

SPECIAL EDITION COMPLETE GUIDE TO SELF BUILD

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- ✓ Project Management Tips

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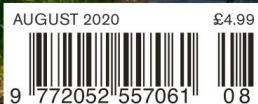
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Welcome

Self building is the best way to create an individual, high quality and value-for-money home that will meet your needs both now and for decades to come. So in this edition, we're looking at all things self build – starting with the reasons why it could be your route to a better lifestyle (page 10). Read on and you'll gain access to inspiring homes (page 12), expert advice on how you can estimate build costs (page 32) and finance your own project (page 35), plus in-depth guides on everything from finding a viable plot (page 40) to making key specification decisions on structural options (page 86), heating systems (page 99) and windows (page 109).

When you're embarking on the journey to creating a bespoke home, it pays to gather as much information and as many ideas as you can. And you can rest assured that, by picking up this edition of Build It, you've made a sound first investment. Our team is made up of leading UK self build and renovation experts, all of whom have undertaken major projects of their own. We've been there, done it and got the T-shirt ourselves: and our goal is to pass on what we've learned along the way, to arm you with the tools you need to successfully self build on time and on budget.

The proof is in the pudding, so I'm delighted to share some fantastic news with you. Build It's Self Build Education House – the magazine's very own project and a unique, interactive educational hub for self builders – has won the RICS South East Social Impact Award for Best Residential Project. The judges praised the Education House for proving that self build is not a pipe dream, but a reality for normal people with normal budgets. So book your visit to the Education House today and make the perfect start to your self build journey: visit www.buildithouse.co.uk/ourhouse



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 self builders face. Read more from Emily at www.self-build.co.uk/emily



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TIM DOHERTY was the founding MD of the NSBRC and runs Dobanti property surveyors. A self builder himself, Tim is a technical guru and regular expert at Build It Live.

MIKE DADE is a planning specialist and plot-finding expert. He's one half of consultancy Speer & Dade and the author of several must-read books about winning the planning game.



JULIAN OWEN is a self build architect and founder of the Association of Self-Build Architects. He has written a number of books on self build, renovation and home extensions.

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 manager. He has first-hand experience of building his own home and has delivered many dedicated self build courses.

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 self builder, sustainability consultant and a fount of knowledge for heating solutions. He is also the author of the Haynes Eco House Manual.



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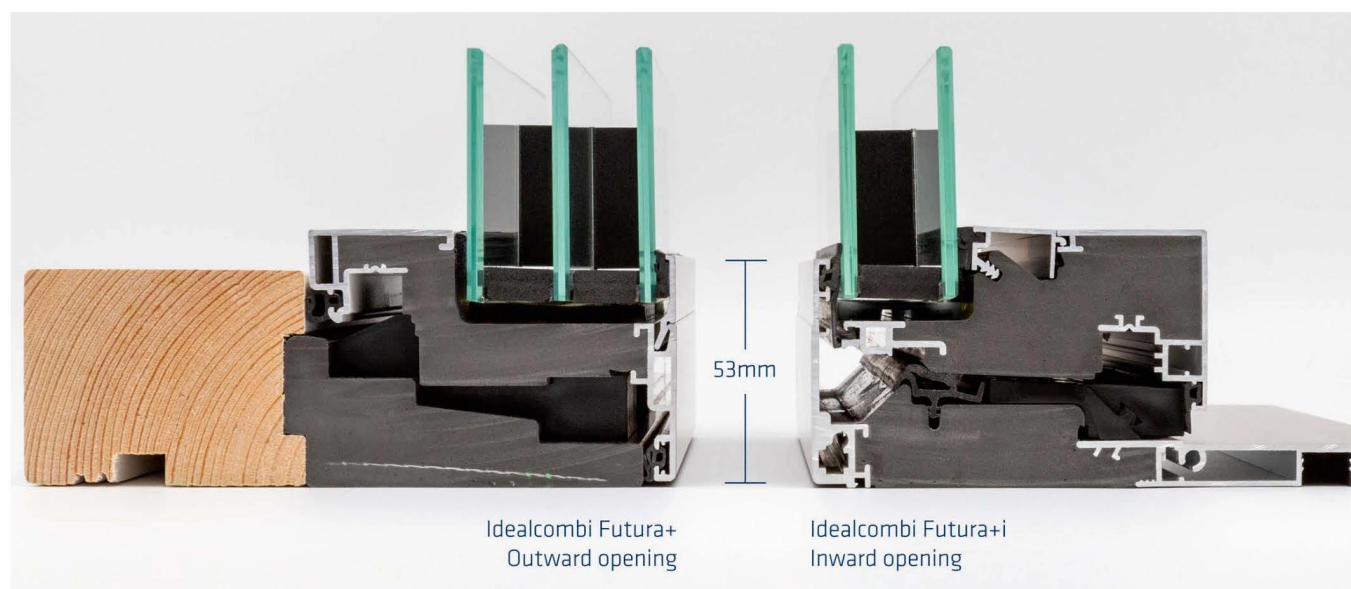
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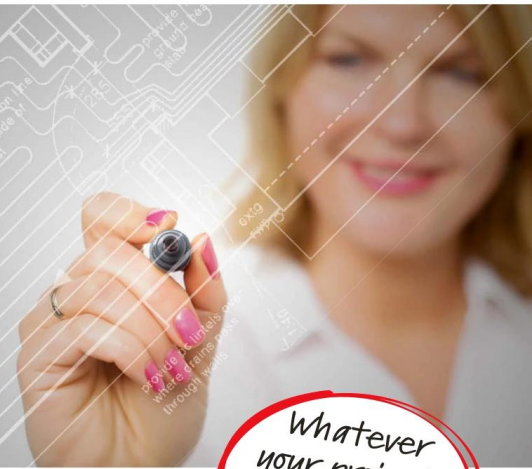


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START YOUR PROJECT

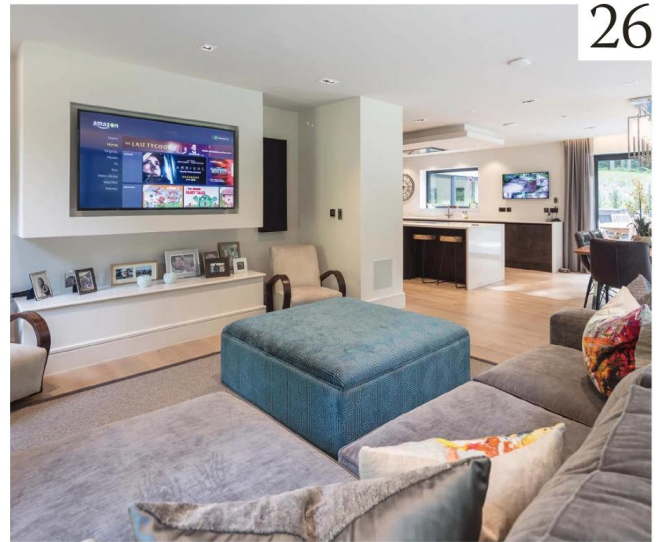
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Self build a better lifestyle

A home tailored to your exact needs can have many positive effects on your day-to-day life

Above & below: This home was created under a turnkey package from Baufritz (www.baufritz.co.uk). "Everything is done so professionally and the quality of the people on site was amazing. It is so light inside and I enjoy the views," says the homeowner

Whether you're thinking about downsizing for retirement or keen to create a larger home that's bespoke to your family's needs, whatever motivation you have for tackling a self build, doing so could enhance your life in ways that you haven't even contemplated. So before this edition gets into the nitty gritty details of how to go about planning and building a new dwelling, here are some of the ways a bespoke home project could improve your everyday life.

1 Create a tailored layout

One of the key advantages of building from scratch is that you have the opportunity to produce a home that's

totally in tune with your needs and the way you like to interact with your living environment. Whether that means an open-plan family space with a large kitchen where you can keep an eye on the kids while you cook, or a luxurious

master suite with its own walk-in wardrobe – you can make sure you have the right amount of room where you want it.

When devising your floorplan, start by thinking about how you interact with your current home and if the relationship could be improved. You'll probably want to keep some of the same furniture, so remember to cater for these.

2 Enjoy light-filled living

There's lots of research proving the benefits of regularly coming into contact with natural light. From improving your

sleep quality through to positive effects on mood thanks to increased levels of serotonin, daylight is arguably the most precious commodity you can have in your home.

Carefully plan window positions by focusing on how the sun moves across your plot so your floorplan matches which rooms you'll want daylight in at different times of the day. Although the sun's pattern is predictable, you will experience different results across the various seasons, so make sure the design caters for year-round daylight. Many designers can produce a computer model of your home to show how daylight will fall across a building throughout the year, influencing layout and the overall orientation.

3 Reduce energy bills

If you're capturing lots of daylight, you'll be able to use natural warmth to your advantage, too. Well-considered positioning of your building and its windows will help you to gain free heating from the sun; but be careful to ensure spaces won't overheat. Harnessing natural warmth will help to lower bills, but reducing energy use is about much more than getting the glazing right. A fabric first approach will create a highly insulated and airtight home, which means the building should be efficient at retaining heat.

Look into how you can benefit from thermal mass, which is where your building soaks up warmth during the day to release it slowly later on to provide even heating patterns – masonry construction, brick cladding, concrete floors and brick chimney stacks could all help with this.

If you're keen to create a low-energy home, consider building to Passivhaus standards. This design methodology aims to reduce the energy need for space heating, while ensuring rooms maintain good air quality and comfort levels.

4 Soak up the surroundings

There's another benefit to having ample glazing – the potential to frame views and create a better connection with your garden. In fact, having regular contact with nature is another commodity that is known to be good for us,



generally increasing health and happiness, so it's worth thinking of ways to bring the outdoors in.

Glazed doors connecting living spaces and gardens are a popular feature. Think about what style will work best for you. For instance, sliding doors have thinner frames when closed, meaning they offer a clearer view out in comparison to bifolds; however, the latter type are able to concertina as they open to give you maximum access to the outdoors.

5 Create a healthy environment

Self building also gives you control over the products and finishes in your home. Many people make specification decisions aimed at boosting overall wellbeing. A key area is bad indoor air quality, which is linked to a range of health problems, from asthma and eczema through to cancer and heart disease. You'd be surprised at how many nasty fumes can come out of building materials and finishes.

If you're creating an airtight building, factor in a fresh airflow without compromising energy efficiency (usually achieved with mechanical ventilation and heat recovery systems). Also look for products that protect the health of your household, such as natural solutions like sheep's wool insulation and plant-based paints. You can even get special plasterboards that neutralise harmful compounds.

6 Guaranteed peace & quiet

Want to make sure that busy road doesn't keep you up at night? Or that your teenager's drumkit practice doesn't disturb their younger sibling's bedtime? Creating your own home means you can ensure quiet rooms by building in good soundproofing and acoustic performance.

Beam and block floors offer a solid barrier against noise transfer between storeys. If you aren't building with masonry then you can upgrade timber floor structures with specialist acoustic products, such as British Gypsum's Silent Additional Ceiling (www.roomsmadeoryou.co.uk).

Think about layout and design – open-plan living spaces and hard floor surfaces could be noisy. Soft materials are

better at absorbing sound waves; you could even integrate acoustic absorption panels into walls to reduce echoes.

7 Get the quality you want

Whether you're working with an architect, house designer or specialist building firm, you'll be deciding what goes into your new home.

From the construction method through to internal finishes, each element will have a role to play. You'll have the freedom to carefully consider your budget and what things are worth putting extra money into, whether that's super high spec insulation or the dream kitchen for entertaining.

8 Wow factor at an affordable price

You will have the opportunity to create some amazing results you're unlikely to find in a developer property. There's a host of ways to bring standout details into your new home – statement cladding, clever lighting, double-height spaces, cantilevered levels, grand front doors... the potential is endless! Look at other projects and chat to the professionals about what's possible within your budget.

9 Reduce clutter

A big problem with mass-produced housing is the lack of storage, as developers squeeze as many rooms into as small a space as possible. It's easy to underestimate how many possessions you need to store away, so think carefully about how much room you need. Built-in solutions can extend the full height of walls, which is a great way to create a focal feature and maximise available space.

You'll also be able to think about where sockets should be to ensure you don't have cables running the span of rooms, so it's worth thinking where your TV, freestanding lights etc will be positioned when creating the floorplan.

10 Future proof

It's inevitable that every household's needs change as time goes on. So if you're planning to live in your new self build home for decades to come, the layout needs lots of flexibility built-in to ensure that it can evolve with you.

For instance, a downstairs WC, cloakroom and large study next to each other could be transformed into a wetroom and bedroom if stairs become an issue in the future. Wider than standard doors will allow for wheelchair movement and perhaps what could be a cupboard for now could become a lift at a later date, with the floor joists above pre-trimmed already just in case. You could put services in place for a future extension or creating an attic space that's ready to convert later on for more rooms – these things mean your home will definitely be able to adapt with you and enable you to get the most value out of your project.



Above & below left: Alison and Tony Jackson hadn't planned to self build, but when a dream plot came up, they couldn't resist the opportunity to build a bespoke new home. Luckily, they were able to utilise the design skills of their architect daughter, Kate Jackson (www.katejacksonarchitects.com)



Clay roof tiles by Dreadnought Tiles, white silicone render from K-Rend and Russwood's Siberian larch cladding combine for a characterful facade

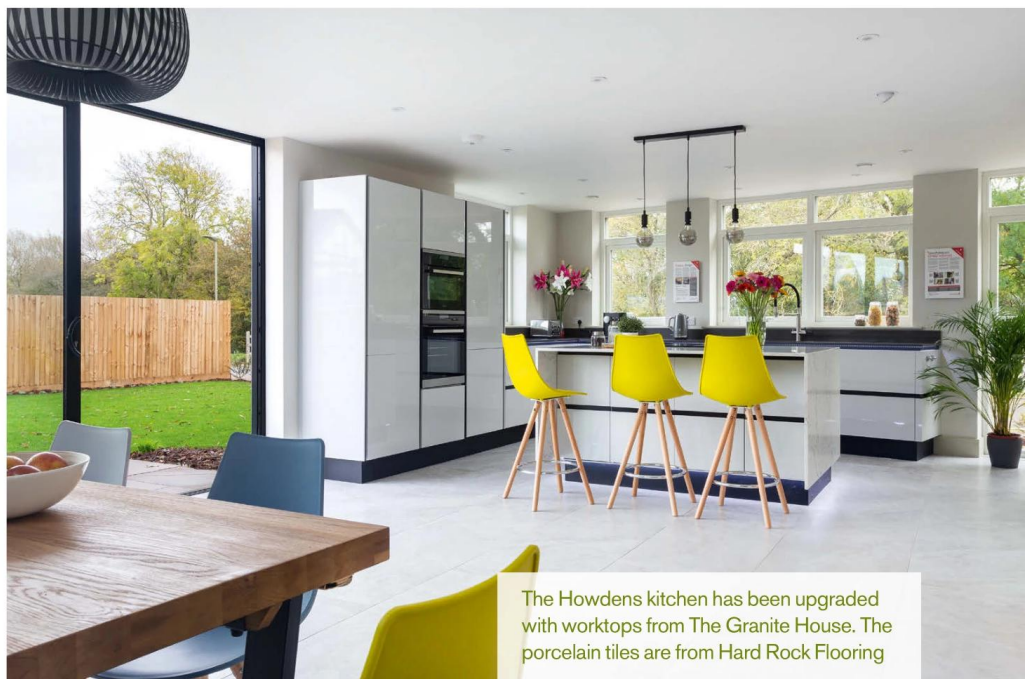
Build It's Education House

Our **Self Build Education House** is an access-all-areas home designed to give you a blueprint for the choices you'll make on your own self build journey

Since Build It magazine's launch in 1989, we've featured thousands of amazing bespoke homes. 30 years on, we've taken that to the ultimate level by actually building our own house. Our goal was to create a unique educational hub to not only inspire, but also arm you with the tools you need to complete your own dream home – so you'll have a real-life reference point on which to base your decisions and budgets. You can follow the entire journey online at www.buildit.co.uk/ourhouse – but here's a quick overview of some of our project highlights.

Our plot & key design decisions

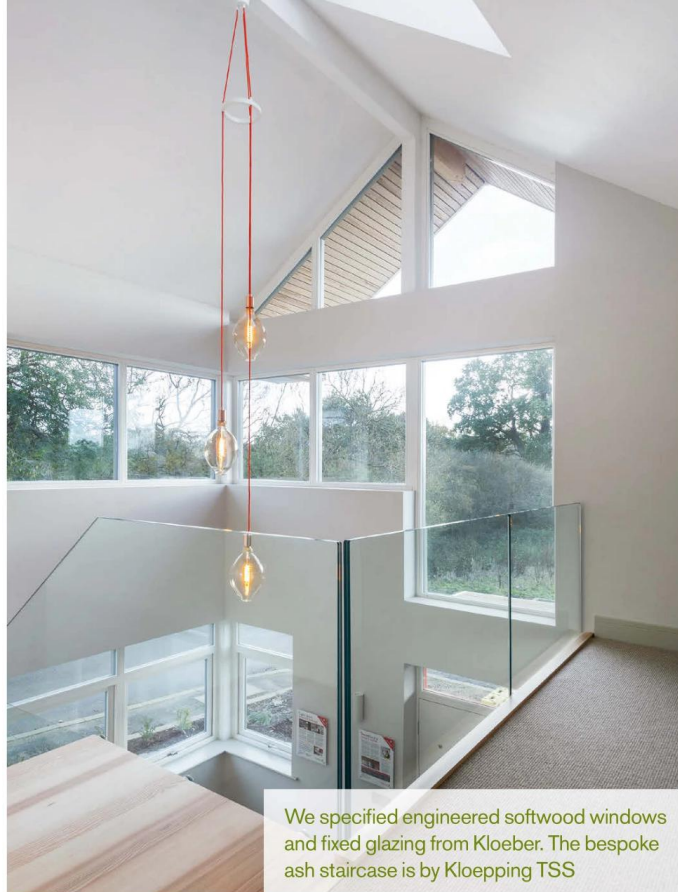
We created the Education House in partnership with Graven Hill, the UK's largest custom build development, set in Bicester, Oxfordshire. Every shovel-ready self build site at Graven Hill (find out more on page



The Howdens kitchen has been upgraded with worktops from The Granite House. The porcelain tiles are from Hard Rock Flooring

62) comes with a Plot Passport and services already in place and ready to tap into. So you know everything you need to know before you buy, including the maximum house size, where it can sit on the plot, permitted roof ridge heights and any restrictions on materials.

The Education House is in a zone that offers lots of design freedom, but we still had parameters such as an 8.1m ridge height and an above-ground internal floor area of 160m². These helped to inform some key decision decisions, such as the shallow triple aspect roof to enabled two full height storeys and a ready-to-convert loft.



We specified engineered softwood windows and fixed glazing from Kloeber. The bespoke ash staircase is by Kloepping TSS

Editor Chris Bates project managed the build – alongside main contractor Drewett & Hunt – and worked with Opinder Liddar from lapd Architects to develop plans for a wow-factor, high-performance home that represented good value for money.

Our project doesn't set out to show how cheaply you can build a house. Instead, we're showcasing some of the bells and whistles – such as the latest heating systems, feature staircases, glazed gables and smart home tech – so you can experience them first-hand and decide which elements matter most to you when allocating chunks of your self build budget. We've also made some creative cost-saving choices, including

FACT FILE

LOCATION Graven Hill, Bicester

CONSTRUCTION METHOD

Nudura insulating concrete formwork from ICF Supplies; SIPCO structural insulated panel (SIPs) roof

PROJECT ROUTE

Architect designed, self project-managed with support from main contractor

HOUSE SIZE 250m²

PLOT SIZE 330m²

PROJECT COST £517,892

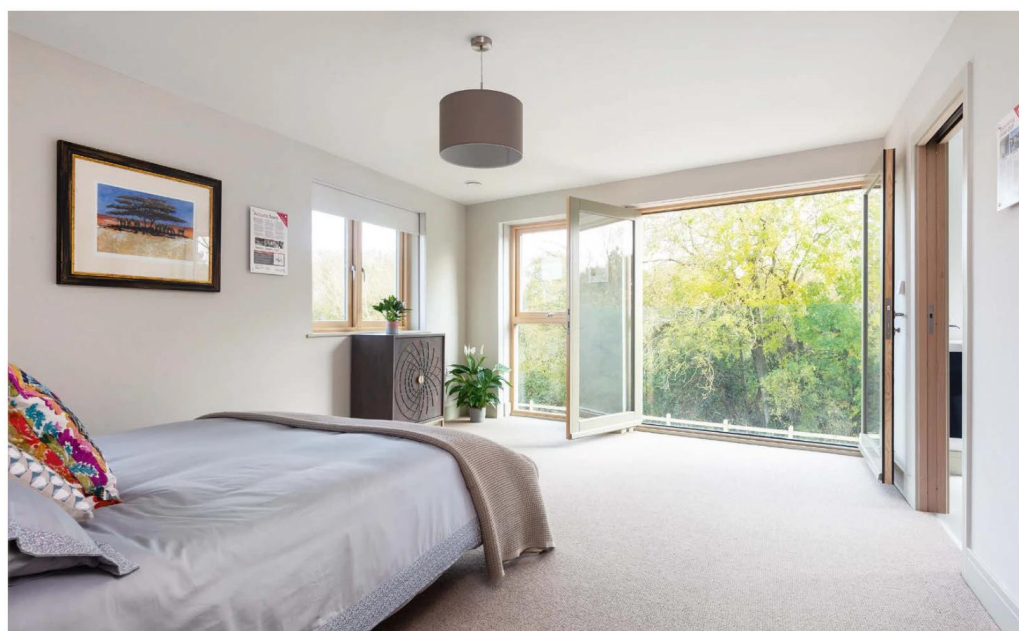
PROJECT COST PER M² £2,072

BUILDING WORK COMMENCED November 2018

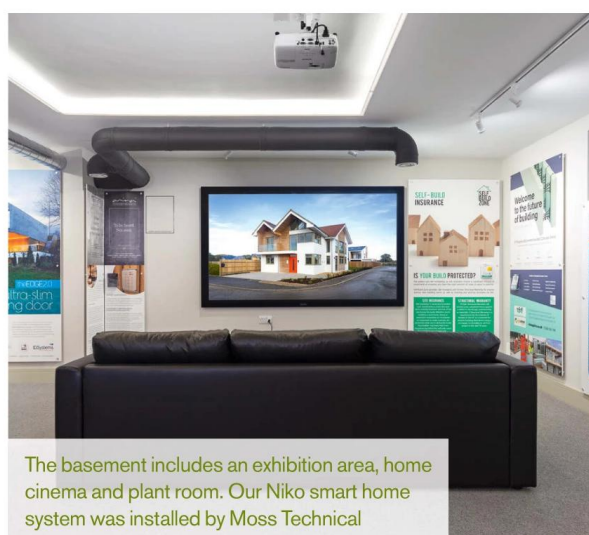
BUILDING WORK TOOK 10 months



The internal glazed sliding doors are from IDSystems (as are the external sliders, pictured left); our gas stove is from Jotul



We chose SIPCO's structural insulated panels for the roof, to maximise head height in our conversion-ready attic



The basement includes an exhibition area, home cinema and plant room. Our Niko smart home system was installed by Moss Technical

upgrading a relatively affordable kitchen with impressive quartz and silestone worktops. Similarly, the basement stair is a variation on the theme of the main feature flight, showing what you can achieve for £5,000 as opposed to £15,000.

Get the lowdown on our self build journey, learn more about all our project partners and book your visit to the Education House via our online hub at buildit.co.uk/ourhouse

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KITCHEN

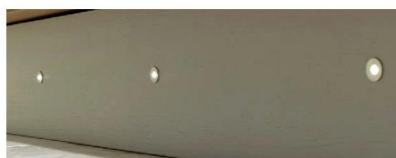
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Cabinet Hinges



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2

BEDROOM

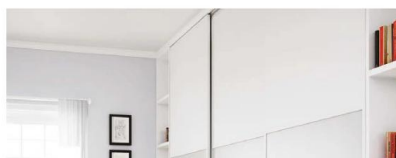
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Future-proof home

An oak frame design and shell package was the ideal solution for **Diane and Pete Smith's** new low maintenance property

With their sights set on creating an oak frame home, Diane and Pete Smith were sold on a serviced plot for sale through a builder near Shrewsbury. Welsh Oak Frame were the house designers and the couple liked that they were a local company. "The process seemed hassle-free and we did our research so we knew Welsh Oak Frame would be a trusted company to work with," says Diane. "In fact, we rang them straight after seeing the plot to arrange a design meeting."

They met with design director Emyr Davis to discuss their ideas. They discussed having an air source heat pump, underfloor heating and a mechanical heat recovery ventilation system. Also, three ensuite bedrooms and downstairs open-plan living with space to fit in special pieces of furniture. "Futureproofing the house was important too," adds Pete. "We wanted a downstairs study that could be used as a bedroom if we needed to later on, and a cloakroom next door designed as a wet room with wheelchair access." The couple also pointed out oak features they liked in the Welsh Oak Frame house brochure. "Emyr was very accommodating and incorporated things



we wanted,' says Diane. "The final cost ended-up being reasonable too."

Change of plan

Although they'd finalised their ideal design with Welsh Oak, they couldn't agree some of the construction details

FACT FILE

LOCATION Shropshire

CONSTRUCTION METHOD
Oak frame

PROJECT ROUTE

Package house design & shell, homeowners project managed

HOUSE SIZE 218m²

PLOT SIZE 950m²

BUILDING WORK TOOK
16 months



with the builder and decided to part company with him, and the plot. Luckily, they soon found a nearby patch of land that would perfectly suit the design they'd finalised with Emyr.

Welsh Oak Frame helped the couple achieve planning for their new house. Exposed oak gables with painted render give the house an aged feel along with carefully chosen roof tiles and bricks. This

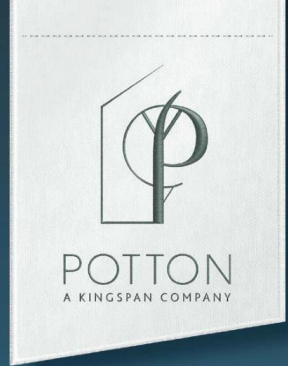
time Diane and Pete decided they wanted complete control of their build and took on the project management.

