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You Need to Know

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Welcome

As I write, it's a few days since Boris Johnson announced England would be taking its first small steps towards easing lockdown. One of the key sectors he's targeted for a swift return is construction – no doubt because, in many ways, it's the heartbeat of our economy. Without improvements to infrastructure and delivery of both commercial development and new homes, everything quickly stagnates.

Clearly, this is a time to be cautious, and it's right that reopening the UK takes place over time and on a watchful, conditional basis. But for those selfbuilders and renovators who have been stuck with half-completed projects, I'm sure lockdown can't end soon enough. As it happens, the construction sector was never asked to shut down completely – but the difference now is that employers and trades are being actively encouraged to take up their tools and return to site.

Manufacturers across the whole home building spectrum are also returning to their factories, and working hard to get production back up to speed – but we can all expect extended lead times at the moment, especially for bespoke products.

We're at an early stage in returning towards normality, and I'm sure there will be some bumps in the road – both nationally and in terms of individual projects. For instance, if you booked a trade to start on site three weeks ago, are you entitled to expect them to get cracking on your job right away? I suspect that, in many cases, they will actually have to fulfil their current contracts first, which could leave some selfbuilders and renovators in limbo or possibly having to find someone else to do the work. Progress will be slower than usual, too, as we follow strict social distancing and other Covid-safe practices.

The key to successfully navigating your way through this situation is to stay on top of communication. Keep those channels open with your trades and suppliers so that you can respond quickly to changes and challenges. And bear in mind that if there's going to be a big gap in your build schedule, you may need to inform the likes of your mortgage and insurance providers, too.

Chris

CHRIS BATES, EDITOR

EDITOR'S
FAVOURITE
FEATURES

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MEET THE TEAM

EMILY SMITH is Build It's deputy editor and supplements editor. She has a real design eye and deep understanding of the challenges selfbuilders face. Read more from Emily at www.self-build.co.uk/emily



ANAMIKA TALWAR is Build It's editorial assistant. She loves sourcing new products and ideas for home building projects of all types. Read more from Anamika at www.self-build.co.uk/anamika



LUCY APLIN is Build It's digital editorial assistant. She's created tonnes of inspiring & practical content for you to browse through on Build It's website. Check out the latest at www.self-build.co.uk



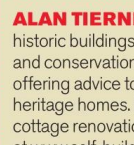
TIM DOHERTY was the founding MD of the NSBRC and runs Dobanti property surveys. He's a technical guru and regular expert at the Build It Live shows (www.builditlive.co.uk).



MIKE DADE is a planning specialist and plot-finding expert. This month he shares his all-time planning hates – and how he'd like to see the system simplified for selfbuilders (page 86).



JULIAN OWEN is a self build architect and founder of the Association of Self-Build Architects. On page 80 he explains what you need to know to get modern plant rooms right.



ALAN TIERNEY is a historic buildings expert and conservation specialist, offering advice to owners of heritage homes. Follow his live cottage renovation diary online at www.self-build.co.uk/alan



MIKE HARDWICK is a self build consultant and project management specialist. Go to page 91 for his top tips on what you need to get sorted before you start building.



OPINDER LIDDAR is director of Lapd Architects and was the designer behind the Build It Education House (buildit.co.uk/ourhouse). He is a regular expert at our Build It Live exhibitions.



NIGEL GRIFFITHS is a sustainability consultant and a font of knowledge for heating solutions. This month he helps you decide on the best heating system for your project (page 70).

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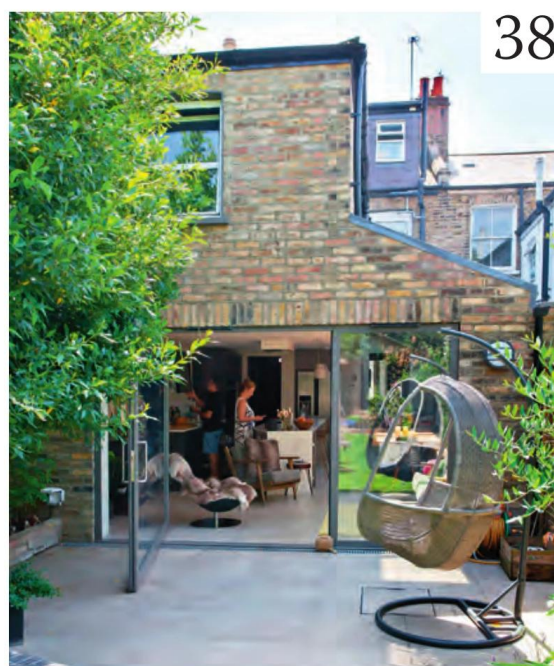
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READERS' HOMES

COVER STORY

Strong Connections

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Relocating from London to Devon, Chris and Laura Mead combined their professional design skills to build a beautiful new home on an idyllic sloped patch of land

Passivhaus Success

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Learn how Stephen Cirrell overcame a series of planning hurdles in order to design and build an impressive and innovative energy-efficient property in Leeds

Artist in Residence

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When Michelle and Remi Morgan found this Victorian town house, they knew that, with some vision and hard work, it could be transformed into their dream home

RENOVATION & BUILDING

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Having a specialist look after the core elements of your project is a great way to ensure a swift, cost-certain build. Mike Hardwick looks into the options

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Ultimate guide to windows

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Your choice of glazing will have a major impact on both the aesthetics and performance of the finished property. Here's what you need to know to ensure you get it right

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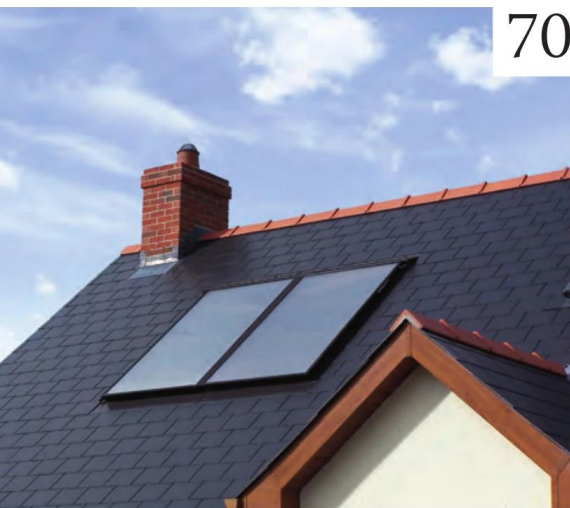
Every new property needs an efficient heat source and emitters for a warm, comfortable environment. Navigate the options with sustainability expert Nigel Griffiths' advice

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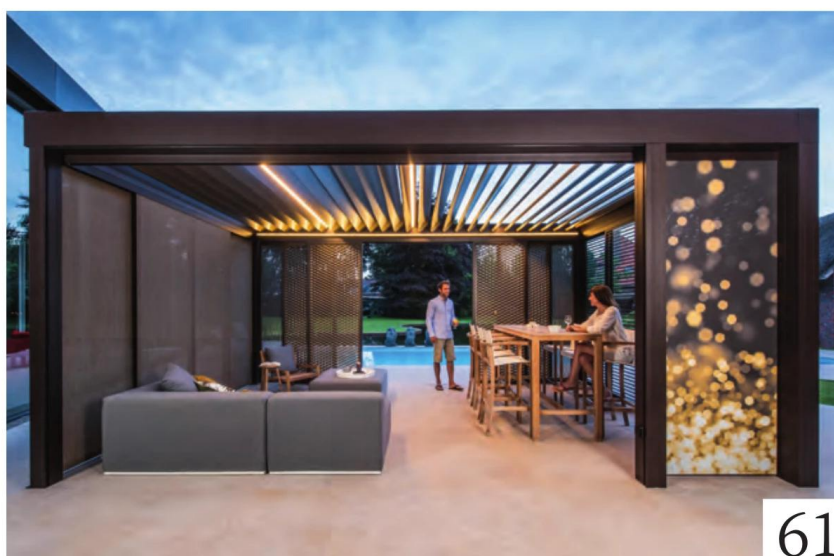
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Mike Dade explains what frustrates him most about the UK's planning system, and explores his ideas on how it could be improved to help self builders and renovators

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Mike Hardwick outlines the essential things to consider and organise before you start works on your project

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Our planning expert investigates a patch of land for sale on an estate. Could it be a bargain steal for these first-time buyers or is it unlikely to ever get consent for a new home?

Finding land 98

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Coming up in the August edition



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inspiration



Unique yard home

This innovative family home was created by Jonathan Tuckey Design to fill a vacant plot in an empty yard, set just off a bustling London high street. The homeowners wanted the property to offer privacy, accommodate a large workshop and fully utilise the south eastern orientation of the plot. The result is a unique two storey house that features a translucent polycarbonate skin that sits facing into a private, sunny courtyard. The eye-catching wall has been built using Rodeca, a hardwearing, super-insulating material that allows

light to pass through in a similar way to glazing. This has created a translucent effect that changes according to the pattern of internal and external light.

Despite the constrained nature of the urban plot, the spacious new property includes separate zones for the bedrooms and workshops, which are connected with a double-height living and dining wing. The ground level is unified with a poured concrete floor, which encourages a feeling of connectivity throughout the internal rooms and out into the adjoining courtyard.

For more about Jonathan Tuckey Design call 020 8960 1909 or log on to www.jonathantuckey.com

PROJECT OF THE MONTH

The wooden house

by Fiddes Architects

This stunning property was designed by Fiddes Architects to perfectly suit its rural surroundings in the heart of hilly Aberdeenshire. Built on the site of an old farm, the house has an L-shaped floor plan, which provides space for two separate wings while helping to keep the overall footprint to a minimum. This form also creates a secluded spot in the middle of the floorplan where the homeowners can enjoy some privacy from neighbours and the nearby road. The house was designed and constructed with a south-facing aspect in order to take full advantage of free solar gain while framing beautiful views over the undulating landscape.

A key part of the brief was to reflect the style of old agricultural buildings dotted around the farmland plot. To achieve that level of synergy, Russwood's Siberian larch cladding was installed in both vertical and horizontal profiles. The timber is pigmented with a SiOO:X mid-grey finish for a wow-factor aesthetic. This is complemented by a combination of grey corrugated and rusted Corten steel roofing. Internally, Russwood's engineered brushed natural character grade oak flooring continues the modern rustic theme.

For more details visit fiddesarchitects.co.uk and russwood.co.uk



Get quotes from your builders via video call

Checktrade.com, the online directory of trusted builders and contractors, has added a new video calling function to its website. The setup allows tradespeople and potential clients to meet virtually in order to discuss projects and quotes over the internet. The handy facility will enable self builders, home extenders and renovators to book a range of useful services from the comfort of their own living rooms – a useful tool both during the lockdown situation and potentially into the future, reducing the need for travel.

67%

of Brits intend to buy a smart thermostat to help improve their home's energy efficiency, a recent study conducted by Priceyourjob.co.uk has found. The research surveyed 1,484 homeowners and found that automated appliances are the most popular eco-friendly upgrade options, with 56% of Brits also saying they want to install a smart kettle and 45% planning to buy a smart fridge.

Community-led housing for historic farm

Ashley Vale Action Group (AVAG), the not-for-profit organisation behind celebrated group self build project The Yard, which was completed in 2011, is getting started on its next scheme. AVAG has applied to Bristol council to redesignate grade II listed Bridge Farm from 'important open space' to 'community-led housing, mixed use and open space'. The bid is the first step in potentially creating opportunities for dozens of sustainable, affordable and community-led self build homes.

What's on: Online events & courses

INTRODUCTION TO PASSIVHAUS

12PM, 1st JUNE
FREE

The latest in Green Building Store and Enhabit's free webinars on a diverse range of topics looks at how to meet this eco standard.

greenbuildingstore.co.uk

HEATING YOUR HOME VIRTUAL COURSE

5th JUNE
£59

Sustainable building expert David Hilton delivers a Zoom version of his well-respected NSBRC heating course.

nsbrc.co.uk

HOUSE PLANNING HELP: PODCAST SERIES

WEEKLY PODCASTS
FREE

Ben Adam-Smith interviews real-life self builders and industry experts on a range of project essentials.

houseplanninghelp.com

LESSONS LEARNED FROM REPAIRING HISTORIC HOMES

2PM, 18th JUNE
£50 MEMBERSHIP

Martin Telling takes SPAB members through the highs and lows of repairing two grade II* listed properties.

spab.org.uk

POTTON SELF BUILD ACADEMY

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lowimpact.co.uk



NIGEL RIGDEN PHOTOGRAPHY

England gets back to building

As we take the first cautionary steps towards post-lockdown normality, Boris Johnson has encouraged construction companies and manufacturers to bring their employees back to work. It's a subtle change in emphasis, as some big developers in particular reopened their sites many weeks ago on the basis of strict social distancing and other health and safety procedures. But the biggest impact could be on small-scale self builds and renovations that have faced uncertainty since lockdown began (see www.self-build.co.uk/lockdown for more on this). Home builders and suppliers servicing the domestic side of the industry are now able to pick up their tools, which should result in greater availability of materials and labour in the coming weeks – although demand for products and installers is likely to be extremely high, which is likely to translate into lengthy lead times.

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need to know

the home of the future by Mark Stevenson

The seriousness of the coronavirus pandemic cannot be overstated. But put thoughts of the virus aside for a moment, and the UK's recent lockdown – with its limitations on how often we can go out – has caused us all to spend a lot more time at home and reflect on the houses we live in.

For those of us lucky enough to have self built, the deprivation of our normal freedoms is somewhat eased by the fact we're in homes crafted around our individual needs and how we want to live. For others, the abundance of time they find themselves with will have exaggerated the frictions of trying to marry up round lives with a square peg of a home. I dearly hope the pandemic eases swiftly, but based on the assumption that its impact continues, the economic outlook for developers of standard houses is bleak. Self build, on the other hand, will flourish – fuelled by our ambitions for individually designed homes that suit our unique lives and offer a safe, pleasurable place to be.

The experience of lockdown, where our homes have once again become our castles, will challenge the populist view that the suitability (and value) of a house is measured simply by the number of bedrooms. Family living, coupled with a need for both social spaces and private rooms, will cement our desire for multifunctional yet segregated interiors. For most of us, working from home on the corner of the dining room table while sharing our wifi with Netflix has become a reality. Self build gives you the flexibility to incorporate dedicated workspaces that can be serviced with reliable hardwired networking, along with the perfect bookcase backdrop essential for virtual meetings.

The more time we spend at home, the more important our houses' performance will be. High quality internal environments that are energy efficient, don't overheat but are still flooded with natural daylight will be essential as we look to combat the increased utility bills that come with home working.

Unfortunately, perfection is rarely permanent. Building your own home gets you most of the way there, but designing in adaptability and future proofing is essential. Self building sets itself apart from other routes to home ownership in this regard, as it enables you to incorporate provisions that allow your house to evolve as you and your family ebb through the cycles of life.

Given all of this, you can see why building predetermined boxes, designed to optimise developer profits and perfectly fit sales particulars, fails to cut the mustard. If coronavirus has taught us anything about how we live, the quality of our homes is now more important than ever. Our individuality as people means the houses we build must be equally as individual if we're to enjoy the seclusion and protection a good home should provide. In my view, the only way to achieve this is to design and build your own home. The future is self building.



MARK STEVENSON

has 30 years' experience as a construction professional and is managing director at Potton, where he helps self builders create their dream homes. He is a serial self builder and provides regular masterclasses via Potton's Self Build Academy. **Find out more at www.potton.co.uk**

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This collection of composite decking from Havwoods is suitable for internal and external use. The innovative structure of the material means that decking will not warp, splinter or rot.

Trekker anthracite mixed width, £89.94 per m², havwoods.co.uk

£27.78
per m²



Composite tiles are a quick and cost effective way to transform your outside space. These units are 30cm x 30 cm and don't need tools for installation, but are designed to be laid on a stable and level surface. **Composite decking tiles in grey, 4 pack £10 (£27.78 per m²), bmstores.co.uk**

product news

Great shopping ideas for your custom home project

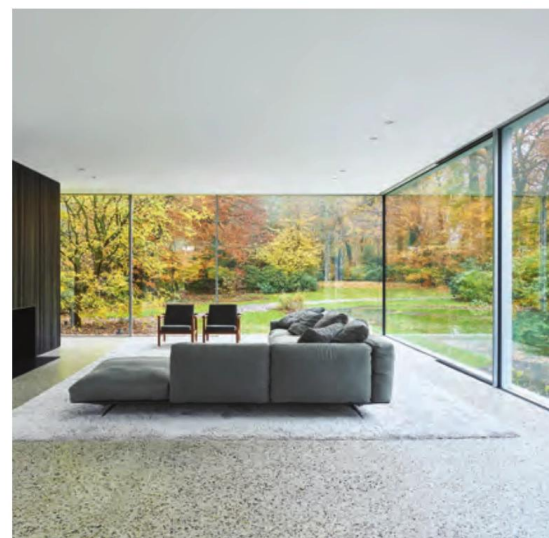
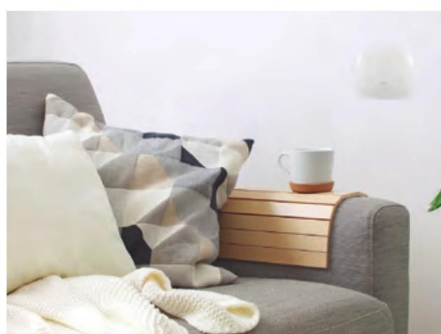
EASY STACK WALLING ↓

These contemporary style bricks are hollow and can be filled with either concrete or soil, perfect for creating a stylish new low garden wall or flower bed border. **Bradstone, from £6 per unit, bradstone.com**



ENERGY SAVING TECH ↓

This smart system features 13 sensors within wall-hung units that replace light switches. The full setup can control lighting, heating and alarms, to keep your energy bills low and your home safe. **Wondrwall, from £399, wondrwall.co.uk**



NOISE ABSORBING PLASTER ↑

This high performance acoustic plaster integrates seamlessly in any wall or ceiling and is Quiet Mark accredited. **BASWA Phon Acoustic Plaster System, £120 per m², baswana.com**

SUPER THIN INSULATION ↓

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Recticel Deck-VQ insulation, from £90 per m², recticelinsulation.com



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2 Terano e80 pivot doorset, £7,912, urbanfront.com



3 Thermo46 Style 900D Decograin, £3,046, Hormann.co.uk



Design : Planning : Self Build & Turnkey Packages : Project Management : Fixed Price : Bespoke : Plots



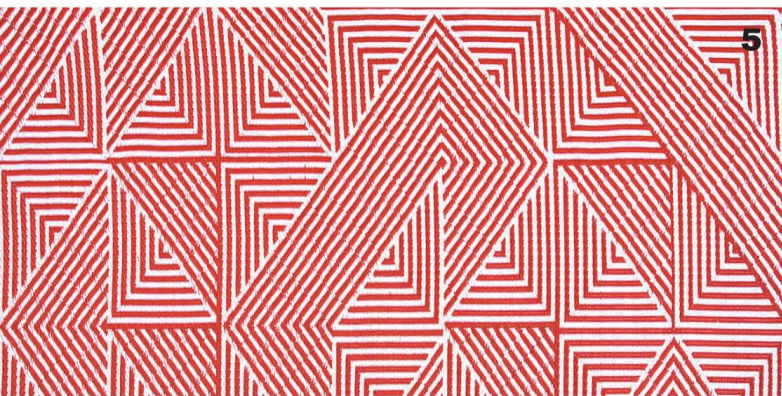
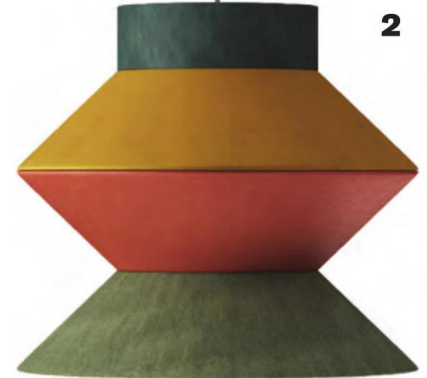
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interiors notebook

Mid-century modern is an iconic style that is simple to replicate



Shopping list

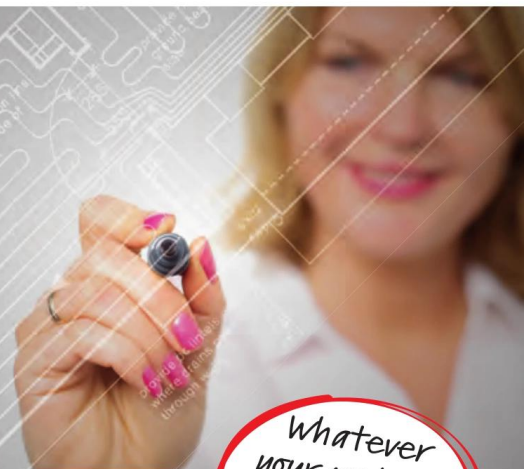
- 1** This chair and footstool can be bought separately or together for a timeless chic look. The design is available in several finishes. **Retrostar chair (£263) and footstool (£149),** sternzeit-design.de
- 2** Combine your favourite colours and styles with this mix-and-match lampshade to achieve a personalised mid-century modern touch in your home decor. **The Zig-Zag One, £325,** matchimatchi.com
- 3** These porcelain tiles offer the authentic effect of a wooden parquet floor, without the maintenance needed to look after real timber surfaces. **Woven wood tiles, £39.95 per m²,** [wallsand floors.co.uk](http://wallsandfloors.co.uk)
- 4** This sideboard has a sleek and simple design with traditional undertones, perfect for creating a centrepiece that will suit any space. **Melina sideboard, £1,915,** [sweetpeaand willow.com](http://sweetpeaandwillow.com)
- 5** The intricate pattern in this colourful rug offers a unique way to add style and flair to your home's garden in the summer. **Fab Hab Tokyo outdoor rug in burnt orange, £49.95,** cuckooland.com



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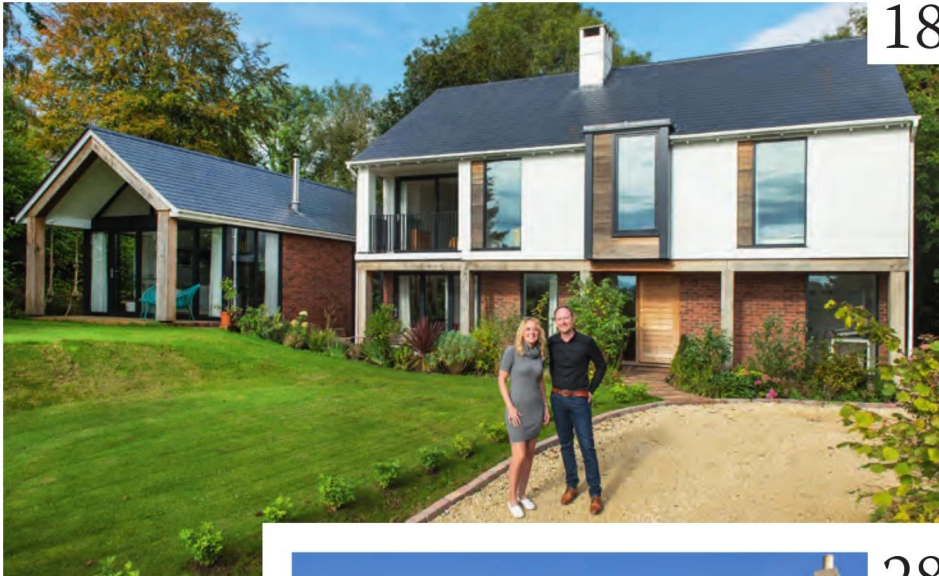
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Readers' homes

SELF BUILD + RENOVATION + EXTENSION + CONVERSION + IMPROVEMENT



18 **STRONG CONNECTIONS**

Learn how this couple overcame several hurdles in order to build an idyllic three bedroom house, which fits perfectly with the surrounding rural landscape

28 **PASSIVHAUS SUCCESS**

Discover how Stephen Cirrell managed to build this incredibly high performing new dwelling

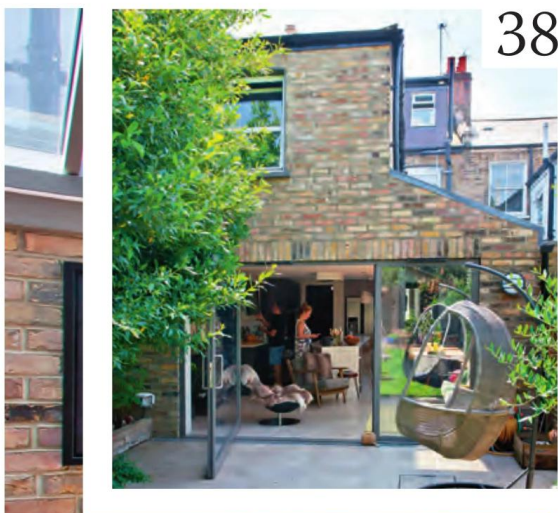
38 **ARTIST IN RESIDENCE**

This couple transformed an Victorian property into a unique, modern family home through some clever budgeting decisions and their own creative flair



MORE ONLINE >>

FOR MORE INSPIRATIONAL READERS' HOMES VISIT WWW.SELF-BUILD.CO.UK/READERS-HOMES





Strong connections

Chris and Laura Mead knocked down an old bungalow to make way for this glorious modern rustic home

WORDS ANNABELLE GRUNDY PHOTOS COLIN POOLE



Having made the decision to relocate from London to the West Country, Chris and Laura Mead spent several months house-hunting without success. They hoped for a comfortable, period dwelling in a convenient village location, close to Laura's family in Devon. "We just couldn't find the right thing," she says. "A lot of places felt quite remote, with few facilities. Plus, the houses we saw had very small gardens."

On one of their property-scouting weekends, they passed along a secluded country lane on the edge of Sidmouth in East Devon. The peaceful and convenient location, near Laura's parents' home, was idyllic. "It was lovely but there were only a handful of houses along the road. We knew the chances of one ever becoming available

“It’s so exciting to watch the house that you’ve designed evolve into a reality”

Build progress: The decrepid bungalow was demolished to make way for the new house, as well as the separate garage. The sloping plot was a challenge to work around, but the result looks great within the landscape



were very slim,” says Chris. The couple continued their search, and within a few months were amazed to spot a bungalow for sale on the lane. Full of enthusiasm, they arranged a viewing. “It was a post-war Woolaway prefab,” says Chris. “It had been extended over time, so the layout was higgledy-piggledy and the structure was rotten. It wasn’t salvageable at all. But the views were amazing, the garden had clearly been loved, and the size and position of the plot were perfect.”

Although the couple had not really considered doing a self build before, the opportunity to secure such a special location was too good to pass up. The pair were also undaunted by the task, as both have worked professionally in architectural practice, with Chris specialising in commercial buildings and Laura in landscape design.