Three months after starting, the frame went up. "Unusually, we had the guys from the workshop who made our frame come and put it together, as heavy storms had delayed the other team," says Pete.

Soon the outer shell was finished and the couple took on some of the major build stages themselves, installing the Danish IdealCombi windows, building the first floor, upstairs studwork, fitting the insulation and plasterboards, and doing all the joinery. 16 months after starting, they moved into their new home.

"There were times when we wondered how we could keep going and we really appreciated the support Welsh Oak Frame gave us," says Diane. "We particularly love that the house has character and looks old – often people assume it has been here for years."





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Building on experience

An upside down layout has enabled **Aileen and David Downie** to make the most of the surrounding views of stunning countryside

When Aileen and David Downie decided to move back to their native Scotland, hunting for a plot rather than an existing house was an automatic decision. “We’d been living somewhere we’d built in York for 20 years,” says Aileen. “The idea of going back to a home we hadn’t created ourselves gave us both a sinking feeling.”

It only took a few months for the couple to find a patch of land that ticked all their boxes. “We trudged through the streets and visited all

the various estate agents,” says Aileen. The Downies could see that the sloping site would lend itself to a structure dug down into the ground. “We didn’t want to blot out the views of the building behind,” says Aileen.

Clear vision

The land came with outline planning permission, there wasn’t an indication of what style of house could be built or where on the plot it should be positioned. Having already worked with timber frame provider Fleming Homes on previous schemes, the couple were keen to go back to the Scotland-based firm to create their new abode. They got local architect Joanna Lockhart involved and the design process became a three-way collaboration between the Downies, their designer and Fleming Homes.

“While the planning process got off to a slow start, it ended up being a positive experience. The local authority was keen for us to



FACT FILE

LOCATION Fife

CONSTRUCTION METHOD

Timber frame

PROJECT ROUTE

Architect designed, timber frame supplied by package company, shell erected by local builder. Homeowners acted as project managers

LAND COST

£125,000

HOUSE SIZE 180m²

PLOT SIZE 560m²

PROJECT COST

£297,000

PROJECT COST PER M2

£1,650

BUILDING WORK TOOK

10 months

WE LEARNED...

WHEN IT COMES TO FINDING the ideal plot, you've got to be open to ideas. If you've got your heart set on a location and only want to be in that particular place, you can wait for years.

TRY AND BRING the local planning department into the process and the fact you want to do a really good job. If you can get chatting and bring them on board as quickly as possible, it can help pave the way for a smoother process.

SELF BUILD IS a constantly evolving process. Trying to keep up with the new innovations is exciting, and even though you may love what you've got, there's always more you can create.



create something really modern," says Aileen. However, once the couple received the green light from the planners, they experienced several delays. Not realising they needed a full building warrant before construction led to a four-month hold-up and the other serious delay the project encountered revolved around finances. They were relying on funds from the selling their previous home, but the sale fell through twice; waiting for completion delayed things.

Unfortunately, these hold ups meant that Fleming Homes' erection team was no longer available to assemble the structure. Joanna suggested a local builder she'd worked with before, Dryburgh Contracts, to come on board and it was soon full steam ahead.

Progress on site

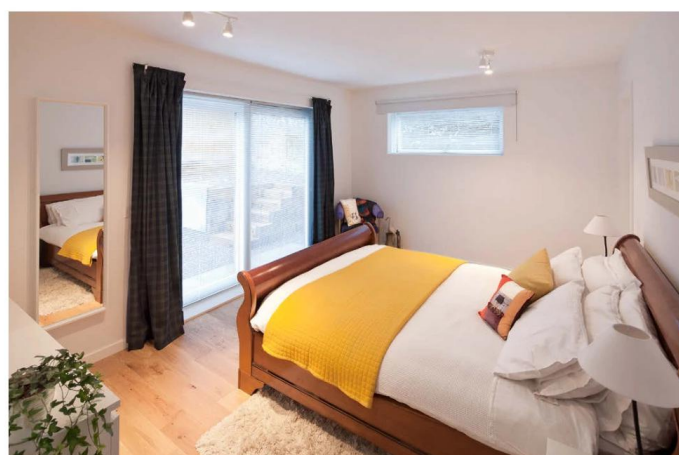
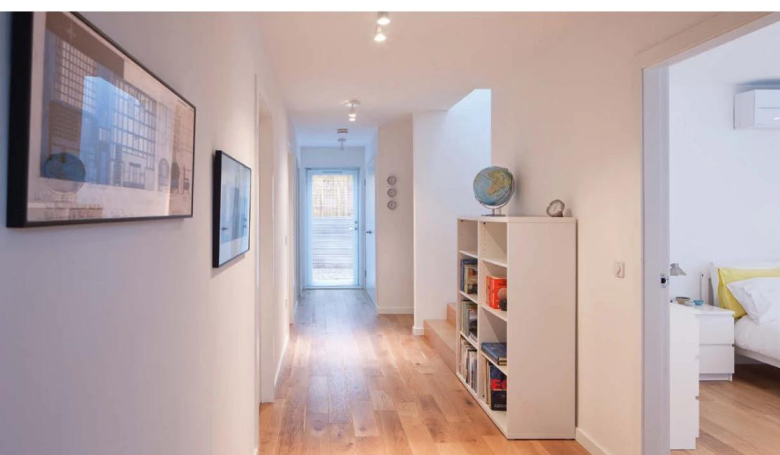
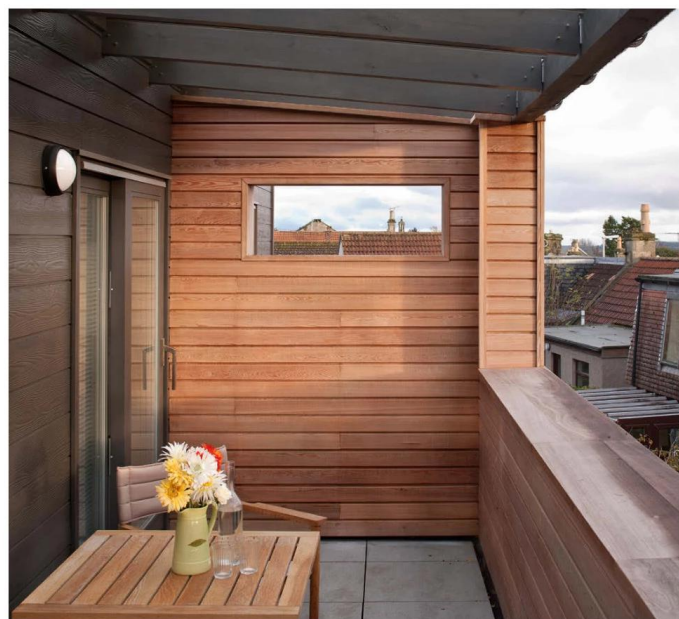
Another consequence of alterations to the timescale was that Aileen and David ended up taking on the project management. "We didn't know what the schedule was going to be, so we never had one full contract with Dryburgh. But we'd probably have handed the responsibility over to them if we could," says Aileen.

The couple also got hands on with the construction work on site – and enjoyed it immensely. "Once we moved up to the area we wanted to get our sleeves rolled up and do as much as we possibly could," says Aileen. For David, the highlight of the building process was seeing the structure reach wind and watertight stage. "The timber frame goes up so quickly, and then you just want to get the roof on as soon as possible," says Aileen.

Now the house is complete, Aileen and David are delighted with the fruits of their labours. The couple opted for an upside-down layout to maximise the stunning views over the local countryside.

Four Velux windows have been installed overhead to flood the open-plan kitchen-dining-living area with sunshine. This spacious zone is the couple's favourite place. The bedrooms downstairs have a snug feel and a sunroom at the front is flooded with natural light.

Despite some stressful moments on their latest self build journey, Aileen and David don't have any regrets. "It is hard work – you don't have anything else on your mind," says Aileen. "But it's exciting as well, and we're definitely addicted. We'd do it again in a heartbeat!"





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Country escape

FACT FILE

LOCATION Bedfordshire

CONSTRUCTION METHOD

Green oak with encapsulation

PROJECT ROUTE

Oakwrights design and shell build, homeowner project managed

LAND COST

£259,655

HOUSE SIZE 235m²

PLOT SIZE 0.35 acres

PROJECT COST

£445,965

PROJECT COST PER M²

£1,898

BUILDING WORK TOOK

One year



The **Milnes** hadn't contemplated self building before – but taking the plunge has given them the idyllic rural lifestyle they craved

Lisa and Ian Milne had been living close to Watford for 17 years when they decided the time was right to escape to a more rural area. "We wanted to be somewhere more tranquil but were commuting into London, so wherever we moved would need to have good transport connections," says Lisa. "We found a house we liked but ended up losing out in a bidding war. As I worked in property funding I had good industry contacts, so we

decided to change tack and look for a piece of land on which to build our own home."

The couple found the perfect plot in Bedfordshire – but it came with 26 planning conditions. It had planning consent for a vernacular-style oak home, but the couple were keen to make a few tweaks. The original proposal had been put together by an Oakwrights architectural designer, so the

Milnes decided to go back to them to personalise the scheme. There was a lot of work to do before the project could start, as nine of the planning conditions needed to be discharged pre-commencement.

Getting underway

Although the couple faced some disruptions with the foundations because of bad weather, the oak frame was assembled on site by the Oakwrights team in just four days. Encapsulating the structural skeleton in an insulated wraparound took a further 10 days, so the main shell of the couple's new home was built in just two weeks.

Ian had recently taken a redundancy package, which meant he had plenty of time to manage the site himself. He took the chance to be really hands-on and even sanded the whole frame himself after it had been erected – a job that took three weeks and burned through

24 inspiring homes

15 different sanders. Lisa and Ian were able to assemble a great team and, by and large, things progressed well – although there were a few hiccups along the way.

“The trickiest thing to install was the mechanical ventilation and heat recovery (MVHR) system,” says Lisa. “It was all drawn out to navigate the beams but in reality it proved more difficult to route the ducting.” Another issue arose when the door frames were fitted. “We realised that the unusual shape of the house meant the door under the stairs wasn’t going to open properly,” says Lisa. “The contractor who was making the flight kindly rebuilt the door with a cut-off in the top corner to ensure it would fit.”

Learning experience

The bespoke layout of the new property is perfectly suited to Lisa and Ian. The house has an open-plan feel and features expansive glazing that works to frame views. A downstairs bedroom proved handy when Lisa's

father stayed with them, and the upstairs sitting area benefits from amazing vistas.

As part of the strict planning conditions, Lisa and Ian had to submit a full landscaping plan for approval. “I found a garden designer, Rosalind Rosewarne, online; she was brilliant,” says Lisa.

So, if they could start again, would they do anything differently? “I would consider having blinds within the

window panels, as we have a huge amount of solar gain due to all the glass,” says Lisa. “I would have asked the decorator not to caulk between the oak and the plaster because the wood shrinks as it dries, which means you end up with gaps that require filling and redecorating.”

Overall, the Milnes are delighted with their first self build and have many happy memories. “The house has given us great entertaining space,” says Lisa. “We have five children plus their partners and two grandkids, so it’s lovely to have the ability for us all to be together. The most rewarding aspect is that we did it ourselves, and knowing how proud my dad, who has since passed away, was of us for building it.”

WE LEARNED...

PLANNING CONDITIONS can feel onerous, but we found it helpful to meet the planners for in-depth discussions. For anything contentious, it’s always best to engage them face-to-face.

PAYING TRADES QUICKLY was key to making sure we had a harmonious relationship. We also double-checked that they were going to be on site a few days before they were needed to ensure everything was on track.

IT TOOK A LONG TIME to get water and electricity on to the site, but luckily our neighbours let us tap into their supplies. Make sure you get these applications sorted out well ahead of the build.



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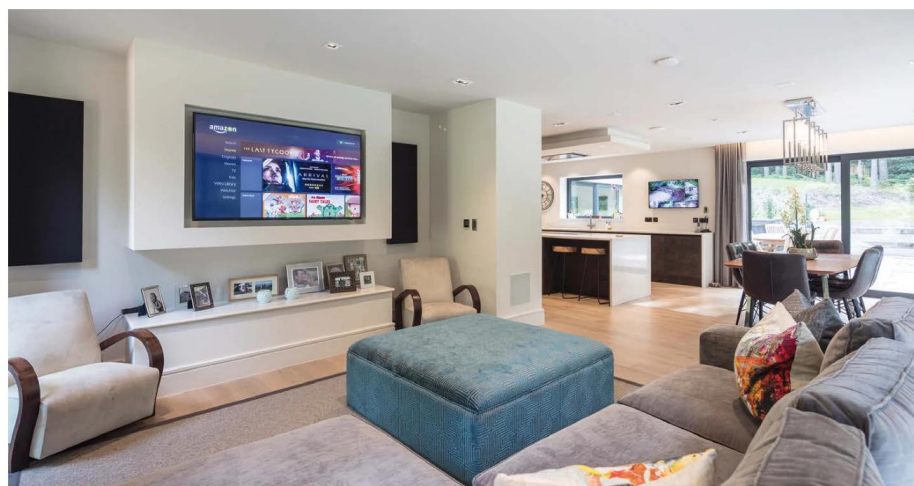
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Smarter living

FACT FILE

LOCATION Surrey
CONSTRUCTION METHOD
 Timber frame
PROJECT ROUTE
 Homeowner project managed
LAND COST
 £715,000
HOUSE SIZE 297m²
PLOT SIZE 1.5 acres
PROJECT COST
 £645,000
PROJECT COST PER M²
 £2,172
BUILDING WORK TOOK
 36 weeks

Peter and Katy Worthy replaced a 1950s bungalow in Surrey with an ultra-modern, efficient and high-tech family home



Having worked in the house building and design industry for 14 years, Peter Worthy knew he eventually wanted to create his own property. “We were on our honeymoon when we got an email from Rightmove about a bungalow for sale with plenty of land,” says Peter. They bought it and initially considered renovating to sell on, but when Katy became pregnant they changed their tactics. “We decided to make this our family home instead. I wanted to create a contemporary, energy-efficient Passivhaus that we would stay in for many years,” says Peter.

The couple got in touch with Leigh Brooks at BWP Architects, having noted his track record for creating beautiful, modern eco houses. The couple wanted something with plenty of open-plan living, a separate playroom, a kitchen with a larder, a walk-in

dressing zone, a cinema room and at least four bedrooms. Leigh came up with a five-bedroom property based on the Passivhaus principles of controlled airtightness, minimal thermal bridging and plenty of insulation to reduce energy consumption. The design would use an MBC Timber Frame structural shell – which guarantees airtightness levels at 0.6 air changes per hour (the Passivhaus threshold) and U-values below 0.10 W/m²K.

Moving forward

Positioned in green belt, the countryside plot was subject to strict planning policies, including limiting the size of replacement

WE LEARNED...

THE PLANNING GAME can be very frustrating. Many people face delays here and it can cause heartache. My advice is don't get upset and just stick with it.

GO FOR A DISTINCTIVE DESIGN that captures the imagination. There are some really big houses on our road that look completely different to ours, but the planners and building control commented they enjoyed seeing something bespoke.

BE CAREFUL WHEN MAKING BUDGET CUTS during a project. We initially planned to use porcelain floor tiles on the master bedroom roof terrace with a flush threshold between inside and out. We later changed to astroturf outside as we realised it would save us over £5,000. But we didn't consider that there would now be a step down onto the terrace.



dwelling to just 10% larger than the existing house. Leigh's strategy to overcome this was to apply for consent to extend first and, once this was in the bag, seek approval for the dwelling the couple really wanted. But as luck would have it, building control condemned the bungalow's foundations anyway, meaning knocking down and starting again was actually the only viable route.

Peter took on the role of project manager. "I was very strict with myself not to let the stress of a self build get to me," he says. "We lived in a caravan on site so were close by if any problems arose."

As with any build, there were some hiccups along the way. For instance, the pair forgot to have a gas pipe run into the kitchen – so they had to fit an electric induction hob instead. Perhaps the biggest hitch came towards the end, when the Worthys realised that the landscaping needed to be put in as soon as possible. "We didn't

Smart homes. "We even have bedtime buttons in the children's rooms to give the right level of lighting and music, which switches itself off after they've been in bed for 45 minutes," says Peter. The family are very happy in their new home – but they wouldn't rule out taking on another project. "I really enjoyed running the scheme and would self build again, perhaps when I've sold my business or taken a step back," says Peter. A successful project is all about having good professionals and trades around you. You need to trust the people designing and constructing your home, because you're reliant on them being the experts."



want to end up with a lot of dirt coming in and damaging the interior," says Peter. "We had to borrow another £50,000 from our self build mortgage provider to install the patio and driveway."

Integrated tech

The Worthys' home benefits from an instant connection with the surrounding landscape thanks to the swathes of large glazed panels, which help to ensure you never feel far from a stunning woodland view. Lifestyle-enhancing technology is incorporated in every zone, allowing the couple to better interact with their new property and creating a unique show house for their company,



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home you want to build – and then getting planning consent. Here's what you need to know:

Get familiar with the type of house you want by gathering pictures and considering what it is you like about them. Would a single- or two-storey best suit you? What kind of materials do you prefer? Don't pin your hopes on a design just yet –

Left: The owners of this new barn-style self build in the New Forest worked with Oakwrights (www.oakwrights.co.uk) to create their dream home

31 ways to kick-start your self build

The Build It experts and editorial team reveal what you need to know when you're starting out on the self build journey

IS SELF BUILD FOR ME?

Self builders come from every walk of life – from families keen to create an affordable home that can be adapted over time, to empty nesters thinking about downsizing to a high-spec house that has minimal running costs. If you're at the early stages of looking into this route to a bespoke dwelling, here are six essentials to bear in mind:

Self building doesn't have to be hands-on. In fact, few projects involve much in the way of DIY. Unless you've got genuine construction skills and experience, you're probably better off commissioning professional designers and contractors to deliver your tailor-made home. **Emily Smith, Build It deputy editor**

start to finish. **Anamika Talwaria, Build It editorial assistant**

There's no substitute for getting face-to-face with products and suppliers, so head to the Build It Live shows (www.builditlive.co.uk), where you can gain advice from seminars, workshops and book one-to-one consultations. **Emily Smith**

This is probably going to be the most involved project you will ever take on, so do lots of research. As well as reading this magazine, head to www.self-build.co.uk where you can find lots of advice and inspiration. **Lucy Aplin, Build It digital editorial assistant**

Don't worry if you haven't got any experience of taking on a major project. Every year, over 12,000

but if you've got a vague idea, you'll be better able to picture how a plot might work for you. **Tim Doherty**

Maximise your chances of finding land by letting friends, family, estate agents etc know you're looking. Drive round the area searching for infill sites, side gardens or unused buildings. Keep an eye on planning applications, and register with PlotSearch.co.uk. **Chris Bates**

Sign up to your council's Right to Build register. Every local authority must run one – and is then obliged to permission enough serviced self build plots to fulfil the demand identified on its list within a certain period. **Anamika Talwaria**

Allow plenty of time to get planning consent. Applications should take eight weeks but it can be longer. Once you have permission, you may need a month or so to agree conditions. **Mike Dade**

Take pre-application advice from the planners. Some councils charge, others don't – but it will help identify potential stumbling blocks before you submit your scheme for scrutiny. **Chris Bates**

Never buy land up for sale as 'leisure plots' with alleged potential. The one thing almost all such sites lack is any kind of potential for a building project at all. If it looks too good to be true, it is!

Mike Dade, planning consultant & Build It expert



Self building gives you the opportunity to get more bang for your buck: this is undoubtedly the best way to create a high-quality home that's tailored to your family's needs at a cost-effective price.

Chris Bates, Build It editor

Consider working with a package house supplier to take the stress out of your scheme. Basic service starts with structural design and building the shell, but can run right up to turnkey, where the company holds your hand through the process from

people build their own home, and the vast majority of those have never done it before. **Chris Bates**

PLAN IT

The first barrier for most projects is finding a plot suitable for the

DESIGN IT

Not sure where to start with designing your new home?

These ideas will help you narrow down the options and come up with the right brief:

You don't have to spend a fortune to add wow factor. Features such as upside-down layouts that maximise views are pretty straightforward to integrate, for instance. Maybe focus your budget on key statement-making elements, such as a double-

Keep things in proportion to your budget: work out what can be achieved for the money you have, rather than stretching funds. In my experience, self building always costs more than you think, so be pragmatic with your decisions. Running out of money halfway through is no joke.

Mike Hardwick

The high street banks don't tend

to understand the needs of self builders, so visit a specialist broker, such as BuildStore (www.buildstore.co.uk) for advice

costs for materials and labour, which allows you to understand what your scheme will cost and where you could make changes. **Lucy Aplin**

BUILD IT

Every self build comes with a number of choices, from specifying materials to coordinating trades. Ensure a smooth project with these tips:

Consider taking on more of the risk by managing the project yourself. By co-ordinating the trades, you can eliminate a general builder's profit margin and save money. Remember that this will be at the expense of your time and – in all probability – your stress levels. **Mike Hardwick**

Protect your investment by taking simple, smart steps. Get references from trades and be sure to follow them up. Put decent contracts in place, too. And don't skimp on a self build insurance policy: if you need it you'll be grateful you didn't try to cut back on what's a relatively small

Designing a home should be a fun experience – it works best if you start out on the process with an open mind. Sometimes the best aspects emerge from what initially seems to be a crazy idea.

Julian Owen, architect & Build It expert

height space, a glazed gable or an impressive staircase. **Emily Smith**

For the brief, keep a list of your must-haves, like-to-haves and things you don't want. Pull together inspiration from mags, Pinterest and similar resources. A well thought-out scheme will respond to your brief, the planners' concerns and your plot. **Chris Bates**

Decide the key objectives your design must achieve at an early stage and write them down. Check back on these goals throughout the project to ensure your scheme is delivering. **Julian Owen**

If money's tight, keep it simple. A square box with a dual-pitch roof is the most cost-effective shape for floor area. **Mike Hardwick**

Put as much care into the design phase as you do building the house. Consider everything in detail, down to the placement of sockets and switches. **Anamika Talwaria**

COST IT

No matter the size of your budget, you'll want to be sure your spending stays on track throughout your scheme. Here's where to start:

on the best option for you. Find out more at www.self-build.co.uk/mortgages. **Emily Smith**

Keep at least 10% of your project fund back as a contingency buffer. This will cover you against the inevitable unexpected stuff that crops up along the way – such as when the first shovel hits the earth,

Spend your money where it counts – namely on permanent items such as external wall finishes, roof coverings, windows, doors and your staircase, which will last the life of the house.

Mike Hardwick, self build consultant & Build It expert

and you suddenly discover that poor ground conditions will necessitate more expensive engineered foundations. **Chris Bates**

Accept that, regardless of how much you can afford to spend overall, you will probably have to make some compromises to keep within your budget. **Julian Owen**

Get an accurate estimate, so you know what to expect and can compare like-with-like when you put the work out to tender. The Build It Estimating Service gives you a thorough budget report using live

expense in the context of a home building project. **Chris Bates**

Don't get fixated on one building specification or system; there are almost always different options and some may be more suited to your project. The trick is to understand the merits of each and balance them against aspects such as cost and performance. **Tim Doherty**

Make sure your new home is built according to the permitted plans. If you make changes, get them approved – otherwise you'll be building something that doesn't have consent at all. **Mike Dade**

Open a trade account at a builder's merchant and negotiate on what you buy in exchange for your loyalty: big orders mean big savings. Don't expect a blanket figure and be prepared to haggle. **Mike Hardwick**

Self builders with full-time jobs aren't likely to manage a project themselves: it takes more than evenings and weekends to organise and you'll need some daytime flexibility. If you can't guarantee that, budget for a professional project manager or main contractor.

Tim Doherty, chartered surveyor & Build It expert

DID YOU KNOW?

Refusal of planning permission doesn't have to mean the end of your scheme. In fact, it could help clarify the issues blocking your application

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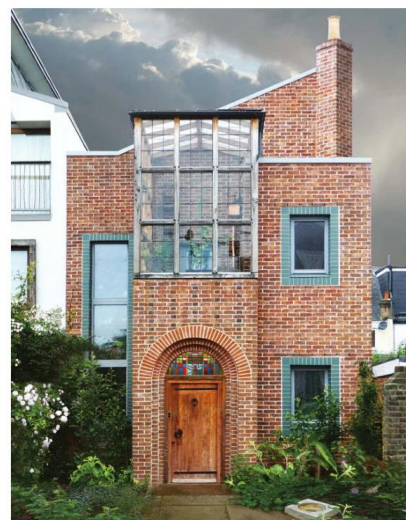
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SELF BUILD COST CALCULATOR



Want to know how much it costs to build your own home? Our ready reckoner, powered by the Build It Estimating Service, will help you gauge what size, style and quality of house you can achieve on your project budget

One of the first things you'll want to figure out on your new build journey is just how much it's likely to cost. Every self build is different, of course, so the answer will depend on a host of considerations – including the size of the house, number of storeys, quality of materials and finishes you want to specify, location and more. One key benefit of building a bespoke home is your project will be zero rated for VAT – so you can get much more for your money compared to buying a new house on the open market.

The self build cost table and accompanying project advice in this article, prepared by the experts at the Build It Estimating Service, will give you an insight into what you need to know when planning your project budget. To help start your scheme off on the right foot, we've looked at five different sizes of new build home, along with a variety of single-storey, dormer and full house types:

- Two bedroom bungalow (90m² internal area)
- Three bedroom bungalow (100m²)
- Three bedroom house (160m²)
- Four bedroom house (200m²)
- Five bedroom house (280m²)

You'll notice that the larger the house, the lower the construction cost per square metre of usable floor area. So you can achieve better value with a bigger home – provided your budget will stretch to that size of property. This is down to economies of scale: you'll need basically the same amount of foundation and roof on a two-storey 200m² home as you would on a 100m² bungalow, for example.

Ultimately, exactly which option suits you will depend on your budget, ceiling values in the area (check out local listings and speak to estate agents) and what type of project fits your site and needs. Factors such as sloping ground can have a major impact on your build costs, too, and should be reflected in the value of the plot (land costs are excluded from the figures in our calculator).

QUICK GUIDE COST VARIATIONS BY REGION

Your exact self build project 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%

GET A MORE DETAILED PROJECT ESTIMATE



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.

QUICK GUIDE QUALITY & COSTS

The core elements of a building project are relatively straightforward to estimate. The cost of constructing a house shell in brick and block cavity walling with a simple trussed roof, for instance, can be ballparked based on structural plans and known, measured rates.

Things change quickly, however, when you start to add in complicated bespoke architecture or move away from standard materials. For example, you might spend £15,000-£20,000 on standard electrics, while a fully-integrated, lifestyle-enhancing smart home setup is likely to cost at least twice that – but could offer value for money and the convenience you want.

In order to get an accurate picture of how different specification choices will affect your build costs, you will need to source individual, like-for-like quotes. But here's a rough guide to the potential uplift you might expect over and above the figures in our cost chart:

Build Complexity	Fit-Out Quality
Straightforward	Standard
Slightly unusual	Mid-range
Highly complex	High spec
	Luxury

Using the self build 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.

We've assumed a standard quality and performance level for a bespoke home project (better than Building Regulations, but not high-end). The costs given here are based on cavity wall masonry construction, but the online version of our calculator allows you to select from a range of other common construction options, including timber frame, insulating concrete formwork and oak frame.

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

in a basic level of internal 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, self builders could spend anything from £5,000 to £50,000+ on a new kitchen. Other possible cost uplifts include clearing the site, complex foundations 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 nature of your project and what level of service you opt for with your designer. Other fees that may apply include surveys, structural engineering and project insurance.

Visit www.self-build.co.uk/calculator for a fully interactive version of our self build cost calculator.

					
	Two bedroom bungalow	Three bedroom dormer bungalow	Three bedroom house	Four bedroom house	Five bedroom house
House size (floor area)	90m ²	100m ²	160m ²	200m ²	280m ²
Materials cost	£70,970	£79,289	£95,520	£116,914	£171,666
Labour cost	£49,830	£60,732	£67,660	£84,703	£108,086
Plant cost	£25,670	£23,618	£29,850	£31,018	£31,790
Scaffold & subcontract cost	£4,530	£5,061	£5,970	£5,965	£6,358
Total cost (excluding VAT)	£151,000	£168,700	£199,000	£238,600	£317,900
Total cost per m²	£1,678	£1,687	£1,244	£1,193	£1,190



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Self build mortgages explained

Get the right finance in place to support your bespoke home goals with our quick-fire guide

While some are lucky enough to be able to fund a project without borrowing, for most of us, a suitable mortgage is a must. But the high street banks don't tend to be set up for the unique requirements of a live build that's changing in value as it gets constructed. Thankfully, specific self build mortgages are available. But how can you access them and improve your chances of being accepted?

What are self build mortgages?

When you start exploring the market, you'll quickly realise there are two basic types of mortgage for self builders; those that lend you money in arrears (ie after works have progressed on site); and those that give you it upfront and ahead of the works being started.

Both lend in stages (typically four or five) as the project unfolds. They are typically capped at a maximum contribution of around 75%-95% of the predicted end value of the project, otherwise known as the loan-to-value (LTV) ratio.

Arrears-based mortgages

With an arrears mortgage, when you reach one of your predetermined key stages for a payment release (such as the completion of the roof structure and covering), you ask your lender to access the respective tranche of funds.

They will then send out a surveyor, who determines how much additional value there now is on site, against which the lender can make suitable payment. If the difference between the new valuation and the last one is £40,000, then at an LTV of 80%, your stage payment release could be as much as £32,000.

In general, arrears mortgages offer a maximum LTV of 85%. They are straightforward from the lender's perspective, so there are a lot of options available. If you require it, funds for a land purchase can be provided in advance. Thereafter, the cash flow profile best suits those with significant savings.

Advance payment mortgages

With the advance stage payment mortgage, which was invented by BuildStore (the UK's leading self build mortgage broker), your cash flow needs are assessed in detail before the project even starts. This way, the right amount of money can be made available to meet your payment commitments as the construction work progresses.

So, the project is properly costed, the release stages calculated, your borrowing facility assessed against the cash you already have available and a detailed cash flow statement is prepared. Why's this important? Well, payments to suppliers and contractors may be due ahead of the incremental increases in building value. If your agreement pays out in arrears, you'd need to foot the bill out of your own cash reserves and wait for the lender to replenish your funds.

The advance stage payment route removes this issue for the self builder – instead, the lender takes on a funding gap (the level of exposure it temporarily assumes until the project is complete). This gap is secured by an insurance bond, so you'll be a one-off indemnity fee for this kind of mortgage.

Proliferation of cost-based mortgages

BuildStore is encouraging more and more lenders to release stage payments based on your actual build costs, rather than survey valuations, for both arrears and advance mortgages. The big benefit of this approach is that, even if there's been no uplift in value from the work, you have certainty that you will still get the cash you need – with no need to wait around for a surveyor to sign off release of funds.

CLOSER LOOK Applying for a mortgage

A self build mortgage application must include detailed info about the build to demonstrate to the lender that you've thought through project costs. Armed with your identified plot, its planning approval and the drawings that go with it, you will also need to provide the following details:

- Build route; ie assumptions about whether you will be managing the construction process yourself or seeking one contractor to oversee this.
- The materials you intend to use. Are you considering traditional bricks and blocks, timber frame or some alternative technologies like SIPs (structurally insulated panels) or ICF (insulated concrete formwork)?
- Detailed costings, bearing in mind the above two assumptions.
- Cashflow models to indicate what money will be required and when.
- Answers to any specific statutory requirements which might arise from the planning conditions and wider property search.
- A demonstration of affordability via details about your household income, lifestyle costs, whether you intend to continue servicing your existing mortgage or, if you have already sold your previous property, proof you can afford to service the new rental payments instead.



BUILDSTORE
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GET IN TOUCH

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MAB 10340

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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**

These products are chosen for illustrative purposes, and were available at the time of going to press.

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%	85%	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%	3.50%	DPP & Building Regs
Mansfield BS	★ SB & CB	Advance	0345 223 4647	80%	80%	4.59%	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	75%	80%	5.89%	Foundations
Darlington BS	★ SB & CB	Arrears	0345 223 4647	85%	80%	4.89%	Foundations
Furness BS	★ SB & CB	Arrears	0345 223 4647	80%	80%	3.34%	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%	3.95%	Foundations
Mansfield BS	★ SB & CB	Arrears	0345 223 4647	80%	80%	4.09%	Foundations
Newcastle BS	★ SB & CB	Arrears	0345 223 4647	85%	85%	5.50%	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
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	75%	75%	4.64%	Flexible
Ecology BS	SB	Arrears	0845 674 5566	80%	80%	4.15%	Flexible
Hanley BS	SB	Arrears	01782 255000	60%	60%	3.25%	Foundations
Melton Mowbray BS	SB	Arrears	01664 414141	75%	50%	3.49%	Foundations
Penrith BS	SB	Arrears	01768 863675	75%	75%	4.75%	Foundations
Saffron BS	SB & CB	Arrears	01482 881510	80%	80%	4.19%	Flexible
Scottish BS	SB	Arrears	0131 313 7700	60%	80%	5.64%	Foundations



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Why you need to get insurance as soon as you buy a building plot

The moment you become a landowner, you're liable for what happens on your plot. Self-Build Zone's **Paul Kempton** explains how to protect your new property

Once you've completed the conveyancing and bought your plot of land, no matter whether you're ready to build now or at some stage in the future, you are legally responsible for the land. Technically, this means you've assumed liability for everything on it. The 'it will never happen to me' approach won't be much help when problems occur, so it's vital to ensure you're protected from day one.

A common mistake

If you happen to live next door to your proposed building site, don't assume that your current household insurance will cover you. If the plot is registered separately then it won't be part of this policy. You therefore need to make sure that you genuinely have adequate insurance cover against any claims that might be brought against you.

Be thorough when checking this out: apart from the actual legal liability for accidents or other issues, you need to ensure the costs incurred in defending any actions are also covered. We live in an increasingly litigious world, and defending claims can be a lengthy and expensive process. Having a suitable, dedicated policy in place will mean you know you're protected.

In most cases, the product you'll need is known as a landowner's liability policy. However, circumstances vary and it's important you check that your exact requirements are covered. Be aware that these could well change over time, and you may need to adapt the product you've purchased or switch to a new, more appropriate policy.

Which insurance is best?

The best way to understand how your cover needs could change is to take

you on a typical self builder's journey. Assuming you intend to develop the land, there's likely to be a delay (which could be several weeks, months or longer) whilst your scheme is drawn up and full planning permission obtained.

During this time, you will need to carefully consider the potential risks on the plot. Are there any derelict buildings, walls or other structures on the site? What about lakes, ponds, dried-up wells or potentially diseased trees? All of these could present a liability risk if trespassers – particularly children – gain access to your land.

This is important even with buildings that have little or no value, including those you intend to demolish at some point. If someone was to be injured as a result of a structure's derelict state, then as the landowner you may be liable to compensate them.

It might be that, whilst you wait for your planning consent to come through, you decide to start preparing the land to build on. Shrubs and trees may need to be cleared (being mindful of any tree preservation orders or other issues highlighted in the TA6 property information form you were presented during the sale process). You might also want to demolish any existing structures on the land using special plant and machinery.

If any of the above is the case, you will need more than a simple landowner's liability policy, as this type of insurance typically excludes cover for work being carried out on a plot (let alone for protecting any equipment).

This is likely to be the point at which you need to consider purchasing a specific site insurance policy from a reputable provider that's backed by A-rated insurers. This will offer protection for the works, as well as

covering your liability for anyone assisting on the project. It can also include any machinery, plant and equipment you purchase or hire in.

Protecting the build

Once construction is underway, site insurance will also cover your partially-built home as it progresses – together with the materials, equipment, fixtures, fittings etc. But do remember that these policies are normally sold for time-limited periods (typically 12, 18 or 24 months). So it's worth putting a reminder in your calendar to extend them if you've not completed the scheme within that timeframe. Providers such as Self-Build Zone offer automatic alerts to advise you when your policy is about to end.

QUICK GUIDE Structural warranties

Structural warranties are a requirement for anyone using a lender to finance their project, or for those wishing to sell their property to someone using a mortgage in the next 10 years. But what do you really need to know about your warranty provider?

Firstly, always look at the insurer behind your structural warranty. Make sure they are A-rated, so you know you are covered for the 10 years. Secondly, you can save money if you arrange your warranty before you start, as surveys, inspections and remediations can be carried out and corrected as the build happens, not after you've completed. Lastly, even if you aren't using a lender, a structural warranty gives you (and any future buyer) the peace of mind your project is protected for 10 years. This is one of the biggest investments you will make in your life, so it's worth making sure it's protected!

Paul Kempton is managing director at Self-Build Zone, which provides specialist site insurance and 10-year structural warranties for self builders, home extenders and renovators. Call **0345 230 9874** or log on to **www.selfbuildzone.com** for more advice.



BEGINNER'S GUIDE TO finding land

Identifying a viable building site is the first step in your self build journey. Get ahead of the competition with these plot hunting tips



Above: Gorgeous plots do exist – but if you have grand designs on that secluded rural location, 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 over 13,000 people manage to find land and build every year – but if you want the best 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 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.

Go exploring Walk around the locale to identify potential opportunities such as empty land between houses, garden plots or disused garages. If you spot a site you think has scope to build on, 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 111 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.

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 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 unsure 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.

CLOSER LOOK 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.

Gardens Contrary to the 'backland development' and 'garden-grabbing' headlines of a few years ago, planners still allow schemes on garden plots – especially in places that are 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 who is willing to negotiate a fair price.

Edge-of-settlement Depending on the maps marked out in the relevant council's Local Plan, this kind of site might fall within existing 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

Right: Build It's planning expert, Mike Dade, assessed this edge-of-town infill plot. With a prime site like this, the prospective buyers will need to have their finances and legal representation in place and ready to go, to demonstrate to the seller that they're serious about a purchase

BUYING YOUR PLOT

The value arising from planning consent is temporary, and only becomes tangible once a material start has been made on site (eg foundations installed). But that value is significant: agricultural land with no building potential might have a notional value of £5,000 to £10,000 per acre, while a quarter acre plot (with planning) might be worth £100,000 to £300,000 depending on location. So if the price looks cheap, it's important to ask yourself why before you buy.

While some might be able to finance a land purchase from savings and investments, most of us require a mortgage. A lender might be prepared to loan you 60% to 80% of the plot's value, but they'll either want this repaid before the consent expires (usually with a 12 month safety margin) or a guarantee the project will start by a certain date. Some might seek a charge on another sizeable asset, or possibly a personal guarantee or a third party guarantor. Specialist self build mortgage lenders are much more comfortable with land acquisition than the high street banks, though some specifically preclude this aspect. For this reason, dedicated brokers are vital, as they will help you navigate the market and direct you to the most appropriate product and, crucially, help you to prepare for the application properly.

Providers who lend on land will expect the some detailed information with your application, covering aspects such as build route, materials, detailed costings, cashflow forecasts and a demonstration of affordability. Once you have their offer, you can proceed to completion on your plot.

Agreeing the plot price

Some vendors will sell to the first cash-rich developer they come across, while others hold out for best price. Many are keen to work with self builders, especially when the plot is next door to their own house, so they have some idea of who their new neighbours are going to be.

You can reach a reasonable land valuation by subtracting indicative design and build costs from an anticipated final market value. What's left would be the very maximum that anyone should pay for the plot – and speculative developers will want to secure land at much lower costs than this as they will be seeking a healthy profit from the project. There will be a guide price, but you need to be thorough with due diligence to be sure about your maximum offer.

Negotiations with a vendor can take anything from two to 20 weeks, depending on whether you need a mortgage (longer if you need a new planning consent). If there's a lot of competitive interest, you may find it difficult to move quickly enough if you're reliant on a mortgage – unless you can find the cash from another source. Some sellers might request a holding fee (known as an 'option') in return for giving you time.

QUICK GUIDE **Post-purchase essentials**

As soon as you have acquired your plot (or house you intend to demolish and replace), don't forget to make the site secure with gates and fencing where appropriate. Mains services should be disconnected to prevent any risk of flood, fire or explosion and to save on unnecessary standing charges.

Like any property, the site needs to be insured – but with public liability cover as a minimum. This protects against any claims from third parties who might injure themselves on your land, regardless of whether they should have been there or not. Don't forget to make regular inspections to ensure an army of squatters hasn't set up camp.



If competition is very high, the selling agent may run a sealed bid, where you get one chance to put in an offer by a set date. The vendor then compares offers and chooses their preferred bidder, based on the price and purchaser profile.

Conveyancing (buying the plot)

This is the bit where you need a lawyer. They'll treat your plot purchase just like any other property transaction, usually following the Conveyancing Protocol guidelines. If you have a mortgage, they'll be acting for both you and the lender.

Your lawyer will carry out searches on your behalf, usually including drainage and an environmental assessment. These are standard documents based on information taken from databases/maps from utility companies (water, drainage, power and gas) as well as the Environment Agency, British Geological Survey, Radon UK etc. They are not absolute and are full of caveats, but are nonetheless a good place to start.

Sometimes, physical site inspections will be required (at a cost) to obtain evidence of where services may be located. You'll need to study these in detail yourself, as your lawyer will expect you to rely on the information contained within these reports and not their interpretation of them.

Then there is the thorny issue of title. Most land, but not all, is registered with the Land Registry. Sensible vendors who secure planning consent in their gardens will have registered the plot they want to sell under a separate title. But title plans and the deed narrative are often difficult to interpret.

On the title plan, the red line around the site shows your boundary positions and plot dimensions. This is usually at a scale of 1:2500 or 1:1250 for the location plan, with a site plan at 1:500. Older versions may simply be at a 1:2500 scale. Always check it matches the planning consent.

The deed narrative is designed to tell the story of who sold what to who and when, and who may be the beneficiary of any legal covenants. Understanding this takes experience, and your lawyer will advise you of anything that appears to be a problem (ie if they might block development or require you to come to a financial arrangement with the beneficiary). In some cases, insurance can be used to cover the risk of old covenants where the current beneficiaries are not traceable.

Contracts will be exchanged and completed when both sides are ready, just like any other property purchase, and your lawyer will handle all aspects of this transaction for you.



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Our Services

We can offer VAT exemption certificates for you to present to your contractors to avoid paying VAT or the reduced rate of VAT in the first instance, if that is what is applicable to your project. Paying the wrong rate of VAT can cost you 20% of the project value – a costly mistake

We can offer to process and submit your VAT reclaims, where appropriate and support you during HMRC's enquiries into your reclaim after the submission, from shoe box of receipts through to the cash in your bank

Common misconceptions

- On a new build, you pay 20% VAT and reclaim it all at the end or/optional you do not pay VAT in the first instance – **wrong**
- On a barn conversion, you pay 5% VAT except to suppliers where you pay 20% and then you reclaim the 15% from HMRC at the end – **wrong**
- I need to be VAT registered to reclaim the VAT on my new dwelling – **wrong**
- Within 3 months of my building control completion certificate date is the deadline for submission of a VAT reclaim from HMRC – **wrong**

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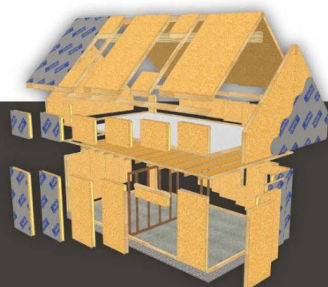
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Location

Cullompton

Price

£200,000

Plot

15004

This former agricultural building has detailed planning permission to be converted into a detached, two bedroom home. The plot is in an area of outstanding natural beauty within the popular hamlet of Clayhidon. The local amenities include a pub, church and primary school. The site is positioned four miles of the M5, and eight miles from Taunton, which has a mainline rail link to Paddington.



Agent
Stags

Location

Epsom

Price

£995,000

Plot number

150064

This south-facing plot in the Epsom Downs has detailed consent for a new detached house with five bedrooms and a long driveway. The site sits next to a golf course and boasts rare views over London yet remains private and peaceful. It's within walking distance to Epsom, and there are plenty of excellent schools in the area. The plot also offers easy access to the M5 and Gatwick.



Agent
Bill Reid

Location

Rhayader

Price

£45,000

Plot number

150091

With outline consent for a detached property, this plot sits near the centre of the rural village of St Harmon, some three miles north of the popular market town, Rhayader. The plot is situated close to a pub, chapel and thriving community centre. The area boasts several excellent amenities, including a doctor's surgery and schools; plus the nearby Elan Valley is famous for its magnificent lakes and reservoirs.



Agent
Clare Evans
& Co

Location

Matlock

Price

£150,000

Plot number

150630

This elevated plot has detailed consent for a detached, four bedroom house. The 0.4 acre site overlooks the village of Cromford, which is well known as the birthplace of the industrial revolution and has many listed buildings. Within Cromford you can find a range of local shops, cafes, pubs, and a railway station with lines to Derby city centre. Access can also be found to the A6 and to the Peak District National Park.



Agent
Bagshaws
Residential

Location

Longhorsley

Price

£150,000

Plot number

150715

This 809m² plot sits in the heart of the popular village of Longhorsley, seven miles north west of Morpeth, Northumberland, with its wide range of town centre amenities. Longhorsley itself has a first school, pub/restaurant and local shop. The site comes with detailed planning permission for a four bedroom detached dwelling and is served with drainage, water and electricity. The plot is located nearby to the A697.



Agent
Rickard Estate
Agents

Location

Roy Bridge

Price

£80,000

Plot number

150746

With stunning views over Glen Spean and outline planning consent for the construction of a detached property, this is a fantastic spot for a self build. This site has good access links to Fort William and the surrounding area, with trains to Glasgow nearby. The plot sits just north of the A86 and is accessed by a private track that's shared with the neighbouring property.



Agent
Nock Deighton

Assessing a self build plot

Before you purchase a site, you'll need to make sure it's able to match up to the criteria for your dream home. **Mike Dade's** checklist will help you gauge a plot's true potential for self build



This former quarry has consent for a four-bedroom contemporary home. A pre-app meeting with the council could determine whether a revised design, to better suit the buyers, would be acceptable

Whether you're keen to buy a particular piece of land or you're eyeing up your own garden's potential as a development opportunity, there's a lot to consider before you can decide whether you've found the right site on which to create a new home. To help you make a smart, well-informed choice, I've put together a checklist that covers most of the scenarios self builders are likely to encounter. Armed with this guide, you can be confident that you won't miss anything crucial that could influence a site's suitability. This includes factors such as what and where you can build, whether the costs stack up, and the chances of gaining planning permission for a design that you're happy with.

Don't be alarmed by the length of the following checklist. On most plots, you'll actually come across very few constraints. But taking a fastidious approach means that you'll be aware of any potential issues

right from the beginning. This means that you will be able to proceed with greater certainty and budget more accurately.

If during your investigations you come up against anything you're not sure about, the key thing is to seek advice from suitable professionals. That could mean speaking to your local council about planning matters, involving your solicitor for legal considerations or maybe using other appropriate specialists. If you have an architect or planning consultant on board – or if you're working with a package house company – they will be well suited to point you in the right direction.

Looking at comparable planning applications for recent nearby projects, via your local council's online records, may also prove helpful. Checking these over can alert you to some of the potential stumbling blocks for self builds, including how the hurdles were overcome and who provided the necessary reports or advice.

PLOT ASSESSMENT CHECKLIST



Get a solid idea of whether the site you're considering for your self build has real potential by going through this checklist, broken down into 11 key areas. Note that some of these considerations may be more critical to your scheme's success than others; and many of the points are equally applicable to conversion projects.

SITE SUITABILITY

- ☐ Is the plot large enough for the size of house you wish to build?
- ☐ Are local property values in tune with the kind of design you want?
- ☐ Could any adjoining and nearby uses be bad neighbours?
- ☐ What's the orientation like – will windows have light and outlook, and will the garden get sunshine?
- ☐ Does the site slope?
 - ☐ If so, could this necessitate a split-level house or significant excavation (which may impact on construction costs)?

- ☐ Would access be too steep for deliveries and plant vehicles?
- ☐ Are there any obstacles, such as existing structures, trees, overhead cables and underground pipes?
- ☐ Who owns and is responsible for maintenance of the boundaries and access?

PLANNING STATUS

If the plot has existing planning consent...

- ☐ Does it have full or outline permission in place?
 - ☐ With full consent, is the design and layout what you want to build?
 - ☐ If outline, is there an indication in the permission as to what is likely to be approved?
- Should the answer to either of the above be 'no', then all of the points for 'no current permission' will apply.*
- ☐ When was planning consent granted (permission lasts for three years from that date)?

If the clock runs out soon, say within six months, this could present issues for a scheme that involves a redesign or discharge of planning conditions.

- ☐ Can you comply with all the planning conditions?

Common requirements include council approval on external materials and/or landscaping, plus ecological surveys etc.
- ☐ Have you looked up the council's online file for the application and read the officer's report, along with any letters from neighbours?

The results of this could impact on any alternative design you wish to put forward for planning.

If the plot has no current planning permission...

- ☐ Is the site within a development boundary defined in the Local Plan or Neighbourhood Plan?
 - ☐ If not, are there circumstances that could enable you to build, such as a housing land supply shortfall, or a need to live on site for farming or another rural business?
- ☐ Would a building on the plot fit in with the pattern of housing and prevailing character of the area?

- ❑ Can you build a new home without compromising neighbours' light, outlook or privacy?
- ❑ Is the plot in a conservation area or close to a listed building?
 - ❑ If so, would your scheme have any implications for these 'heritage assets'?

If it might, you will need a heritage statement to accompany your planning application.

- ❑ Are there any other special planning designations that could impact on your scheme, such as an area of outstanding natural beauty (AONB)?
- ❑ Have you taken advice on the likelihood of getting permission, either via the council's pre-application service or from a planning professional?

ACCESS & PARKING

- ❑ Is there safe access with good visibility in both directions along the principal road?
- ❑ Will there be enough space to turn a vehicle on site?
- ❑ Is there room for sufficient parking to meet the council's standards?

If any of the above affect the site, you might need a traffic assessment to accompany your planning application.

TREES

- ❑ Are any trees on site protected by Tree Preservation Orders (TPOs)?
- ❑ Is the plot in a conservation area (where all trees are protected)?
- ❑ Would any specimens have to be felled or are any trees close to the area of your build?

You may need a tree survey and an arboricultural implications assessment if any of the above apply to the site.

ECOLOGY

- ❑ Do you intend to demolish any structures that could host bats?
- ❑ Are there ponds on or close to the site that could harbour great crested newts?
- ❑ Are there other signs of protected species, from badgers to reptiles?

If so, you will need an ecological report identifying what species are present and how they will be safely rehomed. Note that surveys can be season-dependent, which may cause delays.

ARCHAEOLOGY

- ❑ Is the plot within an Archaeological Notification Area?

If so, you will need an archaeological assessment to accompany your submission. In some circumstances, a watching brief may also be required – whereby you pay for the excavation work to be monitored.

CONTAMINATION

- ❑ Is there any possibility of contamination on the site from former industrial, agricultural or garage use?

If so, you will need an environmental assessment. If contamination is found, further investigations will be required to determine what it is, along with a method statement to confirm how it's to be disposed of.

FLOOD RISK

- ❑ Is your plot located within an area at risk of flooding from river, sea or surface run-off?

If so, you will need a positive flood risk assessment to support your application. Note that mitigation measures are likely to add to your build costs.

GROUND CONDITIONS

- ❑ Have you consulted the council's building control department to establish the likely soil conditions?
- ❑ Are there signs of poor ground, such as wet areas, heavy clay, soft sand or filled land?
- ❑ Could there be former mine workings in the region?
- ❑ Are there signs of current or historic subsidence in the area?

If any of the last three points above apply, you will need a soil survey to determine the most suitable foundations. Should an engineered solution be recommended, this will increase build costs.