FACT FILE

NAMES Chris & Laura Mead**OCCUPATIONS** Architect & baker**LOCATION** Devon**TYPE OF PROJECT** Self build**STYLE** Contemporary**CONSTRUCTION METHOD**

Brick and block

PROJECT ROUTE

Chris designed, Laura's father project managed, main contractor hired for construction

PLOT SIZE 1,000m²**LAND COST** £310,000**BOUGHT** May 2015**HOUSE SIZE** 205m²**PLOT SIZE** 0.6 acres**PROJECT COST** £300,000**PROJECT COST PER M²** £1,463**TOTAL COST** £610,000**VAT RECLAIMED** £5,500**BUILDING WORK COMMENCED**

October 2015

BUILDING WORK TOOK

48 weeks

CURRENT VALUE

£900,000

What's more, Laura's father Roger Norton, an experienced architect with the benefit of local knowledge, was happy to be involved.

Buying the plot

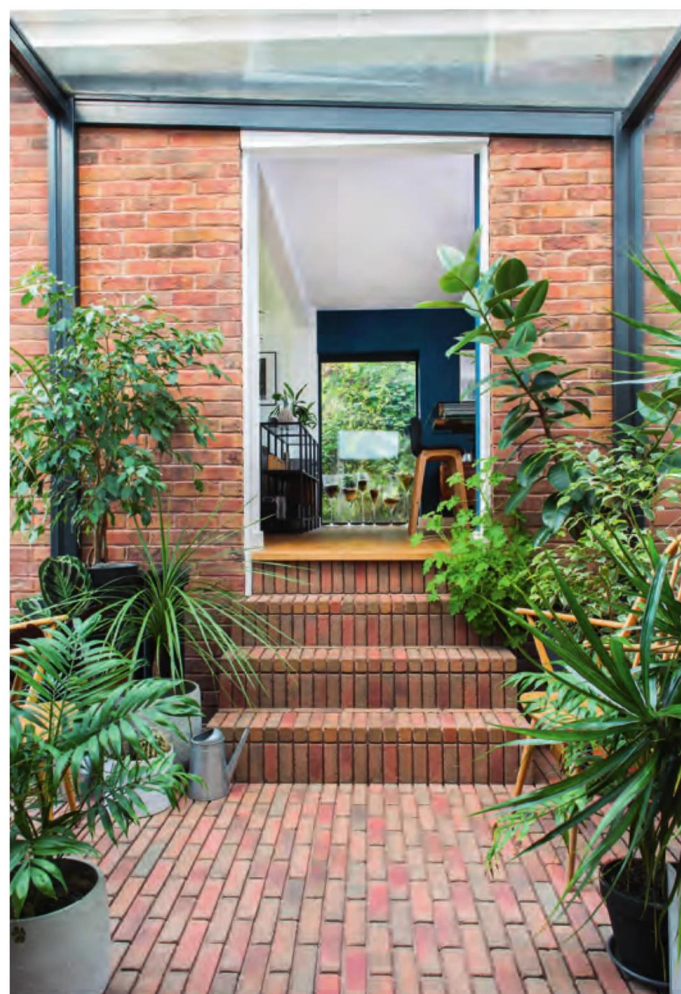
The Meads were not the only ones to spot the site's potential. Having set their hearts on acquiring it, they soon found themselves bidding against five other buyers. "We took advice on the property's value from my father and a local estate agent, and offered £60,000 over the guide price," says Laura. "We were quite hopeful, so when we heard we'd come second, we were really disappointed."

A few months later, the original sale fell through. As the next in line, the couple were given first refusal and their original offer was

Below: Having lots of potted plants in the glazed link creates a real inside-outside feel



The colonnade serves as a porch and shields the living areas from strong sunlight





They chose keenly priced kitchen units but invested in hardwearing Silestone composite work surfaces

experience meant we understood the processes perhaps better than a layperson and could act quickly."

Design process

While the purchase was going through, Chris and Laura devoted every spare evening and weekend to refining the design. Although Chris had 15 years' experience as an architect, he had worked on few individual houses, so faced a steep learning curve. He was keen to create a contemporary home that would fit comfortably in the rural landscape, honour the vernacular and capture the stunning views.

Chris created plans for a two-storey, three-bedroom house to sit centrally on the plot, with a living room 'extension' connected by a glass link. A large, separate garage lies to the other side. "Rather than a big, imposing dwelling, I wanted the feel of a cluster of rural buildings, like a farm," says Chris. "We incorporated traditional elements like pitched roofs, oak, slate, brickwork and white render, which is the customary exterior finish for a Devon longhouse."

The couple also had to work around the plot's significant incline. Digging out a sizeable quantity of earth was going to be unavoidable, bringing significant costs. Excavations were minimised thanks to a split level ground floor, with a small flight of brick steps between the kitchen and lounge. "I had to find a balance between a manageable change of level inside and not digging out more earth than necessary outside," he says. "With just four risers, the transition between the rooms is very comfortable and the steps make an attractive feature."

Full steam ahead

Planning permission was obtained without a hitch. With friend and structural engineer Paul Smith on board, and a recommended local contractor engaged, the build got underway. Laura's father agreed to act as project manager, which allowed the Meads to continue working in London until a few weeks before they moved in.

The three liaised whenever required, and Chris and Laura made regular weekend visits to monitor progress. "Having my dad here on site to act for us was brilliant. We were always excited on the Friday



accepted. With their relocation plans suddenly back on track, Laura and Chris decided to remain in their London home and full-time jobs, and remortgage to buy the land and finance the Devon project.

They soon encountered a tricky situation. Their lender insisted that outline planning permission for the build was granted before they would agree a loan – but as they didn't yet own the site, the couple didn't feel they could fully develop their plans. "This turned out to be one of the most stressful parts of the whole process," says Chris. "We needed a way to show the lender that we could definitely get planning consent for a house of sufficient value to warrant the mortgage." The solution was to arrange a pre-planning meeting with the council. The couple met with the local officer on site, showed sketch plans and talked through their ideas. The local authority then confirmed in writing that a full planning application based on the proposals was likely to be approved.

"That letter, along with some initial construction costings, was enough to reassure our lender. They then agreed a stage payment self build mortgage and released the funds for us to buy the land," says Chris. "You'd normally at least be expected to have outline planning permission to get finance, but I think our professional

WE LEARNED...

MAKE SURE YOUR ESTATE AGENTS are aware what possibilities you're open to. The company we were working with thought the property wasn't what we wanted, so didn't alert us. We would have missed out if we hadn't spotted it ourselves.

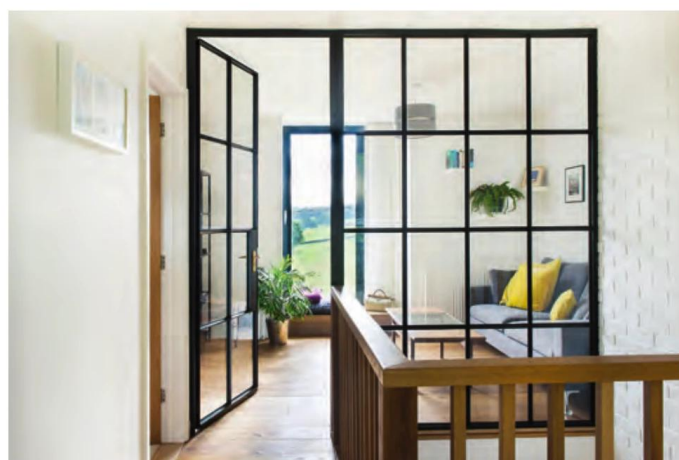
IN A BID TO SAVE MONEY we bought smart-looking but inexpensive bathroom taps and shower fittings online. Both of the showers developed problems within a couple of years, so we've ended up replacing them with quality brands.

THE WALK-IN LARDER in the kitchen and the dressing room off the bedroom work well. Without big wardrobes or wall units, the rooms feel spacious and clutter-free, but everything's to hand.

HAVING A PROJECT MANAGER proved particularly useful when we had a minor clash with one of our trades. He was a great mediator and able to take the sting out of an awkward situation.



Zephyr, a deep blue colour from Valspar, brings a sophisticated mood to the dining area. Laura's old architect's drawing board now acts as an unusual dining table



Huge windows in the lounge draw the eye to the uninterrupted green views



The open tread, oak stairs from Westgrove Joinery let light flow through from the large window on the half-landing

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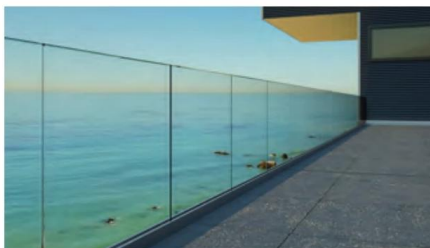


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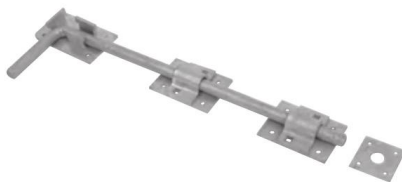
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TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Preliminaries	£59	4%	£12,000
Foundations	£44	3%	£9,100
Walls & floors (external & internal)	£278	19%	£57,000
Roof structure & covering	£161	11%	£33,100
Windows & doors	£200	14%	£41,000
Plumbing & heating	£66	4%	£13,500
Electrics	£37	2%	£7,500
Kitchen & bathrooms	£69	5%	£14,200
Joinery	£40	3%	£8,250
Glass link (incl. brick floor)	£98	7%	£20,000
Plastering & floor finishing	£44	3%	£9,000
Decorating	£27	2%	£5,500
Garage & workshop	£163	11%	£33,500
Landscaping	£104	7%	£21,350
Fees	£73	5%	£15,000
Grand total			£300,000

Note: The costs shown here reflect the original prices for materials, labour and services at the time this project was undertaken. As a general guide, inflation in the construction market runs at about 3%-4% per annum.

throughout the building. Both the ground and first floors feature double-glazed, aluminium-framed, floor-to-ceiling doors and windows. A glass wall divides the upstairs snug from the landing and allows sunshine to permeate through the centre of the house.

At ground level, the modern, plant-filled glass link connects the two living areas. "We had a vision for this and collaborated with our window supplier to create something as close as possible to that," says Chris. "We wanted it to sit just under the lounge roof and be large enough to be usable." It's not just the glazing that helps to create a connection between indoors and out. The link's floor is composed



The glass screen creates a sense of openness in the bathroom

night drive down," says Laura. "As we weren't here all the time, we could really appreciate the difference from one visit to the next."

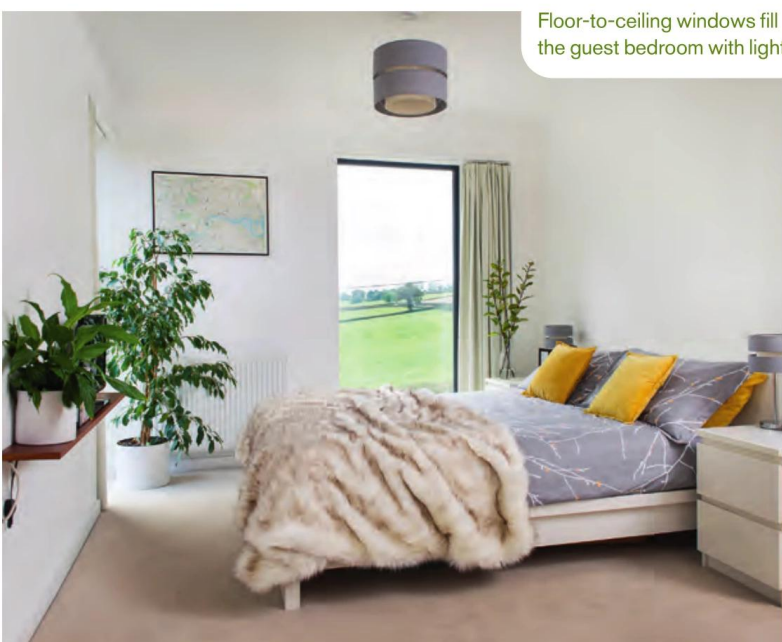
Living at a distance from their project, Laura and Chris were spared some of the day-to-day stresses of self building. However, there were downsides, too. On one visit, Chris noticed the roof was being constructed with a 300mm overhang at the gable end; but he had envisioned almost no projection. "The little details were important to me and I simply hadn't been clear enough to the contractor," he says. "Luckily things hadn't gone too far, but I had to ask for the joinery to be removed and redone."

Although he investigated a range of building systems, Chris's design lent itself to a standard brick and block construction. With mains water and gas supplies already in situ, they've opted for a gas-fired, zoned central heating system with underfloor heating. "I do advocate renewables, but the upfront costs of solar panels and heat pumps were outside our budget. It would have impacted on the size and finish of the house and we had to make a choice," he says.

Nonetheless, this is a very energy efficient house, largely due to a fabric-first approach. "We've got Celotex insulation in the walls and floors, as well as traditional loft insulation, all to a higher spec than the Regs require," says Chris. "We're south-facing and benefit from a sunny orientation, to the extent that we needed the colonnaded overhang for protection from solar heat gain in the living areas."

Stunning result

The house was designed to take advantage of the far-reaching rural views, and glass is a key element in maximising the outlook. It brings in natural light, frames garden views and promotes direct sightlines



Floor-to-ceiling windows fill the guest bedroom with light



of carefully laid Dutch bricks. These have also been used for the patio outside, blurring the boundary between house and garden.

A large, white-painted brick chimney runs up through the middle of the house, adding architectural interest. It also separates the open-plan living zones and echoes the white, brick-format wall tiles in the kitchen and bathrooms. Engineered oak flooring is mirrored by the feature staircase and wood-effect kitchen cabinetry inside, and by exterior oak cladding and timber supports outside.

Managing their build at arm's length was not without its frustrations and challenges, but Chris and Laura feel it gave them space to think over decisions, eased their finances and made the process as relaxed as it could be. "It's incredibly exciting to watch the house you've designed evolve into a reality," says Laura, "I'd never say we wouldn't do it all again, but I can't see us moving from here for years to come, if ever. We feel very lucky to have found such a special spot."

closer look

Glass link...



As well as providing a connection between the single-storey lounge and the rest of the house, Chris and Laura Mead were keen for this to be a place where they could spend time. In fact, this sleek structure has turned out to be one of Laura's favourite design details. "I love greenery, so the glass link works beautifully," she says. "We often have breakfast there, and even the sound of rain on the roof is lovely." The bespoke structure was supplied by Southfield Windows.

Various options are available – including sliding or outward-opening doors. The panels can be fixed into floor and wall-mounted steel channels to achieve a contemporary, frameless look, while glass beams can support the roof. Ensure the glass you specify is thermally efficient, with a high-quality double or triple glazed spec to minimise heat loss. Laminated sheets should be specified overhead for safety reasons, sloping slightly to allow water run-off.



Light-filled space



Floor plans



Ground floor



First floor



House plans re-created using
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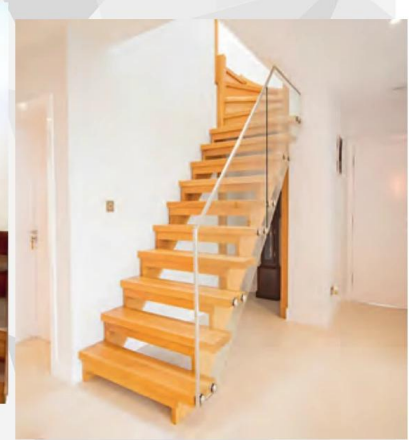
Useful contacts

ARCHITECT Chris Mead Architecture 07500 872876 www.chrismeadarchitecture.com **MAIN CONTRACTOR** CJ Woodley 01395 568687 www.woodley-builder.co.uk
WINDOWS & GLASS LINK Southfield Windows 01803 866955 www.southfieldgroup.co.uk **JOINERY & STAIRCASE** Westgrove Joinery 01395 568123 www.westgrovejoinery.com **ELECTRICS** Dominick Horrell Electrical 01395 577309 **PLUMBING** Plumbworx Devon 07930 079079 **STEELS & BESPOKE METALWORK** Sid Vale Metal Craft 01395 578258 **OAK BEAMS** Oak Beam UK 01285 869222 www.oakbeamuk.com **KITCHEN UNITS** Chippendale Kitchens www.omegaplc.co.uk **KITCHEN WORKTOPS** Purple Granite 01562 549100 www.purplegranite.co.uk **INTERNAL GLASS WALL** Fabco 01903 718808 www.fabcosanctuary.com **PAINT** Valspar www.valsparpaint.co.uk



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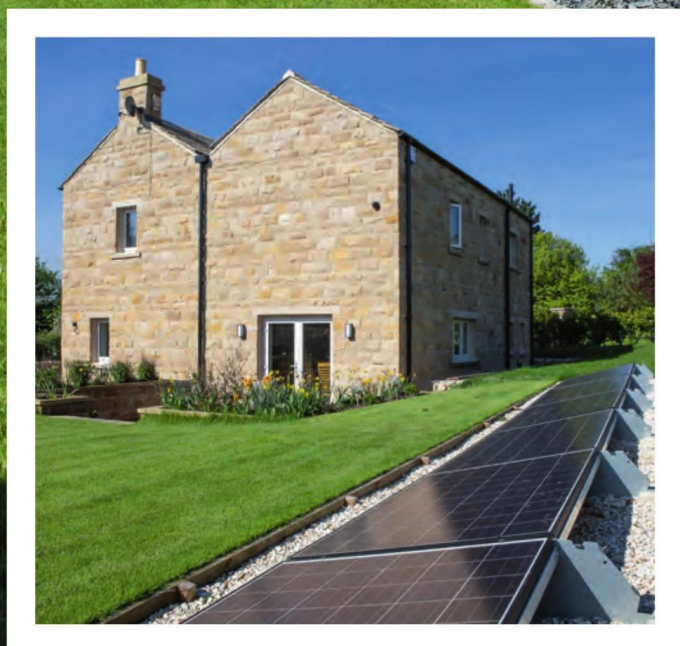
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Passivhaus success

Stephen Cirell's self build home in Leeds is the first Passivhaus in the area, as well as one of the most airtight homes in the country

WORDS **HEATHER DIXON** PHOTOS **DAVE BURTON**

Stephen Cirell had no interest in building his own house, let alone an ultra-efficient one, until his work took him into the energy sector. Before long he was planning to sell his comfortable, but draughty, four-storey period villa in the suburbs of Leeds for a derelict old cottage that he planned to rebuild using the most up-to-date, energy-efficient systems available.

"The old house was attractive, but I wanted to improve its thermal performance," says Stephen. "In summer it was beautiful, but only half the walls were insulated and the windows were single glazed, so the conditions in winter were awful. When I started to assess what needed doing to improve it, I realised I wasn't prepared to strip it

back to a shell and start again. I started reading Build It and decided the only way to get the house I wanted was to construct it myself"

Finding the right project

It took 15 months for Stephen to find a suitable plot and during that time he poured hours and hours of research into his new project. "I started to become disillusioned when I couldn't find anything within my budget in the area I was living in," he says.

A derelict cottage came up for sale and Stephen went to see if it could be a potential knock down and rebuild project. "When I first saw it, I wasn't convinced," he says. "I wanted a glass fronted house in



FACT FILE**NAMES** Stephen Cirell**OCCUPATIONS** Solicitor and consultant on low carbon & renewable energy projects**LOCATION** Leeds**TYPE OF PROJECT** Self build**STYLE** Traditional stone**CONSTRUCTION METHOD**
Blockwork & stone**PROJECT ROUTE**
Self managed**PLOT SIZE** 1,000m²**LAND COST** £400,000**BOUGHT** March 2015**HOUSE SIZE** 158m²**PROJECT COST** £385,300**PROJECT COST PER M²** £2,439**TOTAL COST** £785,300**BUILDING WORK COMMENCED**
March 2017**BUILDING WORK TOOK**
One year**CURRENT VALUE**
£800,000

an urban street." This would be a more traditional home in a village setting. "In the end I thought, why not, and went for it," says Stephen.

The property, which was once attached to a forge, had been empty for 30 years. A neighbour had bought the derelict buildings, along with a barn on the same site, which he developed for his own use. The small forge was demolished and the cottage put up for sale.

Stephen looked to replace the property with a family home built to Passivhaus standards, with a renewable ethos at its core. "While I'm not skilled at DIY, I am good with planning documents, contracts, insurance and warranties," says Stephen. "I included a clause in the contract to purchase the site so that my neighbour, who was selling me the plot, could not object to what I built."

Planning negotiations

Unfortunately, the bid to get permission to demolish the cottage turned out to be a long and frustrating process. The neighbour had been refused planning consent to knock down the existing building and start again; Stephen inherited the subsequent appeal. He thought that restarting the whole process, based on a new plan, was going to be the best approach. However, permission was refused again, so Stephen – tenacious as ever – turned to planning

“It was exciting, onerous and frustrating all at the same time, but never stressful – I saw it as a challenge”





The downstairs features an open-plan layout. The door from the kitchen leads to the room that houses the hub of his MHVR system



consultant David Walton, who opened up a line of communication with the council. “The authority is progressive where renewables are concerned, so we negotiated something that worked for everyone,” says Stephen, although he had to compromise a fair amount. The property had to complement surrounding architecture; the design included chimneys, which are purely decorative, and a stone exterior – a long way from his dream for an ultra-modern, predominantly glazed home. He also had to fight for the size of the house – the council were pushing for a two-bedroom replacement but Stephen wanted three, with a slightly bigger footprint and a larger garage.

Thankfully, Stephen could fall back on a certificate of lawful use, which the vendor had obtained from Leeds City Council. This meant that there was permission for a 7m x 5m two-storey extension under permitted development rights. “In effect I would have been within my rights to increase the volume of the existing building by 80% by adding a couple of extensions,” says Stephen. With this helping to back his case, after months of negotiating his way through the complexities and detail of lawful use and permitted development rights, he was finally granted permission to build a new three bedroom cottage – with 24 conditions attached. Surveys required included archaeological, asbestos, drainage and road access. There were also restrictions for materials used, such as the stone, walls and fencing, lighting and landscape works. Before any building work even started, costs came in at around £10,000.

“It was exciting, onerous and frustrating all at the same time, but never stressful – I saw it as a challenge,” says Stephen. “The darkest point was when planning permission was refused for the second time and I thought I was in danger of losing money, but once David came on board everything improved. I learned to choose my battles and when consent finally came through I was euphoric.”

With the planning complications behind him, luck finally began to turn in Stephen’s favour. After being quoted up to £12,000 for the demolition of the old cottage he managed to find a builder to do it

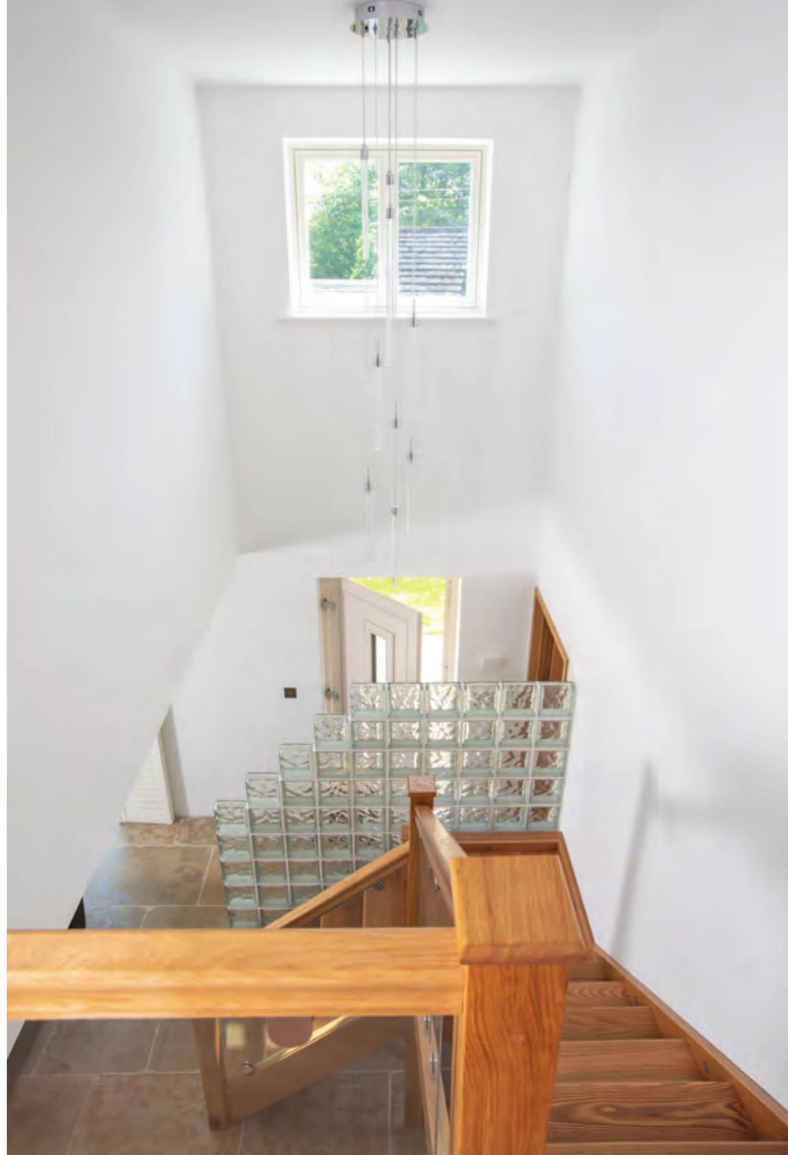
WE LEARNED...

SELF BUILDING a house will always take longer and cost more than you think it will, but it's definitely worth taking the time to plan ahead and thoroughly.

ON GREEN BELT or other protected land, you are likely to face planning restrictions, so it's worth getting to understand local building trends before taking on a project in these locations.

IF PLANNING becomes challenging or complicated, employ a specialist consultant who understand the systems and knows the local council. Having a professional act as a go between can really help you to achieve what you want.

Right & below: A partial glass brick wall acts as a barrier between the front door and staircase, while still allowing light to travel throughout the space



for £1 (a legal technicality required a value) in return for keeping the old stone.

Passivhaus expertise

The Passivhaus method is a way of building that reduces heating demand to a very low level to minimise running costs and the effect on the environment. One of the guiding principles is a fabric first approach to construction. Supreme airtightness is a must, as are triple glazing and the highest levels of insulation. Any warmth naturally generated in the home, from body heat, cooking and showering, is repurposed via a mechanical ventilation and heat recovery system, which also ensures that stale air is exchanged for a fresh, filtered supply.

Stephen brought on board an architect and a builder with experience of Passivhaus design and construction – Eric Parks from Buckrose Ecological Architects in Malton and I&C Watts builders of Harrogate. “When I put the project out to tender, I provided lots of detail because I wanted the price to be accurate and secure,” says Stephen. “In the end, I appointed I&C Watts and his team of just three people effectively built the house – a stonemason, a joiner and a very good all-round builder.



They were excellent and the builder had been involved in similarly high-performance projects before, so he knew what he was doing. A lot of Passivhaus projects fail when the team have no experience of it – it's very different to conventional design and construction."