DRAINAGE & SERVICES

- ❑ Can you connect the planned property to a public foul sewer; or if not is there enough space to accommodate a private system?
- ❑ Is there a public surface-water sewer you can connect to?
 - ❑ If not, is there a watercourse for rainwater to drain into, or would soakaways be effective?
- ❑ Does the site have straightforward access to the following services:
 - ❑ Water?
 - ❑ Electricity?
 - ❑ Gas?
 - ❑ Telephone/broadband?

In each case, check the availability and cost of making a connection (as well as any temporary supplies and disconnections if you are dealing with existing services). If a supply is unavailable, the extra cost of a site-based alternative should be reflected in your offer price for the plot.

LEGAL CONSIDERATIONS

- ❑ Do you have right of access to get to the plot?

You may need consent from the Highways Authority if you need to cross a pavement.
- ❑ Does anyone else have a right of way or right of access over the plot?

In some cases, a third-party may own a ransom strip between the site and highway, which means you'll need to pay them to secure an agreement for access. This should be factored into your offer for the land.
- ❑ Are there any easements (typically granting access) or wayleaves (usually to allow for services) affecting the plot?
 - ❑ If so, do any time limits or other potential issues need to be addressed?
- ❑ Do any restrictive covenants exist that could affect whether, what or where you build?
- ❑ Are there any planning obligations (Section 106 agreements) affecting the plot?

These legal agreements might be put in place to prescribe the nature of the development; or they may require that compensation be paid to the council for any perceived damage that would be caused by your scheme (such as loss of open space).

- ❑ Are there any public footpaths or bridleways that could affect your planned project?

These access routes may need to be preserved, diverted or closed – and could impact on your chances of gaining planning consent.

MIKE DADE



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



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How good design will save you money

Opinder Liddar discusses how to maximise your funds by planning a project that delivers the best return on your investment

Above & right: Future proofing the design and layout of their home was an important part of David and Lynette Proctor's self build strategy. The couple also spent plenty of time at the technical drawings phase, as they knew a thorough approach would reduce the likelihood of cash flow problems further down the line

Today, you could technically build anything – if you had a large enough budget. However, in reality, funds are limited and self builders demand innovative solutions for their bespoke projects. Of course, I understand that in designing your dream home, you want it to be exemplary and exciting. But I also know that unless you can afford it, your scheme will not happen.

As an expert at events like Build It Live, I have the opportunity to talk to many prospective self builders. All too often, I've seen people who present me with wonderful schemes that they simply can't proceed with. These projects are unaffordable because the design is too elaborate and there are no appropriate cost controls in place. Not only is this emotionally draining for the clients, but it's an unnecessary and expensive ordeal. So, what's the best way to achieve a fantastic design within your budget?

Concept phase

Your design drawings have a direct impact upon the affordability of your



scheme. So, it's important to ensure you spend plenty of time at this early stage setting everything up correctly. Establish a clear and comprehensive brief, highlighting all the components you want your dream home to include – your chosen designer should be able to help you with this. As your plans develop over time, the elements of the scheme that are possible can be confirmed while others, perhaps due to planning or cost constraints, will be revealed as not very viable.

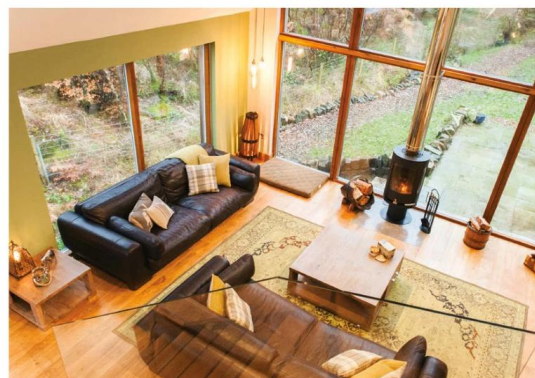
This approach is far better than not mentioning ideas that are important to you early on, and then attempting to add them to your scheme further down the line. The latter strategy may

result in going back to the planners, altering the technical design or making changes on site. These sorts of adaptations will cost you time and money as the scheme progresses.

At this stage, your designer should also make sure that the scheme is appropriately costed before you commit to planning and construction expenses. When this is done at an early phase of your project, you're less likely to change your mind later. Remember, it's far cheaper to alter things on paper than on site.

Site focus

A great self build project responds to the opportunities offered by the



MARGARET SORAYA

Left & inset: Joe and Vanessa Blower completed their self build remotely, working alongside architect Nigel Johnston and a local contractor. The scheme accounts for the sloping plot and maximises views – without breaking the bank. It cost £467,800 to build, with design fees of £20,000

unique characteristics of the plot. I always design this way around rather than trying to impose a pre-made plan onto the land. Key money-saving benefits of this approach are that the scheme can account for different site elevations, minimising digging out or infilling to establish level areas.

More importantly, by taking this approach, you can design your house to make best use of solar gains and guard against potential over-heating issues. This will have an impact on the

long-term running costs of your new abode. Ideally, you want to use the sun to help heat your home when the weather is chilly, and ensure you're not paying to cool the property where the solar exposure is too great.

3D modelling will allow you to make use of this free and natural resource, as you'll be able to map the level of sunshine across your plot and use this knowledge to best position your windows and shading devices. Your architect may also want to get ground

investigations done at this point so that they can factor any unusual subterranean features into the costs. These kinds of surveys are particularly important if you're still in the process of buying your site.

Setting out

Most bricks and blockwork are produced in sizes that are a factor of 75mm. If your masonry is set out with these dimensions in mind, the labour involved in cutting the units will be

SELF BUILD CONSULTANT MIKE HARDWICK ON WHO SHOULD DESIGN YOUR HOME?

1 Architect To be allowed to use the title, you must have completed seven years of training and will have to be accepted by the Architect's Registration Board. You must also hold professional indemnity insurance. It's this training and professional status that pushes up the price of an architect.

If you're looking for a cutting-edge contemporary home that pushes the boundaries of eco design and exploits the latest materials and thinking, then you should probably go straight to this kind of designer. An architect is also likely to be the right person to go to if you're looking to develop a difficult site. Shop around, though, because not all will specialise in the kind of house you want.

2 Architectural technologist These professionals apply the science of architecture, specialising in the technological aspects of buildings, including design and construction methods. They work alongside architects and therefore have an understanding of space, materials and aesthetics. Add these aspects together and they're well qualified to design individual homes.

As they're not full-blown architects, they tend to charge less and offer great value-for-money. This can be especially true for contemporary, energy-efficient buildings, as many architectural technologists are qualified to design to Passivhaus standards.

Architectural technicians possess similar qualifications to technologists – although they are not authorised to work as a sole practitioner. Check out the Chartered Institute of Architectural Technologists' website to find members working in your area.

3 Package company The many package house suppliers in the self build market rely on great design to sell their products. The basic idea is they come up with a scheme at little or no cost, using their

in-house architects and designers. You then fall in love with the idea and commission them. The catch is they own the design, so if you want to use it you will be obliged to sign up to their package – and that's where they make their money. Using a package company is a popular and sensible route into self build, especially for first-timers, as you'll have access to their support all the way through the project.

4 Designer Anyone who is not formally qualified falls into this category. Anybody can call themselves a designer – so it's important to do your homework. The key things to look for are examples of work, followed up with client references to prove competency. Also ensure you see proof of professional indemnity insurance.

Into this category would fall the design and build companies who offer stock plans and the resources to build them. Costs are relatively easy to control, but don't expect state-of-the-art architecture.

5 DIY design You could have a go yourself. Core versions of 3D design software packages such as Sketchup are free to download and, with the help of web tutorials, give everyone the chance to draw up their own scheme. More powerful tools are also available, such as the Build It 3D Design Software (www.self-build.co.uk/3dsoftware).

Getting a self-drawn design through the planning process is not at all uncommon, but the key question is whether the scheme can be built safely and meet Building Regulations. It's at this stage where DIY designs can come unstuck and many architects and designers will be familiar with the clients who call up having obtained planning permission for their drawings but with no idea what to do next.

If you think this is a step too far for you, another approach would be to use the software to mock up ideas that can be used to inform your brief to an architect or house designer.



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The beginners' guide to planning success

From getting your head around complex terminology through to crafting a successful application, Mike Dade lays out the basics

Whether you're self building, extending or renovating, you'll need to set reasonable expectations of what's going to bring you success in the planning phase. You'll also need enough of an understanding of the process to ensure that you get the procedure right. Here are the factors that'll weigh in, as well as the route you'll need to follow to obtain the green light from the council.

Understanding the jargon

Planning permission, approval and consent are all terms that amount to exactly the same thing. Similarly, certain phrases, like green belt, conservation area (CA), area of outstanding natural beauty (AONB) and national park all have the same defined meanings, countrywide.

When it comes to individual councils who administer the process, you'll encounter a variety of jargon. The naming and wording of texts, policy documents and the titles of planning staff can all vary greatly. It's also worth bearing in mind that local authorities often change well-established and understood language on a regular basis.

What schemes need consent?

Authorisation is required for three categories: building works; change of use; and engineering operations. Of these, you're most likely to encounter the first for new homes and extensions, the second for conversions, and

the third if you're excavating a pond or changing levels in your garden. Anything that involves alterations to a listed building will need listed building consent.

Normally, one application sweeps up everything. For example, if you're converting a farm building it might involve a change of use from agriculture to residential, plus some building works and engineering operations (the latter digging out service trenches and foundations).

It might be unclear whether an existing structure or something new you want to build requires formal planning consent. This can be resolved formally by applying to the council for a Lawful Development Certificate (LDC). However, this is quite a technical area so, if you come across it, you'd be well-advised to seek professional advice.

What is permitted development (PD)?

To facilitate a range of different types of construction, the government has evolved a complex series of rules under the General Permitted Development Order. The guidelines enable things like certain types of extensions to houses, garden outbuildings and an increasing array of changes of use. Schemes that fall under the PD umbrella can be undertaken without planning permission. In effect, the Order grants a blanket consent for all the projects it covers.

Some of these, especially rights to convert things such as farm buildings, offices, shops and business premises to residential use, involve a limited approval process. This involves a kind of mini planning application that enables the council to check for things like flood risk, contamination and any potential highway safety issues.

Permitted development rules are complex. For peace of mind, obtaining a Lawful Development Certificate will ensure that your local authority agrees your proposed scheme is covered by PD. Note that these allowances

Above: In order to attain planning consent for this modern new home, Clear Architects made sure the structure sat within the footprint of the barn that originally occupied the site



Above: Designed by Arco2 Architects (www.arco2.co.uk), this house has been constructed so that it has minimal impact on the surrounding landscape. Creating an aesthetic that blends with the surrounding area is often a key aspect to consider when making a planning application

Right: Base Architecture (www.basearchitecture.co.uk) liaised closely with the local conservation officer to attain consent to extend this listed barn conversion in Shropshire

can be removed or restricted by conditions attached to a planning permission, or by an Article 4 Direction. The latter is most commonly found in conservation areas. For more advice see www.self-build.co.uk/pd.

How are applications assessed?

Any decision on a submission is supposed to be made in line with the policies of the Local and/or Neighbourhood Plan (unless so-called material considerations dictate otherwise). The Local Plan is essentially a document produced by the district and borough council and is supposed to follow government guidance set out in the National Planning Policy Framework (NPPF). Neighbourhood strategies are drawn up by parish or town councils, or other relevant bodies in the area. These guides establish policies on a very regional basis that are supposed to be broadly consistent with the Local Plan.

Any policy document goes through a lengthy review process that can take a couple of years to complete. A council might have a rather out-of-date plan and a new one not yet formally adopted. It's always advisable to ring the district authority's planning policy department to check which strategy is used for decision making purposes.

If you're wondering what 'material considerations' are, in practice, they're pretty much anything the officer dealing with your application considers to be relevant. Note that most submissions are assessed by the authority's planning officials in a process known as a delegated decision. For some contentious projects, the final call is made by the planning committee, which is a group of councillors who debate and vote on the outcome.

Pre-app guidance

Prior to making your official submission, most councils encourage you to seek pre-application advice. The cost varies, as does the amount of time involved. However, it's often a good idea as you can get an idea of the council's likely reaction to your plans. Taking this step can identify whether supporting statements will be needed alongside your proposal. For example, an arboricultural report may be required if any trees will be affected. In other cases, the council might deem a flood risk assessment to be necessary. Where the process is expensive or overly slow, going straight to a formal application is a better bet.

Making your application

You can submit your proposal online via the Planning Portal (www.planningportal.co.uk). This enables you to complete the forms, as well as upload your drawings or supporting reports. The process is reasonably user-friendly, too. You'll

have to pay the council's fee – there's a calculator on the website to help you work out exactly what the total sum should be. Currently it's £462 for a new house and £206 for extensions or alterations to an existing dwelling.

You might also be prompted to submit CIL forms. These relate to the Community Infrastructure Levy, which is a fee that an increasing number of local authorities now charge – although self builders and some extenders can claim an exemption. It's vital that you submit the right forms at the correct time to successfully claim the exemption. Always seek advice if you're in any doubt about this aspect of your planning submission, as fees charged can amount to several tens of thousands of pounds for a new dwelling.

Managing the process

When your application is submitted it goes through a validations procedure. Once found to be valid, it goes through a registration process. First is consultation, where neighbours, parish or community council, and various local authority specialists look at and comment on the proposal. Their thoughts channel back to the official who is dealing with your proposal, known as the case officer.

At some point, this designated person makes a site visit and writes up a report with a recommendation to approve or refuse the application. While it's a good idea to contact this individual during the course of a submission, bear in mind that they can be difficult to get hold of. A proposal



should technically be determined within eight weeks, but decisions can run over this period and the council might ask you for an extension of time.

Understanding your consent or refusal

Planning permission is almost always granted subject to conditions. These can require additional information to be submitted to the council, either before or during the build. Typical stipulations cover elements like materials choice, drainage details and landscaping features. Once granted, planning consent lasts three years. It will be up to you to sort out any pre-commencement conditions and get started with the project within this period.

If your application is refused, reasons will be provided that you can (hopefully) address, so you can amend your scheme and resubmit. If there doesn't seem to be any way forward with the council, you have the right to appeal a refusal, taking the decision out of the hands of the local authority. It's always worth taking professional advice before going down this route, as there are potential pitfalls and costs to be considered before taking the plunge.

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Building Regs & technical design

When you're coming up with a bespoke home building scheme, dealing with the planners is only half the battle. Architect **Julian Owen** explains how to ensure your project meets the Building Regulations and why it's important to develop the details at the design stage



Planning and Building Regulations applications are dealt with entirely separately. So gaining planning permission it is not a guarantee that you will get approval under Building Regulations (or vice versa). In fact, the information required to meet Building Regs has little in common with that needed by the planners, and is assessed by a different method. There's a large element of subjectivity at play when it comes to getting planning, whereas obtaining Building Regulations approval is, in many ways, simpler and more predictable. On the whole, if you follow the edicts set out in the relevant approved documents and technical standards, your project will be approved; and if you don't, it probably won't.

Designing to meet the Building Regs

While there's a certain amount of negotiating room, in general it's best to anticipate and design out any problems at the concept stage. Whoever prepares your planning application should also be intimately acquainted with the regs and avoid drawing anything that has to be modified because it contravenes them.

While the guidelines are widely available, interpreting them and ensuring they can be easily met on the ground involves experience from your designer and your building team. For example, your house may make use of the attic space, with rooflights for the first floor bedrooms set just above the gutter line. This may sail through the planning committee without a murmur of objection. If the cill height of the rooflight is over 1.1m, however, it will not pass the regulation that says it must be low enough for an occupant to easily climb out if there is a fire.

Another common issue involves countryside plots, where it can be difficult to meet the requirement to have space for a fire engine to turn around on the site (and for a hose to reach all sides of the property). If the location or the size of the dwelling prevent you from complying with these stipulations, your only option is to negotiate. One compromise might be to offer to install a sprinkler system. This would be costly, but might help you avoid having to go back to the planners with a revised layout. A similar bargaining process is required if you decide you want to

construct a three storey home with an open-plan ground floor which includes the staircase in the same space. The issue here is that the regulations require an enclosed, protected route from the upper floors directly to the outside. This is to give the occupants at least half an hour to escape from the property in case of fire.

What's needed for your application

Technically, all your designer will need to supply are 1:100 scale elevation drawings, 1:50 scale plans and sections and a few pages of A4 specifications, backed up by some calculations from a structural engineer and an energy use consultant. This information is submitted to either an approved inspector or to a building control officer, who may then have a few queries and ask for extra information before they are in a position to rubber-stamp the plans.

QUICK GUIDE BUILDING CONTROL BODIES

There are two types of organisation that can help you to ensure that your house complies with the Regulations. The most established are local authority building control officers (BCOs). They work for the council, not you or your builder, and their job is to check that the regulations are applied to every relevant aspect of the construction. Since 1985, approved inspectors (AIs) have done essentially the same job, but these are private organisations appointed to provide a professional service for your personal project.

As the law currently stands, it is almost impossible to sue a building control department if they miss significant failures to meet the regs. This is because you don't have a contract with them: they are providing a service as part of the council's duties to the community. By contrast, you could hold AIs directly liable for any misjudgement that they might have made, as they are one of your own personal team of consultants.

BCOs can be helpful and a good source of practical advice, but their hands are tied to a certain extent by the rules and procedures set by their local authority. The benefits of using AIs are that they are more flexible, more ready to volunteer advice during the early stages of the design and can cut through the red tape when the occasion demands. They also often have links with structural warranty providers, which can allow you to tie up inspections for building control and warranty purposes in one package – potentially offering better value for money.

Building Regs: Technical guidance documents

Responsibility for the regs has been devolved to national governments across the UK. The regimes are very similar in England and Wales, with 16 Approved Documents setting out guidance on each area. Northern Ireland's Technical Booklets are split into 14 areas, while there are eight sections to Scotland's Building Standards. Procedures are a little different in Scotland, where work cannot start in any form until a building warrant has been secured, and a new house cannot be occupied unless a habitation certificate has been issued.

England & Wales	Scotland	Northern Ireland
Regulation 7 – Materials and workmanship	Section 0 – General	Technical booklet B – Materials & workmanship
Part A – Structural safety	Section 1 – Structure	Technical booklet C – Site preparation and resistance to contaminants / moisture
Part B – Fire safety	Section 2 – Fire	Technical booklet D – Structure
Part C – Site preparation and resistance to contaminants / moisture	Section 3 – Environment	Technical booklet E – Fire safety
Part D – Toxic substances	Section 4 – Safety	Technical booklet F – Conservation of fuel and power
Part E – Resistance to the passage of sound	Section 5 – Noise	Technical booklet G – Resistance to the passage of sound
Part F – Ventilation	Section 6 – Energy	Technical booklet H – Stairs, ramps, guarding and protection from impact
Part G – Sanitation, hot water safety & water efficiency	Section 7 – Sustainability	Technical booklet J – Solid waste in buildings
Part H – Drainage & waste disposal		Technical booklet K – Ventilation
Part J – Heat producing appliances		Technical booklet L – Combustion appliances and fuel storage systems
Part K – Protection from falling (includes glazing safety in England)		Technical booklet N – Drainage
Part L – Conservation of fuel and power		Technical booklet P – Sanitary appliances, unvented hot water systems & reducing risk of scalding
Part M – Access to and use of buildings		Technical booklet R – Access to & use of buildings
Part N – Glazing safety (Wales only)		Technical booklet V – Glazing
Part P – Electrical safety		
Part Q – Security		
Part R – Physical infrastructure for high-speed electronic comms networks		

When work begins, it is the responsibility of whoever is managing the site to notify the inspector shortly before the construction reaches key stages. It is possible to press ahead without getting the plans approved beforehand by serving a Building Notice and having the work inspected as it progresses on site – but this is only suitable for minor alterations. On a self build or other major project, your contractors will want more to go on.

One area of confusion can arise due to the rather limited usefulness of Building Regulations drawings, as these will only show the very basic construction details. Although it

should be fairly clear how the house will work structurally, all that has to be described are the main features of the dwelling to a level that is sufficient to show the scheme is compliant with the regulations. The structural design, foundations and basic materials that are to be used for the roof and walls will be mentioned, as will drainage, fire protection and other elements that are covered by the approved documents. This might be enough for a builder to quote and construct the shell of the house, but it is inadequate to get a reliable price to finish the dwelling.

Many aspects that are not covered will be crucial to the cost, design and success of the project. For example, sanitaryware, decorations and landscaping are of little interest to the inspector checking for Building Regulations approval, but are usually crucial for the budget and the appearance of the finished dwelling.

Getting it right

Paying your house designer to prepare drawings and specifications that go beyond the minimum requirements of the regs is like to provide good value for money. This way, you can be more certain about the accuracy of quotations and quality of the construction work itself. It's generally a sensible idea to speak to key suppliers at this stage to get the best, most current information about the products you're using and integrate this into the drawings.

Some self builders choose to forego this process and make decisions on the fly during the works in the hope of saving money. But don't be surprised when your builder complains there's insufficient information for them to achieve what you're expecting (and that it's going to cost a little more than they first realised).

There are plenty of times when the inflexibility of the Building Regulations can cause frustration and even seem a bit petty, but they were conceived and developed to protect you as much as the community in general. When it comes down to it, I am hard pressed to find any of the standards imposed that fail to follow this principle.

Your completion certificate

Once the project is finished and the works have been signed off by your inspector, the local authority will issue with a completion certificate within eight weeks. To enable this, you'll need to provide documentation to demonstrate the products and systems installed in your house, such as electrical safety certificates, water usage information, airtightness test results and more.

The completion certificate is an important legal document that shows your project conforms with the current standards. It should be stored safely with the property deeds, as it may be required if you sell the house in future. The certificate is also the trigger for self builders to finalise their VAT reclaims, which must be submitted within three months of the completion certificate being issued (see page 11 for more on this).

A completion certificate simply confirms that, as far as can be ascertained from the plan check and inspections, the work done on your project complies with the current regulations. What it won't do is give any kind of guarantee against defects that emerge post-completion.

The best way to protect your new home is to get a 10-year structural warranty in place – and you may wish to use a supplier who can package inspections for this with an AI service. For more on warranties see page 39.

Top marks in every class



- Premium class: ThermoCarbon aluminium entrance door



- Exclusive class: ThermoSafe aluminium entrance door



- Top class: Thermo65 steel / aluminium entrance door



Discover a project that's unlocking the future of the housing market and delivering a pioneering community for people who dream of owning an extraordinary home

Above: An aerial view of Graven Hill. The development now plays host to 200 residents, with more tailor-made homes completing all the time

As the first project of its kind in the UK, Graven Hill is on a mission to shake-up the housing sector and provide an alternative to the standard options on offer. Pioneered by Cherwell District Council and spanning 188 hectares of former Ministry of Defence land, up to 1,900 new dwellings are set to be built on the brownfield site over the course of 15 years.

There are two main choices when creating a home at Graven Hill: self build or custom build. Both options provide buyers with the opportunity to revolutionise how their property is designed and built, offering a realistic alternative to traditional construction routes. The objective is to make creating your perfect home an achievable reality, regardless of budget or ambitions.

"What makes Graven Hill special is the flexibility and control you have when designing and building a home that fits your lifestyle and tastes," says Karen Curtin, managing director at Graven Hill. "No matter what stage of life you're at – or how high up you are on the housing

ladder – we can help you to find your dream home." In this self build special edition of *Build It* magazine, we'll be exploring what life is like at Graven Hill, the options available, how the process works and how prospective self and custom builders can get involved.

Building a community

Nestled in the rolling green landscape of Oxfordshire, Graven Hill first found national fame on *Grand Designs'* television show, *The Street*, which followed the progress of 10 pioneering self builders creating their dream homes. Since the first plots were released in summer 2016, there have been a total of circa 60 build completions on-site, with over 200 residents now calling the village their home.

While providing access to bespoke houses is the key aim, Graven Hill is also keen to establish an ever-growing community of like-minded people. Due to the nature of the development, this sense of community formed from an early stage, with self builders supporting and encouraging each other from the very beginning.

This focus has led the decisions to incorporate a pre-school nursery, primary school and community centre into the finished development, alongside shops, cafes, a local pub and allotments. The result is a unique and supportive community that stands out from the rest.

Sustainability is also at the heart of Graven Hill's masterplan. Playing host to a plentiful array of wildlife conservation areas, wetland habitats and woodland, Graven Hill has prioritised the protection of its existing natural habitats. The construction of boardwalks and cycle paths throughout the site allows residents to explore the stunning environment around them, without impacting the wildlife that also calls Graven Hill its home.

COUNTRY LIVING MEETS URBAN CONVENIENCE

As the crow flies, Bicester is located halfway between London and Birmingham, which makes it one of the UK's top commuter hotspots. Excellent transport links mean it is the ideal location for those craving a life in the country, while still working in the big city.

In fact, from Bicester Village train station, commuters can be in London in just 46 minutes, or Birmingham in one hour 15 minutes, while Oxford is just a 14-minute train ride away. For those looking to travel by car, the M40 is a mere three miles from the development, allowing stress-free travel to anywhere in the UK.

Introducing the MASTERPLAN

Graven Hill is far more than the standard housing development. It is an opportunity to become part of a vibrant community of self and custom builders who all share one key aim – to own a home designed entirely with them in mind. The development offers a range of opportunities, all located within a setting full of open green spaces. The masterplan has been designed to provide 11 Character Areas, each with a different identity. From the mews-like terraces on the urban streets to detached properties on the rural lanes. This variety of plot types ensures that there is a location to suit every homeowner.



PLOT & PROPERTY TYPES

- Self Build Plot
- Custom Build New Home
- Affordable Home
- Apartments
- Phase 0 Grand Designs: The Street
- Phase 1 Grand Designs: New Series
- Show Homes
- Graven Hill Marketing Suite & Build It's Self Build Education House

VISIT NOW & EXPERIENCE GRAVEN HILL

To help you gain a real insight into what building your own home at Graven Hill is like, Build It's Self Build Education House has been built to demystify the self build process. A joint project, the Self Build Education House marries Build It and Graven Hill's shared goal of providing practical information and inspiration for those who wish to create their dream home.

Unlike a standard show home, the house is designed to provide a unique insight into the entire self build process. Informative graphics guide you through its construction, ranging from initial sketch designs and structural decisions to product choice and snagging checks. By offering a glimpse of what to expect from a project, Graven Hill and Build It hope to inspire budding self builders to take the leap and create their own grand design.

The Self Build Education House is also the setting of Graven Hill's Marketing Suite, where aspiring self builders and those searching for their next home can see plot availability, visit properties, and discuss requirements with the sales team.

The Graven Hill team are also on hand to explain the design and planning process works, as well as provide information on finance. You can also learn more by taking a virtual tour of the development, available on the Graven Hill website.



To find out more visit
www.gravenhill.co.uk
or speak to a member of
the team on 01869 390009



SELF BUILD OR CUSTOM BUILD?

Choosing the right route for you

Above: The Maliks built their five-bedroom, three-storey 291m² home at Graven Hill using Nudura insulated concrete formwork

Everyone aspires to create the perfect home, but we all have different ideas of what it might look like. For some, an open-plan social living space is a must, while others will prioritise a utility room or home office. That's why Graven Hill has pioneered a choice of models and options to suit every need and budget.

Whether you're keen to self build your own design from scratch or would prefer to add a touch of personality to a tailored new property, Graven Hill will be there to help make the process as simple, affordable and accessible as possible.

Below & below right: The Avon is an 80m² two-bedroom custom build terraced home with an open-plan kitchen-dining area, priced at £315,000 including fittings and appliances

Building from the ground up

Realising a home building project can feel like an impossible dream, but it could be easier than you think. Choosing to self build at Graven Hill gives buyers total control over every aspect of their project while taking away some of the stress that is often associated with the process.

Although common in other European countries, self building still makes up a relative minority (about 10%) of

the housing market in the UK. As a result, it often feels like a challenging option. Common stumbling blocks include finding a suitable and affordable plot, gaining planning consent and organising the construction process. Serviced plots, such as those available at Graven Hill, aim to take these hurdles out of the process, allowing self builders to focus solely on the design and delivery of their project.

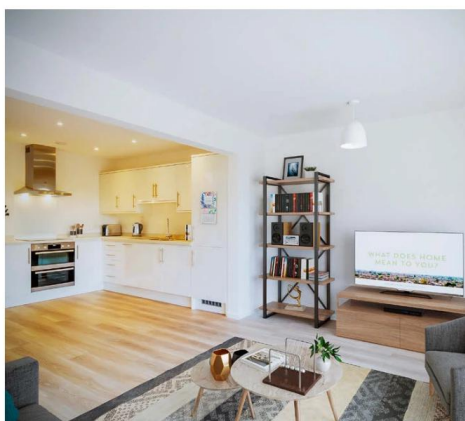
A customised solution

Overseeing the entire construction of a home is a very rewarding project, but it isn't right for everyone. For those who want the convenience of a move-in-ready new-build property, but still want to put their stamp on their home, custom build homes are the perfect compromise.

"Custom Build is a really exciting new concept in the housing market," says Karen Curtin. "If self build isn't the right path, this gives you the chance to design a home that is still individual to you." A relatively new concept in the UK, this route allows buyers to create a bespoke home without the need to don a hard hat. The earlier in the planning and building process the plot is reserved, the more choices available when it comes to personalisation, so you'll want to get on board as early as possible.

PHASE 2 PLOT RELEASE

Phase 2 of Graven Hill is set to be released in 2021. Sign up to the Graven Hill newsletter to be the first to hear about the latest opportunities available as well as what is set to be released for the next phase, including brand new Custom Build New Homes, Self Build Plots and Apartments.



CUSTOM BUILDING

Personality without the project

According to Graven Hill's research, 50% of people identify customisation as the main advantage of designing their own home. However, whether due to finances or the amount of time it takes, self building is not always a viable option for everyone. This is where custom build homes come in, offering buyers an alternative that provides the personal touches they desire without the responsibility of taking on a construction project.

What is custom building?

Custom building is not yet a well-known option in the UK. This could be down to the country's desperate need for houses, with speed often being prioritised over personality and design as a result. However, Graven Hill believes that this approach has left people feeling uninspired by the housing market, and that involving the buyer in the process leads to a longer-lasting love between a person and their home.

By giving people the opportunity to tailor the internal layout and finish of their home, buyers can be certain that it will fit their needs long into the future. Custom build homes can even be made more accessible with touches such as wider door frames, lower light switches and downstairs bathrooms, future-proofing them for later years.

How does the process work?

Unlike a self build project, the external and internal structure of a custom home is completed by a team of professionals. Depending on when in the building process the house has been purchased, buyers can review elements of the property, including the floorplans, fixtures and fittings, and alter them to suit their wishes. Simply put, the sooner the home is purchased, the more choice the buyer has.

Why choose custom building?

Those who decide to take the custom build route will get to enjoy all the advantages of a high-quality, move-in-ready new home that fits their needs and personality perfectly. So, whether the buyer is a growing family in need of an extra room or a couple looking for an open-plan space to entertain, custom building is the ideal choice.

Providing both a simple and creative way into the world of housebuilding, custom building means compromise does not have to be a part of the property market any longer. As these homes are classed as new builds, buyers can also access the government's Help to Buy finance scheme.



BENEFITS OF A GRAVEN HILL CUSTOM BUILD HOME

Contemporary designs These high-quality homes are designed with modern living in mind, so there is no need to compromise between quality and convenience

Choice The earlier you get on board, the more options you will have to customise your new property

Premium fixtures and fittings Select from a range of high-quality fixtures, fittings and appliances

Help to Buy finance Realising the dream may be more affordable than you might think

Top & above: The Dorn is a 131.9m² four-bedroom custom build new home designed and constructed to passive energy standards, priced at £435,000 including fittings and appliances

In addition, every home at Graven Hill comes with a 10-year structural warranty, allowing buyers to rest easy knowing that they are protected against any damage or defects in the design or construction of their property.



01869 228 041

FIND A PLOT

GET IN TOUCH

SELF-BUILD PURCHASERS' LOGIN



GRAND DESIGNS: THE STREET

ABOUT GRAVEN HILL

MOVE TO GRAVEN HILL

WHY BICESTER?

RESOURCES

NEWS

EVENTS

CONTACT

Find your home

Filter

Plot type:

Any

Building type:

Any

Availability:

Any

Max bedrooms:

Any

FILTER

Self-Build Plot (?)

Custom Build New Home (?)



SELF BUILDING

Creating a home made for you, by you

Above: You can quickly and easily browse all the available serviced plots and other opportunities via the Graven Hill website

Building a home is no mean feat, but it is also incredibly rewarding. Traditionally, projects have been isolated to single plots, leaving people entirely to their own devices. However, in order to make the process accessible to all, Graven Hill has made self building as hassle-free as possible, with the provision of serviced plots and support available throughout the build.

Introducing the Golden Brick

"Laying the foundations can be one of the riskiest elements of a self build project as you never know what you will find until you start digging," says Karen Curtin, managing director of Graven Hill. "Buying a self build serviced plot from us takes away that worry immediately."

One common problems for self builders is finding a site that is viable for development. At Graven Hill, each self build plot is shovel ready, with utilities including electricity, gas, water, high-speed broadband and drainage already in place.

When you buy a self build serviced plot at Graven Hill it is provided on a Golden Brick basis. This means you pay for the land, which includes utilities (to the boundary of your plot) and drainage, in addition to the cost of your foundations, which will be designed and priced up to suit your house design and

Sign up to the Graven Hill newsletter

With the latest on plot availability, site news and stories from residents, the Graven Hill newsletter is the best way to keep informed with all the latest developments. To sign up, visit www.gravenhill.co.uk



layout. It also means that the sale will have a zero VAT rating – unlike the 20% you would typically pay if you were buying serviced land without the Golden Brick.

Choosing your self build plot

Useful questions to consider when selecting the right serviced plot to suit your project goals include:

- How much space is needed?
- How many bedrooms and bathrooms would be ideal?
- Would a rural setting or an urban area be more suitable?
- How will the build be financed and how much money do you have available to spend?

Once you have the answers to these questions, you can start to narrow down which opportunities will best suit you.

BENEFITS OF SELF BUILDING AT GRAVEN HILL

Pre-approved planning Secure fast-track planning consent within 28 days by following the Plot Passport

Design freedom Guided by the Plot Passport, purchasers can build a bespoke home that's totally tailored to their lifestyle

Serviced plots Utilities are already in place at your site boundary

A FAST TRACK TO PLANNING PERMISSION

Securing planning consent can be one of the most challenging parts of a self build project. Graven Hill is on a mission to make self building accessible for everyone, however, and an important part of that is simplifying the planning process.

Planning permission on site

To take the uncertainty out of gaining planning, Cherwell District Council has adopted a Local Development Order (LDO) to grant permission in principle, according to a masterplan and design code. This means every serviced plot at Graven Hill already benefits from consent in principle. So, all self builders need to do is develop a design that fits with the indicated parameters in the Plot Passport and get it rubber-stamped. As long as you meet the compliance checklist, permission should be received within 28 days.

What is a Plot Passport?

All self build plots at Graven Hill come with their own unique Plot Passport that contains vital information about that piece of land. This includes a summary of the main features of the plot, a plan and key to assist designers with initial sketch proposals and guidance on the ground conditions.

Every Plot Passport is also guided by Graven Hill's site's wider design code. This sets out the rules specific to each



of the 11 Character Areas at the development – so even the streets are matched to residents' personalities.

The zone someone chooses to build in will determine how much design freedom they will get. For example, the Tree-Lined Boulevard has relatively few limits on materials and boundary treatments, but there are restrictions on maximum building heights and the position of main facades. Sites in Urban Lanes, meanwhile, offer high levels of design freedom and creative experimentation is encouraged.

"Having this information all in one place means you can tell at a glance whether the plot will meet your needs even before you reserve it," explains Karen Curtin.

Above: The different Character Areas at Graven Hill allow varying amounts of design freedom

QUICK GUIDE WHAT'S IN A PLOT PASSPORT?

Each passport details the vital information you need to successfully build your home. Inside the document you'll find information on:

Main features

An at-a-glance summary including the number of bedrooms allowed, size of the plot, maximum gross internal area, build zone, access point, parking space locations and ridge height restrictions.

Clear rules for your build

A detailed breakdown of the design freedoms you have to play with, in addition to information on sustainability requirements.

Materials palette

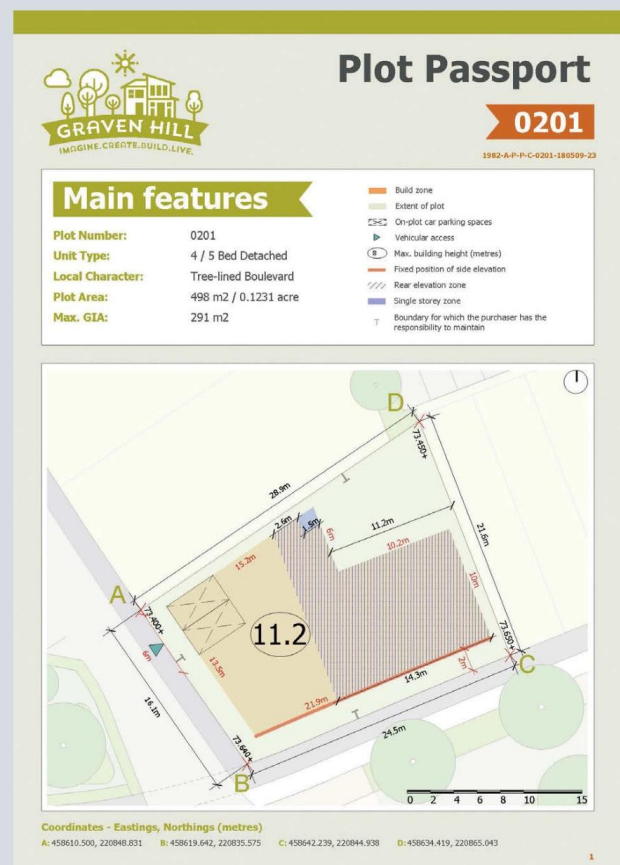
Design Code guidelines that are specific to your chosen Character Area for the facade, roof and accent materials. If a Character Area has no set materials palette, you can apply for whatever materials you'd like.

Information on ground conditions

A report on the nature of the site and recommendation on the probable foundation type based on borehole and trial pit testing undertaken by the Graven Hill Village Development Company. This will only change if your design necessitates it. Also detailed is the key information Graven Hill will need for them to build the foundations of the home.

Services provision

Details of the utilities that will be provided, how these enter the plot and the connection process (including what Graven Hill will provide, as well as what the self builder will need to organise).



FINANCING YOUR DREAM HOME



Above: Maggie and Simon Kirkman engaged design and build experts Dan-Wood to help them realise their dream project at Graven Hill. The construction work was completed in just eight weeks

Managing a budget is one of the most important parts of any home building project. As with the rest of the self build journey, Graven Hill aims to make financing the process as simple as possible. Here's what you need to know about funding a self or custom build project at Graven Hill.

What is a self build mortgage?

Although some people can finance their project through savings or equity in a current property, many self builders will need to secure a loan. However, standard mortgages aren't suitable for a bespoke home scheme. Instead, you'll need a specialist product.

Self build mortgages release funds in stages as your project progresses, as opposed to one lump sum. This makes good project management and strict timings key. Few high street banks deal with this kind of finance, so it's

important to speak to a specialist in order to understand your funding and budget options at an early stage.

Ensuring a project is affordable

Viability is a key aspect of the mortgage market. Any lender must apply affordability tests before it offers one of its products – whether on a self build project or the purchase of an existing property. As such, self builders should thoroughly review all elements of their proposed build before visiting a mortgage lender.

"We don't force our buyers to go to a certain financial institution, but we do want to signpost options for finance," explains Karen Curtin from Graven Hill. "You can choose a specialist product available through BuildStore, but you can also use your own mortgage provider."

Keeping customisation accessible

When it comes to custom building, affordability need not be a barrier. Not only can all of Graven Hill's Custom Build New Homes be funded with a standard mortgage, but they are also covered by the government's Help to Buy scheme.

This means purchasers can apply for an equity loan covering up to 20% of the cost of their property. They will then only need a 5% deposit and 75% mortgage to make up the rest of the finance for their project.

"With access to Help to Buy available for our custom build buyers, their position on the property ladder shouldn't stop them from securing their dream home," says Karen.

PROJECT FINANCE WITH BUILDSTORE

BuildStore is the UK's leading expert in self build finance. They've worked with well-known banks and building societies to create a range of self build lending products, as well as designing their own exclusive Accelerator mortgage, which pays out tranches of money in advance of agreed stages of a self build project to improve cash flow. To speak to BuildStore about securing a mortgage for your Graven Hill project, call 0345 223 4888 or visit www.buildstore.co.uk.

CLOSER LOOK

Terry & Olwen Brown-Waite's trailblazing self build project

House style Two-bedroom detached home

House size 151m²

Project route Self-managed & laboured

Construction cost (excl. land) £234,000

VAT reclaim £30,000

Moved in September 2019

Leaving their quiet village in Northamptonshire, Terry and Olwen Waite set out to create a brand new stand-out home. Their Graven Hill self build was one of the first 10 pioneering projects followed on television in the Grand Designs series, The Street. The eye-catching contemporary home is a far cry from the couple's previous self build, which was designed to look like a 200-year-old cottage. But semi-retired electrical engineer Terry and Olwen, a former tax assistant, wanted to design a house tailored to their own tastes and requirements to the very last detail.

One key objective was to create a low-energy, low-bills property with high thermal mass, which would efficiently retain renewable heat generated by an air source heat pump. To that end, the pair chose to combine the sustainable insulated concrete formwork system from Durisol with a highly insulated steel-clad Thermorooft. "You can think of the house as one big tea cosy," says Terry. The couple also specified a low-maintenance property, with features that would accommodate them into their autumn years.

Terry and Olwen's site is a serviced self build plot, with Graven Hill taking care of the Golden Brick foundations (in this case, a reinforced concrete slab). Post-foundations, most of the labour was carried out by the couple, their family, and their good friend Phil Williams, who came over from Canada for a 13-week period. Some aspects, such as glazing and renewable technologies, had to be done by pros to comply with insurance and energy accreditations.



Unsurprisingly, given Terry's background, the property is replete with gadgets. There is a mechanical ventilation and heat recovery system, underfloor heating, a central vacuum, Alexa-activated smart home automation and fingerprint scan security systems, to name but a few. A faux fire provides a focal point in the living room. The goal of high thermal mass has been achieved with aplomb – internal temperatures fluctuate minimally: only one degree over a 24-hour period, even on cold nights with daytime heating only.

The house is also brimming with forward-thinking features to help the couple live here for years to come. These include flush thresholds between the bifold doors and garden, low-upkeep artificial lawn and raised borders that make for easy planting, complete with automated irrigation. "Fulfilling our dream through hard work has given us a huge sense of achievement," says Terry. "We'd encourage anyone to do it!"



Below left & below: The angular roof line is a striking feature, with its steel blue cladding setting the tone for the vibrant interiors



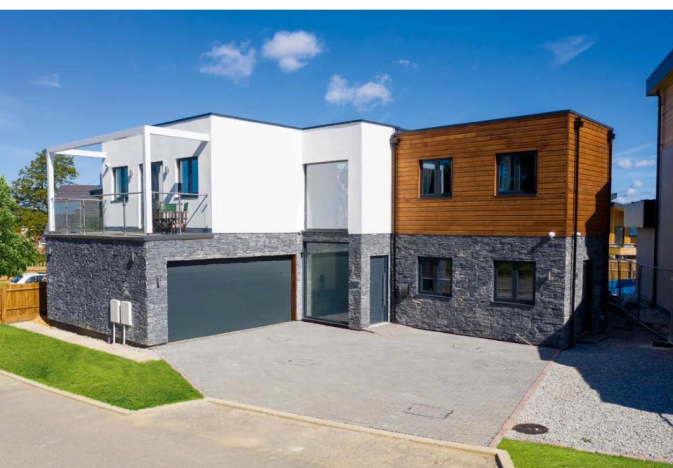
CLOSER LOOK**Greg & Jonny's creative custom build home****House style** Four-bedroom detached home**Moved in** September 2019

After years of renting in Oxford, Greg Simmons and Jonny Stiff chose to buy their first home together at Graven Hill. With Greg commuting to London and Jonny working for an airline near Heathrow, the location was ideal. Now Greg can travel directly from Bicester station, he's taken 15 minutes off his commute, so the couple can make the most of their evenings. "It's lovely to be surrounded by greenery and open space," says Jonny. "It's a countryside setting with city links."

Having previously lived in a dark Victorian terraced house, the pair were drawn to the contemporary styles at Graven Hill. "We were blown away by the light and airy feel of the custom build homes," says Greg. "They were so different from what we were used to, both in terms of openness and modernity. Unlike other new build developments, every home at Graven Hill has its own distinctive edge, which is something we really love about living here." After viewing the site in April 2019, they purchased their plot the following month and were moved in by September. "The process was pretty much effortless from start to finish," says Greg.



Since then they've happily settled into life in their new home and environment. "Even though the site is still young, an amazing community has already been established," says Jonny. "It's a place that breeds creativity and individualism, full of unique, yet like-minded people that are as diverse as the houses they live in."

**CLOSER LOOK****Susan Weston's self build project****House style** Five-bedroom detached home**Moved in** December 2018

Creating her own home had long been a dream for Susan Weston, whose parents built her family home in the 1970s. With a background in engineering and project management, she was already equipped with many of the skills needed to manage a self-build on time and to budget.

After over a decade of searching for the perfect plot, Susan discovered Graven Hill in 2015 and attended an open day with her partner. "I thought I'd need to convince him to take on such a big project, but as soon as he saw the beautiful surroundings, he was sold!" she says. "The ease of Graven Hill's self build process was also a big selling point. Being able to have support throughout, as well as the services already being connected, was a massive plus."

Susan and her partner chose a plot on one of Graven Hill's rural lanes and created the internal layout themselves, using an architectural technician to ensure the design would work structurally. The result is a light, airy and modern home that gives them flexibility in the future. "We were able to add in a downstairs study, which could be changed into a bedroom should the need arise. We know that we can live here comfortably for a long time to come."

The Westons moved into their dream home on 20 December 2018, just in time to enjoy Christmas. "Graven Hill is very different to a lot of other housing developments. There's a sense of community that I've never experienced before. We've all gone through the ups and downs of self-building together, giving each other advice and support throughout the process."



GRAVEN HILL FAQs

What is Graven Hill?

Graven Hill is currently the largest opportunity in the UK for people who want to build their own home. It is aimed at households of all sizes and includes opportunities for people to build as individuals or as a group.

A beautiful development with extensive open space including woodland, allotments, a network of cycle and footpaths and communal spaces, Graven Hill will have a primary school, a pre-school nursery and a community centre. There will also be premises available for shops and a local pub. The site also provides a strategic location for new employment space creating jobs and training for local people and attracting new investment into Bicester.

What kind of house could I build?

The possibilities are endless. For Self Build plots there will be a range of plot shapes, sizes and (depending on their location within the development) varying levels of design freedom. This will all be specified in your plot's unique Plot Passport and within the Graven Hill Design Code.

One of the great things about building at Graven Hill is that you are in control and you can build a home that's totally configured to your lifestyle and your taste.

How long does it take to build a home?

It varies considerably depending on a range of factors. Your timeline will change according to:

- The size of your home.
- The complexity of your design.
- Whether you do the work yourself or engage others (friends or paid contractors) to help you.
- Your construction approach, for example a kit home may be quicker on site, but may require a longer lead in time before you start on site.



Left: A joint project, Build It's Self Build Education House also doubles up as the Marketing Suite for Graven Hill

The Graven Hill sales contract has a stipulation that your house must be built out within a specific period, which is currently two years from the date you completed on the Golden Brick foundations on your Self Build plot.

How do I get a self build mortgage?

All purchasers currently need to be qualified by BuildStore. A number of lenders now provide mortgages for self build homes. We strongly recommend you speak to a broker or lender and get an initial opinion on whether you will be able to get a mortgage and how much deposit you will need before spending money on design.

How do I find out more and reserve?

Get in touch with the Graven Hill Sales team or visit us at our Marketing Suite inside the Build It Education House. Call 01869 390 009 or visit www.gravenhill.co.uk.

SEVEN STEPS TO BUILDING YOUR HOME AT GRAVEN HILL

1 Shape your ideas

Before you take the plunge, it is vital to consider exactly what you want from your new home. That includes what it looks like, how much space you need, plot location, and how hands-on you wish to be in the building process. You will also need to look at your finances and be realistic about what you can afford.

2 Talk to the team

Visit Graven Hill's Marketing Suite and talk your ideas through with one of the team. They can inform you of the plots available and which would best suit your vision. It can be helpful to have some outlined drawings prepared to show the floor plan, elevations and your choice of material.

3 Reserve your plot

Once you're happy with your chosen plot and your finances are confirmed, Graven Hill can reserve your plot with a deposit. Your design doesn't need to be final yet, but establishing it early can help with cost certainty and timescales.

4 Design and permissions

Next comes securing planning permission. As long as your design follows the rules and guidelines in your Plot Passport, it is guaranteed to be approved. You

can then put the finishing touches to your design and Graven Hill will assign you a structural engineer to finalise the substructure and foundations.

5 Exchange contracts

Once your planning permission and designs are approved and a plot price agreed, contracts can be exchanged with the payment of a 10% deposit on the total land and foundation costs. This should be done within 10 months of the plot being reserved. Graven Hill will then agree on a timeframe to build the foundations of your new home.

6 Completion

Ten days before completion of your foundations, Graven Hill will issue a formal notice with a date for completion of the sale, including when the remainder of the purchase price must be paid. After that, you're all set to start building.

7 Get building

Now comes the best bit... starting work on your dream home. Health and safety on the plot will be your responsibility, but Graven Hill will work with you to ensure high standards are maintained. Once your home is built to perfection (within 24 months), your self build journey is complete!



Project management: the basics

Mike Hardwick looks at how to go about hiring a great team for your project

Above: Whether you're taking on a project manager, general builder or individual trades, putting good contracts in place will protect both your interests

Below: As part of the design process, Nimtim Architects (www.nimtim.co.uk) create handmade scale models of each scheme to help homeowners visualise the various possibilities for their project

In the simplest terms, project management encompasses the skills needed to produce a defined outcome (in this case a new house) within the constraints of the resources available (your budget) and within a certain timescale. The latter can be flexible, but usually manifests itself as "in the house before Christmas."

We encounter project management in our day-to-day lives without giving it a second thought. Arranging a family holiday, planning a wedding and organising a party are all projects that we are happy to approach with little or no prior experience – and more often than not, we're able to successfully deliver them with great success.

Building a house is no different. People have constructed homes for centuries. Quite a few builders and

tradesmen know how to do it rather well because, for most projects, it's not rocket science. Leaving aside one-off conceptual designs and instead focusing on the typical houses that we might contemplate building for ourselves, the sequence of events is based on common sense.

The real art is in finding the right materials and sourcing the right people to do the job to the standard you require, for a price you can afford.

Should you use a professional?

A good project manager can save you some, most or even all of their fees by bringing greater efficiency to the site. By buying materials cannily (using access to their trade discounts), foreseeing and avoiding costly delays

and minimising the need for rework, the build will be completed on time, on budget and with minimum fuss.

There are undoubtedly plenty of professional, independent project managers out there who can take day-to-day control of your build,

but the clue is in the 'professional' bit. These specialists don't come cheap (expect to pay around 15% of your build budget) and most self builders have finite funds, the majority of which needs to be allocated to the physical build by way of materials and labour.

Think of it this way. If you have £200,000 to spend, 15% of that would be £30,000 – potentially enough to pay for a lovely kitchen, designer staircase and good-spec bathroom. For this reason, using an independent PM tends to work best on a big, complex scheme where the pro's experience and contacts can help to claw back some of their fee.

This prompts most of us to either undertake the role of project manager ourselves or to entrust this task to a general builder – someone who knows what they are doing and has the contacts to get the right trades at the right price. For a typical self builder contemplating creating a straightforward new home, this can be a sensible route to take; as long as you select the right main contractor.