But architect Eric had a challenge on his hands when it came to achieving Passivhaus standards within the limiting restrictions on the external appearance. "Larger windows were out of the question so we had to use smaller areas of glazing, which meant lower solar gains than we wanted," he says. "We managed to balance this with a combination of increased levels of insulation in the roof and internally insulating the outward-opening window frames."

The cottage is, in some ways, a conventional construction, using breeze block and stone walls on standard concrete foundations, with a slate-effect roof to complement neighbouring properties in the village. The cavities are packed with insulation and the walls are plastered rather than plasterboarded inside to provide high levels of airtightness – a must for a Passivhaus. The devil is in the detail, so every single opening in the house is taped over to prevent draughts. This, along with the triple glazed timber frame windows and doors, and the mechanical ventilation and heat recovery system, contributes to the property's Passivhaus status.

Renewable tech

Further compromises were made when the council objected to the inclusion of solar panels on the roof because of the property's green belt location. To get around this, Stephen ingeniously created his own mini solar farm by placing them in long, low banks along the garden instead. There's also a 5kW Mitsubishi air source heat pump that caters for the property's minimal space heating (it powers the home's single radiator) and hot water requirements.

As well as having a dwelling that uses no fossil fuel, Stephen also uses an electric car and has a 7kW charger fitted in the garage. "I



The large master suite benefits from a dressing room and ensuite





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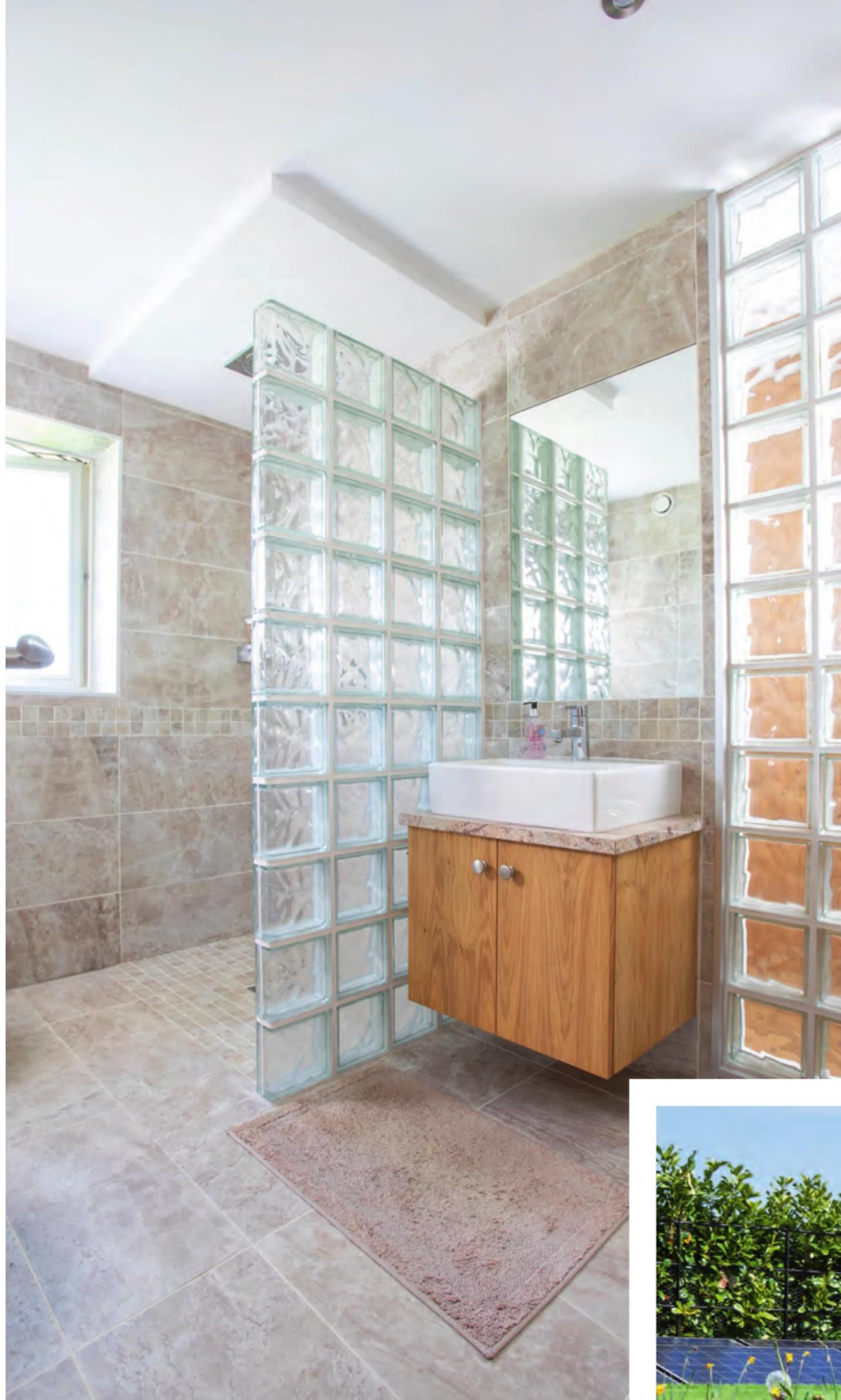
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Glass brick partitions feature throughout the house, including as a shower screen in the bathroom

work as a specialist in renewable energy and am an active consultant in the industry, so I wanted to create a high quality eco-house that has minimal impact on the environment," he says. "The heating and lighting bills in my previous property cost £3,000 a year, while this house should cost nothing to run. I think this shows that Passivhaus and renewable energy sources are the way forward. This is what people want, but the problem lies in the culture of the building industry and in the skills needed to construct this way. I think we will see a change for the better over the next 10 years."

Highly efficient result

Getting full Passivhaus certification is notoriously difficult to attain because of the stringent compliance tests. But thanks to Stephen's tenacity and attention to detail, he now has the first self build in the Leeds area to be certified as a true Passivhaus. His cottage is also the 1,000th to be registered in the UK. "When the house was tested it

got one of the highest ever airtightness ratings," says Stephen. "To comply you have to get 0.6 and this house is 0.1."

Anyone considering building a Passivhaus should bear in mind that it generally adds up to 20% to the construction budget, but this is offset over time by very low running costs. Stephen certainly has no regrets with going down this route. "Living in a Passivhaus is brilliant – the triple glazing and insulation means it is really quiet and calm inside," he says. "The air is always fresh and it's a really healthy house to live in. I would self build again but I wouldn't do it in a green belt area. There were risks with what I did and you need to be resilient, but I'm proof that you can do it if you want something enough."



closer look

Renewable power...

The property's electricity is provided by a £5,000, 5kW solar PV array. The council objected to fitting this technology on the roof, so Stephen got around the issue by installing the panels at ground level, laid on low-level racking in his garden. The power generated can be diverted in four ways – to the house, battery storage, a heat store or the grid. If there is no call for electricity in the house, generated power is diverted to the 13.5 kWh Tesla Powerwall 2 battery located in the garage. When this is fully charged, energy is diverted to the 300-litre water heat store and when the water is heated to the required temperature, any excess electricity is then exported to the grid. This cascade system means that maximum value from the solar power is extricated for every kWh generated.

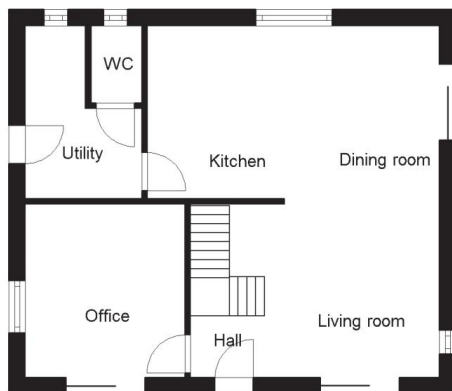


Solar PV panels

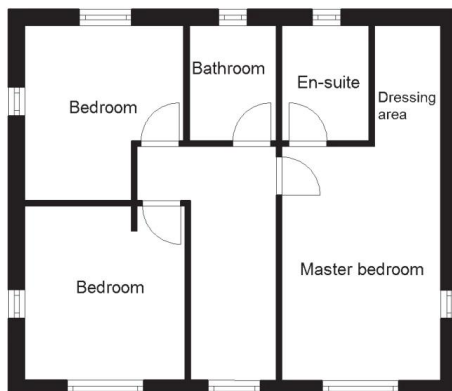


Floor plans

Ground floor



First floor



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TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Building works, labour & materials	£1,104	45%	£174,500
Windows & external doors	£89	4%	£14,000
Insulation	£76	3%	£12,000
Plumbing & heating	£308	13%	£48,600
Air source heat pump	£32	1%	£5,000
Solar panels	£63	3%	£10,000
Electrics	£105	4%	£16,600
Kitchen	£76	3%	£12,000
Internal doors & hardware	£34	1%	£5,400
Bathroom fittings	£41	2%	£6,500
Landscaping	£281	12%	£44,400
Fees	£230	9%	£36,300
Grand total			£385,300

Note: The costs shown here reflect the original prices for materials, labour and services at the time this project was undertaken. As a general guide, inflation in the construction market runs at about 3%-4% per annum.

Useful contacts



PLANNING CONSULTANTS **Walton & Co** 0113 245 8100 www.walton-co.co.uk
 ARCHITECT & CERTIFIED PASSIVHAUS DESIGNER **Buckrose Ecological Architects** 01653 696198 www.buckrose.co.uk PASSIVHAUS CERTIFIERS
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 AIR SOURCE HEAT PUMP **Yes Energy Solutions** 01422 880100 www.yesenergysolutions.co.uk LANDSCAPE DESIGN **Yorkshire Garden Designer** 01904 623343 www.yorkshiregardendesigner.co.uk



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Artists



in residence

Michelle and Remi Morgan transformed their Victorian London terrace with a tasteful extension and renovation, injecting their own creative flair and coming up with some clever cost-saving ideas WORDS VICTORIA JENKINS PHOTOS FRASER MARR



Eager to move, Michelle and Remi Morgan had looked at dozens of houses without success until, one lucky day, a property listing caught Michelle's eye. "I knew this was our dream house, but the estate agent told me the owner had taken it off the market," she says.

Undeterred, Michelle went back to her own agent, who had just sold the couple's previous flat for them, and asked him about the house she'd spotted. To her joy and surprise, her agent knew the owner. He made a phone call and the next thing Michelle knew, she was ringing Remi from their perfect property. "I'm sitting in our new home," she announced.

Remi immediately came to see it. "I also thought it was fantastic," he says. "It was an 1890s Victorian terraced house with four bedrooms – one rather small, another in the attic – and a lovely garden. There were plenty of original features, including wide pine floorboards downstairs, old fireplaces and corbels in the hallway."

Potential for change

Not everything was so charming, however. The sitting room was memorable for its lurid purple and silver wallpaper, while the



The couple installed the hallway with new vintage-style cast iron radiators from Trade Radiators in Scotland



“It wasn’t perfect, but we had a strong vision for the place”

kitchen had 1980s units and terracotta walls and floor tiles. “It wasn’t perfect, but we had a strong vision for the place,” says Remi. “At the time – in 2011 – we did not have the funds for a refurb. However, we did need to upgrade, as our flat in Dulwich was too small.”

The couple bought the house and the family, including Teddy their Cavachon dog, moved in. They soon set about designing a

Below: The rear of the 1890s terraced house has been knocked through and replaced with a glass wall and large pivot door from Max Light



FACT FILE

NAMES Michelle & Remi Morgan

OCCUPATIONS Founder of clothing brand, Pjoys, & artist

LOCATION London

TYPE OF PROJECT
Renovation & extension

STYLE Contemporary

CONSTRUCTION METHOD
Brick and block

PROJECT ROUTE
Commissioned architect, homeowner project managed

HOUSE COST £615,000

BOUGHT November 2011

HOUSE SIZE 97m²

PROJECT COST £266,305

PROJECT COST PER M² £2,745

TOTAL COST £881,305

BUILDING WORK COMMENCED
December 2016

BUILDING WORK TOOK
10 months

CURRENT VALUE
£1,300,000

renovation that could work for them. Remi, a street artist who goes by the name Remi Rough, incorporated the works of other creatives within the designs. “Various well-known artists like Nicky Hirst and MadC have helped create patterns,” says Remi.

Five years passed before the couple finally felt they could afford to make the planned changes to their home. In order to turn their ideas into reality, the Morgans consulted architectural firm Design Squared. Between them, they came up with a plan to demolish the flank wall of the kitchen to make way for a new side return extension.

They would also remove the existing single-storey addition at the rear of the kitchen. “It contained a utility room and a loo and was always damp, thanks to its flat roof. On its footprint we’ve added a new two-storey extension to lengthen the kitchen and create an extra double bedroom above,” says Remi. Michelle adds: “We have a lot of visiting artists and family staying with us. So, we definitely needed the space.”

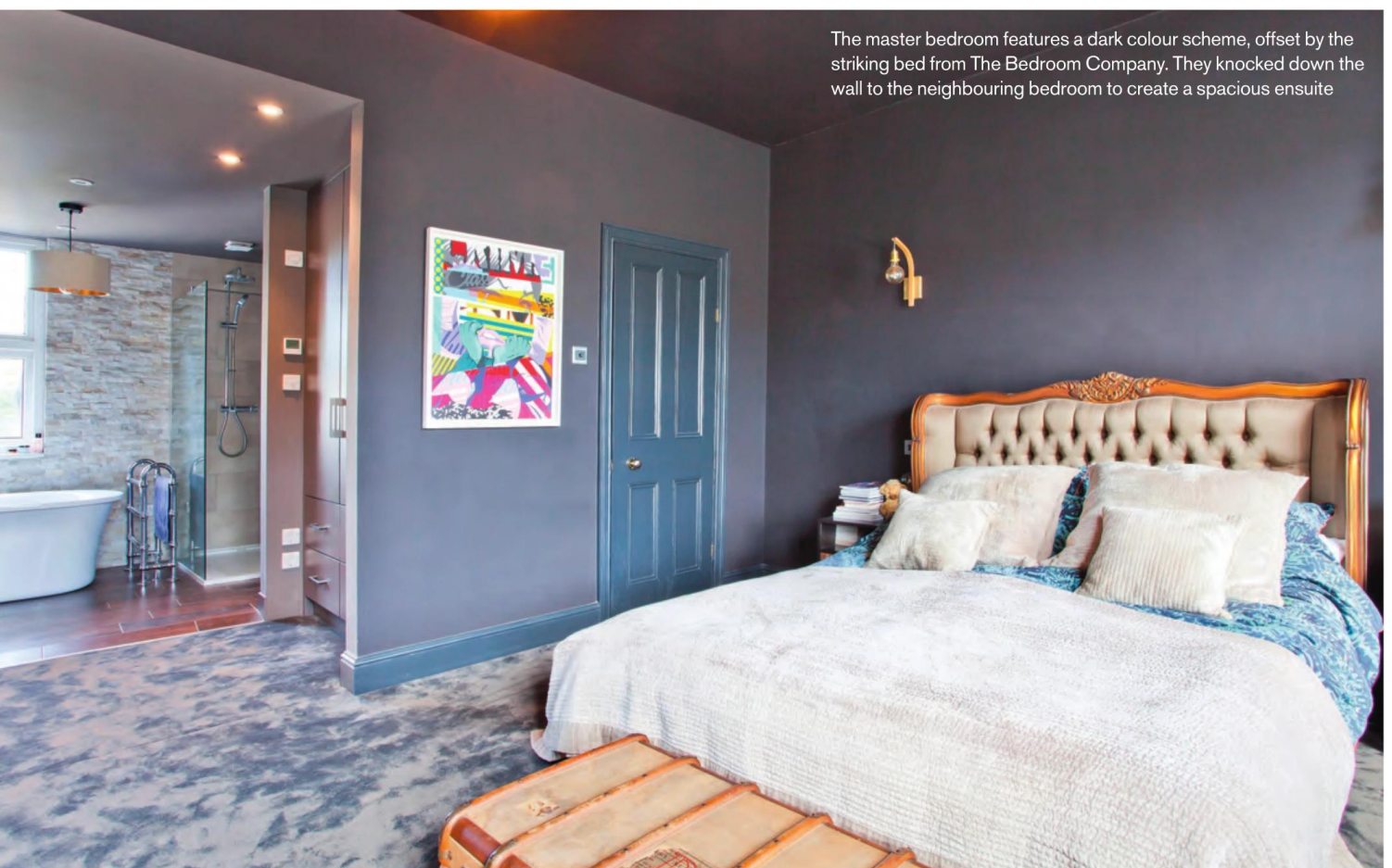
Planning permission was granted with just a single proviso – that a corner of the extension upstairs was curved rather than squared off. “I believe this was to avoid blocking the neighbour’s light,” says Remi.

Light, space & savings

The extension has created a big kitchen-living-dining room, with the space offering an extra 2.3m in width and 1.5m in length.



What was previously the dining room is now a games space. The pine floorboards are a charming original feature of the house



The master bedroom features a dark colour scheme, offset by the striking bed from The Bedroom Company. They knocked down the wall to the neighbouring bedroom to create a spacious ensuite



The line of self-cleaning skylights in the side return's roof help to maximise natural brightness, while a huge glass pivot door from Max Light connects indoors and out. The wall here has been left as exposed London stock bricks – the ideal background for Remi's colourful artwork collection – with the rest of the house repainted.

To kit out the new kitchen space, the couple chose units from German company Hacker, combining these with marble worktops. Remi came up with an abstract, angled design for the island unit. "I didn't want the usual rectangle," he says.

Flooring was a major decision, too. "We thought we wanted a polished concrete floor for the kitchen as it gives a lovely smooth, mirror-like surface" says Remi. "You can even add aggregates or objects into the flooring before the polishing. Plus, it's low maintenance, slip resistant and can last at least 20 years."

It all seemed perfect, until the couple discovered the price. Luckily, they found a fantastic compromise – porcelain tiles designed to look like concrete. "We bought ours from Tile Giant. They're called Synergy Grey and cost under £50 per m²," explains Michelle. "They are so versatile as they are just as hard-wearing outside as inside, so we could continue them through to the terrace. They are also low maintenance, slip resistant, easy to clean and extremely durable – just like a concrete floor." The tiles are algae

and moss resistant, colourfast, frost proof and simple to install – which a concrete floor is not. "We snapped up the lookalikes and spent the money on the pivot door instead," says Michelle. "It was definitely the right decision as the door feels a bigger feature and it's lovely being able to see the garden properly," Remi adds: "It's the most expensive door I've ever bought!"

WE LEARNED...

BE WILLING TO COMPROMISE where necessary. You're unlikely to be able to achieve everything you want, but intelligent choices will make the difference. For instance, selecting a cheaper flooring option freed up funds for our pivot door.

WORK ON RELATIONSHIPS with all your contractors throughout the build process. You may need to be firm sometimes, but always treat them how you'd like to be treated.

BARGAINS ARE AVAILABLE if you can track them down. One snooty carpet manufacturer told us we'd never be able to afford the floor we wanted. But we found the same carpet at half the price by hunting around, purchased it early on in the build and have loved every single soft step on it since.

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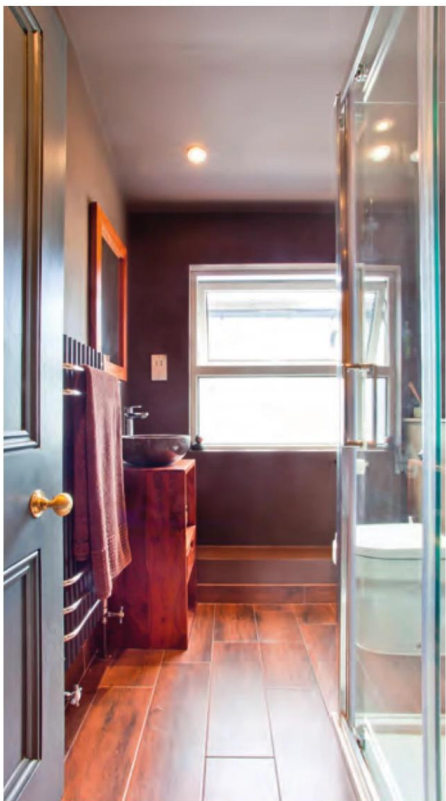
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Four months into the build, the couple made another major money-saving decision, parting ways with their architect so that Michelle could take over to successfully manage the project to completion. “This saved us a fortune,” says Remi.

Using space resourcefully

The property’s floorplan has undergone a significant change. With the old downstairs loo demolished, the builders installed a new one between the kitchen and hallway, while an unused cellar has been transformed into a utility room. “All it needed was plumbing and plywood cladding,” says Michelle. Creating the kitchen-living-dining area meant the existing spaces downstairs could be repurposed and updated. The previous dining room has become a library and games area, while at long last the silver and purple wallpaper in the sitting room could go in favour of a vast painting by Italian artist Marco Grassi. A big blue L-shaped sofa sits in front of it.

Upstairs, there was a reshuffle of sleeping quarters. Daughter Lili seized the chance to move into the attic bedroom, with Michelle and Remi switching over to her old room. “There was a double bedroom next to it, so we got rid of an unwanted built-in cupboard and turned it into a master ensuite,” says Remi. “We also removed the wall between the two zones to create an open-plan effect.”

The ensuite has been fitted out with wood-effect porcelain flooring from Tiles Are Us, along with sanitaryware from Victoria Plumb. The original bathroom has been repurposed as a shower zone. The smallest bedroom has been transformed into a shop for Michelle, who needed a decent space to run her business selling Pjoes, an ethical luxury pyjama brand.

Refurb & rejuvenate

The building work took a total of 10 months, with the family moving out for seven of them. “Luckily, we could rent a flat from a friend whose tenants had just moved out,” says Remi.

“Moving out for seven months was tough for us as a family, not only due to the stress of the build, but also as I was experiencing a big burnout, major surgery and had an episode of depression and

anxiety during this time,” says Michelle. “It was hard feeling we weren’t in our own home.” When they did move back in, however, it was a fresh start. “I was feeling much better and the change to the space in terms of layout and decoration has had a huge impact on how we live and enjoy our home,” says Michelle.

£ TOTAL BUILD COST BREAKDOWN

Elements	Cost m²	Cost %	Total cost
Architect & additional fees	£129	5%	£12,500
CDM health & safety package	£52	2%	£5,000
Project management fees	£278	10%	£27,000
Construction works	£1,650	60%	£160,000
Steel beam	£36	1%	£3,500
Pivot door & windows	£216	8%	£20,988
Heating & plumbing	£31	1%	£3,000
Lighting	£15	>1%	£1,494
Floor & wall tiles	£37	1%	£3,622
Wood flooring	£8	>1%	£750
Sanding & refinishing stairs	£4	>1%	£370
Kitchen units, worktops & appliances	£175	6%	£16,961
Decoration	£77	3%	£7,500
Landscaping	£37	1%	£3,620
Grand total			£266,305

Note: The costs shown here reflect the original prices for materials, labour and services at the time this project was undertaken. As a general guide, inflation in the construction market runs at about 3%-4% per annum.

closer look

Statement glazed entrance...

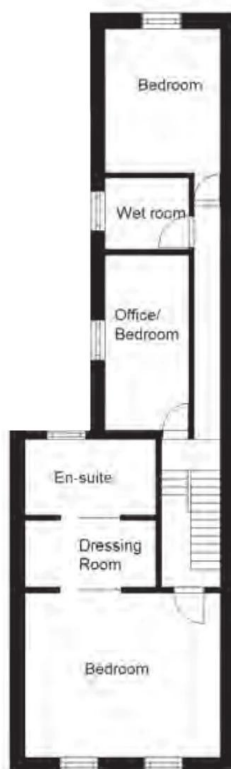
Incorporating a single oversized external door is a fashionable alternative to using classic double doors, delivering a stunning contemporary statement. Hanging the unit on a pivot mechanism can be a clever choice, as it's ideal for heavyweight products such as large steel or hardwood designs. Instead of operating on side hinges, the unit swivels around a pivot located at the top and bottom rails – inset from the edge. This creates a spectacular effect, delivering a wow-factor opening as well as a small gap on the hinge side. With ultra-wide doors, the pivot can even be centrally positioned to create two equal-sized openings.



Glass pivot door



Floor plans

Ground floor**First floor****Second floor**

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For information about Remi & Michelle's businesses: Pjoys www.pjoys.co.uk Remi Rough www.remirough.com





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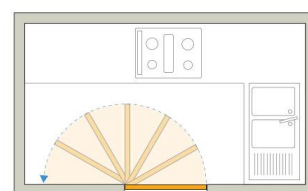


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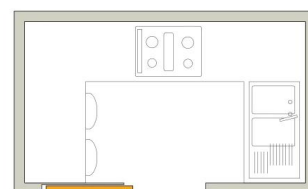
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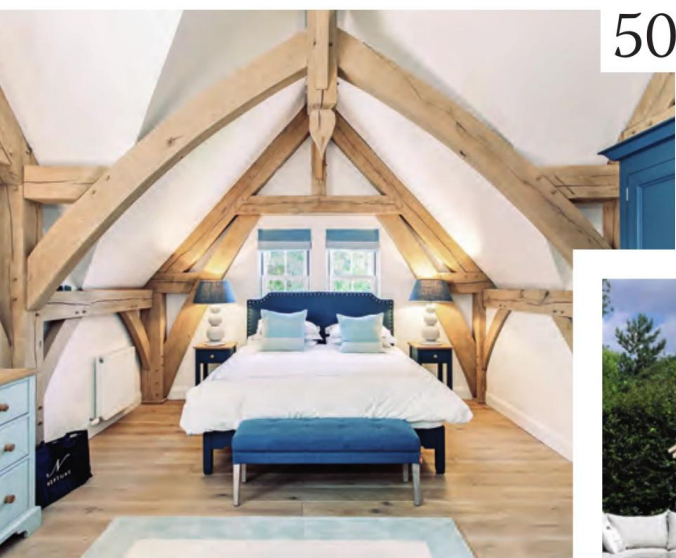
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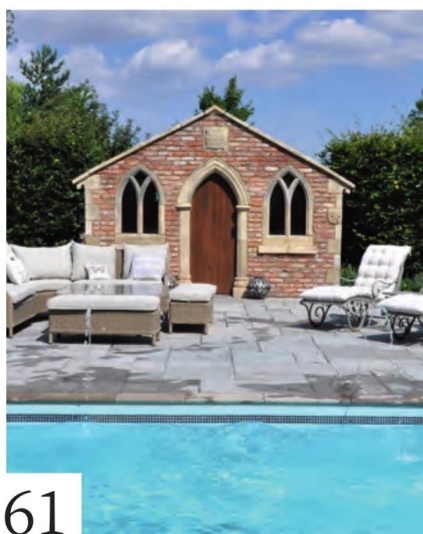
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A beginner's guide to package homes

Entering the world of self building for the first time can be a daunting prospect. **Mike Hardwick** reveals why hiring a package firm could be the ideal route for novices

The list of questions a self-builder has to answer before starting a project can feel endless – from architectural design and planning through to budgeting and project managing – and the process may seem overwhelming to a beginner. However, many of the answers can be found in the form of package

home companies. In this article, I'm going to explain what they are, how they can provide solutions for your project and what makes them such a sensible choice for self-builders, especially those new to the game.

What is a package home company?

Think of it as a one-stop shop solution for your bespoke building project. Typically, these firms will undertake the design process, supply the materials for the scheme and help you source the labour required or provide it themselves.

Timber frame is perhaps the most popular construction method offered, but there are lots of companies that specialise in different materials (see

Above: Build It readers Lee and Amber Wilmot bought a design and shell package from Scandia-Hus for their new self build home. The total building work was completed in nine months. Right: Oakwrights worked with Thomson Hunter Architects to realise the design for this 380m² home in Fife



RICKY FREW

box below for more details). In terms of what services a package company offers, most firms will deliver a bespoke wind and weather-proof shell ready for you to finish using your preferred follow-on trades. Others offer a full turnkey service – managing the build in its entirety and handing over the keys on completion, ready for you to move in (for more on this, see box overleaf).

Which route you choose depends on a number of factors, such as how involved you wish to be during the process, whether you are looking to project manage and if you'd like to be fully in charge of the finishing touches.

Do I need an architect?

One of the key allures of these firms is that they have outstanding designers on their books, so you won't need your own. They will work with you to create a bespoke concept according to your requirements and grant you a copyright license for it once you sign up to buy the materials package. Off-the-shelf plans are available, too.

The more off-site construction there is, the more assurance you'll have that you'll stick to timescale and budget; this Surrey home was built by premanufactured home specialist WeberHaus



CLOSER LOOK: STRUCTURAL OPTIONS

Timber frame Most package companies build with timber but the choice of products – as well as the service level – they offer is expanding. There's a move away from simple softwood studwork kits towards panelised systems involving far more prefabrication. Because they are made under factory conditions, premanufactured panels deliver more of a guarantee of thermal efficiency and airtightness.

A closed-panel system will have the insulation pre-fitted and the openings for windows and doors already cut – but some go further and pre-install the fenestration, external cladding, service runs, internal plasterboard etc. An open-panel system leaves the internal envelope exposed, ready for trades to install insulation and services in situ. Fast on-site build times are another advantage: you don't have to worry about being held back by bad weather or availability of trades. But bear in mind it takes eight to 12 weeks to make the kit in a factory.

Structural insulated panels Related to timber frame, structural insulated panels (SIPs) are lightweight panels of solid polyurethane insulation sandwiched between oriented strand board (OSB). Prefabricated and craned in on site, you get all the benefits of factory-made panels, namely assured energy efficiency and quick build times. The ease of treating structural joints makes it easy to achieve a highly thermally efficient home with a relatively slim wall build-up, and, like timber frame, any external finish is possible. They can also be used to create the roof structure, producing an instant habitable loft space with no trusses to get in the way.

Oak frame For charm and character, little beats exposed oak, with its dramatic beams and vaulted spaces. Frames are made from green (recently felled) oak, cut in a factory and assembled on site. Most suppliers offer a package that includes thermally efficient encapsulation panels to create the walling. So you can have the same level of predictability and cost certainty as with timber frame. This system works well with a package approach, because it requires specialist expertise to get the best out of it.

An oak frame supplier can take you up to shell stage, so you end up with a weathertight structure you can complete yourself. Some offer turnkey solutions (especially if your home is close to their base), including Oakwrights and Carpenter Oak. "As these systems are fabricated in our workshops and are brought to site in a large panel format that easily clip together, the build time

required on-site is reduced," says James Buchanan, Oakwrights' turnkey and custom build manager. "You can even have your windows pre-fitted into your panels in the workshop, further reducing on-site build time. This process will also achieve a dry shell faster, saving you money while driving your build forwards."

Masonry It's possible to get all the benefits of amalgamating the design, materials supply and construction side when tackling a brick and block project, too. The principle of lessening your own risk and transferring it to someone else (for a cost) applies in exactly the same way. It's difficult to find masonry housebuilders that work nationally on a turnkey basis, because it's hard to build up a good network of contractors and project managers. But there are plenty of local firms that specialise in design and build for brick and block.

Insulating concrete formwork ICF is a system of interlocking hollow blocks (usually made from polystyrene), slotted together on site before being filled with concrete, additionally strengthened by steel reinforcing bars. This method gives great thermal performance and airtightness because of the continuous envelope it creates, and it's fast: a single storey can be completed in less than a week. ICF naturally lends itself to packages of structural design plus supply of materials, with the construction side done by a third party – your supplier will usually be able to recommend someone with relevant experience. More companies are emerging that will take your build to shell stage, removing some of the risk for you.

Hybrids It's become common to mix systems within a single project, using different elements to their individual strengths. For instance, lots of panelised timber frame homes have SIPs for the roof and oak frames can use SIPs as the encapsulation system. Another example is that ICF has proved itself the ideal material for basements, because it's strong and can be easily made waterproof with a membrane.

Steel can be used across all build systems to create elements such as long spans (great for large open-plan ground floors) and cantilevers – sought after wow-factor features. Glulam beams can perform the same tasks in timber.

Oak can be combined with timber frame, so that there are characterful post and beam details, but in a more cost-effective package than having the whole structure in green oak.

CASE STUDY: Timber frame dream home by Frame Technologies

Location Herefordshire
House size 160m²
Package type Design, manufacture, supply & erect
Building work took Frame & floor structure 48 hours; full frame complete within seven days
Supplier Frame Technologies

Leanne Player was restricted by geography due to her job as a firefighter, and was struggling to find her dream home in the area. She decided the best option was to build it herself. Looking for a cost-effective, durable solution, Leanne chose Frame Technologies to design and manufacture a high-quality property using the TechVantage E system, a 140mm closed panel timber solution, containing rigid polyurethane insulation.

Frame Technologies was one of the first companies Leanne approached and their prompt response, quick turnaround time and helpful staff made the decision to work with them very easy. Leanne's vision for her dream home included an overhanging roof to form a porch area and large bifold doors to create a spacious

open plan living space. Simon Orrells, managing director of Frame Technologies, says: "We overcame the structural challenges to meet the brief, incorporating a steel wind frame to accommodate the sizable span of the opening."

Another challenge cropped up just days before the timber frame was due to arrive onsite, when Leanne had to postpone the project for two months. Due to her close working relationship with Frame Technologies, changes were easily made to the build programme. Leanne explains: "Frame Technologies understood the delay and put our frame on standby with no hassle at all."

The precision-engineered timber structure with factory-made truss rafter roof was 30% quicker to construct than a home built using traditional methods. Once the build was on site, the entire timber frame was complete within seven days. Thrilled with the project and finished result, Leanne adds: "to live here, enjoying the rewards of the hard graft and decision-making, is the dream."

For more information about Frame Technologies call 01544 267124 or visit www.frametechnologies.co.uk

The first step is to arrange a consultation to establish exactly what you are after and what's possible within the constraints of planning, the plot and your budget. As these

companies have extensive experience seeing through a variety of projects, they'll be able to inject some realism at this stage – useful for first-timers who otherwise could turn flights of fancy into costly mistakes.

Will I have to find a builder?

Selecting the turnkey route offered by firms such as Huf Haus, Hanse Haus and Baufritz means their team of professionals will put together all

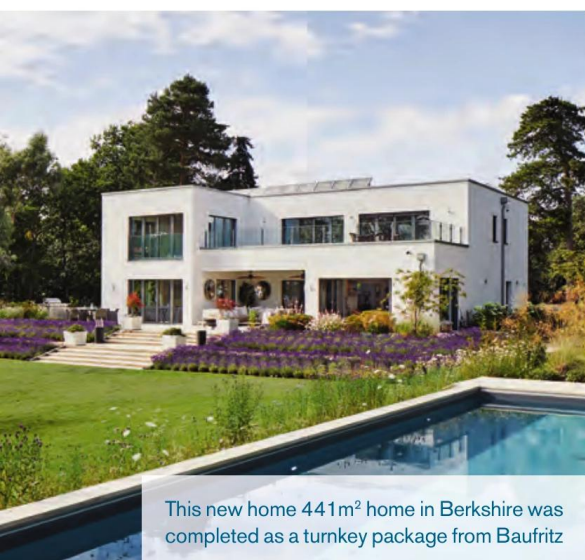
aspects of your home – so you can be completely hands off and let them see the scheme through to completion.

Companies like Potton, on the other hand, have a large database of contractors and project managers, and would be happy to put you in touch with them – as well as assist you with making the final decision on who to appoint.

Who manages the project?

The answer to this question varies according to the exact package chosen and the company you've hired. Potton, for instance, don't project manage as a rule. While you can arrange for them to find the right person for the job, that would have to be negotiated separately. Potton will erect the timber frame on a pre-prepared oversite using their own expert team, while with a supply-only company like ICF Supplies, it will be up to you to choose who keeps tabs on the assembly process – that can be your contractor, a specialist project manager or yourself.

Sourcing the trades and materials yourself can seem like the budget-friendly option, but the onus will be on you if something goes wrong – meaning you would have to



This new 441m² home in Berkshire was completed as a turnkey package from Baufritz

CLOSER LOOK: PACKAGE OPTIONS

Structural design & supply The most basic package is having the structure created according to your architect's drawings, and then having the kit (usually timber) delivered to site. Self builders might opt for this route if bundling the construction side with their main contractor's schedule of works comes out cheaper. But this means that you (or your contractor) will be the one having to sort out any problems that arise.

Shell build These packages consist of the supply and assembly of the superstructure. You'll take your completed house plans to a company, and they'll translate them into something buildable, manufacture the components and erect them on site. You'll be left with a weathertight shell, ready for trades to complete the rest of the works in your chosen materials.

Design & shell build Many companies that started life supplying and erecting timber frames have moved into offering architectural services, too – through the provision of a portfolio of existing designs that can be tweaked to suit, or by providing a completely bespoke service. There can be savings made by

amalgamating these services: package companies often offer the design side at a discounted rate in the hope that you will contract them for the whole project. Another advantage to an in-house route is that the designer will usually know the eventual build system, and be able to tailor the plans around its strengths. Some firms have in-house designers, while others work with a handful of affiliated professionals.

Project-managed & turnkey With this option, a single company will coordinate the design, erection and exterior finishing plus the full interior fit out, including heating, ventilation, electrics, carpentry and decorating, all project-managed on your behalf. You'll still be in full control of the look and finish, but you'll work closely with the company to confirm all the details before work starts on site. Every firm's definition of turnkey is different, so check what you're getting within your contract, and make sure you've budgeted for anything outside it. Things often not included are groundworks, foundations, utilities connections, landscaping and kitchens.



will invariably increase the cost. The standard of finishes also has a dramatic effect on your finances.

Some firms now offer a fixed-price option, which is certainly a boon for first time self builders. One aspect that is usually excluded from their fixed pricing is the foundation works. As ground conditions will vary enormously from site to site and can require expensive engineered solutions, these are usually costed separately or left to the customer to arrange before works start.

Left: Standard designs usually won't cut it when the site is tricky: this house by Welsh Oak Frame is completely bespoke, because of its sloping plot

sort it and bear the cost. So, perhaps it's worth paying extra for someone else to take on this risk, particularly if you've never completed such a mammoth task before.

How much does it cost?

It's fair to say that using a package company is not the cheapest route to self building. However, low cost rarely equates to great value for money – and that's what these specialist businesses are able to add in spades.

Due to their extensive experience, design and supply firms have a very strong grasp on budgets and they are able to offer structural services at competitive rates. Bear in mind, however, that with turnkey routes, in particular, you are transferring the risk of the scheme to them, which

clients. You will usually have a member of staff allocated as your mentor during the project, who you can contact for advice on things that happen during your build.

In my time working with a package company, I took calls and emails at all hours of the day. Some were simply after reassurance about the process, while others threw complete curveballs that had us running for answers.

There are certainly no daft questions – you either know or you don't in this game – and for the beginner it is crucial to have someone skilled by their side.

Starting with little or no knowledge, soon you'll gain an understanding of all the key stages and trades involved, which should arm you for future projects. One phone call, email or piece of advice could save you a fortune.

CONTACTS

Baufritz 01223 235632 www.baufritz.com **Border Oak** 01568 708752 www.borderoak.com **English Brothers** 01945 427985 www.eb-bespoke.co.uk
Facit Homes 020 3034 0720 www.facit-homes.com **Frame Technologies** 01544 267124 www.frame-technologies.co.uk **Hanse Haus** 0800 302 9220
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CASE STUDY: Adaptable & sustainable home by Border Oak

Location Herefordshire **House size** 480m² **Build cost** £885,000 **Package type** Design, build & project management
Building work took 50 weeks **Supplier** Border Oak

With their children growing up, Merry and Ben Albright knew they needed more space – even though it meant leaving the self built cottage they loved. With Merry working mostly from home, they wanted to tailor the house to suit family life now and in the future. “I enjoy the creative process of designing and making a home,” she says. “So, 10 years after our cottage build, we did it all again.”

The couple had taken on a lot of work themselves on that previous scheme, and readily admit it was a lot harder than they'd expected. With children and more pressurised jobs to boot, they didn't feel they could project manage or provide any labour this time around. “We didn't have the time or skill set, so decided to appoint a professional team who could deliver our dream on time to a fixed budget,” says Merry. As both she and Ben work at Border Oak, the company was a natural fit. “We genuinely love what we create, so it was an easy decision,” says Merry. “Choosing the type and style of house, when surrounded by architects producing amazing bespoke designs every day, was the hard bit!”

The main thrust of the brief was for a sustainable, modern vernacular home that would stand the test of time both visually and in terms of its construction. It would also need to fit within a few planning restrictions, suit the six-acre site on the edge of a medieval village and be capable of adapting as the Albrights' family and working lives changed. “We asked for large, bright main rooms and lots of views out of the house from various angles,” says Merry. “We worked closely with the Border Oak architectural design team to refine every element – and the planners approved the scheme without amendment.”

The couple appointed a Border Oak project manager (PM) to keep the works on track. “He was great at ensuring we made decisions and placed orders on time, so that none of the crews were waiting around for items to arrive,” says Merry. “PMs have

such good contacts that if they need someone or something urgently, they can put in a call and it gets done. We really would have struggled to build a house this complex without ours, as well as the technical drawing team and quantity team back in the office. The Border Oak builders were a joy, too. It's hard to overstress how many people it takes to create a home!”

One of the biggest challenges stemmed from a brook running along the site's perimeter. To avoid flood risk, the couple had to agree the exact location of the build with the planners, as well as raise the structure up out of the ground – which they felt could look unnatural. “The architectural team helped us get around that by designing a courtyard at the centre of the house. This is at the same level as the ground floor, with the slope beyond gradually tapered so it's indistinguishable,” says Merry. “It's really successful and you wouldn't know from looking that we've raised the floor level.”

The pair are delighted with the results. “I love all the craftsmanship and detail – from the oak frame, which includes motifs that mean a lot to us, such as the arched door head copied from my family home, through to the handmade blacksmith latches and bespoke staircase,” says Merry. “The flow of the house works so well, and we love the way the light falls and changes through the day. And it's rewarding to know that, although we have a large home, it's very energy efficient, built from natural and high-performance materials and will last at least half a millennium.”



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Choosing Windows

THE ULTIMATE GUIDE

Looking for the best glazing to fit your next project? Our in-depth advice will help you navigate the key design considerations and get the installation right

Above: Many manufacturers offer matching windows and external doors, as with Sieger's slim casement range. Opposite: A mix of fixed and opening windows from Architectural Bronze Casements blends beautifully with this barn's black cladding

Whether you're self building or renovating, the windows will form a huge part of your home's finished character. Aesthetics and budget are bound to give you a big steer, and there will be a lot of to-ing and fro-ing involved to get the balance right. But fenestration is functional, too, and needs to deliver on security, ventilation, provision of daylight and much more besides.

Design basics

The first step when selecting your glazing is to identify the overall look

you're after: is yours a heritage home or period-inspired new build project? If so, then a traditional style will work best – with the possible exception of adding a contemporary extension to an older house – and you may well be able to find inspiration in surrounding homes and the historic context of your property. Do you want leaded lights in those cottage casements, for instance? Should your new sash windows be in a Georgian six-over-six pane arrangement or feature larger glass panels for a Victorian or Edwardian look? Once you've got the basics down, you can begin to flesh

out aspects such as materials, glazing bar styles and decorative details like ironmongery.

If you're building in a more contemporary style, that's likely to be reflected in your choice of frame materials and opening configurations. You may be looking for products that deliver maximum glass with a minimal framing to let in as much natural light as possible and deliver the best views out. Or you might have your sights set on using the frames to add architectural interest – could a pop of colour make the statement you're after; or do you want timber windows to bring a touch of warmth and texture to white-washed interiors?

Much of this outline information will be established at the initial design stages – but it's amazing how quickly you need to start developing this into something resembling a formal spec, as the windows will impact on a host of follow-on decisions.

Thankfully, most suppliers will be keen to work with you and your architect as early as possible. This way, they can help you to identify

DO I NEED PLANNING PERMISSION?

On a self build project, the basic window design and spec will be developed as part of the overall planning approval. You might find that the planners push you towards a particular material to blend with the surround architecture, or that your approval notice includes a condition that the units meet or exceed a specific energy performance standard. Fundamentally, though, you're in control.

With renovations, replacing existing windows for models of the same size (or upgrading to double glazing) can be done under permitted development (PD) rights – but anything above and beyond that is likely to need a formal planning application. In some cases, you'll always need consent – for instance when dealing with listed buildings or conservation areas. Check in with your local council if you're unsure whether PD rights apply.

details such as maximum panel sizes, performance criteria, threshold details, how far the units should be set back into the wall, mission-critical sightlines (how the framing matches up across storeys etc) and establish what's achievable within your budget.

Frame materials

A wealth of frame options is available to suit your project goals. Some are lower-maintenance, while others major on sustainability, slim profiles or affordability. Here are the main pros and cons of the key players:

● **Timber** A natural choice, offering bags of character and warmth – and not just visually. Wood is innately more insulating than other common frame materials, so good-quality products will deliver excellent energy efficiency performance. Most are made in cost-effective engineered timber, which offers good strength in a slim, elegant profile. A huge array of paints and stains are available, usually factory-applied and typically covered by manufacturer's warranties of five years or more (so you won't have to think about maintenance for a good few years). What's more, using wood from sustainable sources can boost your eco credentials, while the fact these units can be easily repaired ensures a long service life.

● **Aluminium** Probably the best known of the metal window options, aluminium is a real favourite for contemporary homes. Its biggest selling point is its strength and stability, which enables super-thin

sightlines to maximise views and natural light. The frames can be powder coated in any colour, so you're not limited to the noughties' favourite of anthracite grey.

Modern metal windows feature an insulated thermal break to achieve low U-values (a measure of thermal performance, where lower numbers indicate better performance). On top of that, aluminium frames are virtually maintenance free, highly durable, corrosion-resistant and fully recyclable at the end of their lifespan. Prices are generally comparable with high-end timber units.

● **Plastic** PVCu has well and truly shed its bad-boy image, with modern products almost unrecognisable compared to the poor examples widely installed in the 1980s and 90s. Today's plastic windows retain that enticing affordable price tag while also offering benefits such as good U-values, impressive colourfast finishes and slim frames (although not quite as thin as timber or aluminium) that can even look the part in period properties. But do pick wisely: look to market leaders who offer robust, secure PVCu windows with decent guarantees, and avoid the cheaper end of the spectrum.

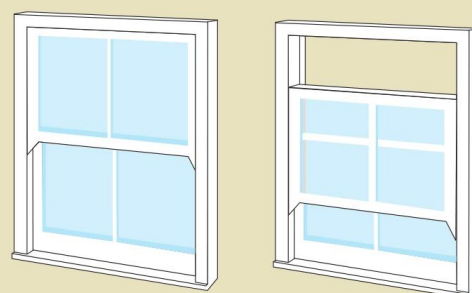
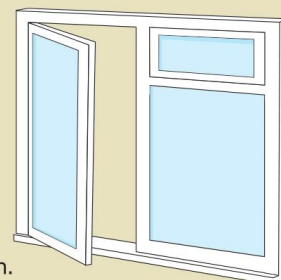
● **Composite alu-clad** These windows typically feature an internal timber frame sheathed in a durable, low-maintenance exterior finish (such as aluminium). They're at the top end in terms of price, but offer an appealing combination of warmth and character internally, excellent

OPENING CONFIGURATIONS

Once you've settled on the overall style of your windows, it's time to think about functionality and how you want to interact with them on a day-to-day basis. Here's a quick look at the main contenders:

Casement

The quintessential side-hinged window is a cost-effective solution, with a choice of clean-looking flush designs and rebated models that provide better weather protection. Often paired with small top lights to offer flexible secure ventilation.

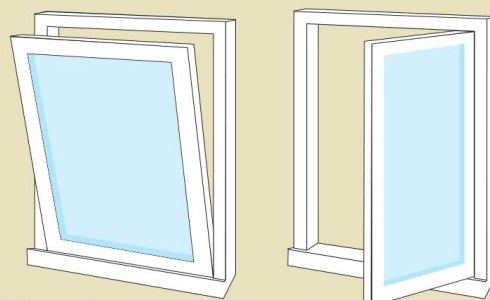


Sliding sash

Slim, elegant and synonymous with Georgian and Victorian architecture – as well as being popular for many heritage-style new builds. Timber is the go-to material, but some modern PVCu designs are getting very close in terms of sightlines

Top hung & top guided

With these designs, the hinge is at (or near) the top and the handle at the bottom – providing good access for high-level windows or where you need to reach across the likes of kitchen worksurfaces. They're also more effective at blocking out rain while open.



Tilt and turn

This style can operate as an inward-opening side-hung window, or at the turn of a handle switch to a bottom-hung tilting configuration for secure ventilation. In turn mode, you get all the benefits of a casement but with easy access for cleaning.

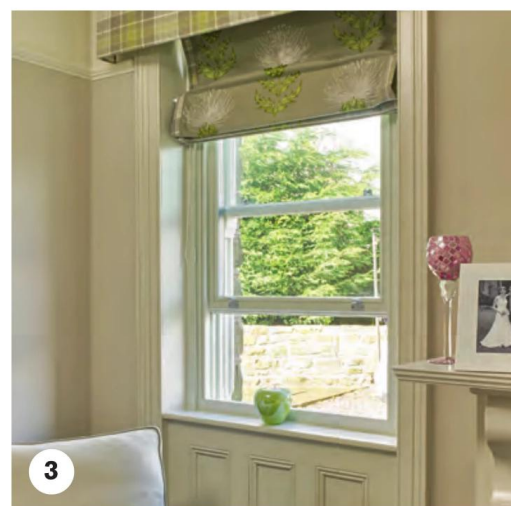




1 Contemporary fenestration can work well alongside traditional materials, as shown by this Velfac project.

2 Kloeber provided the bespoke glazing and entrance doors for this renovation and extension project, complete with minimal framing to achieve a sleek modern look.

3 Green Building Store offers a range of slimline, high-performance triple glazed sash windows ideal for traditional-style new build homes



energy performance and a sleek weatherproof cladding on the outer face. Alu-clad PVCu designs are also starting to gain traction in the UK.

□ **Other metals** If you're after a distinctive, statement-making finish and willing to pay a premium, you might consider the likes of steel or bronze for your bespoke home project. Elegant steel designs where the viewing pane is broken up with horizontal glazing bars are particularly en vogue at the moment; although you can get a similar look for less from some aluminium suppliers.

Energy efficiency

The overwhelming majority of windows are now supplied fully

factory-glazed, pre-finished and completely sealed, which provides the reassurance of quality control when it comes to achieving high-performance units. The thermal efficiency of windows is measured by their U-value, with lower numbers indicating better heat retention. As a rough guide, a single-glazed window might achieve a U-value of around $5.0 \text{ W/m}^2\text{K}$, whereas most modern double glazing hits around $1.4\text{--}1.2 \text{ W/m}^2\text{K}$. For context, a typical new wall insulated to a decent spec might achieve around $0.20\text{--}0.14 \text{ W/m}^2\text{K}$.

There's a raft of choices when it comes to glass specification – including the use of special coatings and gas-filled cavities to improve insulation. But the first question most

self builders and renovators will want to tackle is whether triple glazing (3G) is worth the investment compared to double (2G). Thanks to the extra pane and airgap, there's no doubt that 3G offers better U-values (down to as low as $0.6 \text{ W/m}^2\text{K}$). As a rule, this will translate into better comfort levels in winter, with the innermost pane staying warmer than in a double glazed unit, minimising issues with draughts and condensation.

Heat retention isn't everything, however. There's an argument that few UK homes actually need triple glazing to achieve a good standard of performance, for example. What's more, it's easier to maximise solar gain – free heat from the sun – through double glazing (log on to www.self-build.co.uk/solar-gain for more on this). The thickness of a 3G unit also makes it difficult to incorporate into heritage projects. All of these elements, and more, must be factored in by your design team at the early stages if you're to stand a chance of identifying whether triple glazing is worth the 10-15% additional investment for your home.

DID YOU KNOW?

Triple glazing is often lauded for its ability to enhance sound deadening in windows. But while it can make a difference, the improvement over double glazing isn't always as marked as you might think. This is a complex area, especially when you start to add optional extras such as specialist acoustic glass into the mix. So, if you live near a busy road or simply want more peace and quiet, be sure to speak to your supplier about how you can achieve the level of acoustic performance you're after.



These handsome original sash windows have been sensitively restored by Ventrolla

HERITAGE WINDOWS: REPAIR OR REPLACE?

Original fenestration plays a vital role in establishing the authentic appeal of a period home – in fact, if you live in an historic house, it's likely to have been one of the chief design features that attracted you to it in the first place. With that in mind, you won't be surprised to learn that retaining the old windows, wherever possible, is the best way to preserve a building's character and value.

The trick lies in identifying whether the existing units are salvageable: and you may be surprised to learn that the answer is almost always yes. Old windows were made with high-quality, slow-grown timber that's far more durable than a lot of standard modern wood. What's more, even apparently rotting units can often be cost-effectively repaired by a specialist joiner – who will probably also be able to give them a draught proofing overhaul at the same time.

If the windows are beyond repair, then in general it's best to go for like-for-like replacements that are as accurate to the originals as your budget will allow. Bear in mind that you'll need specific consent for such works if your property is in a conservation area or you live in a listed building.

Find out more at www.self-build.co.uk/windows-repair-or-replace

Even the best window will only perform as expected if it's properly fitted by an experienced crew. So, consider working with companies who operate on a supply-and-install basis, so that you have a single point of contact to deal with and you know your site crew are experienced with the products they're fitting.

Security

One area of window specification that's come into sharper focus in recent years is security, particularly since the government introduced Part Q of the Building Regulations in 2015.