Remember though, that the best builder is not necessarily the cheapest. While they need to be affordable on your budget, it is just as important they are capable of doing a good job. Gauging whether that will be the case means doing your homework by asking them for references and following them up. A good builder will always want to do a high-quality job as



his next contract depends on it – after all, you're the one who will be providing the references to the next clients.

Alternatively, you can ask your architect to undertake the project management role. For complex designs or cutting-edge builds, this can make a lot of sense, as you get the reassurance that the person who came up with the drawings – and therefore knows how it's supposed to fit together – is coordinating delivery.

Architects often calculate their management fees as a percentage of the build costs. A common worry is that this encourages the architect to 'build big' and specify a raft of expensive materials in order to maximise their potential return.

erection of your house shell on site – so you get a weathertight building on a fixed price that's ready to be fitted out using your own trades. In some cases, you can use follow-on services even deeper into the build.

Should you choose to do another self build, you'll have learnt a huge amount. Confidence levels will be that much higher because the processes involved are clearer and easier to address the second time round.

If you do decide to manage your own build, then remember that you are taking on responsibility for everything that happens – in other words, the buck stops with you. While that may seem daunting, it's quite amazing how writing out the cheques can

wrong. But reputable trades and professionals will always start with the intention of delivering a good service for a fair price. They know their next job is likely to require your reference, so will have a vested interest in showcasing their best skills.

Architects & designers

Let's assume you have a plot with at least outline planning permission. Choosing the right team to exploit the site's unique characteristics is a good starting point. Picking a random design practice out of the blue is unlikely to achieve what you seek. Find someone on your wavelength, who enjoys designing the sort of house you are aiming for.

Below left: Labour shortages mean that good brickies can be in high demand, so don't expect a cheap quote – and be sure to book the job well in advance



You can potentially combat that by agreeing for them to work on a fixed fee or ceiling price (something an independent PM or main contractor may also be willing to do). This gives you a top-line figure for the build while incentivising them to seek keen prices from trades. So it's a win-win situation.

Should I self-project manage my project?

A surprising number of people choose to do this, and 99% of them successfully oversee their schemes to completion – although most will tell you that it's a full-on job that takes up virtually all of their time and energy.

Because of this, first-time self builders often work with one of the established package home suppliers, such as Potton. These companies have experts on hand, and you can select from a range of services to help as much or as little as required throughout the project.

They can offer you a package for the design, materials supply and

concentrate the mind and give you the motivation to find great deals and resolve problems on site.

The trade-off is that it will take up much of your free time, of course, but you will have a keen interest in making sure you are getting value for money. You'll be surprised at just how empowering this is and how much you are capable of. Not to mention, it can be very rewarding when you see the finished results: a new home, made to your exact specifications, that's only there because you made it so.

HIRING YOUR TEAM

Building your own home requires the involvement of multiple individuals and companies, most of which you will be selecting and appointing. Of course, the one thing we all want to steer clear of is the 'cowboy' or rogue practitioner. Mercifully, these can be avoided through doing a little homework before you decide. The cowboys are simply after your money and will disappear when things go

HOW TO GET ACCURATE QUOTES

There's a lot of confusion about the terminology used for pricing a job. An estimate is just that: an educated but quickly reckoned and non-binding guess of what a job might cost. A fixed-price quote, meanwhile, is an agreed price based on work shown on a drawing or specification (and the accompanying terms and conditions). So provided nothing changes, that's the final sum you'll pay – but any variations to the spec will attract an 'extra over' cost.

The more information you give, the more accurate your quote will be; and it's always better to know the likely costs at the start of the build, rather than suddenly find that extras have been added to the bill. If the full extent of the work wasn't made clear in the original tender process (when you invite quotes), there's a strong chance the resulting additional costs will render the original figure, and therefore your budget, meaningless. If you send out the same information to several builders and ask for a price, you'll soon find that you get different answers from each, so thoroughly check what's included.

The first step is to check out the company's website and portfolio of projects. If you're after a cottage-style home and the website is full of ultra-modern cubes (or vice versa) you're unlikely to hit it off. Check that your chosen designer has professional indemnity (PI) insurance in case things go awry. A qualified architect should have PI insurance as a rule, but some designers won't. It's worth making sure that the firm who is doing the planning drawings can also produce the Building Regulations drawings, necessary for construction. Not all designers can do this.

Other professionals

You may need to hire specialists to provide things like site surveys, flood risk assessments and environmental studies. Choice tends to be limited for these experts and just finding a professional person who can do the job can be a minor victory. However, if you can, it's worth shopping around, as prices vary. Small one-man-band

Right: This build was self-project managed by the homeowners, who even got involved on a DIY basis – partnering with a small number of recommended sub-contractors, including a plumber and electrician who were willing to help them learn on the job. Below: Fitting underfloor heating (UFH) is possible for a competent DIYer, complex installations require a specialist to get the best results. UFH expert Uponor (www.uponor.co.uk) advises clients to use a manufacturer-approved installer, with certification of their training and positive customer reviews online



operations tend to be better value for money than larger organisations with high overheads to support.

Hiring a general builder

You should typically ask for quotes from three to five builders in the local area, preferably based on personal recommendations from people who have had a successful experience.

When you go out to tender, you'll be required to give enough information to inform a price. So, you should know what materials you're using at this stage and be able to provide Building Regulations drawings (not planning diagrams) so that each contractor can price the job accurately.

Quotes will vary, of course, so it's smart to get an outline estimate such as that provided by the Build It Estimating Service (find out more at www.buildit.co.uk/estimate). This gives you a baseline to challenge costings that look too expensive or, occasionally, too cheap. Bear in mind that lowest price rarely means best –

filter out the non-starters and arrange to meet builders that look promising.

Remember, you're searching for someone with whom you can communicate and get along with for the next year or so. You're not looking for a friend for life, but you need to understand each other and what's required. A good

sign is when your builder fields as many questions as they're being asked, offering suggestions to make things work smoothly. This shows an interest in undertaking the work and a keen attitude to get it right. Talk about safety on site and confirm they are familiar with their site safety responsibilities under Construction (Design & Management) rules and that they are comfortable with their principal contractor duties.

Engaging individuals

If you are self-project managing and hiring individual trades, it's vital to

both take references and follow them up to ensure that the workers you're considering are competent and who they say they are. My preference is to use local trades who have established a

reputation for good work in the area. Join local community social media pages and ask for recommendations for the go-to companies in the area. These may not be the cheapest, but they have a reputation to maintain.

In some cases, I don't even look for alternative quotes, I just ask the person I know is best to undertake the work and always get charged a fair price. Look for membership of a relevant trade body as a sign that they are competent. For example, the National Inspection Council of Electrical Installation Contracting (NIECIC) for electricians, Gas Safe Register for plumbers etc.

Inspection regime

When it comes to inspection under Building Regulations, you can either use your local area building control (LABC) or an approved inspector (AI). You can ask either to provide a 10-year structural warranty. It can be useful to have one inspector covering both of these requirements, as there will be fewer site visits required.

There are advantages to using both providers: your LABC officer from the council will be close to the site. They should also have a knowledge of the ground conditions, whereas your AI may not be from nearby. However, the AI service is risk-based and may be cheaper, especially if your project is fairly straightforward.

Facilities

Make your self build site or renovation a good place to be. Trades tend to enjoy working on one-off projects as there is not as much pressure to rush the job like on multi-site schemes. So, they have the time to do the work properly and to a high standard.

Providing tea, coffee, a pack of biscuits and the occasional show of appreciation for a job well done will



make for a happy site. It will also put your trades in the right frame of mind for helping out with those impromptu 'while you're at it, would you mind taking a look at...' moments that inevitably crop up during a project. Be careful not to over-supervise; hovering over trades and pointing out the obvious can be very irritating – just let them get on with the job.

Understanding value for money

It's easy to be seduced by a cheap price – and the cowboys know this. Low-cost estimates, especially if they are offered against simple planning drawings, devoid of the detail needed for accurate pricing, aren't worth the paper they're written on. The costs will soon balloon as extras are added through the course of the project. The best builders and tradespeople will have been doing the job for years and tend to be able to charge more for their skill and experience. They might not provide the cheapest quote, but they will get the job right first time and to a very high standard.

Remember that everyone involved in your project is in it to make a profit – that's how the game works, and 'profit' shouldn't be a dirty word. I occasionally see self builders and renovators obsessing about trades making money on materials provided on a supply and fix basis, preferring to buy everything themselves thinking there's a saving to be made. The truth is, the tradesperson will be able to buy it far cheaper than you. Also, if they have supplied a product and it needs replacing under warranty, they'll come back and fix the problem. If you go out and buy the kit, you're on your own. Ultimately, you'll be making a profit, too, because if you've got it right, your home will be worth more than it cost you to build, so everyone wins.



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Beginner's guide to package homes

Whether you're self building for the first time or you're a seasoned pro looking for a hassle-free route to your new bespoke home, engaging a specialist company to guide you through the design and construction process makes a lot of sense

The list of questions a self builder has to answer before starting a scheme can feel endless – from design and planning through to budgeting and project managing – and the process may seem mind-boggling to a beginner. But the truth is that most people (even those who have self built before) need to call in expert support to help them realise their goal of creating a high-quality, tailor-made property. The good news is that many of the answers to those challenges can be found in the form of package home specialists.

What do package suppliers do?

Think of these firms as a one-stop shop solution for your building project. Typically, they will undertake the design process (whether for planning purposes or just the structural design element), supply the materials for part or all of the scheme and help you source the labour required to complete it (or provide it themselves).

Timber frame is perhaps the most popular construction method offered, but some will also work with masonry and other systems. In terms of services, most firms will deliver a bespoke wind and weather-proof shell ready for you to finish using your preferred follow-on trades.

But the options can stretch right up to what's known as a turnkey route, where the company manages the build in its entirety and hands over the keys on completion.

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 your own scheme and if you'd like to be fully in charge of sourcing the finishing touches.

Do I need an architect?

One of the key allures of partnering with these firms is that many of them have outstanding designers on their books, so you don't need to engage your own architect (unless you want to). Package suppliers will work with you to create a bespoke concept according to your requirements and then provide the materials for you to build it. Off-the-shelf plans are available, too.

The first step is to arrange a consultation to establish exactly what you are after from your future home and what's possible within the constraints of planning, the plot and your available budget. As these companies have extensive experience of seeing through a variety of projects, they will be able to inject some realism at

Above: Potton (www.potton.co.uk) provided this new self build home's architectural design, planning and Building Regs, supply and erection, plus insulation, windows, stairs and internal joinery. The 370m² property took 10 months to build



Above: Jill and Lloyd Smith partnered with turnkey home provider Baufritz (www.baufritz.com) for their 280m² contemporary self build. The couple were flown out to the company's HQ in Germany to select the house's fixtures and fittings, before Baufritz manufactured the shell and completed the construction and fit-out, except for the groundworks and basement

Right: Paul and Belinda Wilson chose MBC Timber Frame (www.mbctimberframe.co.uk) to supply the shell of their new Passivhaus home. "The company builds the insulated foundations and the Passivhaus-standard timber frame, including taking responsibility for the airtightness of their finished shell," says Paul

this stage – very useful for first-timers, who otherwise could turn flights of fancy into costly mistakes.

Will I have to find my own trades?

That depends on who you partner with and how you choose to manage the project beyond the design and construction of the weathertight shell of your home. Most package firms have a large database of contractors and project managers they've worked with in the past, and will be happy to put you in touch with them.

Sourcing trades and materials yourself can seem like a budget-friendly option, but the onus is on you if something goes wrong (you would have to sort it and bear the cost). So it's perhaps worth paying extra for someone else to take on this risk, particularly if you've never done a big project before.

Some firms are set up to supply follow-on materials and corresponding project management for your scheme; although this is often via trusted third parties. At the top-end, working with a turnkey specialist means their team will put together all aspects of your new dwelling – so you can be totally hands-off with the works and let them see the scheme through to completion.

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 value is exactly what these specialists are able to add in spades.

Due to their extensive experience, design and supply firms have a very strong grasp on budgets and they're able to offer structural services at competitive rates. You will be transferring some of the risk for stuff going wrong on your project over to them – and that is rightly reflected in the price you pay. But the biggest factors in your costs will inevitably be down to specification decisions, such as the house size and the standard

CLOSER LOOK: TURNKEY

What are the benefits of turnkey? James Buchanan, turnkey and custom build manager at Oakwrights, outlines what this route means for you:

• A single point of contact

Instead of managing a lots of trades, you'll liaise with one individual.

• Expertise under one roof

Your Turnkey Project Manager will work alongside other in-house departments who are involved in the creation of your home. Managing your build internally will help to streamline the entire project, so it can be executed on-site with the highest attention to detail.

• Reducing time on-site As your in-house project manager will

be working to a predetermined schedule, you'll be able to plan around your move in date.

• **Cost efficiencies** A reduction of time on-site, coupled with your Turnkey Project Manager's vast industry experience and understanding of your build, which will help you reduce associated costs. These include rent for temporary accommodation; insurance required for your building site; the rent for building facilities; and the hire of machinery.

of fixtures, fittings and finishes you go for.

Many package companies offer a fixed-price option for their portion of the work, which is a real boon for first-time self builders, as it means you know exactly how much you've got left to spend on the rest of the project. It's worth mentioning that one aspect that's usually excluded from fixed prices – whether you're going for a shell-only package or a full turnkey build – is the foundation works. As ground conditions vary enormously from site to site and can involve expensive engineered solutions, these are usually costed separately or left to the customer to arrange before works start.

Are there any other perks?

The experts delivering these homes enjoy helping clients and are a mine of information. You will usually have a member of staff allocated as your mentor, who you can contact for advice on just about any build-related issue.

There are certainly no daft questions – you either know or you don't in the package home 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 stages and trades involved, which should arm you for future projects. One phone call, email or piece of advice could save you a fortune.



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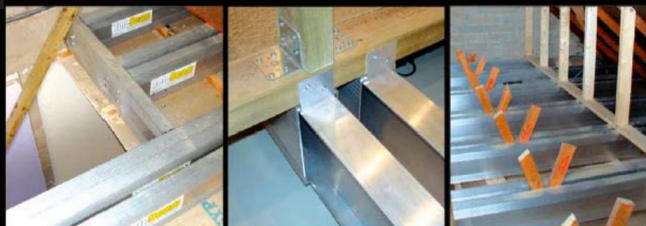
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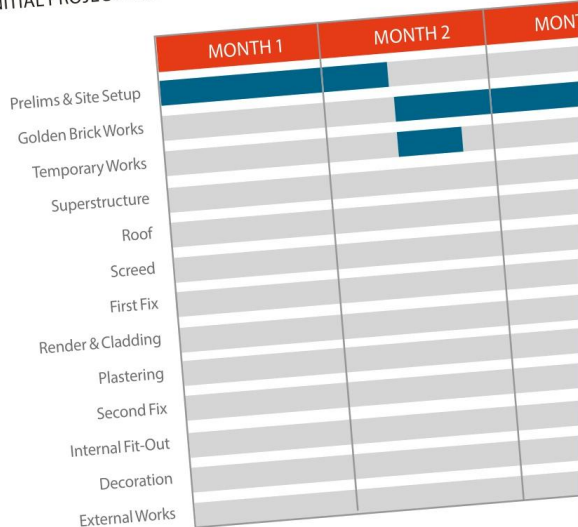
Plan your project programme with **Mike Hardwick's** week-by-week account of what needs to happen when on a typical build

Every project is unique, but the sequence of a typical self build will follow broadly the same pattern. So while you can't simply lift and reuse it, this example schedule can be used as a starting point for your own scheme. It's based on the average construction time for a large detached house. The calendar spans 30 weeks, offering an insight into what happens during a typical build. The programme shadows both a masonry project and a panelised timber frame property.

This outline sequence is meant to be indicative only. Some activities may take more or less time for your particular project, depending on its size and complexity. It's up to you to agree a precise itinerary and appropriate programme to work to with your contractors. Be prepared to amend the timetable on the advice of your tradesmen and the reality of what's happening on the ground. For example, you can't slavishly stick to a schedule if you've just had a week's delay because of heavy snowfall.

Bear in mind, too, that a lot of prep has to be done before you can start on site. As well as elements such as welfare cabins, you'll need to sort out planning and Building Regs approvals, CIL (Community Infrastructure Levy) exemption, site insurance and more.

INITIAL PROJECT TIMETABLE



PROJECT PLANNER

This example build schedule will help you account for the key milestones on your self build journey

KEY

- ✓ BOTH SYSTEMS
- MASONRY ONLY
- TIMBER FRAME ONLY

WEEKS 1-2 Preliminaries

- ✓ Notify building control (BC) of commencement at least 48 hours before work begins
- ✓ Create suitable site access
- ✓ Clear plot and strip topsoil (possibly for later reuse)
- ✓ Set up land in accordance with the site plan
- ✓ Arrange temporary services (electricity & water)
- ✓ Form secure storage on site
- ✓ Install site office, portaloo and temporary fencing
- ✓ Mark out the foundations (may require a surveyor)

WEEKS 2-3 Foundations & oversite

- ✓ Dig foundation trenches and wait for BC inspection
- ✓ Fit foundation reinforcement and pour concrete (inspection may be required)
- ✓ Build foundation blockwork to damp proof course (DPC, inspection may be required)
- ✓ Backfill foundation cavities to ground level
- ✓ Pour concrete slab oversite to form the ground floor structure/install beam and block oversite to spec
- ✓ Fit at least 100mm insulation above or below slab
- Make sure the foundations are accurate enough for the timber frame's tolerances

WEEK 4 External works

- ✓ Excavate service/drainage trenches (inspection may be required). Install ducting and drawstrings
- ✓ Connect to sewer (or install off-mains solution)

WEEK 5 Begin scaffolding & footings

- Construct outer leaf walls to DPC
- Erect scaffolding framework
- Install foot scaffolding
- ✓ Lay drainage pipes in pea shingle
- ✓ Check falls and connections

WEEKS 6-9 Commence superstructure works

- Construct lower storey walls from DPC up
- Erect timber frame (incl. roof structure)
- Install cavity insulation
- Apply breathable membrane to the outside of the frame
- Place meter boxes
- Build in structural openings and lintels
- Raise scaffolding
- ✓ Position intermediate floor structure

KEY

- ✓ BOTH SYSTEMS
- MASONRY ONLY
- TIMBER FRAME ONLY

WEEKS 10-12 Superstructure works continue

- Construct upper storey walls
- Build in structural openings and lintels
- Install cavity trays and closers
- Bed wall plate
- Build up gables
- Form chimneys
- Place lead soakers
- Fix windows and external doors
- Fit insulation
- Tape joints
- Install vapour barrier
- Internally, begin first fix electrics, joinery and plumbing/ducting (see week 18)

WEEKS 13-14 Roof structure/tiling

- Install trusses
- Affix wind bracing
- Build in gable ladders
- Construct dormers (if required)
- Install undercloak
- Fit roof & ridge tiles
- Apply flashing
- Affix soffits, fascia and bargeboards
- Fit external cladding
- Gutters & downpipes
- Take down scaffold

Note: Erecting a timber frame is up to six weeks quicker than masonry. For simplicity, the next few weeks in this schedule relate to masonry only, with timber continuing at weeks 18-19.

WEEKS 15-16 Roof tiling

- Lay sarking/breathable membrane and undercloak
- Set down battening at correct gauge
- Lay roof tiles and ridge tiles
- Apply fixing mortar and bargeboards
- Put in flashings

WEEKS 17-18 Works to watertight

- Install windows and doors
- Affix soffits and fascias
- Apply external render (if required)
- Fit guttering and downpipes & connect to drainage
- Drop scaffolding
- ✓ Conduct airtightness testing once all potential air leakage points have been properly sealed

WEEKS 18-19 First fix**Joinery:**

- ✓ Fit floor deck
- ✓ Insert door linings
- ✓ Install staircase (if using protective cover)
- ✓ Complete studwork for partition walls and plasterboard noggins
- ✓ Fit loft hatch framework

Plumbing:

- ✓ Position waste pipes & hot/cold feeds for outlets
- ✓ Install heating pipework and gas meter
- ✓ Run ducting for mechanical ventilation

Electrics:

- ✓ Run carcass wiring for power, lighting etc
- ✓ Insert back boxes for sockets and switches
- ✓ External wiring for lighting and security
- ✓ Lay armoured cable to external areas

WEEKS 20-22 Plastering/tacking

- ✓ Lay floor screeds
- ✓ Tack ceilings and fit coving
- Apply wet plaster or 'dot and dab' plasterboard
- Install dry lining

WEEKS 23-24 Internal fit out

- ✓ Fit hard flooring
- ✓ Install kitchen units & bathrooms
- ✓ Lay loft insulation

WEEKS 25-26 Second fix**Joinery:**

- ✓ Hang doors
- ✓ Fit balustrades and hand rails
- ✓ Apply skirting and architraves
- ✓ Board out loft (if required)
- ✓ Install wardrobes

Plumbing:

- ✓ Fit cooker, woodburner and other appliances
- ✓ Install radiators/connect underfloor heating
- ✓ Put in boiler or equivalent
- ✓ Commission heating system
- ✓ Fit MVHR unit

Electrics:

- ✓ Affix faceplates for sockets and switches
- ✓ Fit consumer unit fuse board
- ✓ Install internal and external light fittings
- ✓ Fit alarm system
- ✓ Arrange garage supply

WEEKS 27-29 Decorating & landscaping

- ✓ Sweep up
- ✓ Decorate internally (wet plaster must be suitably dry)
- ✓ Complete ceramic tiling
- ✓ External decoration
- ✓ Test drains and backfill trenches (after BC sign off)
- ✓ Lay paths, patios, driveways & outdoor decking
- ✓ Fit boundary treatments (fences, hedging, walls etc)
- ✓ Install turf/seed lawns

WEEK 30 Completion

- ✓ Final building control inspection
- ✓ Completion certification
- ✓ VAT reclaim
- ✓ Snagging & clean up
- ✓ Move in!



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PRELIMINARIES & site setup

With your plans approved, you'll no doubt be keen to get cracking with your project – but there are a few essentials to sort before the fun starts on site

Whatever kind of house you're building, before you crack on with the works, you'll need to sort the preliminaries (known as prelims in the trade). This covers all the bits and pieces that will enable your project to run safely and efficiently. On a typical plot, provisions might include securing the site, creating a suitable access for deliveries and plant, lockable storage for any materials and tools kept on site, setting up welfare facilities for your contractors and dealing with waste. Any scaffolding you'll need across the project is usually bundled in with this area too. Here's a quick guide to some of the key elements to consider before you build:

1 Check the access

A building plot is not a building plot unless you can access it by foot or car – which means you need to have a right of way. It's also not a viable site unless it has access to the essential services. These include electricity, water and drainage or the potential for an off-mains solution. Ideally, you will have determined all of this before you exchange contracts on the plot. But there are some self builders who are still wondering where their electricity will be coming from halfway through their builds. Don't be one of them, as it could cost you a fortune!

2 Investigate soil conditions

The big unknown with self building is what happens when the first shovel hits the earth. The sort of foundations you will require will be dictated by ground conditions or the proximity of trees. If an engineered solution is required, this can hike your build costs right up, without adding to the house's finished value. It's therefore a very good idea to have a thorough site survey done before committing to purchase; or at the very least before you break ground. Knowing what additional costs your plot's soil conditions might prompt makes this a sensible use of funds; you don't want to face delays and extra fees at the start of your build.

3 Sort your CIL exemption

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



4 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. So inform them about what is going on and when it should be completed by. You should also notify them of any 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!

5 Secure the site

Once you become the legal owner of your plot, you are liable for anything that happens on it – potentially even for trespassers injuring themselves. You're also about to have £1,000s worth of materials, tools and plant on site. So as well as arranging suitable insurance (see page 39), you also need to secure the perimeter against intruders. A common option is to erect Heras fencing, with a lockable gate, and to hire secure storage.

6 Arrange welfare units

As the owner and client on your building project, you'll be responsible for ensuring builders, trades and visitors have access to essential amenities, including a working WC, running water and the like. The easiest way to do this is to hire site cabins (which could double up as a site office and secure storage, stocked with extra PPE) and a portaloos. Be clear about who's responsible for keeping these neat and tidy over the course of the works (is it you or your main contractor, for instance?).

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

Structural systems: the options

Your choice of build method will impact on your project's time frame, cost and result. Here are the main systems and how they work

TIMBER FRAME

Versatility in terms of design, costs and package options makes timber frame a popular method for self builders.



Key benefits

- There are lots of suppliers out there offering a range of package options specifically tailored for self builders.
- You can be involved in as much or little of the project as you want – from simply specifying the manufacturer to supply and erect the frame through to buying a turnkey package where the company looks after everything for you, handing you the keys to your new bespoke home at the end.
- Buying a package upfront means you'll confirm costs before work starts, offering you more certainty for overall project budgeting.
- The amount of work completed on site is flexible. An open timber frame will have the insulation, services, windows etc installed on site.

Alternatively, closed designs have more elements fitted in the factory.

- Off-site manufacture allows groundworks and foundations to progress on site while the structural frame is being cut.
- Once delivered to site, the shell can be put together very quickly.
- Good energy efficiency and airtightness are easily achievable.

Main considerations

- Most turnkey packages don't include work on site before the timber frame arrives, such as groundworks and foundations.
- Changing things once the shell is in place can be complicated and costly – especially if you've got a closed panel system.

MASONRY

Some self builders favour the familiarity of building with brick and block, and this traditional method remains fit for purpose.

Key benefits

- Lots of builders have experience with masonry.
- Brick is a traditional option, but it doesn't have to look as such – many modern homes have been built with this method; it doesn't even need a brick external finish.
- There are variations for this method. The conventional route is blockwork with a cavity wall construction – typically with brick as the outer leaf. You could use two layers of blockwork and finish the exterior with a cladding of your choice (typically render) or switch to a modern system like super-fast thin joint masonry.
- Because the structure is being formed on site, literally brick by brick, there's more opportunity for you to change your mind during the build in comparison to systems that

are manufactured in a factory off-site.