This standard, which applies in England and Wales, sets out the basic requirements for how any easily accessible doors and windows should resist physical attack by burglars. Scotland's guidance is detailed in Building Standard 4.13.

Fundamentally, any basement, ground floor or otherwise easily accessible window (including rooflights) fitted into new homes must be designed, manufactured and installed to meet the British Standard PAS 24 (or an equivalent accepted standard). That includes the glass, frame, lock and how the unit is fixed into place.

One way a manufacturer can demonstrate its products comply is to gain the police-approved Secured by Design accreditation – although there are other accepted certifications, too. If security is a paramount concern on your project, be sure to inspect such documentation thoroughly and verify that the approval applies to the exact product you're installing.

Some suppliers have responded to the regs by upgrading all their products to be PAS 24-compliant, regardless of where they're installed in the building. Further upgrades are available, such as using laminated glass (which is more difficult to break than the standard toughened glass).

Placing your order

Windows are a major investment, and will likely represent a hefty chunk of your project budget – so you should always see the products in person before ordering.

So, get down to your supplier's showroom and ask them to give a comprehensive demonstration of the units you're considering. Take this opportunity to find out more about the ordering and installation process (do they use in-house teams or subcontract the work, for instance?). And don't be afraid to ask to see product certifications so you can satisfy yourself everything's up to scratch.

When it comes to developing and placing a major order, you'll need to work alongside your architect/designer and window company to draw up a full window schedule. This should detail elements such as the planned size of each opening, performance targets and the frame material you want to use (if known).

This basic document will then need to be fleshed out in full. There will be questions to answer on glazing spec, opening configurations, ironmongery styles, locking requirements, frame finishes (do you want a dual-colour design, for a different effect inside and out?), reveal depths and more.



Most window manufacturers work to a lead time of around six to 12 weeks for standard made-to-measure products – but check in with the supplier on this, so you can factor their timings into your build schedule. It may be possible to order some windows based on the structural drawings and technical package, but complex units will probably need to be measured on site once the builders have created the openings.

Above: This extension project designed by Mulroy Architects features a frameless glass-to-glass IDS300 aluminium corner window from IDSsystems, cleverly set against a red render backdrop

CONTACTS

Architectural Bronze Casements 01476 249494 www.bronzecasements.com **Green Building Store** 01484 461705 www.greenbuildingstore.co.uk **IdealCombi** 01582 869010 www.idealcombi.com **IDSsystems** 01603 408804 www.idssystem.co.uk **Internorm** www.internorm.com **Kloeber** 01487 740044 www.kloeber.co.uk **Norrskén** 01202 632777 www.norrskén.co.uk **Sieger Systems** 01494 722882 www.siegersystems.co.uk **Velfac** 01536 313552 www.velfac.co.uk **Ventrolla** 080 8301 9668 www.ventrolla.co.uk

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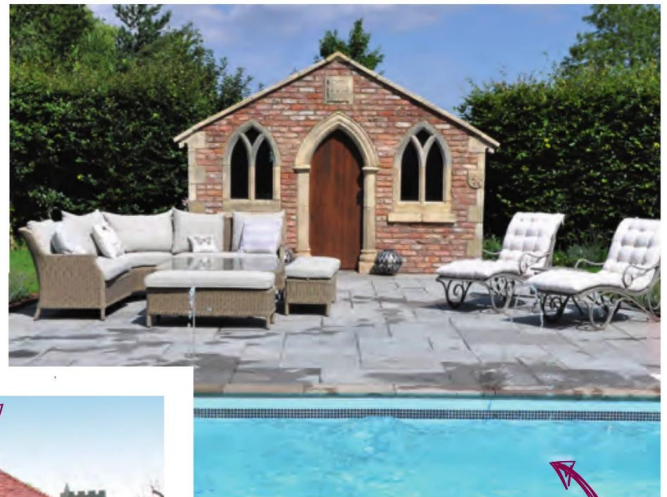
DESIGN IDEAS

Outbuildings & garden rooms

Be inspired by this selection of ideas, from characterful oak garages through to vamped up garden sheds for home offices



A unique oak frame pavilion design and build such as this provides the perfect setting to relax in or entertain friends and family, whatever the weather. **Oakwrights 01432 353353 www.oakwrights.co.uk**



A pool room is the height of home luxury. This bespoke Gothic stone design brings a striking and heritage-style statement to this garden. **Redwood Stone Folly & Garden 01749 677777 www.redwoodstone.co.uk**

A garage is a must-have for many homeowners and oak buildings offer a traditional, characterful aesthetic. This charming design features a double bay garage and covered log store. **Oak Designs Co 01273 400411 www.oak-designs.co.uk**



Turn your shed into an extra living space by injecting some design flair.

This shed has benefited from a fresh lick of paint from the Cuprinol Garden Shades range, which is suitable for wood, terracotta, brick and stone – great for fences, too. **Cuprinol 01604 752424 www.cuprinol.co.uk**



Able to close up or be open to the garden, this versatile aluminium pergola has automatic windproof sun screens and glass sliding doors. The design can be freestanding or fitted to existing walls. **Garden House Design 01903 774774 www.gardenhousedesign.co.uk**



Rotating cylindrical garden pods are a popular design, offering a futuristic look and stylish place to enjoy the outdoors from. This lounge can seat up to seven people. **Cuckooland 01305 231231 www.cuckooland.com**

Home extension cost calculator



Want to add space and value to your home? Our ready reckoner, powered by the Build It Estimating Service, will help you gauge what size and style of extension will deliver the best result for your budget

Whenever you take on a major home building project such as an extension, one of the first things you'll want to figure out is just how much it's likely to cost. Every build is different, of course, so the answer will depend on a host of considerations – including the size, number of storeys, type of roof structure, the quality of materials and finishes you want to specify, location and more.

The cost table and accompanying project advice in this article, prepared by the experts at the Build It Estimating Service, give you an insight into what you need to know when planning your extension budget. To help start your scheme off on the right foot, we've looked at five popular routes to adding space and value:

- ▣ Single storey flat roof extension
- ▣ Single storey lean-to extension
- ▣ Two storey flat roof extension
- ▣ Two storey apex roof extension
- ▣ Loft conversion with dormer

All of these routes hold the potential to transform your home and lifestyle. To make it easy for you to compare costs, we've focussed on 20m² of extra floorplan for the single storey extension and loft conversion schemes, and 40m² for the double-storey projects.

One thing you'll notice is that, while the two-storey additions offer twice as much living space, you're netting that extra floor area for much less than double the price. In other words, this route can give you fantastic value for money. Ultimately, however, exactly which option suits you will depend on your budget, ceiling values in the area and what type of extension fits your site and needs.

It's worth bearing in mind that many extensions can be completed under permitted development rights – head to www.self-build.co.uk/pd to find out whether your scheme counts. Larger projects or those in protected areas will need formal planning permission.

QUICK GUIDE COST VARIATIONS BY REGION

Your exact extension costs will vary depending on where you're planning to build. You can expect to pay more in labour if you're in a city centre or similarly high-value area, for instance – but the financial returns may well be greater. To get a clear picture, the best option is to source project-specific quotes from local builders and trades. But here's a rough guide to regional variations:

SOUTH WEST x102%

SCOTLAND x105%

SOUTH EAST x104%

REST OF UK x100%

ABOUT THE BUILD IT ESTIMATING SERVICE



The Build It Estimating Service offers a detailed and user-friendly way to get an accurate indicative cost for your self build or home extension project. This tailored service enables you to take full control of your budget by providing you with a thorough report, including live material and labour costs – so you can calculate your budget down to the last roof tile and check whether your builder's quotes are fair.

Find out more and submit your plans for review at www.buildit.co.uk/estimate

HOW BUILD ROUTE AFFECTS COSTS

Build Route A: Main contractor – standard option

The figures in our benchmark cost table are based on a main contractor route, where a general building firm manages the project to completion on your behalf, using a standard contract. You can bring prices down by taking on more of the responsibility yourself. Here are typical indicative savings for the most popular build routes:

Build Route B: Builder plus subcontractors – potential saving 10%

You could potentially reduce build costs by circa 10% by hiring a main contractor to complete the structure to watertight stage. At this point you take over from the main contractor as a project manager and the remaining work is undertaken by subcontractors (individual trades), whom you manage through to project completion.

Build Route C: Self project managed – potential saving 20%

By project managing the entire scheme yourself, including the main structural phase, you could knock up to 20% off total build costs. This route doesn't involve undertaking any construction works yourself, but rather fully managing the subcontractors on a DIY basis. So you are both client and building contractor, hiring trades and supplying plant, machinery, tools and most of the materials. You will need to be confident that you can keep the works on schedule to meet your budget.

Build Route D: DIY – potential saving 25%

Undertaking a large proportion of the build on a DIY basis could enable you to reduce project costs by as much as a quarter. This route assumes you'll use trades for the key structural and infrastructure works, but will carry out much of the second fix tasks, landscaping, general labouring, decorating, tiling etc yourself. You will also be project manager, buying most of the materials and supplying all tools, plant, scaffold etc.



Above: This kitchen extension features bifold doors, frameless picture windows and Velux (www.velux.co.uk) Integra white-painted rooflights



Above: This two-storey, 134m² extension in Kent was designed by Richard Gill Architects (www.richardgillarchitects.co.uk)

How to use the extension cost chart

We've put together a breakdown of benchmark costs for popular types of extension project. The prices in the table are indicative of what you can expect to pay to engage a main contractor to complete the works for each of our five extension scenarios. It is possible to reduce costs by undertaking some of the project management or building works yourself – check out the box (above) for a quick guide.

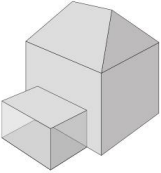
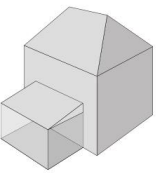
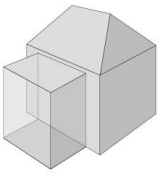
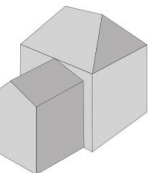
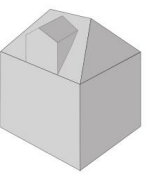
Most home extensions in the UK are built with cost-effective cavity wall masonry, which is familiar to every trade out there, so our benchmark figures relate to this construction method. We've assumed a standard quality and performance level for a bespoke home project (better than Building Regulations, but not high-end).

These figures include allowances for all the infrastructure required for each project type – including electric circuits, hot and cold water supplies and extending the central heating system. They also factor

in a basic level of fit-out, such as second fix electrics (switches, sockets etc), plasterboard and final decoration.

A number of big-ticket fit-out items are omitted from the table, including floor finishes, sanitaryware, kitchen fit-out and landscaping. This is simply because they represent massive variables depending on your design tastes and specification choices. For instance, home extenders could spend anything from £5,000 to £50,000+ on a new kitchen. Other possible cost uplifts include clearing the site and any requirement to move drainage or other services.

Design fees would be in addition to the build costs quoted below. These depend on the scale and nature of your project, and whether you're using an architect to draw up and submit your plans. Other potential professional fees that may apply include surveys, structural engineering, party wall agreements and project insurance.

	 Single storey extension with flat roof	 Single storey extension with lean to roof	 Two storey extension with flat roof	 Two storey extension with apex roof	 Loft conversion with dormer
Extension size (floor area)	20m²	20m²	40m²	40m²	20m²
Materials cost	£12,844	£14,720	£19,734	£22,632	£17,160
Labour cost	£13,858	£14,720	£22,264	£23,736	£17,550
Plant cost	£6,422	£6,624	£7,084	£7,176	£1,950
Scaffold & subcontract cost	£676	£736	£1,518	£1,656	£2,340
Total cost (excl. VAT)	£33,800	£36,800	£50,600	£55,200	£39,000
Cost per m²	£1,690	£1,840	£1,265	£1,380	£1,950
Total cost (incl. VAT)	£40,560	£44,160	£60,720	£66,240	£46,800

Wow-factor extensions

Marshall Architects

have transformed this Hampshire cottage with a striking double-storey extension. Large glazed elements allow for a seamless connection with the garden (www.marshallarchitects.co.uk)

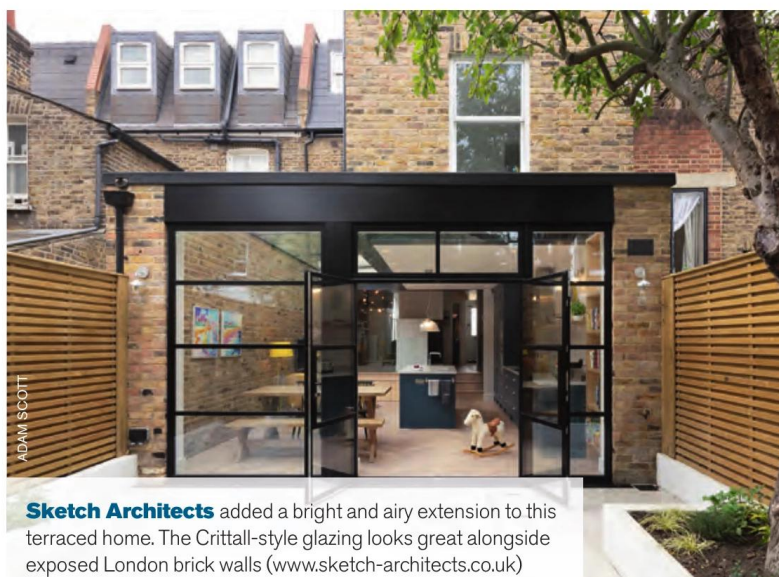
Be inspired by this diverse range of projects, which demonstrate the many possibilities of adding space in a variety of architectural styles



MEGAN TAYLOR

Nimtim Architects utilised cork walls on both the inside and outside of this extension. It makes a modern statement beside pink window frames and a fresh white ceiling (www.nimtim.co.uk)

David Blaikie Architects have enhanced this semi-detached property in Edinburgh thanks to a breathtaking glazed apex addition (www.davidblaikiearchitects.com)



Sketch Architects added a bright and airy extension to this terraced home. The Crittall-style glazing looks great alongside exposed London brick walls (www.sketch-architects.co.uk)



Design Storey have mirrored the Arts & Crafts theme from this Cotswolds home in its new addition, but with a contemporary twist (www.design-storey.co.uk)



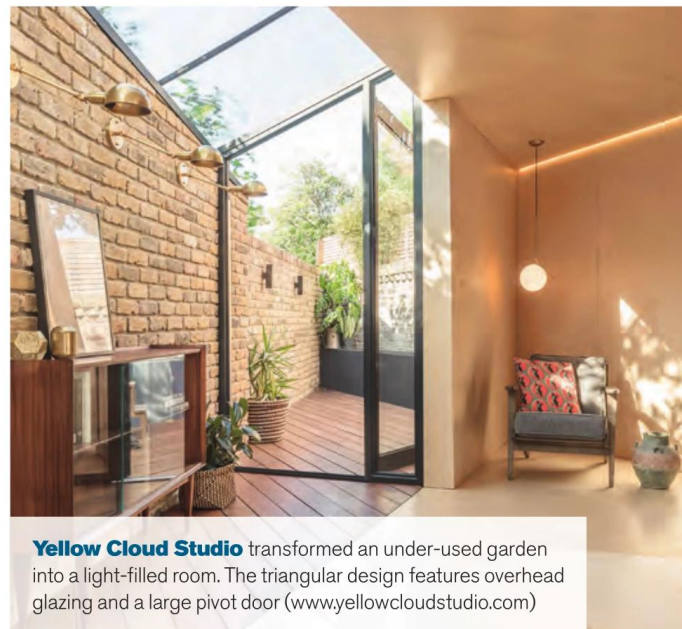
Kin Architects revamped this end-of-terrace property with an oak and glass addition. The new structure sits on top of a brick plinth to work with the sloping landscape of the garden (www.kinarchitects.co)



OB Architecture were given the task of extending a grade II listed home in a conservation area. The new addition is a lovely bright space and links to the garden thanks to bifolds and rooflights (www.obarchitecture.co.uk)



Welsh Oak Frame have added an oak frame extension to this period property. The material selection creates a space that's full of charm and character (www.welshoakframe.com)



Yellow Cloud Studio transformed an under-used garden into a light-filled room. The triangular design features overhead glazing and a large pivot door (www.yellowcloudstudio.com)



Arkle Boyce helped Build It readers Sarah and Mark Stower to turn a conventional 1960s bungalow into a modern home. The single-storey extension has completely reworked the internal layout to perfectly suit family life (www.arkleboyce.co.uk)



Fraher Architects used Douglas fir cladding and a wildflower roof to create a natural feel for this extension. A 4m-tall glazed door connects with the garden, producing a striking architectural statement (www.fraher.co)



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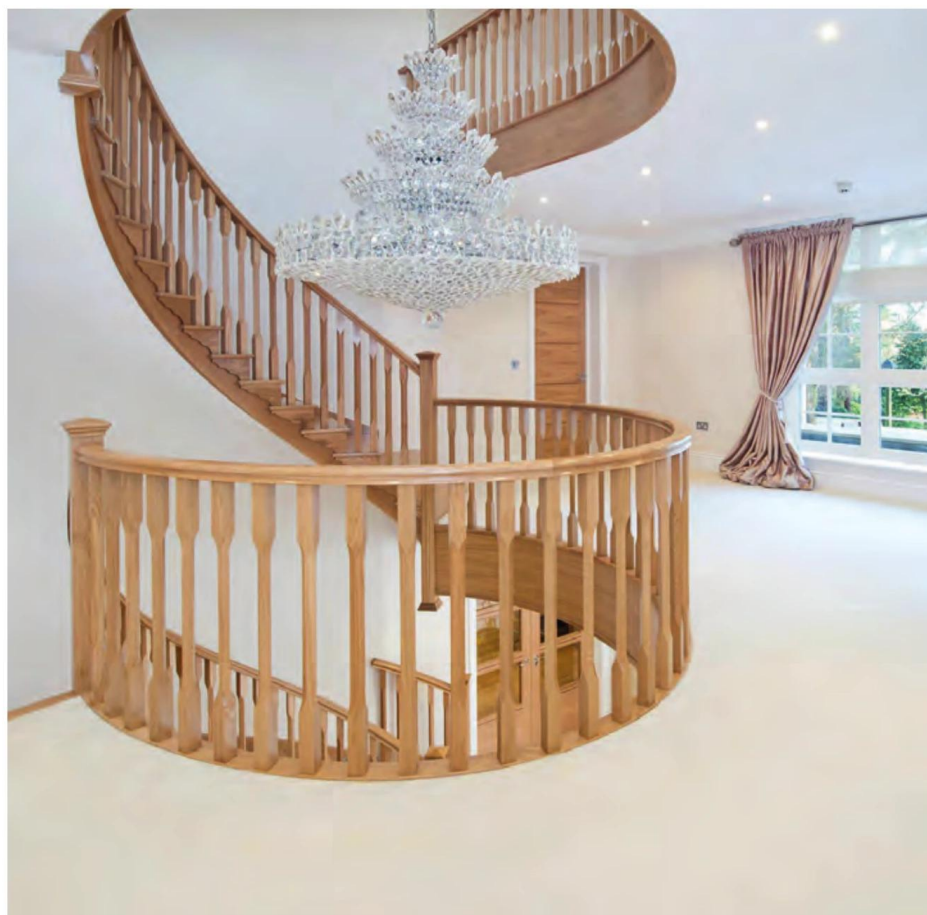
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Protecting your project during the Coronavirus crisis

Facing difficulties or long delays on your build? Self-Build Zone's **Paul Kempton** shares his tips on how to secure your scheme both physically and financially

Construction always has a key role to play in leading us out of recession and other difficult times. But even with the government encouraging trades to go back to work from mid-May, it's still a tough task to coordinate suppliers and installers at the moment. Not to mention there might be various other reasons you can't move your build forward. So if nobody's on site, how do you keep your project safe and secure?

Get covered

There's little issue with leaving blank plots unattended: as long as you have at least public liability insurance on the site and have put up suitable perimeter security, you'll be covered. For those with a project underway and no trades on site, a good insurance policy should give some protection if something goes wrong. But even then, you still need to be aware that insurers will expect you to demonstrate a duty of care to them.

If you're undertaking or hope to start a renovation or extension project, there are two key aspects for which you need to ensure you have the correct cover: (a) the existing buildings being altered or extended; and (b) the new works. Both can be covered by a bespoke site insurance policy, but some policies may restrict cover on the existing dwelling.

If you're spending a substantial sum on your project, you might also want to arrange a 10-year structural warranty on the new works. You may need this for future buyers, as their lender could ask for evidence the work is protected. With the economic climate we're likely to be entering, this could become very relevant, as lenders will want to take more of a belt-and-braces approach, with access to finance becoming harder and loan-to-values changing.

Securing a live build

Prevention is always better than cure. So, if your project is already underway but you can't move forward, the first

step is to secure the site and everything on it. Or, better still, where possible take items away and store them somewhere safe (along with returning hired tools and plant). In times of hardship and unemployment, there are those who would do anything to earn some cash.

Ensure entrances and openings are made secure, site containers locked and alarms set. Remove ladders or padlock them down to something immovable. To minimise any risk of arson, take away any fuel lying around, too. And if you don't live nearby (ie within earshot) then tell the police that you have an unattended building site.

If something does happen, it may take longer than usual to get claims settled, as fewer loss adjusters are working. The interrupted supply chain will also make it more difficult to source replacement products.

With the current restrictions on movement and distancing rules, you need to think ahead – particularly when it comes to things like organising site inspections for building control (for which you are responsible) or warranty technical audits.

Communication is crucial. Do you have all the information you need to achieve completion from a building control point of view? You need to know lead-in times for inspections, for example, and details of how surveys will be carried out.

Then there are the technical audit requirements for warranties. Surveyors have to be careful to make sure that they have adequate insurance to cover their professional risks when carrying out technical audit work. Any changes in working practices should be agreed by all parties concerned.

Dealing with long delays

Site insurance policies will probably have a clause regarding cessation of works, making it your responsibility to notify your insurer if no works are being undertaken for a prolonged period



(usually 60 days). This may affect the amount and scope of cover insurers are prepared to grant, given the site is not being checked or worked on. Read over your policy and make sure you get in touch in good time.

If your project is under construction, but not yet wind and watertight, and will now be left vacant for a long time, your warranty provider will want to know. You or they may wish to conduct an additional survey before work restarts, to ensure the project has not been prejudiced by, say, having open wall cavities during periods of inclement weather. It's worth keeping digitally dated photographic records, ideally before and after lockdown.

Lenders and warranty providers often require you to declare your build timings as part of your agreement. So, you could run into issues if delays are prolonged. Check through the details you supplied and, should there be an issue, get in touch as early as possible.

Finally, keep detailed diary notes and photos of progress and stoppages, as well as what materials etc are on site, just in case. It all helps if there are problems further down the line.

Paul Kempton is managing director of insurance and warranty specialist Self-Build Zone. He has many years' experience looking after projects of all sizes, including high net worth and high risk clients where security is paramount. **Call 0345 230 9874 or visit www.selfbuildzone.com to find out more.**

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HEATING OPTIONS

What's the best fit for your home?



Boilers, heat pumps, solar thermal, hybrid setups – which will be the right fit for your self build project? **Nigel Griffiths** helps you set the criteria that matter most to you

Above: The Greenstar Lifestyle range from Worcester (www.worcester-bosch.co.uk) marries sleek looks with impressive performance, delivering the highest hot water flow rate of any wall-hung combi boiler on the market. Opposite: The BioWIN2 Touch range of wood pellet boilers from Windhager (www.windhager.co.uk) offer a compact biomass solution, taking up less than 1.5m² of space

How you choose to heat your new self build home is a major decision. This is about more than simply keeping cosy in winter: you'll no doubt want a system that performs efficiently, keeps bills low and is easy to maintain in the future. Exactly which option best suits your project will depend on a number of critical factors, including:

- ❑ Predicted space heating demand in your home.
- ❑ How easy it is to connect to mains gas.
- ❑ What type of distribution system you plan to use (eg radiators or underfloor heating).
- ❑ Overheating risk and the cooling requirements in your new property.
- ❑ The availability of solid fuels (such as logs) and your ability to handle them.
- ❑ Provision of domestic hot water.
- ❑ Your priorities, eg low running costs, affordable capital costs (for the setup and installation) or minimising CO₂ emissions.

Your final decision will most likely come back to these key questions and what kind of balance you want to strike between each of them. So, in this article, I'm going to

assess each of the main options in detail – from boilers through to heat pumps, solar thermal and more.

Gas boilers

There's a government proposal to phase out gas heating in new dwellings from 2025 (and by implication switch over to heat pumps in most cases). To my mind, this only makes sense if we stop using gas to generate electricity. I've recently run the idea through its paces at www.self-build.co.uk/phasing-out-gas.

Gas is one of the most affordable forms of heating. What's more, it requires no effort to use, and is ideal for producing the higher temperatures needed for domestic hot water. Modern boilers work fine with both radiant and underfloor heat distribution, as well as warm air distribution systems. At current grid carbon intensity factors and depending on the building, gas is somewhat higher in carbon emissions per kWh (kilowatt-hour) of heat supplied than heat pumps or biomass, but lower than both oil and electrical resistance heating.

The central point to remember here is that, in a new home, you'll be hitting very good levels of insulation and airtightness, so space heating demand should be minimal anyway. What this means is that the environmental impact

of your central heating in use should already be very low. In other words, you need to think about the embodied impact of installing the system itself.

As gas boilers are among the cheapest systems to fit (and maintain), largely because they use relatively little resource to manufacture and install – certainly less than a ground source heat pump. In general, the more money you spend, the greater your environmental impact.

Those of us whose properties are off the gas grid will probably select either some form of heat pump or a biomass boiler. Of course, you might decide that you want to specify one of these options even if you can access the mains gas network – but it's important to carefully think through your reasons for doing so first.

Another option is to use LPG (where liquid gas is delivered and stored on site) to fire your boiler. This is similar in terms of emissions to natural gas, and used to heat many off-grid properties. There is also less pollution risk than oil. BioLPG (biopropane) is now widely available, too. This is compatible with propane equipment, but reduces carbon emissions compared to standard LPG.

Biomass boilers

This tech does the same job as a conventional gas boiler, providing space heating and domestic hot water. Biomass is any form of plant matter (normally wood) that can be burned to deliver heat. This could be simply logs or it might be a wood waste product specifically designed for burning in boilers, such as wood chip or pellets. Wood is considered to be a carbon-neutral fuel, as the CO₂ emitted from burning it is slightly less than the carbon that's absorbed as the tree grows.

Log boilers must be manually fed, so they need a fair bit of oversight and aren't right for everyone. They're normally batch fed, so you fire the boiler at a high temperature for a relatively short period of time, using it to heat a buffer tank that stores the warmth for later use in space and water heating. I like to say that using logs warms you three times: when cutting, splitting and burning it. Plus they can sometimes be had for free.