- You can buy design and build packages; some suppliers offer project management and turnkey options.
- Bricks and blocks have high thermal mass, which means they absorb heat in the day and release it at night.
- You can source bricks that have been manufactured or reclaimed locally and the units can be recycled at the end of their lifespan.

Main considerations

- The build time on site is generally slower than timber frame because you're creating everything there; but if you take into account the lead time of pre-manufactured systems it tends to even things out.
- You're unlikely to have the same up-front cost certainty as with an structural system created off-site.



CASE STUDY: Timber home

TIMBER FRAME SUPPLIER Turner Timber Frames (01482 218945 www.turnertimber.co.uk) **LOCATION** Lincolnshire
HOUSE SIZE 372m² **BUILDING WORK TOOK** Three weeks for the timber frame erection

Set in a beautiful Lincolnshire village, the Blackbourns' tasteful family home is a cost-effective, energy efficient and spacious self build realised by Turner Timber Frames. Capitalising on an



experienced team of designers, engineers and erectors, the company turned the Blackbourns' architectural concept – with spacious vaulted ceilings, adventurous glazing, open-plan spaces and grand balcony areas – into reality. By combining local natural stone with a clean rendered finish, a modern aesthetic in keeping with the house's rural surroundings has been beautifully achieved.

The structural shell was formed using TTF's Advanced walling system, achieving a good U-value of 0.16W/m²K. Accomplished and dedicated joiners pre-insulated the panels in a controlled factory environment, guaranteeing the highest quality of timber frame product. A high-spec membrane, PIR insulation and an internal vapour-control layer contribute to the great energy performance of this walling option, which will keep the family cosy in winter – and cool in summer.

The frame was erected in under three weeks, which meant that follow-on trades were able to seamlessly take the structural shell to fruition, adding the considered personal touches that create the Blackbourns' beautifully individual timber frame home.

"We wanted to build a high performing modern home that featured lots of natural light as well as the feeling of lots of space, but we didn't want it to look out of place in our village. Turner's understanding of the architect's brief was excellent. We've got everything we wanted in a new property," say the homeowners.

OAK FRAME

Britons have favoured the golden hues and characteristic shakes of oak frame inside their homes for centuries. Nowadays this system's character remains, but its production matches 21st century building standards thanks to the latest computer engineering and technology.

Key benefits

- Many oak frame suppliers have in-house designers that you can work with to create plans for your new bespoke dream home.
- The frame will be created off-site in a workshop by experienced craftspeople who understand how this method works.
- Oak is a natural material, so it's a sustainable option if you know it's been sourced from environmentally managed forests.
- You can choose to have exposed oak both externally and internally without affecting the building's thermal performance.
- Oak homes can look traditional or contemporary in style.



- Frames are encapsulated in a highly efficient thermal envelope to create an extremely well insulated and airtight structure.
- The results look striking when paired with lots of glass.
- Oak is not necessarily an expensive option – there are many ways to bring costs down if this is considered early in the design stage.

Main considerations

- Make sure your designer has experience in working with oak frame.
- Frame will be cleaned once erected.
- Oak will settle and shrink into place as part of the drying process, which is what gives it those characteristic shakes – but this needs to be carefully considered at the design stage, especially for any glass.



SIPs
Structural insulated panels do pretty much what their name implies – they are pre-insulated wall, floor and roof panels made in a factory that create a strong and energy efficient structure.

Key benefits

- SIPs are known for providing excellent thermal performance.
- Off-site manufacture can help with budgeting and scheduling.
- Computer-aided factory-precision to meet bespoke requirements.
- You can get panels with windows and doors already fitted.
- Groundworks and foundations can take place on site while the panels are being manufactured elsewhere.
- Once delivered, the panels can be slotted together quickly.
- Panels are lightweight, which offers design flexibility.

- SIPs are an excellent option for creating open vaulted ceilings without the need for any structural beams.
- The panels can be paired with other construction methods easily.
- Walls can be finished in pretty much any type of cladding you wish, able to create both traditional and contemporary looking properties.

Main considerations

- Once the SIPs are craned into place, on site changes are tricky.
- Foundations need to be accurately measured and constructed for the panels to slot into place perfectly.

ICF

Insulated concrete formwork wall systems are created by stacking hollow blocks (usually made of expanded polystyrene) on top of one another. The interlocked walls are then reinforced with steel and filled with concrete.

Key benefits

- Insulated concrete formwork is gaining popularity among self builders thanks to its quick construction time and impressive energy performance once built.
- This method is sometimes referred to as Lego for adults because stacking the ICF blocks is a fairly straightforward task, so homeowners can get involved – you can even go to training courses to learn how to do it yourself.
- ICF offers design flexibility – curved walls and irregular angles are achievable, plus the property can be finished in a myriad of materials to create different styles.
- Very little waste is produced on site – offcuts can be re-used and you can order the exact amount of ready-

mixed concrete that your structure needs.

- This heavyweight structure boasts great acoustic performance, great if you're next to a busy road.
- ICF is an excellent structural choice for basement construction thanks to its watertight properties.

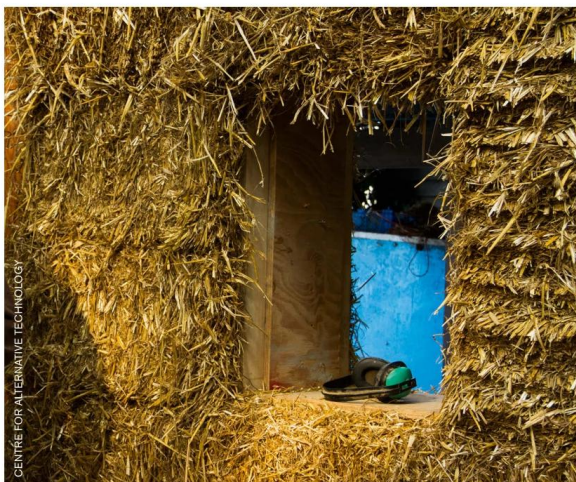
Main considerations

- Concrete must be of the right consistency and directed accurately to be a success.
- Once the pour is done, changes are difficult and costly.
- The blocks should be braced properly to avoid distorting.



ALTERNATIVE METHODS

There are other options to the main contenders for your new home, namely systems that use largely natural materials.



Straw bale

- Popular amongst super eco-conscious self builders who are keen on using natural materials.
- The straw bales can be stacked like bricks to create loadbearing walls or used to infill a structural frame (whether timber, steel or concrete).
- Straw is an agricultural waste product, which means that building with this method comes with a very low carbon footprint.
- This is an opportunity to get hands on with building your home.
- The depth and natural look of the walls adds charm and character.
- No more at risk of fire and pests than other structural options.

Log building

- Great way to get that cosy chalet style popular in ski resorts.

- These designs look particularly fitting in woodland areas.
- Quick construction as the structure is made in a workshop.
- Durable and thermally efficient.
- There are options in terms of the type of wood used.

Cob

- Lots of people love the historical heritage of this method – building with mud dates back to 8,000BC.
- Walls are made from mud from clay, water, aggregate and straw, which leaves little carbon footprint and creates an organic aesthetic.
- Cob is a great option for doing a DIY self build project.
- Once built, the finished cob structure will require maintenance from homeowners, including an annual lime wash.



CASE STUDY: Modern dream home

TIMBER FRAME SUPPLIER Meisterstueck-Haus (0845 003 1383 www.meisterstueck.com) **LOCATION** Kent **HOUSE SIZE** 300m² **BUILDING WORK TOOK** Three weeks for the shell



First-time self builders Charles and Anja Martens wanted to design and realise a unique home exactly suited to the next stage of their lives – and were keen for the process to be as straightforward as possible. The trick would be finding the right firm to help them achieve their goals.

The couple did their research carefully, and after meeting Markus Baukmeier, owner of Meisterstueck-Haus, and the UK team, they made their decision. “They are small enough to care, but large enough to be a secure and reliable partner,” says Charles. “The certainty of the fixed cost for the entire package, the German reputation for precision and high quality, and the ease of dealing with a single firm for the whole process of building the house shell persuaded us that offsite manufacturing was the way forward.”

For Charles and Anja, there were many stand-out moments on the journey to their dream home. “Visiting the factory, finalising every detail of the house and realising that the final price would be slightly lower than the quotation were just the start,” says Charles. “Then there was watching the huge trucks arrive; holding our breath as the 60-tonne crane made its way down our narrow country track; and finally seeing the construction of a watertight, finished, lockable house shell, exactly on schedule. Meisterstueck-Haus are easy to deal with, and delivered every time on their promises and our high expectations. They inspired our trust, and did not let us down.

“Having Meisterstueck-Haus as partners took away multiple areas of uncertainty, while leaving us in overall control of what we were getting,” he continues. “The team worked amazingly hard to build us a home that we – and they – would be really proud of.” The striking project was awarded runner-up in a nationwide German competition for the best self build country house.



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Getting an accurate timber frame quote

Secure the right product at the right price with **Simon Orrells'** expert tips

When should I speak to timber frame suppliers?

Involve a timber frame company as early in your project as possible. Suppliers can assist with design, Building Regs and planning challenges, so it's most cost-effective to take your questions to the specialist from the outset.

What information should I provide?

Each project is unique, so suppliers require as much detail about your objectives as you can give. In the planning stages of your project, they'll need early planning drawings, elevation drawings and floor plans to put together a budget cost.

If you're further along with a project when you enquire, and your build has received planning approval and is at Building Regulations stage, then your suppliers will ask for your dimensional drawings, section elevations and site plans. This will allow them to put together much more accurate pricing.

Cost is of course a major factor, so be clear about your budget. It's also helpful to understand your motivations. Is sustainability important to you, for instance, or do you have other particular goals and specifications that you want to incorporate into your build?

Be honest about how much involvement you want from the supplier. You may only need the product and want to install the frame yourself, or you may require more support and intend to work closely with them at every stage.

What will be included in the quote I get back from the timber framer?

Following discussions about your brief and specifications, they will offer you different products to suit your individual requirements. The quote you receive will vary from company to company. Some suppliers will simply provide an overall cost, whereas others will contribute a more detailed document to show exactly what you are paying for.

What are the common pitfalls to watch out for when assessing quotes?

Always make sure to read your quotes carefully and question anything you don't understand. It's also important to get an idea of timescales early on.

Don't assume each quote will include everything you need to pay for. Some companies do not include mechanical handling fees (cranes and forklifts) in the price, so check whether this has been included. Even if it has been included, ensure the figure covers offloading as well as installation.

It might sound strange, but you should check whether all the structural components, such as steelwork, are included in your timber frame quote. The structural steelwork cannot exist without the timber frame and vice versa.

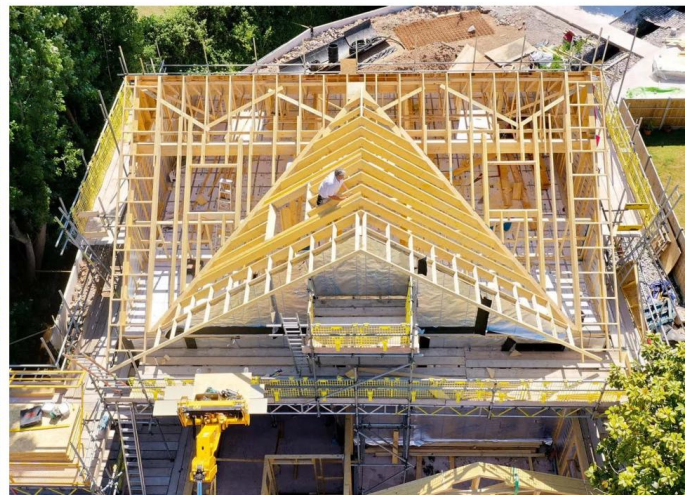
How can I tell the price is right?

It's sensible to get quotes from at least three suppliers to compare costs and understand what your money buys. You should also consider that value is not just cost effectiveness; you are paying for confidence in who you will work with. Find a company who supports your vision for your dream home and matches your passion!

For peace of mind, ensure suppliers are members of the Structural Timber Association (STA). Look for the STA Assure logo; this means the business has been independently audited against quality standards. Asking to see the factory will be worthwhile, and make sure you read reviews online.

What happens when I press the green button?

When you've agreed a fixed quote with your timber frame supplier and negotiated the specification, the design will be frozen and you'll be ready to go. If Building Regulations drawings are still outstanding, the team will start work on these – you'll typically need to wait between 4-6 weeks for them.



Don't get started on site just yet. You should never start digging foundations until you have the soleplate or setting out drawings. Once these are approved, the supplier will first run up prelim plans, followed by manufacturing drawings while the foundations are constructed.

In terms of timing, the average turnaround from order placement to delivery is around 10-12 weeks.



Simon Orrells is managing director of Frame Technologies and has over two decades' experience in self build timber frame construction. Frame Technologies offers a flexible range of timber services to cover full supply and erect or supply only packages. Get in touch to see how they can help with your project by calling **01544 267124** or visit **www.frametechnologies.co.uk**

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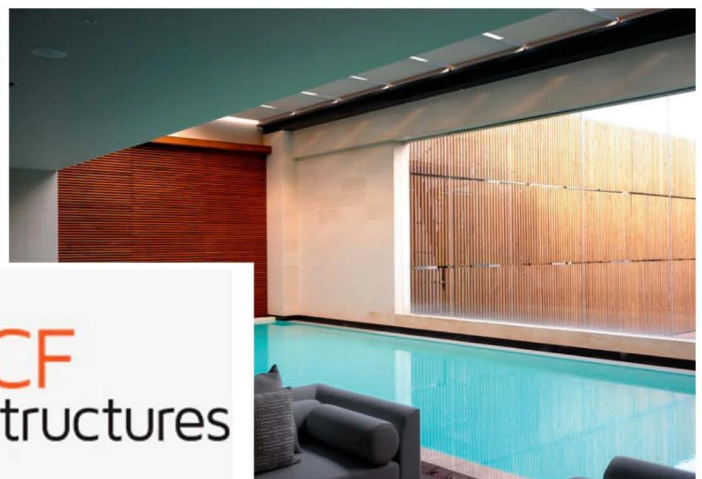
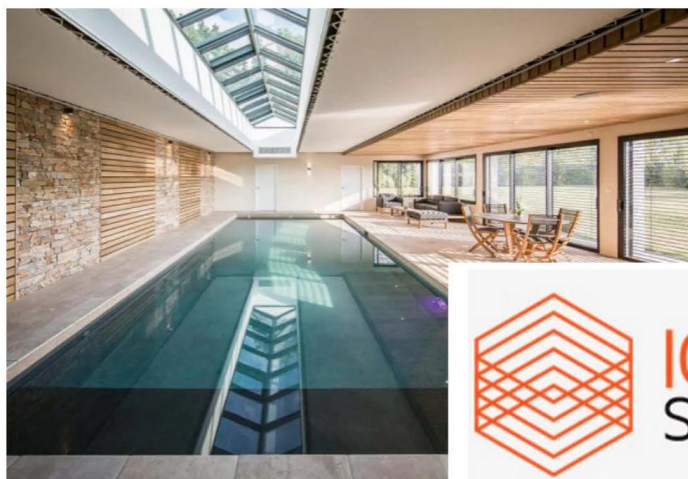
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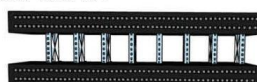
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Smart home technology

Everyone can expect some level of automation and remote control in their homes these days – but self-builders have an opportunity to create integrated systems that help to make life easier

Smart home products are rapidly becoming mainstream. Wireless technology has given us easily retrofitted DIY solutions, such as Philips Hue for lighting, Hive for heating and security, plus Google Home and Apple HomeKit that work to unite many separate functions. They're quick to set up, inexpensive, and you can add more kit as you need it.

Creating a home from scratch offers the opportunity to establish a wired, integrated system where everything works together. "If you're self building, then you'll probably want a professionally installed smart home ecosystem, as opposed to off-the-shelf solutions that might not be compatible with one another," says Loxone's operations and marketing manager, Tyron Cosway. Gone are the days when smart homes felt gimmicky; now, everyone can see the benefit of improved comfort and better control, and installers have focused on what's really useful, not simply adding layers of complexity because they can.

What can you automate?

Heating, lighting, audio-visual (AV) and security products can all be centralised and controlled from one place. Motorised windows (and blinds) can integrate with heating and ventilation to regulate temperature or for security. It's when it all works together that the magic happens: a 'goodnight' button, for example, could turn off downstairs lights, check garage doors are shut and alarm the house. High-end systems such as Crestron and Control4 have almost unlimited programming capabilities: use them to feed your fish, check the weather and water your lawn.

Smart homes & self builds

Get an integrator on board at the same time as your architect and they can collaborate on making your system as efficient and hidden as possible, incorporating space considerations for cable runs and racks in initial plans.

Budget wireless setups like Google Home are designed to be assembled by anybody, although compatibility needs researching (Amazon's popular Ring video doorbell isn't yet certified by Apple HomeKit, for example). In the middle market, expect to see more electricians up-skilling so they can install systems such as Loxone. At the upper end, only a custom installer can design, programme and fit a whole-house system (they will often need to update and maintain it, too). CEDIA, the membership organisation for home

technology specialists, is a good starting point for advice and ideas. If you know what arrangement you want to use, you could also seek an installer through their website.

"In order to understand what's possible, visit one of the many amazing home tech showrooms and experience centres around," says James Ratcliffe, managing director of Homeplay and a CEDIA member. "Do your homework, interview two or three companies and make a decision based on which one best meets your needs. Much like architects or kitchen suppliers, technology integrators specialise in different types of home. One that typically works on projects upwards of £200,000 will probably not be a good fit if your budget is £30,000."

What will it cost?

For a whole-house starter system, £15,000 might buy you a wired and wireless data network and multi-room

Left: Niko Home Control can cater for your lighting, heating, ventilation and blinds, controlled using a touchscreen, your tablet or smartphone: that is home automation



audio. It's worth reinforcing that it's not really the cabling pushing up costs, but TVs, speakers and the controls themselves. Installers usually suggest focusing on one or two areas that really matter, like a great media room or top-notch security, rather than spreading budgets too thinly. Wiring for internet data and capability is a must, though.

"It really does come down to where your priorities are," says Alex Josling, co-founder and director of Seven Integration. "We are doing a project where the Lutron lighting system is costing £70,000, but the client is having one TV and a radio on a shelf in the kitchen."

Above: A rural new build with Lutron HomeWorks lighting controls by Brilliant Lighting. The system is integrated with Control4 for AV, heating and security

Right: Honeywell's EvoHome can work as a stand-alone system or be part of an integrated setup

Lighting

A professionally designed scheme comes into its own when automated, setting the scene at the touch of a button and saving energy by only coming on when needed. Centralised control such as Lutron's or Rako's can work on a stand-alone basis (ie, not integrated with heating etc) or act as a sub-system within a whole-house setup (such as Control4 or Savant).

If you want lighting that's really outstanding, consider using an independent specialist, who will put as much effort into the design side as the technology and controls. They can liaise with your wider smart home provider and supply any information needed to integrate the lighting with the other sub-systems. Installing multiple circuits means you can create pre-set scenes activated with one touch, to match your activity or mood, such as different cooking and eating modes for your kitchen-diner.

If you are interested in the wellbeing aspects of lighting, bio-adaptive systems are an emerging area that could be for you. "This is where colour temperature varies with the time of day – you can have cooler white light in the daytime and a warmer yellow glow in the evenings, which studies have shown helps people sleep more easily," says Owen Maddock, owner of ConnectedWorks.

Security

An integrated security system allows you to monitor your property remotely, pretend you're at home (when really you're on the other side of the world) and deter intruders if the worst happens. "Controllable security offers a complete solution that you can respond to whether you are at home or away" says

Nicolai Landschultz from IndigoZest. "This means your alarms and CCTV video recorders, plus door and gate entry systems, can communicate together."

Door entry systems can do away with the need for a key, working on fingerprints or a code. They can be great for monitoring who is coming and going. If your integrated setup already includes motion sensors, they can work to detect unwanted visitors when alarm mode is turned on. "Additionally you can have indicators such as door window contacts, water leak detectors and glass-break sensors to keep watch for any potential concerns. Smoke alarms can also be integrated," says Loxone's Tyron Cosway. Alex Josling from Seven Integration adds: "Integrate your



lights with your security system and when your alarm is activated, have your artificial illumination come on, too."

Audio-visual

Play music in every room or create a mind-blowing home cinema – all without a cable in sight. The expense of hardware shouldn't put you off installing the wiring with future flexibility in mind, however. "If a homeowner wasn't sure if they wanted to put speakers into all the rooms from the start, we would suggest running cables to the zones but leaving them inside the various construction elements ie, coiled in the ceiling void or positioned within a stud wall," says Alan Matthews of Automated Spaces.

Hidden systems are neater and more streamlined – no more cable clutter behind the TV. If you like a seamless look, speakers can now be invisible thanks to products like Amina's, which can be integrated within the wall and covered, with options for most construction methods.

Heating

Get precise control over every room and feel comfortable every day of the year. A smart heating system will see your home divided into zones, each with its own thermostat – no more letting a single thermostat in the hallway dictate the temperature everywhere. "You might want a cooler bedroom or a warmer environment for your baby's nursery. A spare bedroom can remain at a much lower temperature if not used much, rather than waste energy heating it unnecessarily," says Andy Moss, MD at Moss Technical, which works with Niko Home Control systems.

In an integrated smart home, zoned thermostats don't have to be something you see, or need to adjust – it's done for you. "In design-critical rooms, we might want a concealed thermal probe in each room instead of a wall-mounted digital panel – those can go in a cupboard," says Owen Maddock, owner of Connected Works.

"Modern systems learn how long your house takes to warm up, so it's at the right temperature when you wake up or arrive home. They also know – thanks to being connected devices, or via external sensors – when it's warm or cold outside, so they'll come on a bit earlier or later as needed," continues Owen.

Check compatibility, says Homeplay's managing director James Ratcliffe: "Many smart heating systems can be integrated with Control4 and the like, but not all of them. For example, two of the most popular heating systems – Heatmiser Neo and Honeywell Evohome – are both supported in Control4, but Hive currently isn't."



Above: An Elan home automation system was used in this Link It Solutions Berkshire project, operated by remote controls, tablets or smartphones

CONTACTS

Amazon www.amazon.co.uk **Amina** 01480 354390 uk.aminasound.com **Apple HomeKit** www.apple.com **Automated Spaces** 01664 500552 www.automatedspaces.co.uk **Brilliant Lighting** 01845 525664 www.brilliantlighting.co.uk **Cedia** 01480 213744 www.cedia.org **ConnectedWorks** 0117 214 0115 www.connected.works **Control4** www.control4.com **Crestron** 0845 873 8787 www.crestron.com **Google Home** store.google.com **Hive** 0333 202 9614 www.hivehome.com **Homeplay** 01932 781327 www.homeplay.tv **Honeywell Home** www.honeywellhome.com **IndigoZest** 01923 883979 www.indigozest.co.uk **Loxone** 01183 130140 www.loxone.com **Lutron** 020 7702 0657 www.lutron.com **Moss Technical Services** 01656 746766 www.homecontrol.uk.com **Philips Hue** 08000 7445 4775 www.meethue.com **Rako** 01634 226666 www.rakocontrols.com **Seven Integration** 0300 124 5080 www.sevenintegration.co.uk



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CON180LI	18V	2x 4.0Ah Li-Ion	£139.98	£167.98



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CON1500RDV	1100	13-40	£49.98	£59.98
CON1200RDV	1200	13-40	£65.98	£79.98
CON1200RDV	720	13-40	£79.98	£95.98
CON1500RDV	1500	13-40	£89.98	£107.98



MODEL	BLADE DIA/BORE (mm)	CROSS CUT (mm)	EXC. VAT	INC. VAT
CMS10S2	216/30	65/305	£139.98	£167.98
CMS10S2	254/30	78/340	£139.98	£167.98
CSM250S	250/30	85/250	£109.98	£131.98
C2M250MP	255/30	90/305	£189.00	£226.80



MODEL	MOTOR	M/MIN	EXC. VAT	INC. VAT
Clarke BS1	900W	380	£34.99	£41.99
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£99.98	£119.98



MODEL	MOTOR	M/MIN	EXC. VAT	INC. VAT
Clarke BS1	900W	380	£34.99	£41.99
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£99.98	£119.98



MODEL	PLANING WIDTH (mm)	MAX THICK. CAPACITY (mm)	EXC. VAT	INC. VAT
CPT600	6"	120mm	£179.98	£215.98
CPT800	8"	120mm	£219.98	£263.98
CPT1000	10"	120mm	£299.98	£359.80



MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC. VAT
CJS380	420W	55/6mm	£15.99	£19.19
CON750	750W	80/10mm	£24.99	£29.99
Bosch PST700E	500W	70/4mm	£44.99	£53.99



MODEL	MOTOR	BLADE	EXC. VAT	INC. VAT
CTS800B	600W	200mm	£72.99	£87.99
CTS16	1600W	250mm	£109.98	£131.98
CTS14	1800W	250mm	£129.98	£155.98
CTS11	1500W	254mm	£149.98	£179.98
CTS10D	1500W	254mm	£179.98	£215.98



MODEL	MOTOR	CFM	TANK	EXC. VAT	INC. VAT
8/260	2HP	7.5	24ltr	£89.98	£107.98
7/250	2HP	7	24ltr	£94.99	£113.99
11/260	2.5HP	9.5	24ltr	£109.98	£131.98
8/550	2HP	7.5	50ltr	£119.98	£143.98
7/510H	2HP	7	50ltr	£119.98	£143.98
11/550	2.5HP	9.5	50ltr	£139.98	£167.98
16/550	NEW 3HP	14.5	50ltr	£199.98	£239.98
16/1050	NEW 3HP	14.5	100ltr	£249.98	£299.98



MODEL	MOTOR	CAPACITY	EXC. VAT	INC. VAT
CVAC20P	1250W	16/12ltr	£49.98	£59.98
CVAC20SS	1400W	16/12ltr	£59.98	£71.98
CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
CVAC25SS	1400W	19/17ltr	£69.98	£83.98
CVAC30SSR	1400W	24/21ltr	£89.98	£107.98



MODEL	DISC (MM)	MOTOR	EXC. VAT	INC. VAT
CAG800B	115	800W	£24.99	£29.99
CON1150	115	1150W	£27.99	£33.59
CAG2350C	230	2350W	£52.99	£63.59



MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC. VAT
CR4	420W	55/6mm	£15.99	£19.19
CON750	750W	80/10mm	£24.99	£29.99
Bosch PST700E	500W	70/4mm	£44.99	£53.99



MODEL	MOTOR	BLADE	EXC. VAT	INC. VAT
CTS800B	600W	200mm	£72.99	£87.99
CTS16	1600W	250mm	£109.98	£131.98
CTS14	1800W	250mm	£129.98	£155.98
CTS11	1500W	254mm	£149.98	£179.98
CTS10D	1500W	254mm	£179.98	£215.98



MODEL	MOTOR	CFM	TANK	EXC. VAT	INC. VAT
8/260	2HP	7.5	24ltr	£89.98	£107.98
7/250	2HP	7	24ltr	£94.99	£113.99
11/260	2.5HP	9.5	24ltr	£109.98	£131.98
8/550	2HP	7.5	50ltr	£119.98	£143.98
7/510H	2HP	7	50ltr	£119.98	£143.98
11/550	2.5HP	9.5	50ltr	£139.98	£167.98
16/550	NEW 3HP	14.5	50ltr	£199.98	£239.98
16/1050	NEW 3HP	14.5	100ltr	£249.98	£299.98



MODEL	MOTOR	CAPACITY	EXC. VAT	INC. VAT
CVAC20P	1250W	16/12ltr	£49.98	£59.98
CVAC20SS	1400W	16/12ltr	£59.98	£71.98
CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
CVAC25SS	1400W	19/17ltr	£69.98	£83.98
CVAC30SSR	1400W	24/21ltr	£89.98	£107.98



MODEL	EXC. VAT	INC. VAT
311" x 311"	£229.00	£274.80
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4 adjustable legs	£54.99	£65.99
4 Castor Wheels	£59.98	£71.98



MODEL	MOTOR	MAX CUT (mm)	EXC. VAT	INC. VAT
CON185	1200W	90/45	£41.99	£50.39
CCS185B	1200W	65/44	£41.99	£50.39
CON185	1600W	60/40	£59.98	£71.98

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INTEGRATED WINDOW BLINDS

Thomas Hagen, technical manager at glazing specialist Internorm, discusses the benefits of having blinds encapsulated within windows



Above: This diagram of Internorm's home pure HV 350 timber/aluminium window with integrated blind shows how the shading fits into the triple glazed setup. Left: These units by Internorm can be powered by solar energy thanks to the firm's I-tec shading option



Whether to frame views, draw maximum amounts of natural light inside, use the sun to boost indoor temperatures or simply offer a better connection with the outdoors, more and more homeowners are looking to install wide spans of glass in their homes. Whatever reason you have for wanting extensive glazing in your property, you'll need to have shading precautions in place to ensure thermal efficiency and to maintain privacy.