Most domestic biomass boilers are fueled by wood pellets (wood chips are typically reserved for larger, commercial installations). The consistency of pellets' size and moisture content means they can be used in automated feed systems, delivering controlled heat on demand. The fuel can be delivered loose direct to a hopper or supplied in sacks for manual handling.

HYBRID BOILERS & HEAT PUMPS

ASHPs don't perform to their maximum efficiency when it's very cold outside. As a result, there's a growing interest in hybrid heat pumps. These combine a fossil fuel burner (usually mains gas, but possibly LPG or oil) with an ASHP. The setup intelligently and automatically decides which source will be most cost-effective to run, switching between modes appropriately.

In this case, the ASHP component would be used primarily during the shoulder months in the heating season, ie at either end of winter, when the air temperature is higher. The boiler would then most likely come to the fore in the coldest periods. Hybrid systems also make it easier to deal with the efficient provision of domestic hot water. The result will be a carbon saving in operation when compared to a boiler alone, but these setups are more expensive to install and maintain.

An alternative technology that's relatively new to the UK domestic scene is heat pump ventilation (HPV), available from the likes of Total Home Environment. These all-in-one systems provide efficient, integrated space heating, summer cooling and heat recovery ventilation in one package – so they can take care of comfort levels across a whole home. You can see the tech in action at Build It's Self Build Education House. Visit www.buildit.co.uk/ourhouse to find out more.

Pellets and chips are more expensive than logs per tonne (and per kWh of heat) as they have been processed. Bagged pellets cost around 6p/kWh but small blown deliveries can be had for around 5p/kWh (compared to gas at around 4p/kWh). Obviously this varies by quantity, location etc. If your biomass installation is eligible for support via the Renewable Heat Incentive (RHI), then this subsidy will cover the cost of the fuel.

Heat pumps

Heat pumps are designed to take low-grade energy from the ground or the air and convert this into usable energy at a higher temperature for space and water heating. It takes electrical energy to run a heat pump, so it's not a completely renewable system, although it does make use of a renewable source of heat.

For each unit of electricity used by the pump, you get several units of heat output – and this is what makes the tech attractive. The ratio of the kilowatts of heat energy produced by the system to the kW of electricity that's required to power the pump is known as the coefficient of performance (CoP). If the system runs at a CoP of 3, this means that it produces three units of heat energy

Below left: Part of a barn conversion project, this Evo GSHP from Kensa (www.kensaheatpumps.com) meets 100% of the owners' heating and hot water needs – plus they found it so stylish, they decided to leave the appliance on show rather than boxing it into a cupboard. Below: The paddock at the front of this four-bedroom self build home was the ideal location for three 50m lengths of slinky collector pipes for a Kensa Evo GSHP





This image & left: The off-grid location of this barn conversion meant the owners needed an alternative to mains gas heating – so the owners chose a F2040 8kW heat pump from NIBE (www.nibe.co.uk), plus a 200L hot water cylinder and 40L buffer tank. The couple now receive RHI payments of around £800 per year



for each unit of electrical input. Final installed performance varies depending on insulation levels etc, but you might expect around a CoP of 2.5-3 for air source heat pumps (ASHPs) and 3-3.5 for ground source (GSHPs).

Given the carbon intensity of the UK's grid-based electricity is dropping, heat pumps are now lower in CO₂ emissions than gas boilers – although they're similar in terms of running costs. Both ASHPs and GSHPs are more expensive to install than a standard boiler, however, which could be a major factor if the space heating demand is very low. What's more, ground source versions require plenty of garden space for the collector loop.

Heat pumps work best in tandem with low temperature distribution systems such as underfloor heating (UFH). Less energy is required to raise the temperature of the water to the required level (around 40C for UFH, compared to 60C-80C for standard radiators), so the pump runs more efficiently. For the same reason, heat pumps are less efficient when providing domestic hot water (DHW) at the usual 60C. So it pays to work out what proportion of your heat demand is likely to be for DHW.

Some heat pumps can be operated in reverse to provide cooling. This is one occasion where there's a good match with solar PV panels, as these should be generating plenty

QUICK GUIDE THE RENEWABLE HEAT INCENTIVE

In the UK, heat pumps, biomass boilers and solar water heaters are supported by the Domestic Renewable Heat Incentive (RHI). This will be open to new applicants until March 2021. The RHI is funded via general taxation and run through Ofgem. It is not a grant scheme but a stream of payments made directly to homeowners who install eligible renewable systems.

The RHI provides a set payment per kWh (kilowatt-hour) of heat generated by a qualifying setup. Among the various requirements, you must have an MCS certificate on the installation and an EPC on your property, and the product you've chosen must be on the eligibility list. With existing houses, any recommendations in the EPC for loft or cavity wall insulation need to have been addressed.

For most domestic RHI installations, the amount of heat generated is not measured in any way but instead deemed. This is based on the estimated annual space heating needs stated on your EPC – and water heating, too, if your installation provides DHW. So, the amount of energy you use in reality will make no difference to the payments you receive – but as fuel costs money this still encourages us to be efficient in its use.

The payment is constant from the point at which you are accepted into the scheme and will be made quarterly in arrears for seven years. However, for new entrants, the subsidy decreases year by year through a process known as depreciation. The rates in the table below are for applications submitted between 1st April and 30th June 2020:

Technology	RHI tariff (pence per kWh)
GSHPs	21.16 p/kWh
ASHPs	10.85 p/kWh
Solar thermal	21.36 p/kWh
Biomass	6.97 p/kWh

Clearly, the RHI can have a significant impact on the viability and payback periods for self builders and renovators installing qualifying renewable systems. So if running costs are your key consideration, always do the sums up front to ensure you're choosing the setup that best suits your requirements.



of power for the heat pump when there's a demand for cooling. By contrast, PV generation in winter is almost non-existent. However, it should be possible to design out the risk of overheating in most new homes – so this facility is more useful for large non-domestic projects.

Solar water heating

Solar thermal panels collect energy from the sun and use it to deliver hot water for washing and bathing (they are rarely used for space heating). Much of the energy required to heat water is used to take it from cold to lukewarm so, even on dull days, they can do some work.

The key components of a solar water heater are the collectors, a storage cylinder and a controller. The storage vessel normally has two sources of heat – the solar coil and the boiler coil, so it is known as a twin-coil cylinder.

Solar water heaters require little or no maintenance, and cost nothing to run. They are much cheaper and lower tech than PV systems (used to generate electricity) and some are manufactured in the UK, which minimises the carbon intensity of installing them.

When you're building a new home, you'll have easy access to the roof and will be able to specify the correct cylinder from the start (rather than replacing an existing one). So the marginal cost of adding solar thermal panels on a self build is much lower than doing it as a retrofit measure.

For a truly low carbon solution to DHW provision, consider combining your solar water heater with an efficient, Ecodesign-ready woodburning stove. This will add relatively little to the overall installation cost on a new build project and, if you source your own logs, then this system will be almost zero-cost to run. You'll still need a backup source of heat when the sun isn't shining and the stove isn't lit, of course. This could be a boiler, biomass boiler or a heat pump (making it a three-coil cylinder).



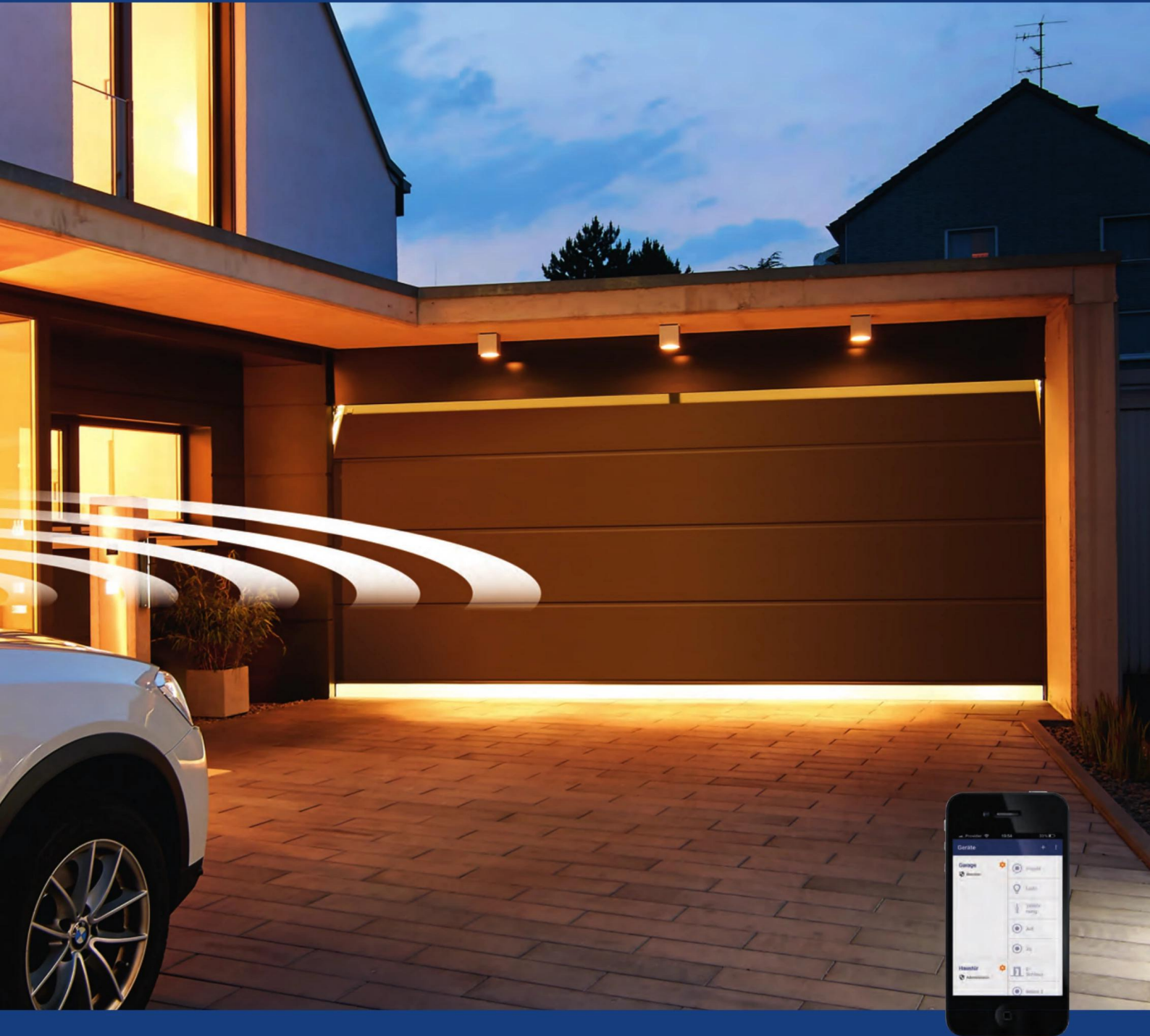
Above: The Sahara solar thermal panels from Grant UK (www.grantuk.com) are available in in-roof (shown here), on-roof and flat roof collector mounting configurations. Left: The pipework for a water-based UFH installation by Robbins Systems (www.underfloorheating.co.uk), ready to be covered in liquid screed to provide even heat distribution and a level substrate for the floor finish

NIGEL GRIFFITHS



Nigel Griffiths is director of the Sustainable Traditional Buildings Alliance (www.stbauk.org) and a consultant working mainly on energy efficiency policy and evaluation. He specialises in sustainable construction and building performance and is the author of the Haynes Eco House Manual.

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BUYER'S GUIDE

garage doors

Looking to upgrade your doors or building a new garage? We take you through the materials options, pros and cons of different opening methods and more

The garage door may not be top of your priority list when you embark on your self build or renovation journey, but it can have a big impact on your finished home. After all, for most of us, the garage will be a conspicuous part of the approach to the house.

The good news is there's a fantastic range of materials, styles and opening configurations to choose from these days, whether you're looking for a statement-making garage door or a subtle design that harmonises with architectural elements such as the main entrance or window frames.

Design basics

There are several key factors when selecting the best garage door for your project. As well as the opening mechanism (covered in the next section), you also need to consider materials, size, performance and long-term maintenance.

Strong, secure and easy to mould into interesting styles, metal designs in steel or aluminium are highly

popular. They're lightweight and easy to handle, and can be supplied factory-finished in a vast array of colours or primed for you to paint on site. Standard-sized softwood garage doors can be had for as little as £500 for a side-hinged pair, but will require a little more maintenance over time. Expect to pay considerably more for bespoke sizes or wow-factor hardwood designs. The final major contender is glass reinforced plastic (GRP), which is regarded as a cost-effective, low-maintenance alternative to timber.

With so much choice on the market, you shouldn't have any trouble finding matching front and side doors to achieve a consistent aesthetic – particularly as many manufacturers have expanded into offering a full suite of products. Most designs can be readily insulated, too – sectional and roller versions perform particularly well here. If security is paramount, then look for products that carry police-approved Secured by Design status.

Deciding on the right size and arrangement isn't just about going for the biggest doors your budget can stand. Hinged versions, for instance, will swing out into the driveway – so the bigger they are, the less room there is for manoeuvre. Think about proportion, too. Is a large double door the most practical and aesthetically pleasing option, or would you prefer to split the design into two single doors with a pillar between (which also offers the benefit of individual access). Most manufacturers offer a range of sizes out of the box, with bespoke dimensions available at a higher price and longer lead time.

Opening styles

Probably the biggest question when specifying a garage door is which type of opening mechanism to go for. Your choice will have a big impact on the uses you can put the space to – particularly in terms of the amount of easy-access storage. Here's a quick look at the options:

Above: Urban Front's Milano up-and-over garage door in RAL 1031, with matching Milano pivot entrance door featuring an 11 v handle



1



2



3



4

1 This four-bay Porchester garage by Oakwrights features a room above with open-plan kitchen-living area, bedroom and separate bathroom. Oak cladding and traditional strap-hinged, side-hung double doors help the building blend into its setting.

2 Hormann sectional garage door with Duragrain Rusty Steel finish.

3 6.6m x 2.3m curved Rundum Meir Original side-sliding garage door, manufactured from extruded aluminium, insulated and powder-coated to the client's spec. Prices start from £8,000.

4 This Tavole overhead sectional garage door in oak and matching front door are both by Deuren

Up-and-over As the name suggests, this classic option slides upwards and back along the ceiling of the garage space. The straightforward opening mechanism helps to ensure easy installation and a long service life. Canopy versions are available that create a small projection from the face of the garage, while retractable designs hide away entirely. The door opens out into the driveway as it rises, so it's not ideal where space is limited.

Sectional Made of several full-width sections rather than a single panel, these designs can slide vertically up and across into the roof zone without encroaching into the driveway – so vehicles can be parked in front of the garage, too. They're available in both modern and traditional styles, and (like up-and-overs) can be fitted with windows for a source of natural light.

Roller A similar concept to sectional doors, these open vertically – but the individual strips are much smaller, so they can roll up into a housing located directly above the door. This means the roof space remains open for easy

access to storage. Installation is straightforward, providing there's enough room for the box at the top of the opening. They tend to look best in a modern context.

Side-hinged This double door setup is reminiscent of old coach house entrances. The units swing out into the driveway zone, but on the flip side they give you maximum room inside the garage. An obvious candidate for period properties, but contemporary designs are available, too.

Side-sliding Also known as round-the-corner doors, these designs turn a sectional or roller setup through 90 degrees so that they slide to the side rather than up. This is ideal for large garages with wide openings, and can be part-opened to allow easy pedestrian access. They also ensure the whole of the garage attic is easily

accessible, but you'll lose storage space on the wall where they slide.

Smart doors

Remote-opening garage doors have been around for a while, but the tech is vastly improved. If you're worried about rummaging around in the glove box for a hunk of cheap plastic with a worryingly fragile button, fear not! Many manufacturers now offer smart systems that can run off a phone app, meaning you can operate the door at the swipe of a screen. Some versions even offer features such as voice control and built-in proximity sensors.

What's more, with good planning your smart tech can be built into a whole-house automation system. So you know, for example, that if it's dark outside when you open the garage door, all the external and internal lights you need to gain access safely to the house will switch on.

CONTACTS

Arridge Garage Doors 01691 670394 www.arridgegaragedoors.co.uk
Deuren 0800 138 6688 www.deuren.co.uk **Garador** 01935 443700
www.garador.co.uk **Hormann** 01530 513000 www.hormann.co.uk **Oakwrights** 01432
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HOW TO DESIGN A PLANT ROOM

Planning a new home with the latest technology and services? Architect Julian Owen shares his advice for creating the best place to store equipment and controls

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WHAT TO SORT OUT BEFORE YOU BUILD

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PLOT WATCH

Is this affordable plot too good to be true? Mike Dade looks into whether it's a wise idea for these first time buyers to take the plunge and purchase

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How to design a PLANT ROOM

Our homes are packed with ever-more tech and services, making plant rooms a go-to choice for many self builders. Architect **Julian Owen** shares his top tips on how to create a well-planned, neat and easy-to-maintain zone

Plant rooms have been part of large buildings – such as commercial properties – pretty much since the gas boiler was invented. Over the years these have increased in size to accommodate mechanical, electrical and plumbing equipment. Yet until quite recently, homeowners had to make do with a noisy boiler in the kitchen and an airing cupboard upstairs, with utility meters squeezed into an under stairs cubby hole.

Thankfully, that's now changing. Arguably the mainstream UK construction industry is slow to innovate but one sub-sector that offers sophisticated, cutting-edge options for our homes is building services (ie heating, ventilation, electrics etc). Control over the internal environment has rapidly evolved, partly due to a need to make homes more energy efficient but also to satisfy our demand for gadgetry.

Clearly, the more tech you have, the more space is needed. A long-held complaint from service engineers is that architects on commercial

projects don't properly consider the utilities at the early planning stage. Consequently, when the detailed design is worked up it's a struggle to squeeze all the kit into an undersized plant room. Ultimately, that means the space needs to be bigger, which unsurprisingly leads to complaints from clients about a loss of floor area.

A similar criticism is levelled at designers who fail to include enough space in new homes. If a plant room is not made an integral part of the brief and accounted for from the start, you may find the kitchen, utility or other nearby rooms have to be re-planned and reduced in size long after you thought your layout was done and dusted. So how can you work together to get the best result?

What goes into a plant room?

It's a good idea for your designer to look to rationalise building services as much as possible by creating a hub, with all the appliances and core controls in one location. Keeping the important kit all in one place will also make finding and fixing faults easier and allows the runs for different services to share the same routes, making it easier to integrate them into the building fabric.

If you are a bit of a technophobe and take the simplest services

options available, you will still need to find room for a boiler as well as the incoming mains supplies for water, electricity, energy and broadband. These will all need space around them for maintenance, too. What's more, the Building Regulations for energy efficiency are due to be ramped up towards the end of 2020. New standards for air tightness and reductions in carbon emissions will mean that air handling and heat recovery systems are likely to become essential in self build homes, requiring more ductwork along with heat exchangers, filters and control panels.

Also falling under the 'plant' moniker is the formidable array of equipment associated with smart home technology, including extensive control of communications, heating, lighting and entertainment systems. There is a good argument for this being in a separate room altogether, or at least in a cupboard within a plant room, because the wiring and units are relatively delicate and need more protection from disturbance.

The days of a clunky water tank in the loft are long gone, as modern plumbing design uses mains pressure for even the most basic systems. A combination boiler that directly heats water for radiators and supplying hot taps is adequate for smaller houses and can often be placed on an



upstairs external wall within an airing cupboard, or integrated into the design of kitchen units.

If you have more than a couple of bathrooms, however, then storage of heated water in some kind of cylinder is essential to avoid the shower going uncontrollably cold. Sophisticated, energy efficient designs incorporate extra loops of pipework that will bring pre-warmed water into the storage cylinder – so you can take advantage of solar panels as well as a ground or air source heat pump. These each bring with them extra equipment, control panels and service runs.

How big should it be?

If you accept the case for including a plant room, then from an early stage of the design you need to estimate its size. Architects starting to plan very large buildings often work to a percentage of the total floor area. This is not appropriate for a home because the design is very dependent on the combination of equipment that is selected. So, ideally the services that are likely to be fitted into the building should be decided before the architect starts to sketch out ideas.

There has to be space to maintain and upgrade these products in the future, and exactly what's required will vary between components (so check the manufacturer's guidelines). If the room is too cramped, the plant will not get essential regular inspections and checking for faults by sight will be difficult or even impossible, which will reduce the life of the equipment.

For some houses, a cupboard of 1.4m by 1.2m might be adequate, but this will only accommodate a boiler and some water storage. If you intend to have underfloor heating, solar panels, and mechanical ventilation and heat recovery (MVHR) you could need twice this or more. If you are concerned that it may turn out to be too big, you could consider doubling up with another use, such as storage of household tools and equipment that can be easily removed when it's time for some periodic maintenance.

Where should it go?

Once you know the approximate area needed you can decide on the location of the plant room, although in some cases it might be more convenient to have two. One reason

CLOSER LOOK: BUILD IT'S SELF BUILD EDUCATION HOUSE



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a bit of a juggling act: we needed to work closely with a wide range of installers to ensure everything was done in a neat, compact fashion while offering access for future maintenance.

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Visit www.buildit.co.uk/ourhouse to find out more and book your visit to the Build It Education House.

for splitting it up like this is if you have a gas, oil or wood pellet boiler as they will need a short flue to a nearby outside wall, well away from any

openable windows, which restricts the positioning options.

If you are using electricity to power a renewable source (such as a heat



Planning your plant room into the basement can help to maximise space on the standard above-ground storeys, with pipework, ducting and electrics running mainly in floor voids and chased into walls

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pump) there may be less restriction and, assuming that a window and ventilation to the outside are not required, it can be located centrally in the house. In many ways this is the best place for a plant room because internal service runs radiate out in all directions, keeping them shorter than if they have to come from the side or one corner of the floor plan.

Any moving parts tend to generate noise even at night, which might be a disturbance next to bedrooms, so you'll need to consider sound insulation. Other than that, the first floor can be a very appropriate choice.

In some homes it might make sense to combine utility and plant room functions, but bear in mind this can result in an unsightly maze of pipework, wires and white steel boxes that are unattractive and readily gather dust in hard-to-reach places. It is logical to connect the two zones, however, because mains supplies often arrive into the building via the utility. Arranging access via the WC can work well for the same reason.

A basement can also be a good location, as it's out of the way of the rest of the house so it's easy to keep the noise and clutter separate. It's certainly a better option than using

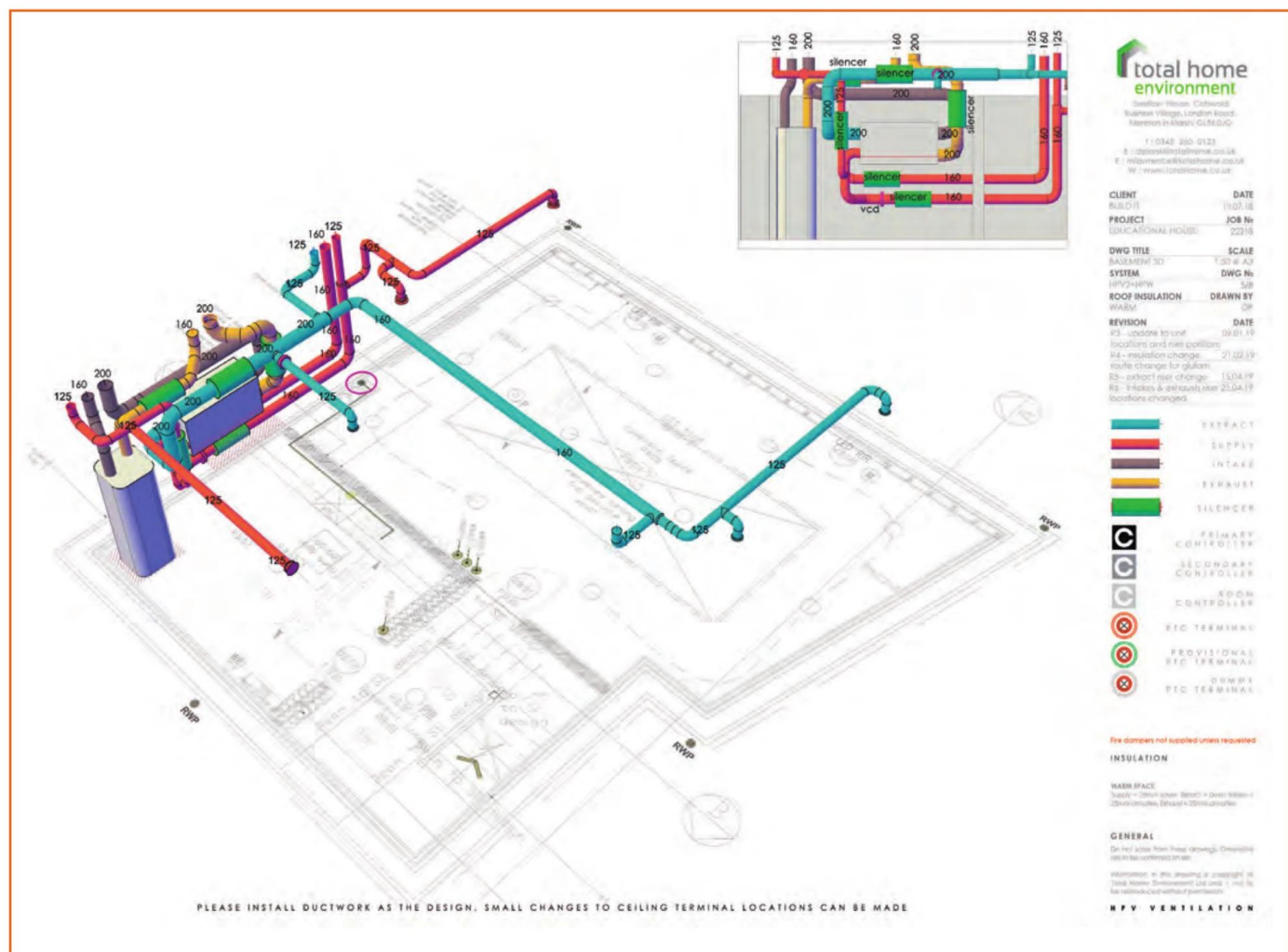


Above: Build It readers the Brees incorporated a sizeable plant and storage room into their three-storey project, which is built into a sloping plot. Left: Even the most attractively-installed services, such as this Nu-Heat (www.nu-heat.co.uk) underfloor heating manifold, will typically be hidden away in a plant room or box-out

QUICK GUIDE: SPRINKLER SYSTEMS

In Wales, the Building Regulations require that a new house must include a sprinkler system. Follow the disaster of the Grenfell tower block fire, it's very likely the whole of the UK will soon adopt similar rules. At the moment, however, sprinklers are generally only considered as a helpful solution where your plans don't satisfy the standard fire escape requirements of the current regs.

Modern versions are very discrete and are designed to spray a fine mist to suppress fire, which causes less damage to property than old-school designs that will simply flood your home with water. Nevertheless, if they go off in a room it will get a thorough soaking, so a well-positioned plant room is essential to provide quick access to the central controls. Water storage may also be needed if the mains pressure at your property isn't up to the job.



Above: This diagram by Total Home Environment (www.totalhome.co.uk) shows the location of the heat pump ventilation, water storage and ductwork runs in the plant room and basement of the Build It Education House

part of an uninsulated garage or loft space, as these routes would waste the incidental heat generated by the appliances and require all the pipes and ducts to be thickly lagged.

If you have a young family, make sure your plant room has a secure, lockable door because this room is a risky place for children, full of intriguing taps, levers and control panels that are irresistible to little hands. I learnt this myself at the age of six when I got into great deal of trouble for turning off the water supply to the house for several hours!

JULIAN OWEN



Julian Owen is an East Midlands-based chartered architect and author of several books on self build and house alterations. His publications include Self Build; Home Extension Design; and Kit and Modern

Timber Frame homes. He's also the founder of the ASBA Architects network. To find out more visit www.asba-architects.org.

10 PLANT ROOM DESIGN TIPS

- 1 Choose the products and components that you would like, at least in principle, before designing the layout plans for the house.
- 2 Figure out the likely locations of service pipes and ducts, with a goal of keeping them as short as possible.
- 3 Ensure there is plenty of space to allow easy access for the maintenance and replacement of equipment – and considering making the space bigger than you think you need, to allow for extra equipment that might be needed in the future.
- 4 Consider whether you need a ventilation route through to the outside, whether that's to prevent the build-up of fumes or to avoid your electrical equipment from becoming overheated.
- 5 Bear in mind that some externally located equipment (such as an air source heat pump) may have to be close to the plant room and could be an eyesore if it is in prominent position.
- 6 You may need drainage for condensate, which should not just be a pipe sticking out of the wall because it can freeze.
- 7 Sound transmission should be minimised using solid walls if possible, along with a well-fitting, good quality door.
- 8 Floors should always be slip resistant, and a floor drain is useful for helping to keep larger zones clean.
- 9 Finishes for all the surfaces will need to be waterproof, oil-resistant, low maintenance and non-combustible.
- 10 It's a good idea to provide shelving or a cupboard to keep all the maintenance manuals in one place.

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10 THINGS I HATE about the planning system

Planning consultant **Mike Dade** discusses his pet peeves about the process as it stands and how it could be better for self builders and renovators

After more than 30 years dealing with the planning system, it's fair to say I've seen many changes. The days of popping into the council offices for a chat with the planning officer are long gone. Planning has gone digital in a big way, too. Meanwhile, other things remain the same, namely the endless government mantras about building more houses and simplifying the planning system, neither of which have got anywhere at all. So, in my many years of working in this field I've certainly had time to gather some thoughts about what parts of the system are the most infuriating and how they could be improved. In no particular order...

1 Jargon

Planning is riddled with this, even down to job roles – a council's head of planning is just that, but what is a director of place? The phrasing 'local plans' does what it says on the tin, but not after a regrettable excursion into 'local development frameworks', 'core strategies' and 'development management documents'. But we also now have neighbourhood plans – an extra tier, to keep things simple. Both local and neighbourhood plans go through a process of examination, following which the former are formally adopted, but the latter are 'made'. It begs the questions, why the difference? At government level, guidance used to come from planning policy guidance documents (PPGs). These were then consolidated into the national planning policy framework (NPPF). But no sooner was this brought out, than explanatory details were published in planning practice guidance again, but a different PPG. There is so much avoidable confusion.

2 Tick box culture

To help you make your planning application, councils produce validation checklists. These documents list all the things you might have to submit with your application. However, they are geared towards large scale development and in many cases most of the reports, studies and details they seek are irrelevant to self builds. This means you have to wade through the checklist putting a cross against all the irrelevant stuff. Failure to submit the checklist itself, even if it's all crosses and no ticks, can result in your application not being validated.

Another tick box irritation is planning application forms. When applying for a new house, is it really necessary to have to say whether you're storing hazardous substances, for instance, or whether yours is a waste management development? Forms could so easily be tailored to individual project types, which would avoid homeowners having to answer 'no' to innumerable irrelevant questions.

3 Cheating

Applications and appeals are supposed to be dealt with in a timely fashion. But councils and the planning inspectorate, who deal with appeals, have devised cunning ways of circumventing tiresome targets.

For councils the first line of defence is validation. Delays there, coupled with asking for irrelevant or unnecessary details and nit-picking generally, slow down the starting of the clock on an application. Once begun, as the deadline approaches, councils ask for additional information and include a request for an extension of time. Unfortunately, this leaves you with little option but to agree.

The Planning Inspectorate are more blatant. Their cunning plan is just not to 'start' an appeal until it suits them – the 'start letter' might not appear for weeks or even months after you lodge the appeal. It's cheating, plain and simple, but the root cause is underfunding resulting in short-staffing and so on. A little more money injected into the planning system could speed things up a lot.

4 The information maze

Details on planning policy are incredibly hard to track down. At the local level, finding out which documents are relevant to daily decision-making can be difficult at best, especially if you're not sure what you're looking for. If you're lucky enough to find an up-to-date local plan, then locating the policies you need can still be tricky. They might be filed in a housing, urban or rural environment, or potentially a design section. Some local plans have indexes, some don't. A greater degree of continuity in the appearance and structure of local plans would make life a whole lot easier.

At government level the worst offender is PPG. This one has an alphabetical index, which includes such gems as 'Use of planning conditions' and 'When is permission required?' If you want to look up something to do with conditions, you have to look under 'u'; and if it's permitted development you're after, it's under 'w'. So while the guidance itself might be technically sound, a little intuition and usability checking certainly wouldn't go amiss.

5 Weasel words

Planning policy is rife with ambiguous phrasing. For instance, a replacement house should not be 'significantly' bigger than the original. Extensions should be 'proportionate'. Planning permission will 'normally' be given... and so on. But what do these words mean? Occasionally they are defined in notes accompanying the policies. More often though, they mean whatever the

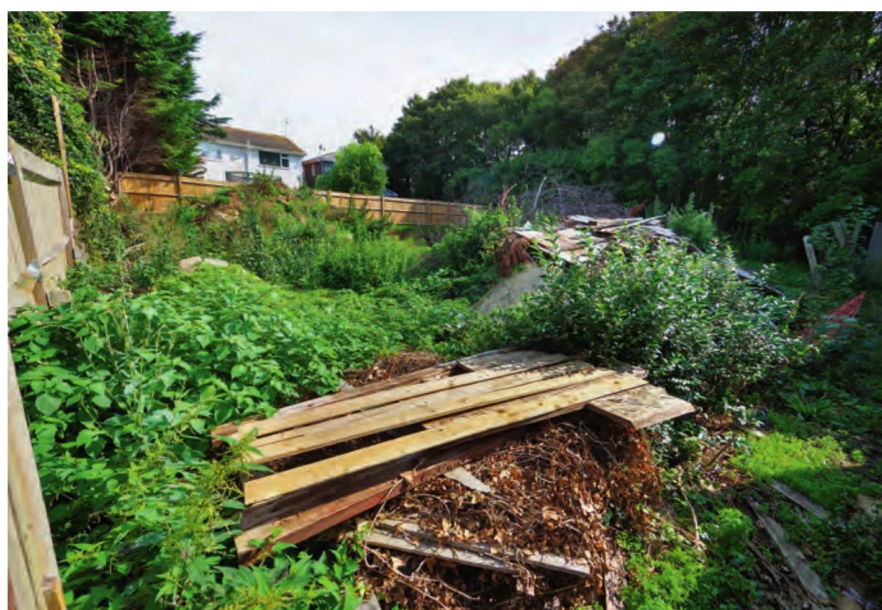
planning officer applying them decides. Greater definition of these terms would bring much needed clarity.

6 Planning committee

If enough neighbours complain about your application, or if your local councillor doesn't like it, the proposal might get called to planning committee, no matter if the planning officers support it. Councillors who make up planning committees aren't professional planners, indeed they have minimal training. Having sat through far too many committee meetings myself, I've witnessed all manner of bizarre arguments, misreadings of drawings and misunderstanding of policy. This is hardly surprising when you ask a group of essentially lay-people to decide often complex policy and legal matters.

I don't think there's an easy answer for this one. But more training would help, as would a pro-active role for

Below: In every issue of Build It, Mike investigates a patch of land to see if it could work for a bespoke home project. This plot in Kent came with permission for two dwellings, but the potential buyer wanted just to build one. Read Mike's thoughts on this site at www.self-build.co.uk/garden-site and go to page 104 to read this month's Plot Watch



ALEX PRATT

planning officers, who are often guilty of keeping quiet when they know the councillors' discussion has taken a wrong turning.

7 Inconsistencies of planning

A couple of years ago, my local council would let you take down a building that might otherwise be converted to a house and replace it with a new property. Meanwhile, the neighbouring council would only let you convert buildings of some age and character and then, preferably, to a business or holiday use, rather than a dwelling. Hugely different policy approaches applied within a few miles of each other.

Unsurprisingly, government policy guidance on conversions is no better. In green belt, the partial or complete redevelopment of some previously developed (brownfield) land, whether

Left: It took three long years before Lesley Richardson was granted permission to build her dream home in Cornwall. Read about how she overcame the planning difficulties at www.self-build.co.uk/richardson

Right: Stephen and Tracey Stewart bought a bungalow with permission in place to be demolished and replaced. While it's advisable to secure consent before purchasing, as it proves the principle of development being acceptable, buying land with planning in place doesn't necessarily mean you'll be able to build the exact property you've got in mind. Luckily for this couple, it was fairly straightforward to change the existing permission to create this wow-factor new home

redundant or in continuing use, can be acceptable. In the same guidance, new homes in the countryside are only allowed where the development would re-use redundant or disused buildings and enhance its immediate setting. This means there's a more generous policy in the more protected area, which makes no sense. Greater consistency would make life easier for planners and self builders alike.

8 Opinions

Planning officers inevitably have their own thoughts about what they like and dislike, but they really shouldn't let these override policy. Conservation officers are perhaps the worst culprits of this. Whether you could add a modern extension to an historic building, for example, is likely to depend much more on this professional's personal tastes than anything written in policy. Greater oversight of conservation officers by planning officers might help, but then they themselves will probably have their own opinions.



Above: David and Sharron Reetham were told they stood no chance of getting permission to build on their land, but after finding a local councillor to endorse their application, it passed at appeal

MIKE DADE



Mike Dade is a land and planning specialist, and Build It's plot expert. He's one half of Speer Dade Planning Consultants and the author of several must-read books on plots and planning.

over and work to resolve problems. However, the reality is often that they don't answer the phone ('I'm sorry, we're closed for Christmas' was the voicemail message I got late in February from one officer) and they don't respond to emails, either. Being short staffed is undoubtedly part of the problem, but some officers seem to manage to communicate while others don't. Minimum standards of service, which officers are obliged to follow, could ensure at least a base level of communication, which would be so much better than nothing.

9 Tinkering

It seems like every new government is possessed of an irresistible urge to tinker with the planning system. And this means that it just keeps on changing – which is fine where those amendments are required in order to meet specific challenges, such as climate change or the advent of new technologies. But change for change's sake just adds to the difficulties self builders face when navigating the system. Some sort of moratorium to avoid mere tinkering is long overdue.

10 The elusive planning officer

Programmes on the television that feature planning applications generally show co-operative planning officers who come out to site, chat things

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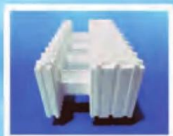
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What to sort out before you build

While you will no doubt be eager to get on with the practicalities of constructing your new home, there are a few essentials to consider before the fun starts.

Mike Hardwick takes a closer look at the key things that need to be done

As the saying goes: proper planning prevents poor performance. And this is certainly the case when it comes to self building, so with this in mind, I'm sharing my top 10 things that should be considered and sorted out before the diggers roll.

1 Finance

This has to be top of the list, because if the budget isn't right, the project runs the risk of going off the rails. Work out what funds you have available, ensure that mortgages are approved and finalised and that you have access to cash that might be tied up in notice accounts or illiquid assets. Unforeseen stuff will happen, and you will need access to additional money, I guarantee it. So always make sure that you have kept at least 10% of your projected build costs to one side for contingencies.

2 Access

A building plot is not a building plot unless you can access it by foot or car and unless it has access to the essential services. These include electricity, water and drainage or the potential for an off-mains solution. Ideally, this will all have been determined before you exchange contracts on the plot, but I still come across people wondering where their electricity will be coming from halfway through their build. All of these issues can be, and should, be resolved before you buy the plot.

3 Site survey

The big unknown with building is what is under the ground. The sort of foundations you will require will be dictated by ground conditions or the proximity of trees and, if an engineered solution is required, this can impact considerably

on your build costs but without adding to the finished valuation of the property. It's therefore a very good idea to have a thorough site survey done before committing to purchase. Knowing what additional costs your ground conditions might add make it a sensible use of funds.

The survey might flag up issues such as running sand, contamination or heavy clay. If so, the report will include a plan view of the plot that can be used by your architect or designer, and by you, to create a site plan showing where materials can be stored or off-loaded and where site offices and the like can be situated.

4 Planning permission

You must have secured detailed planning permission (sometimes called full planning permission) before you can start work on any new dwelling in the UK,

Above: The site huts arrive at the Build It Education House – learn more about this access-all-areas project at www.self-build.co.uk/ourhouse



Above: Designed and built by Scandia-Hus (www.scandia-hus.co.uk), this new build home was constructed on a very tight site, just 1m from the plot boundary. The scheme had to be carefully managed to ensure the neighbours weren't disturbed by construction. Access to the rear of the site was also difficult due to the narrow entry to the side of the house

so this must be submitted to and approved by your local authority. This can either be a straightforward process lasting a couple of months on a non-contentious site, or the hardest bit of your self build journey as you wrestle with planning officers and committees over several months or even years. The temptation to just crack on is huge, but resist the urge until all permissions are in place.

Even when you have planning permission, there will be conditions attached, some of which must be satisfied before any development commences. For example, your local authority might want to approve some of the external materials, such as facing bricks, renders and your choice of roof covering.

The other thing to watch out for is any restrictive covenants on the plot that might preclude you building what you want. These will be in the deeds and your solicitor should be aware of their existence and inform you of the implications. Recent or active covenants must be complied with or dealt with through other means, but some covenants are ancient with their original purpose lost in the mists of time, along with the person who imposed them in the first place. If

this is the case, a simple indemnity policy can be put in place in order to offset the effects of an old covenant, in the unlikely event someone wishes to take enforcement action.

5 Getting an idea of costs

This is always a tricky one. Everyone wants to know how much their project will cost, but in reality,

you'll only find out how much was spent at the end of the build. You can, however, get an idea of some of the major costs by getting prices from main contractors or individual trades. But to get anything like a meaningful figure, you will need construction drawings and a decision on what building system you choose to employ, so once you have planning permission approved, your next step is to commission the construction drawings needed for accurate fixed pricing. The more detail you can give, the more accurate the price you can expect to receive. If you ask a builder to price off planning drawings, you might get an estimated figure, but it will be just that, with the potential to increase wildly as the build progresses. Once you have decent drawings, online estimating services can be well worth the money.

6 Hiring builders & trades

You'll need to get in early to get the services of the best local builders. So as soon as you have the drawings, start asking for fixed quotations. Good contractors are busy people, so don't expect them to drop everything and come and work for you as they will have plenty to get on with. You'll usually need to give several months' notice so they can schedule you in.

Use the time wisely; ask for references and follow them up to make sure that your chosen builders are as good as they say they are. If



they have done a good job for others, they will do a good job for you. It's during this process that you will weed out the cowboys. If you are taking on the project management, you'll need to repeat this process for each trade.

7 Do your research

While you are waiting to get going, this is the perfect time to get informed regarding the various

processes involved in building your own home. There is so much resource out there, much of it free. Visit the National Self Build and Renovation Centre in Swindon; attend one or more of the self build shows, like Build It Live, held throughout the year; and listen in on the workshops and seminars that are a font of useful information. If you have any specific concerns, book an appointment

with one of the experts available at most self build events, who can often give you the answers you need, or at least point you in the right direction, for free. You might also trawl online resources, such as the Build It website (www.self-build.co.uk), where there is a wealth of material and an extensive archive covering all topics in the self build sphere.

8 Sort out your insurance & warranties

As soon as you exchange the contracts on your plot, you become liable for anything that happens on it. Always buy site insurance, including public liability, petty theft and employer's

liability if you are hiring others to work for you. Your builder should have their own contractors' all risk cover to insure their activity while working on your site, but you need to protect your interests during the build, too, as standard building insurance will not cover the risks of a new build.

You'll also need a 10-year structural warranty, especially if you are raising finance through a mortgage. Even if you are a cash buyer with no plans to sell the house on once built, life has a habit of getting in the way of the best laid plans and if you ever have to sell to someone who needs a mortgage, that warranty is a must and much more expensive to obtain if applied for retrospectively. The simple answer is: make sure you have one in place.

9 CIL notification

If you are building under a local authority that applies the Community Infrastructure Levy (CIL), no doubt you will have applied for the self build exemption to avoid a hefty CIL charge. It is vitally important that, before you start any work on site, you submit CIL Form 6 (Notification of the Commencement of Work). Unfortunately, failure to do so could result in full CIL liability being payable.

10 Tell your neighbours

You are about to embark on the adventure of a lifetime, but your neighbours are about to undergo a prolonged period of disruption, dust, blaring radios and blocked driveways that will test their patience to the limits. Tell them what is going on and when it should be completed by, notify potential inconveniences in writing well in advance and drop a note through the door with your contact details and those of the site foreman, encouraging neighbours to get in touch if there's a problem. You'll be living next door for a while, so best set off on the right foot!

MIKE HARDWICK



Since successfully finishing his own bespoke scheme, Mike has become a well-respected project manager and self build consultant. He is general manager at the NaCSBA.

Left: The best local builders and trades are likely to have a long lead time, so approach them early to get them booked in for your upcoming project

Left: Extreme weather conditions caused a collapse just after the first floor joists had been installed in Mark and Marjorie's Kingston's build. Luckily, they'd had the foresight to arrange suitable site insurance. The home was reassembled in only three days. Read about this project online at www.self-build.co.uk/kingston



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MAB 10340

Your home may be repossessed if you do not keep up repayments on your mortgage.

For self and custom build mortgages, we charge a fee of £295. £95 is payable on application and £200 on offer. For all other mortgages a separate fee policy applies.



Self build & custom build mortgages

Looking to fund your bespoke home project? Each month we round up the best deals from leading lenders and update you on what you need to know to secure the right finance

Advance Stage Payment Mortgages

Created by and exclusive to BuildStore, these mortgages provide guaranteed stage payments based on your costs before each phase of the build. This offers certainty in your budget and peace of mind that you can plan for and pay your bills on time.

Arrears Stage Payment Mortgages

These mortgages release funds after each stage of building works is completed. To trigger the payments, a valuation must take place that shows an uplift in value. BuildStore's exclusive mortgages can offer increased borrowing of up to 85% of your costs.

Get In Touch

For advice on funding options for your self or custom build project, speak to the experts at BuildStore by calling **0345 223 4647** or visit **www.buildstore.co.uk**

KEY FOR TABLE: □ BuildStore Exclusive Product | **SB** Self Build Mortgage | **CB** Custom Build Mortgage | **LTV** Loan to Value

Lender	Mortgage Type	Payment Schedule	Contact	LTV Land	LTV End Value	Interest Rate	1st Stage Payment
Bath BS	□ SB & CB	Advance	0345 223 4647	95%	80%	4.44%	DPP & Building Regs
Buckinghamshire BS	□ SB	Advance	0345 223 4647	80%	80%	4.99%	DPP & Building Regs
Darlington BS	□ SB & CB	Advance	0345 223 4647	85%	80%	4.84%	DPP & Building Regs
Furness BS	□ SB & CB	Advance	0345 223 4647	80%	80%	4.15%	DPP & Building Regs
Mansfield BS	□ SB & CB	Advance	0345 223 4647	85%	80%	4.99%	DPP & Building Regs
Newcastle BS	□ SB & CB	Advance	0345 223 4647	85%	85%	5.29%	DPP & Building Regs
Tipton & Colsley BS	□ SB & CB	Advance	0345 223 4647	85%	75%	4.99%	DPP & Building Regs
Vernon BS	□ SB & CB	Advance	0345 223 4647	85%	80%	5.50%	DPP & Building Regs
Buckinghamshire BS	□ SB	Arrears	0345 223 4647	85%	85%	4.84%	Foundations
Chorley BS	□ SB & CB	Arrears	0345 223 4647	85%	80%	4.64%	Foundations
Darlington BS	□ SB & CB	Arrears	0345 223 4647	85%	80%	4.64%	Foundations
Furness BS	□ SB & CB	Arrears	0345 223 4647	80%	80%	3.99%	Foundations
Hinckley & Rugby BS	□ SB	Arrears	0345 223 4647	85%	75%	4.29%	Foundations
Ipswich BS	□ SB & CB	Arrears	0345 223 4647	80%	80%	3.99%	Foundations
Loughborough BS	□ SB & CB	Arrears	0345 223 4647	80%	80%	4.25%	Foundations
Mansfield BS	□ SB & CB	Arrears	0345 223 4647	80%	80%	4.49%	Foundations
Newcastle BS	□ SB & CB	Arrears	0345 223 4647	85%	85%	5.99%	Foundations
Nottingham BS	□ SB	Arrears	0345 223 4647	80%	80%	3.99%	Foundations
Stafford Railway BS	□ SB	Arrears	0345 223 4647	85%	75%	4.27%	Foundations
Tipton & Coseley BS	□ SB & CB	Arrears	0345 223 4647	85%	75%	4.49%	Foundations
Vernon BS	□ SB & CB	Arrears	0345 223 4647	85%	80%	4.74%	Foundations
West Bromwich BS	□ SB & CB	Arrears	0345 223 4647	85%	80%	4.29%	Foundations
Beverley BS	SB	Arrears	01482 881510	n/a	80%	4.99%	Wall Plate
Cumberland BS	SB	Arrears	01228 403141	75%	85%	Call	Flexible
Earl Shilton BS	SB	Arrears	01455 844422	50%	75%	4.99%	Flexible
Ecology BS	SB	Arrears	0845 674 5566	80%	80%	4.65%	Flexible
Hanley BS	SB	Arrears	01782 255000	60%	60%	3.84%	Foundations
Melton Mowbray BS	SB	Arrears	01664 414141	75%	50%	3.49%	Foundations
Newbury BS	SB	Arrears	Local Branch	66%	75%	4.45%	Foundations
Penrith BS	SB	Arrears	01768 863675	75%	75%	4.99%	Foundations
Saffron BS	SB & CB	Arrears	01482 881510	65%	75%	3.99%	Flexible
Scottish BS	SB	Arrears	0131 313 7700	60%	80%	5.89%	Foundations

Ask the EXPERTS

Essential advice on your problems with building, budgeting, DIY & planning from the most experienced names in the self build industry



PLANNING

Mike Dade is a land and planning specialist. He is a contributing editor of Build It, a plot hunting expert and author of several books on planning and plot issues. He is one half of Speer Dade consultants (www.speerdade.co.uk).



FINANCE

Rachel Pyne is director of financial services at BuildStore (www.buildstore.co.uk). She has worked in self build finance for over 10 years and deals with a diverse portfolio of lenders across the whole market as well as on exclusive self build and renovation mortgage products.



SUSTAINABILITY

Nigel Griffiths is director of the Sustainable Traditional Buildings Alliance (www.stbauk.org) and a consultant working mainly on energy efficiency policy and evaluation. He is the author of the Haynes Eco House Manual.



SCOTLAND

Angela Doran is NaCSBA's self build representative for Scotland, Wales and Northern Ireland, brought in by Glasgow City Council to coordinate a pioneering new self build project in Maryhill. She works to promote alternative, community and individually led housing in Scotland.



SELF BUILD & RENOVATION

Tim Doherty was the founding MD of the National Self Build & Renovation Centre and a founding member of NaCSBA. He runs Dobanti Property Consultants (www.dobanti.com), a specialist surveying & building consultancy for the residential and commercial sectors, including project management and custom build solutions.



PROJECT MANAGEMENT

Mike Hardwick is a self build consultant, project management specialist and NaCSBA's general manager. He has first hand experience of the processes involved in building bespoke homes.



DESIGN

Opinder Liddar is a director at Lapd Architects (www.lapdarchitects.co.uk). The practice specialises in residential projects from extensions to new builds, making him the ideal person to answer all your home design questions.

PROJECT MANAGEMENT

Is it sensible to purchase a home that's not on mains sewage?

We are looking to buy a new bungalow for my mum using the proceeds from the sale of her house. The property that we are considering is to be built on a small new development that is currently under construction, however the homes will not be on mains sewage for drainage, but have a modern treatment plant instead.

There is a large neighbouring scheme of over 200 houses that have recently been built and are connected to mains, but the small developer says that unfortunately the plot we are considering does not have access to this.

I am just wondering why the company has not connected to the main sewer system. Is a treatment plant a legitimate solution for a small builder to reduce costs or should we look at pulling out of the purchase?

There can be a number of reasons why your small developer was unable to connect to the mains. Quite possibly it's because of all those new homes, which will have pushed the existing infrastructure in the area to the limit, even to the point where there can be no new connections to the existing system. In this case, it is quite common practice to use an off-mains solution such as a treatment plant. Personally, I wouldn't be worried by this response. I'd see it more as a practical solution to a problem rather than a cost-saving measure.

Modern treatment plants are not much different to being on the mains and if sized and set up correctly, they really are nothing to worry about. You will need to be careful what goes down the loo and use cleaning products that will not harm the friendly bugs doing the work inside the plant. So do not walk away: have a chat with the builder and let him reassure you that it will be the right system for the plot and that it will be installed correctly.



SELF BUILD & RENOVATION

How do we insulate an old cavity wall to convert our garage?

We want to transform our garage into living space, but the room is too hot in summer and too cold in winter, so we would like to insulate the 1970s cavity walls. What are the common pitfalls we have to look out for when insulating this kind of wall, and what products would you suggest we use for a successful project?

Cavity walls were not designed as a means of insulating homes; they were more about managing water travelling through porous bricks and stone. In the age of central heating, it started making sense to insulate these walls to retain more warmth inside.

The main pitfall, especially in the early days, was that filling the cavity meant water had a way to track across the cavity and through the inner leaf, causing damp problems. So it's essential to have the right system installed by a competent fitter.

The main options for cavity wall insulation are blown mineral wool, polystyrene beads held together with a PVA glue binding agent, or urea formaldehyde foam. It's a good idea to take the advice of a CIGA-registered installer (www.ciga.co.uk), who will do an inspection of the property, recommend the right product for your situation and provide a guarantee on the results.



PLANNING

Will I be able to gain planning consent in a tucked-away garden?

Is it viable to build a two bedroom dormer bungalow on a plot in my dad's garden in Cornwall? Alongside my father's home there are two neighbouring bungalows, however neither property have windows overlooking the plot that I want to build on. I was just wondering what restrictions and regulations would typically apply here and whether I can potentially construct on the land.

Much depends on context with planning. If other properties are built closer together, and if there is a mix of houses nearby, including small chalets, then your proposal would not be out of character. The lack of overlooking is a help. Planning policies aim to facilitate higher densities and making the best use of available land, you have a chance of approval in this regard.

It is impossible, though, to predict what the council will say. The best bet would be to draw up some sketch plans and seek pre-application advice from the council. Or take advice from a local architect familiar with single plots in your area.

FINANCE

What are my mortgage options for financing a self build?

I am about to embark on my first ever project, but am not sure what financial options are suitable for me. Are there different types of mortgage? I obviously want to ensure my investment is as safe and secure as possible.

There are two types of self build mortgage. They are defined by how funds are released during the build, whereby staged payments are either subject to an increase in the value of works completed or guaranteed based on your costs.

A valuation-based mortgage releases funds to buy the plot, and then after each stage of works are complete – where a survey has taken place showing an uplift in value. But this can cause problems because there is a risk of the property being devalued during the build. For example, the increase in value of installing foundations is often not as much as the cost to complete them.

BuildStore's unique cost-based mortgages provide guaranteed stage payments based on your actual build costs, as opposed to the value the works add. This gives you certainty in your budget and peace of mind knowing you can plan for and pay your bills on time. You can find out more at www.buildstore.co.uk.

With a cost-based mortgage, funds are available before or after each works stage, depending on your agreed payment schedule. For example, if you've chosen an off-site manufactured system like a timber frame or structural insulated panels, you may be required to pay for the structure in full before it leaves the factory. A cost based mortgage with funds released before each stage will provide the cash to meet your supplier's payment terms.



ANY QUESTIONS?

Send all your self build, renovation and conversion questions to buildit@castlemedia.co.uk or visit www.self-build.co.uk/question
Please note all correspondence may be published in the magazine

finding land

The first step in your self build journey is tracking down a viable building site. Keep yourself ahead of the competition with Build It's top plot hunting tips



Above: Gorgeous plots do exist – but if you have grand designs on that dream rural setting, bear in mind that it's incredibly rare to get planning consent for a completely new house in the countryside. Demolish and rebuild may be a better route

Tracking down the right plot for your project is a little more complex than purchasing an existing house. The good news is 13,000 people successfully build their own home each year – but if you want the best possible chance of identifying a viable site, it's worth getting to grips with the process first. Here's what you need to know.

LAND FINDING ROUTES

Few self builders simply stumble on a great plot by chance and end up building on it. Identifying the right opportunity can take considerable time and effort, so it pays to adopt a multi-pronged approach. So what are the best land hunting routes?

Use your contacts Don't underestimate the power of networking. Tell your friends and co-workers that you are looking for a plot. They may have heard of someone selling in your preferred area, for instance, or even have a large garden they'd be willing to split at the right price. Social media can be a big benefit here, spreading the word even quicker.

Explore the area Walk around the locale to identify empty land between houses, garden plots or disused garages – all of which could offer potential build opportunities. If you spot a site that you think could have scope to be developed, then approach the owner and let them know you are interested. If the owner isn't obvious and you can't find out via the Land Registry, try speaking to the neighbour.

Talk to locals Head to pubs and shops in the area you're considering to meet residents, as they may be able to tell you about opportunities not yet listed. Professionals such as architects, building surveyors or planning consultants in the region may be a useful source of leads, too – and you might want to use their services further down the line.

Speak to business owners Local farmers, breweries, universities and other organisations may have surplus land they want to sell (or would consider selling). Many do so via estate agents, but there's no harm approaching them directly.

Sign up for your Right to Build Councils are now obliged to maintain official self build registers, thanks to the government's Right to Build legislation. You can record your interest in obtaining a plot and state the type of project you are keen to pursue. If 200 people sign up, the council is then supposed to permission 200 viable sites within a three-year period. You aren't guaranteed land, but the legislation should see the availability of build-ready plots improve dramatically.

FURTHER READING

www.self-build.co.uk/right-to-build

Visit the council's website Local authorities list current planning applications online, usually under the 'planning' or 'housing' sections – with details of the scheme, who has applied and when. If you find a likely-looking opportunity and can get in touch with the owner before they get consent, you'll be in a strong position to secure a purchase.

Use plot finding databases BuildStore's Plotsearch (www.plotsearch.co.uk) lists thousands of sites with planning consent across the UK. Happily, it's also free to use. As well as giving you the chance to find a good plot, this resource helps you get a feel for land prices and availability in different areas. You can also see which estate agents are active in your region. Turn to [page 103](#) for a taster of what's on offer.

Check out property auctions Many good quality plots change hands this way. Auction houses such as Clive Emson, Allsop and Savills sell a variety of sites, so get on their mailing lists for catalogues. Remember that you will need to have finance in place – once the hammer goes down, the contract is triggered and a deposit is due.

FURTHER READING

www.self-build.co.uk/auctions

Register with agents Many building plots are still sold through traditional estate and land agents. Monitor the books of both types, as some may have overlooked the planning potential of properties they're selling (eg for a demolish and rebuild opportunity). The personal approach can pay dividends with this route, too – if they know you, they're much more likely to give you a heads up when something's coming onto the market.

TYPES OF BUILDING PLOT

Bespoke homes can be constructed on a range of sites, and knowing about the opportunities can help you spot land with potential for your project. Here are some of the key options:

Brownfield sites This is basically previously-developed land that is or once was occupied by a permanent structure. Government policy supports the provision of new housing in such locations, so councils tend to look favourably on plans that have the potential to improve these plots. Plus on a practical level, services are likely to be in place already.

Demolish & replace A type of brownfield opportunity where you could knock down an existing building, such as an old bungalow or former non-residential structure, and construct a new (usually bigger and more attractive) home in its place. It's often more cost-effective than tackling a renovation, as VAT can be reclaimed on a new build project.

Infill plots There's no formal definition of this type of site, but many councils take it to mean a small gap between an otherwise built-up frontage or group of houses. Infilling is usually allowed within settlements' development boundaries – and sometimes outside of these. Gaining consent will be more difficult in zones such as conservation areas.

CLOSER LOOK: PLOTS WITH POTENTIAL

These sites are a small selection of those that have been recently assessed by Build It magazine's land and planning expert, Mike Dade. For his latest in-depth plot investigation, turn to [page 104](#).



This fenced-off former garden is level, clear and would provide good privacy for new housing. It currently benefits from two planning consents: one for a chalet bungalow; the other for a pair of semi-detached homes. The former only has a few months left to run, so if the purchaser wanted to go for a single dwelling, they may need to get works underway (eg by digging a foundation trench) to keep the permission alive, and then apply to amend the design.

FULL STORY

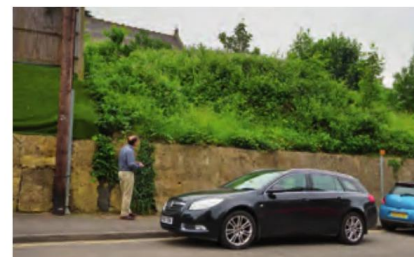
www.self-build.co.uk/garden-site



A secluded piece of woodland in West Sussex available for just £15,000. This plot's particulars show an attractive-looking contemporary dwelling set amongst the trees and confirm it has the owner's consent to construct a house or other buildings. The trouble is, owner's consent means nothing without formal planning permission – and the fact the vendor hasn't sought this themselves, and bagged the uplift in value, suggests there's little chance of achieving it.

FULL STORY

www.self-build.co.uk/woodland-bargain



Two budding self builders discovered this overgrown potential infill site by searching for empty spaces in their hometown on Google Maps. It's tucked behind high street shops, with a frontage to a side road – so it could have real potential for development. But its elevated position and retaining wall could present some challenges for any building work. Ground conditions, particularly in terms of stability, will need to be investigated and accounted for prior to making any offer.

FULL STORY

www.self-build.co.uk/infill-potential

NEED TO KNOW PLOT BUYER'S CHECKLIST

Think you might have identified a viable site for your self build project? Our **quick-fire plot buyer's checklist** will help you decide:

Am I ready to act quickly? It's important to have your funds and/or borrowing lined up and legal representation ready to go so that your offer looks enticing to the vendor (if you're buying at auction, this is essential).

Is planning permission in place? The outline or full consent shouldn't be about to expire, as this could put your dream home project in jeopardy. Any conditions attached to the permission must be acceptable to you.

Are there any fees? Double check whether you will be liable for a Section 106 charge or any other financial contributions to the council as a condition of the planning permission. These could increase your project costs markedly, and may need to be accounted for in your offer.

Am I getting all the land? Ensure the plot area that's for sale is exactly the same as that indicated on the current planning permission – otherwise you could run into trouble with ransom strips and other issues.

Can I change the consent? The majority of self-builders will want to tweak the design to some degree, so think about whether you want to revise the existing planning permission and if these amendments are realistic.

Are there any other obstacles? Check whether the plot has a right of access to the public highway and ascertain if any legal issues, such as restrictive covenants (binding conditions written into a property's deeds), might bring extra costs or prevent you building.

For more advice log on to www.self-build.co.uk/plot-checklist

Gardens Contrary to 'backland development' and 'garden-grabbing' headlines, planners still pass garden schemes – especially in places considered to be built-up. You may even be lucky enough to have a large space that could work as a viable site already; or know a friend willing to provide one.

Edge-of-settlement Depending on the maps marked out in Local Plans, this kind of site might fall within built-up area boundaries or it might not. Generally, policies will allow development within this zone – but control it very strictly outside. This undeveloped land is known as greenfield, and will typically only offer housing to serve the needs of agriculture, replacement dwellings and some infill.

Serviced plots A fairly new option on the market, this term refers to land that's ready to build on – with utilities, highway access and possibly other infrastructure already in place, as well as at least outline planning consent. This route offers the benefit of more certainty over early-stage costs.

FURTHER READING

www.self-build.co.uk/serviced-plots

WHAT MAKES A GOOD PLOT?

Picture the perfect piece of land and it will probably be in a pleasant area, affordable, completely level, easy to access and have good ground conditions, no obstructions and no planning issues that might hamper your dream home plans. Trouble is, that plot doesn't exist (or at least if it did, a big developer probably snapped it up ages ago). In practice, even the best site will require you to make a few compromises. So it's crucial to assess contenders properly to check you can get as close as possible to your goals at a cost that stacks up.

Plots generally come with planning permission in place: either outline (which is a fairly loose affirmation that the site

can be developed); or full (consent for a particular design). Beware any site that doesn't have a current approval. Land is worth considerably more once consent has been granted, so if the deal looks too good to be true, it probably is.

Basic potential

Once you've spotted a likely-looking opportunity, there are two key questions to ask before delving in further. Can the house you want to build be comfortably accommodated on the plot (eg in terms of size, local property values and the like)? And does the existing planning consent allow for that house, or could it be amended to suit? If you can say yes to both of those, then it's worth a bit more research.

In terms of site suitability, you need to check for issues that could increase construction costs (which should be factored into any offer for the land), make it difficult to get the right kind of design for your household, or affect the viability of a project. Some of the most notorious budget-busters include steep slopes, difficult access to services (electricity, gas, water etc) or obstacles such as trees, existing structures and overhead cables. But these issues may not be insurmountable, and with good design some can even be turned to your advantage. A sloping plot is likely to offer great views and the potential for a basement, for instance, and you won't face much competition from developers.

From a planning perspective, check how long is left on the consent. If it's less than about six months and you need to redesign the house or sort out any conditions the planners have put on the permission (such as approval for materials), this could be problematic. It might sound obvious, but you should also scrutinise the plot boundaries to ensure you're buying all of the land included in the approved plans.

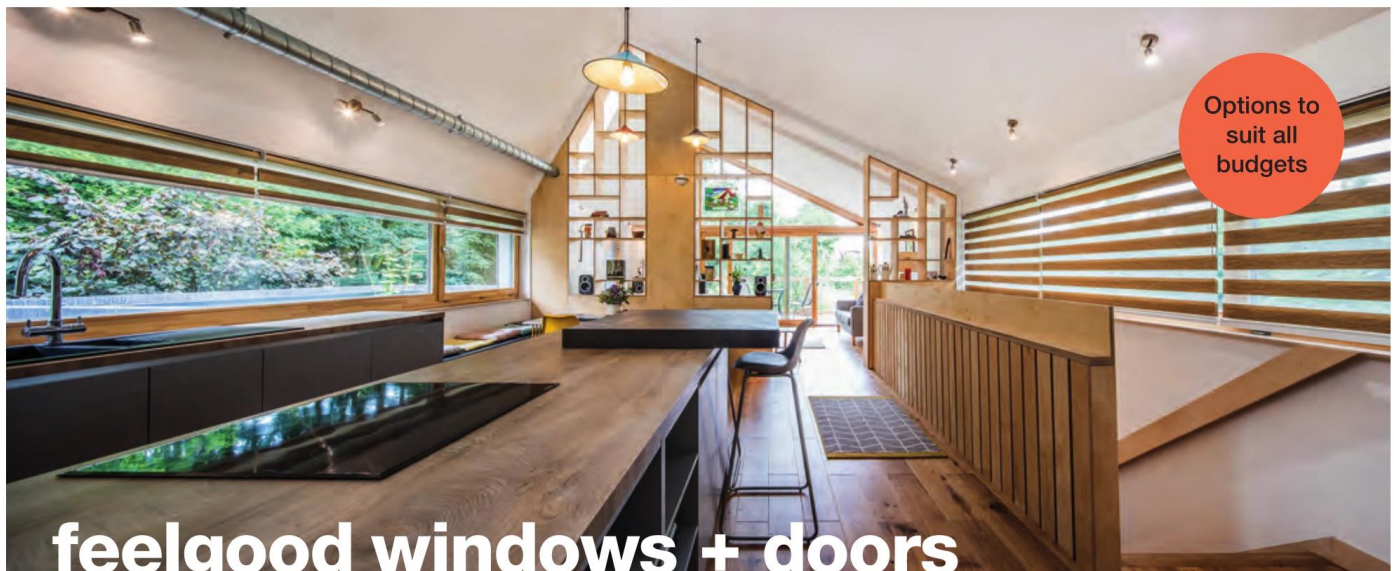
Detailed assessment

If early-stage investigations seem positive, you can move on to a more in-depth appraisal of exactly how suitable the site is in terms of planning potential and build costs. This will take in things like access, trees, ground conditions, drainage and legal considerations. Build It's invaluable resource at www.self-build.co.uk/plot-checklist can help structure this part of the process. If you come up against anything you're not sure about, seek advice from suitable professionals. That might mean speaking to your local council about planning matters or engaging a solicitor on the legals.

A planning consultant, architect or specialist design-and-build company may also be able to point you in the right direction or help you undertake a full viability assessment.

Right: This brownfield infill plot features three lock-up garages, set between a pair of semi-detached houses. It comes with outline planning for a new house and could be an excellent opportunity – provided the right design can be achieved and a site contamination investigate doesn't reveal any major hidden costs





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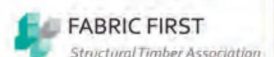
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HAVE YOU CHECKED OUT THE 2019 BUILD IT AWARD WINNERS?



In association with **BUILDSTORE**

The **Build It Awards**, in association with BuildStore, is the UK's premier celebration of the very best products, services, projects and innovations for self builders and renovators. Every year, our panel of industry experts put all of their knowledge and experience into scrutinising hundreds of high-quality entries, with the goal of helping you to identify the very best options out there for creating your dream home.

FROM INSPIRING PROJECTS TO INNOVATIVE PRODUCTS, TAKE A LOOK AT THE WINNERS AND SHORTLIST TO HELP YOU SPECIFY THE RIGHT MATERIALS AND APPOINT THE RIGHT PARTNERS TO SUIT YOUR INDIVIDUAL PROJECT.

From architects to glazing, here are a few of our well-deserved winners...



BEST SELF BUILD ARCHITECT
KAST Architects



BEST TIMBER FRAME HOME
Fleming Homes



BEST OAK FRAME HOME
Oakwrights



BEST GLAZED DOORS
DWL Windows



BEST JOINERY PRODUCT
First Step Designs



BEST STOVE
Nordpeis



BEST ROOFING PRODUCT
Fakro



For more information about all our winners visit www.buildit.co.uk/winners

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FOR INFORMATION ON SPONSORING THE 2020 BUILD IT AWARDS CONTACT: **NICK GILLAM** ON **0203 627 3245**



It's FREE to subscribe to PlotSearch – the UK's premier land finding resource with over 5,000 genuine building opportunities, all with planning permission guaranteed.

The plots collated here are a hand-picked selection, but you can find plenty more in the online database. To find out more and to subscribe call **0345 223 4499** or visit the website at **www.plotsearch.co.uk**

Land FOR SALE

Location

Canterbury

Price

£400,000

Plot

147159

This plot sits in an area of outstanding natural beauty. It has been granted detailed planning permission for a new two storey house. The modern design is sympathetic to the local Kentish vernacular, incorporating a slate roof and flint cladding, with a white render. The home will have an open-plan layout, six bedrooms with ensembles and a cinema room, spread across 370m² of floorspace.



Agent

Christopher Hodgson

Location

Aberdeenshire

Price

£49,000

Plot number

150302

Detailed planning consent has been given for a self builder to create a four bedroom house with double garage on this rural plot. The land is located in the hamlet Garmond, with a small local community nearby. The closest village has a small range of facilities, including a shop and primary school. A wider variety of facilities can be found in Turriff, approximately seven miles away.



Agent

Grant Smith Law Practice

Location

Shropshire

Price

£170,000

Plot number

150318

This plot has detailed planning granted for a four-bedroom detached dwelling. The proposed plans comprise a master suite and separate family bathroom to service the other three bedrooms. Downstairs holds the kitchen, utility, dining and living rooms, plus a home office. The large plot measures 1,369m² with a shared drive and right of access to the neighbouring property.



Agent

James Du Pavey

Location

Suffolk

Price

£115,000

Plot number

150336

An opportunity for a zero-carbon home, this plot has DPP for a single storey house with detached garage. The architects propose an eco-friendly build with open-plan living, a south-facing veranda and solar panels. According to the submitted plans, both buildings should be 106m² and should aim to meet Passivhaus standards. The nearby town has a friendly community vibe and excellent amenities, including a deli and butchers.



Agent

Fenn Wright

Location

Durham

Price

£105,000

Plot number

150347

Outline consent has been obtained for this suburban plot, three miles outside of Durham City. It's a great chance for a self builder to create a bespoke home, with fantastic travel links to local hotspots. It's ideal for those seeking countryside tranquillity but easy access for commuting purposes. The plot is positioned just 10 minutes from Durham City by car, and is less than an hour from the main railway station and Newcastle International Airport.



Agent

George F White

Location

Carmarthenshire

Price

£193,000

Plot number

150489

This traditional stone barn has permission to be converted into a residential building. The project has detailed consent for the change of use, so that the agricultural structure can become a four-bedroom domestic dwelling. The barn benefits from scenic views over the surrounding countryside, and would be an excellent opportunity to create a stunning rural home, packed with character.



Agent

Nock Deighton

PLOT WATCH: Mike Dade *investigates*

Could this cheap site on an estate offer these first time buyers the opportunity to take on a self build? **Mike Dade** checks out its potential

WHO Robert Pendry & Jill Norton

WHAT Land on an estate selling at auction with a tiny starting price

WHERE West Sussex



BARGAIN OR BIG RISK?

Robert and Jill are first time buyers looking for a modest property in their home town. They've dreamt of self building, but plots in this desirable commuter town in West Sussex are few and far between, and expensive as well. However, Jill has spotted a piece of land up for sale by auction. What caught her eye was the price tag, +£1, and a note on the particulars that there was no reserve. Could this piece of land have potential and could it be bought at a really cheap price?

The site

Positioned within a housing estate, the plot is an open space between houses with a belt of trees along one side. It's a level, mown area of grass with a maximum depth of about 50m and width of 24m.

It appears to serve a purpose as communal open space. At one end there's the estate road, and at the other is a footpath running beside the tree belt. There's a terrace of houses facing onto it all down one side. The far end next to the trees has a terrace facing onto it, and the near end, adjacent to the road, has a terrace fronting the road presenting a blank side wall to it.

Estate plots

Odd bits of land on housing estates do come up for sale from time to time. They are often part of large side gardens, or wide verges and amenity spaces. Planning applications on such sites tend to be contentious, with local residents not wanting to see the original estate layout altered. I've known several such applications that have been refused due largely to public pressure and then approved following going to appeal.



Is it possible to build here?



owner may be responsible for maintaining it. Such obligations and expenses might explain its rather modest price tag.

Planning potential

The only realistic option for development here would be to add an additional terraced house to the row that faces the road. This would fit into the established pattern of houses and could have a back garden of similar size to the neighbouring property. It wouldn't affect the privacy of neighbours, although it would bring the existing end of terrace gable wall closer to the houses facing it. That said, there would still be a gap of a good 16/17m, so not a major impact on outlook. The new house would also be to the north of the facing terrace, so it wouldn't cause any loss of light or direct sun. You can be sure the facing owners wouldn't like it, but from a planning perspective there wouldn't be significant harm to their amenity, and not sufficient to justify refusal.

Whether the loss of amenity space would be considered so harmful as to justify refusal is another matter. Current government



Especially where residents have become accustomed to using an area of land as if it were public open space, stiff resistance to development can be expected. In some cases the land was designated in the original estate planning permission as public amenity space, although never adopted for that purpose by the council. Such land can be particularly difficult to develop.

Preliminary thoughts

This looks like one of those tricky sites where the perception locally is likely to be that it's public land, no matter that it



is evidently privately owned. Robert and Jill would need to establish what it was intended to be in the original estate layout, and whether there are any planning or legal restrictions affecting it – the latter in the form of restrictive covenants.

Another key question is who maintains it and at what cost? Given that at best only a part of it could be developed, the remainder is likely to remain as it is now, and any future

planning policy guidance in the National Planning Policy Framework (NPPF) places great weight on the benefits of making the best use of available land within settlements for housing. In addition, greater emphasis is now placed on maximising densities than used to be the case when this estate was built some 40 to 50 years ago.

A new house would only occupy about 25% of the overall land area and if the



remainder could stay as a public amenity, there would be a good argument to be made that the amenity value of the land wouldn't be too compromised. There might be potential to enhance the remaining space, through planting or provision of seating or a play area. That would inevitably come at a cost, although helpful in avoiding some objections. But the provision of facilities and their long-term maintenance could place an untenable burden on Robert and Jill.

Auction challenge

Jill spotted this land with only three weeks to go before the auction date. That's not enough time to get pre-application advice back from the council and a squeeze for getting professional advice from a planning

also because estate developments can be the subject of multiple permissions and amendments. They should also check the Local Plan, in case the site carries some specific designation as public open space.

At relatively short notice, though, it's not going to be possible to determine for certain whether consent for a new house might be forthcoming. They'd also need to determine whether they could build on to the end of terrace house, from a legal point of view. Given these uncertainties, it would be almost impossible for Robert and Jill to put together a realistic figure on the value of the site.

Conclusions

Despite the possibility that this site might sell for a low price, it's not a sensible proposition

a good deal of weight. If refused, an appeal might succeed, but the process is time consuming, taking six to eight months, and again, there's no certainty of success at the end of that.

For self build buyers there's the certainty that expense will be incurred, in buying and seeking planning permission, but here there's no certainty at all that permission will be granted. For a developer or speculator the site might have some value, particularly if bought alongside a portfolio of other parcels of land. If only a small percentage of such sites gained permission, that would justify all the purchases, but Robert and Jill aren't in



consultant. Robert and Jill should do as much research as possible.

The legal pack provided by the selling agents should reveal any covenants, rights of way and other legal obligations that might affect the land. They could also try looking up the planning history of the site on the council's website. This can be tricky, though, partly because the records might be sparse for such an old planning permission and

for Robert and Jill given their first time buyer status. There's a risk that the land might in fact prove to be a liability, with maintenance costs, rather than an asset. In addition, there's no guarantee that permission would be granted. The near certainty of local objection means that even if the planning officers were happy with an application scheme, the decision might be taken at committee where local objection carries

that camp. Their best bet would be to move on to looking at other more promising sites that have less embodied risk.



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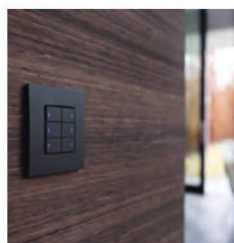
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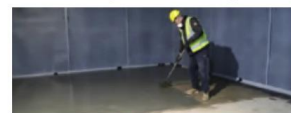


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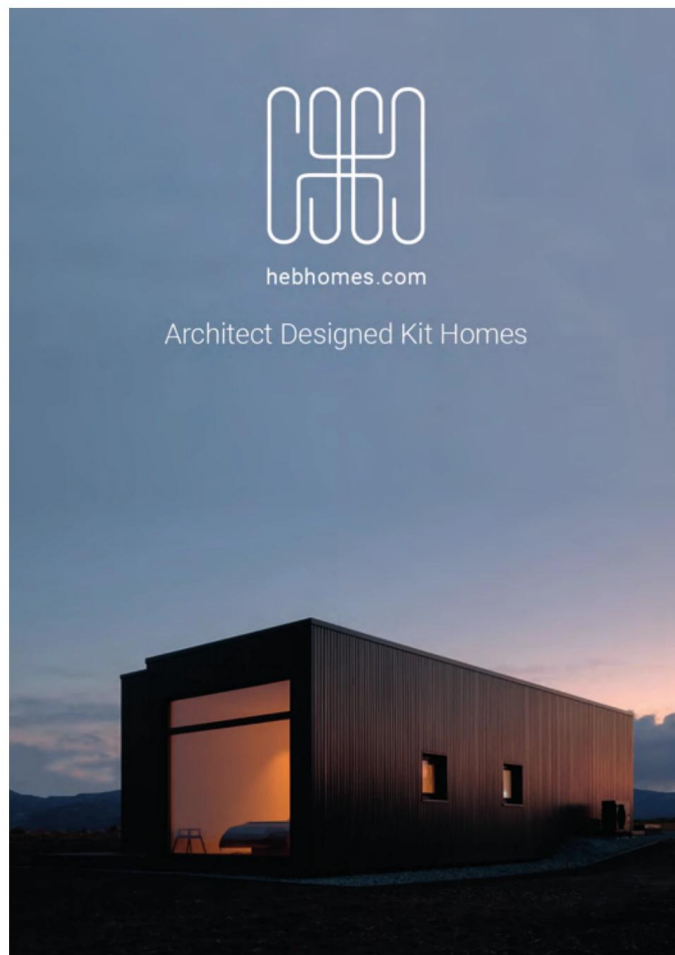
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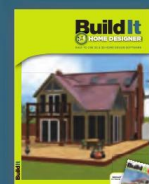
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