One convenient option is to buy windows with blinds fitted between the panes – a subtle result that means you're paying one price for glazing and shading. Their position sheltered within the unit also means they are a virtually maintenance-free option, as you don't need to worry about dust or moisture gathering between the slats. They also

help with sound protection – especially important near busy roads.

The options

Most integrated blinds available are encapsulated within a double glazed window at installation stage, but it's also possible to retrofit into existing glazing. Much like conventional blinds that sit over the window, integrated products lower, raise and rotate to allow different levels of daylight into a room. Venetian-style blinds are usually used, meaning you simply adjust the angle of the slats to regulate the amount of light coming inside. Different colours are available to suit your decor; you can also opt for blackout versions with an aluminium coating that hardly lets any light in.

With Internorm integral blinds, you can open the window to allow access as one of the panes is on a hinge –

perfect for cleaning the units; just a micro fibre cloth used without cleaner provides a flawless finish. Another advantage is that you need not worry if something goes wrong with the blinds, as it's easy to look inside to adjust the unit or have it replaced if necessary.

Control

For a long time the standard option has been manually operated blinds, but these days there are solutions available to take the hassle out of using them. Look for motor driven versions with wireless technology – a convenient way of controlling the units that's a great alternative to mains-powered setups. It also removes the need for an electrician to be involved when fitted, helping to cut installation costs. Wireless remote controlled blinds can be adjusted via a handheld device or control panel fixed into the window frame.

At Internorm, solar powered units are the latest in integrated blind technology. These work by including a photovoltaic panel that harnesses energy from the sun – especially useful if there is no electricity supply available from a direct source nearby. This method contributes to better energy efficiency in the home through the use of renewable tech. Internorm's I-tec shading can even be controlled conveniently on your smartphone via app. Alternatively, the motor blind can be battery operated.



Thomas Hagen is technical manager at Internorm. The company specialises in windows and doors, offering a range of designs, styles and materials to ensure you find the ideal solution for your self-built or renovated home.
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HEATING & VENTILATION

Want a system that will offer you low-bills, low-carbon heating and a healthy living environment? **Nigel Griffiths** outlines the pros and cons of the main options

How you choose to heat your new home is about more than simply keeping cosy in winter: you'll no doubt want a system that's efficient, 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.
- Up front costs (versus mains gas).
- What type of distribution system you plan to use (eg radiators or underfloor heating).
- Overheating risk and cooling requirements.
- The availability of solid sustainable fuels (such as logs) and your ability to handle them.
- Provision of domestic hot water.

On top of these, you'll need to weigh up the balance of priorities that works for you in terms of low running costs, affordable capital costs (for the setup and installation) and minimising CO2 emissions.

Before we cast an eye over the key options, it's worth bearing in mind that most new build homes achieve very good levels of insulation and airtightness. This means that space heating demand should be minimal, and the environmental impact of your heating in use should be very low – whatever technology you install. So, if sustainability is a key part of the equation for your project, then you should also consider the embodied energy required to manufacture and install the system.

Gas boilers

- Affordable to install, provided it's easy to connect to the mains supply, and cost-effective in use.
- Requires no effort to use, and is ideal for producing the higher temperatures needed for domestic hot water.
- Modern boilers work fine with both radiators and underfloor heat distribution, as well as in conjunction with warm air distribution systems.

- Gas is slightly higher in carbon emissions per kWh (kilowatt-hour) of heat supplied than heat pumps or biomass, but lower than oil and electric heating.
- Requires relatively little resource to manufacture and install compared to some renewables, so offers a low embodied environmental impact.
- LPG site-stored gas option if you're off mains. Now also available as BioLPG to reduce CO2 emissions.

Biomass boilers

- This tech does the same job as a conventional gas boiler, providing space heating and domestic hot water – although it's more expensive to install.
- Biomass is any form of plant matter (normally wood) that can be burned to deliver heat. Usually pellets for domestic installations.
- 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.
- Consistency of pellets' size and moisture content means they can be used in automated systems, for controlled heat on demand with relatively little intervention.

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

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 is currently open to new applicants until March 2021. 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.

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. Head over to www.self-build.co.uk/rhi to find out the most up-to-date tariff details.

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.

GUIDE GUIDE VENTILATING A NEW HOME

Most modern homes are tightly sealed to help conserve energy; which means there's very little air coming in and out. So, to maintain a healthy environment, you need to think through your ventilation options. The most common approach in self build projects is to install a mechanical ventilation system, usually with heat recovery built in (MVHR).

As well as removing the stale air from the wet zones in your home (bathrooms, kitchens etc) and drawing in a fresh supply, MVHR extracts and recycles heat from the outgoing flow. This energy is then transferred into the incoming stream, when desired, to provide pre-warmed, fresh filtered air. This helps to regulate internal condensation and pollutants.

MVHR units are usually positioned in a loft or plant room, with runs of ducting branching out throughout the house (concealed in the walls and floor structures). The system should be planned in the very early stages and the MVHR installers brought on site as one of the first contractors to ensure they can achieve clear runs with minimal bends in the rigid ducting (as too many turns will impair performance). It will also need to be properly set up and commissioned, with the documentation passed on to building control as part of obtaining your completion certificate.

As a rough guide, a typical cost to install an MVHR system in a well-insulated, four bedroom new build home is around £3,000-£5,000.



Above right: An F2040 8kW air source heat pump from NIBE (www.nibe.co.uk). Below: 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

- Pellets cost around 6p/kWh but small blown deliveries can be had for around 5p/kWh (compared to gas at around 4p/kWh). This varies by quantity, location etc.
- If your installation is eligible for the Renewable Heat Incentive (RHI), the subsidy will cover your fuel costs.

Heat pumps

- 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.
- 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 for each unit of electrical input.
- Ground source (GSHP) is slightly more efficient than air source (ASHP), but significantly more costly to install.

Both will cost more to fit than gas boilers, but may still suit your project goals and are ideal for off-grid plots.

- The carbon intensity of grid electricity is dropping, and heat pumps are now lower in CO2 emissions than gas boilers – though similar in terms of running costs.
- Ground source versions require plenty of garden space for the collector loop, which is buried into the earth.
- New technologies such as Total Home Environment's heat pump ventilation (HPV) can provide efficient, integrated whole-house heating and cooling solution. Build It chose to install this product at its Self Build Education House (www.buildit.co.uk/ourhouse).
- Standard products aren't ideal for producing domestic hot water, although micro heat pump technology is now available to boost this element, too.

Solar water heating

- Collect energy from the sun and use it to deliver hot water for washing and bathing (rarely space heating).
- Easy and cost-effective to install onto a new roof.
- 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.
- Requires a twin-coil cylinder that can be hooked up to the main space heat source as well as the solar panels.
- You'll need a backup source of heat when the sun isn't shining. This could be a boiler, biomass, heat pump, electrical immersion or low-carbon woodburning stove.

BENEFITS OF UNDERFLOOR HEATING

Underfloor heating (UFH) is the preferred choice of heat emitter for many self builders – and with good reason. Its low flow temperatures marry up perfectly with renewables such as heat pumps. What's more, standard boilers run more efficiently with UFH compared to using radiators.

It's also a hidden system, so a key benefit is that it reduces the need for wall-hogging traditional radiators – although you may still want to include a towel rail in wet zones such as bathrooms, to provide a timely boost when external temperatures drop into the minus figures.

UFH works by pumping a controlled flow of warm water through tubing embedded in the floor. This in turn warms the surface above, transforming it into a whole-room, low-temperature heating emitter. The system performs most efficiently in combination with tiled flooring and similar hard surfaces, but can be installed beneath engineered wood floors, carpet and more.

Solutions are available for both screeded and suspended timber floors, including low-profile options to help maximise floor-to-ceiling height.



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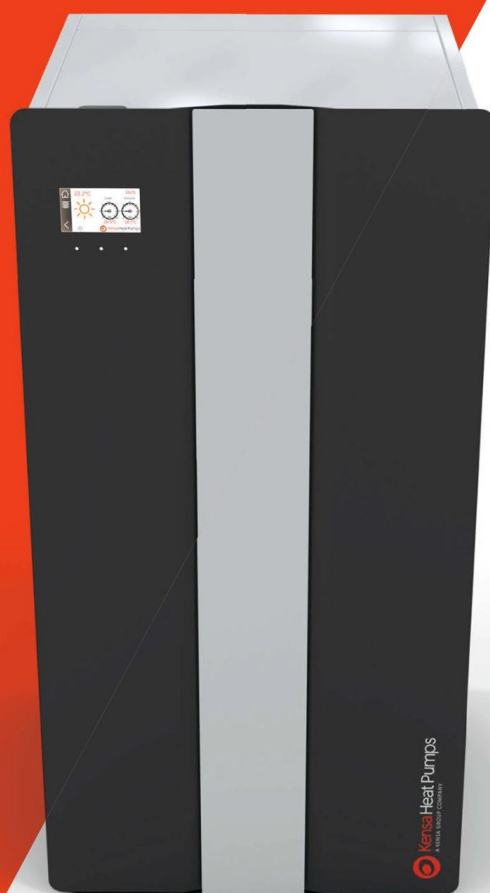
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Your home's entrances need to offer security, efficiency and look stylish, and that's the case for both the front door and any spans of glazed doors opening onto the garden. Here are the main options for your external doors

Choosing doors

Front doors

Your front door will be one of the first things any visitors to your home will interact with, so it plays an important role in setting the tone for your entire dwelling. Cost and style will be important factors, but also efficiency and security. You'll see that some products have Secured By Design (SBD) accreditation, which is a standard certified by the police.

The door needs to suit the overall style of your property, as well as other external features, such as windows and cladding. Contemporary trends tend to be minimalistic with clean lines – pairing with glazed panels will maximise light. Panelled doors with traditional accessories, such as an antique knocker or conventional handle, work well to create a more heritage aesthetic. The size of the door will have a bit impact on the result, too. Oversized units boast wow factor and can look strikingly modern. However, be careful that the proportions you've selected for the front door work with the rest of the house.

Different materials have individual pros and cons:

- **PVCu** Available in a range of colours and styles, these doors are often cheaper than other materials. Low-budget versions can be quite weak, but splashing out on an SBD-approved door will give you peace of mind.
- **Timber** Heavy and robust, most modern doors are fully finished in the factory and have an 8-10 year guarantee – it's only after that point that you might need to think about regular maintenance. Almost all timber units are made from engineered wood, which means they can be insulated internally and that they are highly stable.
- **Composite** These typically comprise a tough steel-reinforced frame with an insulated core. Many are clad in GRP (glass reinforced plastic), which is high quality and low maintenance. Other finish materials are available.

- **Metal** Aluminium is the most popular option for metal front doors, but you can find anything from bronze to steel. Modern thermally-broken designs are highly efficient. They can be powder-coloured in almost any shade, which makes them ideal for creating a contemporary look.

Above: Kloeber's (www.kloeber.co.uk) FunkyFront door design suits the contemporary style of this property



Sliders

This glazed door design is great for producing a sleek, minimal look. The frames can be super slim, offering uninterrupted views out, plus large panes of glass are possible, which can create striking, wow factor features.

The panels glide to and fro on a fixed floor track to sit one in front of the other, creating an opening of around 60% of the full aperture. As the glazed leaves sit parallel when the doors are open, you won't need to leave space for them to stack, as you would with bifolds. This makes sliders a smart choice for homes that are limited on space.

Above: TheEDGE 2.0 sliders from IDSystems (www.idsystems.co.uk) give this home a sleek look

Right: Fully-glazed French doors and sidelights, supplied by Timbawood (www.timbawood.co.uk) establish a classic aesthetic

"Don't overlook how easy it will be to operate the doors," says IDSystems' Edward Stobart. "Sliders with incredibly narrow frames at the base tend to have smaller running gear wheels, which can make the doors feel heavier to operate." If you're looking for a convenient way to nip in and out of the garden, multi-panel sliders may not be best.

The cost of your glazed sliding system will depend largely on whether you go down the off-the-shelf route, or have a bespoke design made up. "There's a huge variance in the price and quality of sliders," says Matt Higgs from Kloeber. "At the lower end expect to pay £500 per m², and £1,200 per m² at the upper end."



French doors

This style offers a timeless solution – particularly if you're creating a traditional-style home. Out of all the products mentioned here, French doors are the most cost-effective route to incorporating a glazed entrance. Plus there are lots of looks and finishes available.

French doors are often the preferred choice for smaller areas. If your goal is to let in plenty of sunshine, incorporate fixed glazing around the door. Timber is the traditional option, although PVCu is great for tighter budgets. Crittall-style doors with steel framing and distinctive glazing bars can infuse your home with a modern, industrial flourish.

If you're going bespoke, it's really important to get the proportions right. "You don't want the entrance to look too wide or squat. The ideal size is 1.7m x 2.3m," says Rob Owens from Westbury Windows & Joinery (www.westburyjoinery.com). "From a design perspective, it is better to set the frame back from the face of the external wall. This will help with weathering and looks better. Ensure you don't set the doors in further than 50mm from the brickwork or render so the projection hinges fully fold back."

An off-the-shelf set of PVCu French doors could cost less than £400, however, it's a wise move to budget £600+ per m² for bespoke timber versions.



Above: This set of bifolds is from Dekko Window Systems (www.dekko-windows.com)

Bifolds

If your goal is to create an unbroken transition between the house and garden, bifolds provide a great solution. This design comprises a series of panels that concertina back to sit one in front of the other, perpendicular to the floor track. While this does mean you'll need to allow some space (either inside or out) to accommodate the panels when the doors are open, you'll achieve a broad opening spanning up to 90% of the full aperture.

Depending on how you want to use the doors, various configurations are available. For example, a centre-parting design with an even number of panels and a French-style opening in the middle could create an eye-catching focal point and entrance. Or an odd number of panels with a single access door at one end could be handy for when you need to pop in and out without opening the entire run.

Remember that, as this type of setup generally features more panels than sliding arrangements, views of the outdoors tend to be more obscured by the vertical mullions in the frame. So if you want the glazed entrance to frame a glorious view, sliders might work better.

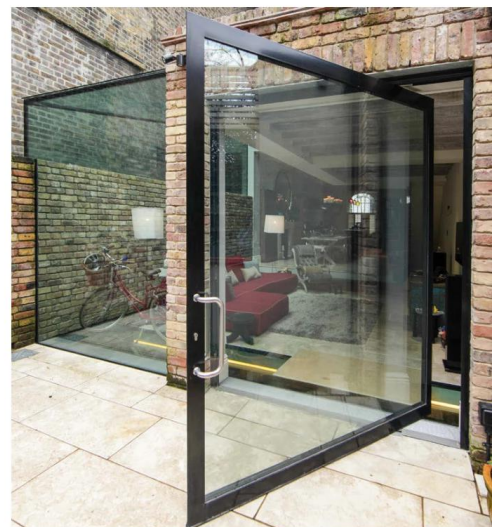
With bifolds, you get what you pay for. "The minimum budget for an off-the-shelf setup should be £600 per m², which could save you up to 20% on a bespoke system," says Matt Higgs. With any product, if you opt for a made to measure solution, it makes sense to choose a design, supply and installation service. That way, if anything is wrong, responsibility lies with the company.

Right: This large pivoting door was supplied by Maxlight (www.maxlight.co.uk)

Pivot doors

For openings too large for standard hinged doors but too small for bifolds or sliders, a pivot design provides an innovative solution. Rather than being affixed directly to the adjoining frame, the hinge is found at the top and bottom of the glazed leaf, roughly 200mm from the edge.

This option is perfect for making a contemporary design statement. "You can achieve large openings with a pivot door – up to 3m width," says Tony Culmer from Maxlight. Bespoke pivots from Maxlight are priced from £5,000 per unit, depending on the size, design and glass specification you go for. From pivots to bifolds, most tailor-made glazed doors require a lead time of around eight to 12 weeks – so be sure to factor this into your overall build schedule.



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Specifying slim sliding doors: what to consider

IDSystems' **Edward Stobart** gives the inside track on how to ensure you get a high-quality door with performance to match its looks

Since 2012, when IDSystems first launched theEDGE, our Build It Award-winning ultra-slim sliding door system, the number of projects incorporating narrow framed door systems as part of their design has skyrocketed. There are now lots of slender framed products on the market from a wide variety of suppliers. So how can you differentiate between them? Having set the trend eight years ago, we're in a good position to advise on the factors you need to consider!

1 Sightlines matter, but so does frame depth

When it comes to judging a truly slim sliding door, the depth of the frame matters just as much as the width. Whilst most sightlines have now reached an almost invisible 20mm, the frame depths vary dramatically.

To provide structural stability, a number of systems on the market need chunky reinforcing additions to the outer frame. This means that, unless the doors are viewed from completely face-on, they can appear anything but slim. The design of theEDGE2.0

combines narrow 20mm sightlines with incredibly slender 51 mm frame depths ensuring the doors appear slim, whatever angle they're viewed from.

2 Good security should come as standard

Every door system that is fitted on a new build home should meet the requirements of PAS 24:2016 testing, in order to meet the requirements of Building Regulations Document Q.

However, the same standards don't apply to renovations and other projects – so not every door is equal in terms of its security specifications. Indeed, some products will require upgraded locking mechanisms in order to comply. In some cases, this might be added as a surcharge on top of the original quotation.

3 Are flush floor finishes best?

Achieving a completely flush finish between inside and out is a key design element for many people installing sliding doors into their home. Creating a seamless transition between inside and out is an appealing idea, but it is

important to check that it's the right option for your project, and that you aren't reducing the protection the doors offer from wind and rain.

4 Look for versatile door configurations

Whether you are planning a three-panel set of sliding doors leading out to the garden, contemplating an open corner, or looking at a setup that slides into a pocket in the wall, it is crucial that you find a system that provides you with total flexibility in design. That way, you'll get the door that's best for your build.

For instance, theEDGE2.0 is available in panel sizes from 800mm to 3,000mm wide, and up to 3,000mm high. You can also choose to have all the panels sliding and, depending on configuration, the option to achieve up to three-quarter openings. The system works well on its own, or it can be incorporated alongside fixed frame windows and even glass-to-glass corners to a complete glazing solution.

Above: theEDGE2.0 combines large panels of glass with minimal sight lines of just 20mm, high security and superb weather ratings



Edward Stobart is head of projects at IDSystems, providing advice, support and assistance to architects, self-builders and homeowners. IDSystems is a three-time Build It Award winner for its vistaline, theEDGE and Sunflex SF55 glazed doors. Call **01603 408804** or log on to **www.idsystems.co.uk** for further information.



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Buyer's guide to windows

Chris Bates reveals the key considerations when selecting fenestration for your project

Windows perform a range of duties – from setting the tone for your home's architectural aesthetic through to practical tasks such as letting in light and providing adequate ventilation. Here's what you need to know when specifying this critical component of your project.

Style

Getting the position and proportion of your windows right is vital if you want to achieve a stylish result, maximise light and make the most of any views.

A self build or extension will have more design freedom when it comes to windows than if you're working on an existing house. However, it's important to properly consider placement in order to achieve a good-looking result – and there are some simple rules that can help. Decide early on whether you want a symmetrical look; and if so, aim to achieve something that's balanced without being boring (the Georgians, who adopted the golden ratio concept, were great at this, for instance).

Consistency in proportion and detail is important: should the tops of the

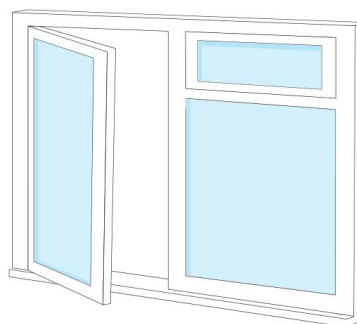
windows align, for instance, and should they be predominantly landscape or portrait? The odd unit that bucks the trend can create an interesting focal point. Modern manufacturing opens up the opportunity for creativity; consider full-height picture windows, designs with minimal framing and structurally glazed elements that can even form both the walls and the roof.

Generally, the more sky is visible through the fenestration, the brighter the space will be – hence why period properties often have larger windows for the ground floor living areas. Floor-to-ceiling fixed glazing and high-level clerestory windows are good options. Consider adding rooflights to bring light into deep corridors or loft spaces. Be careful to avoid glare and overheating; shutters, blinds and brise soleils can provide solar shading.

Efficiency

Saving energy and money are often central to a home building project, and windows have a key role to play. Thermal performance is addressed in Part L1 of the regs (approved document L1A for new builds; L1B

QUICK GUIDE: OPENING CONFIGURATIONS

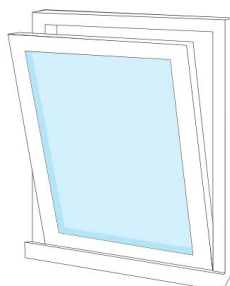
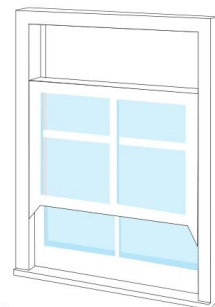


CASEMENT WINDOWS

Outward-opening casements are hugely popular and available in an array of designs to suit anything from country cottages to ultra-modern new builds. They're usually side-hung, but can also be hinged at the top or bottom (the latter is often specified for basement light wells).

SLIDING SASH

Vertical sliding sash windows are a distinctive feature of Georgian and Victorian properties, and can help to underpin a traditional look. With this configuration, two moving panels sit one in front of the other, and can be slid up and down independently of one another for highly-controllable ventilation.



TILT-AND-TURN

This style has been popular on the continent for decades, and is fast becoming a self build favourite in the UK, too. Tilt-and-turn windows feature twin hinging mechanisms to allow the unit to be tilted to allow for ventilation or operated as a side-hung casement.

Right: A modern design statement, this aluminium frame in anthracite grey blends with the metal-clad dormer. The window is from Kloeber (www.kloeber.co.uk)



Below: A modern take on bay window design, this Velfac (www.velfac.co.uk) aluminium and timber system with extensive glazing makes the view of the Yorkshire valley the main focus thanks to the slim frame. The pine internal surround was finished in white to match the interior decor

for renovations). A key indicator is the whole-window U-value (not the centre-pane figure, which only concerns the glass pane). For self builds, the limit is 2.0 W/m²K; and for new units in renovations it's 1.6 W/m²K (Band C on the Window Energy Rating scale).

Most modern double-glazing achieves around 1.4-1.6 W/m²K as standard, but you may well be looking to exceed that. Top-end triple glazed units can hit as low as 0.6 W/m²K; perfect if you're building to a stringent eco standard, such as Passivhaus.

Frame materials can have an impact. Timber is a natural insulator, giving a slight edge – but the difference is marginal, and most PVCu and metal versions now come with a thermal break to address this. Remember performance is only as good as the installation: even high-spec units will score poorly if they're badly fitted.

Security

In most burglaries, criminals get in through a door or window – so this is a crucial part of your spec. In England & Wales, Part Q of the Building Regulations sets out minimum security

Maintenance

Frame material can make a big difference here. Plastic (PVCu) and metal versions are practically maintenance-free. Painted timber requires more upkeep; but modern factory-applied finishes can last for 10 years before repainting is needed. Composite units blend the benefits of the natural warmth and insulation of timber with metal cladding.

It's important to factor longevity into the equation. PVCu windows will typically last up to around 25 years, but the alternatives comfortably offer a service life of 40 years or more.

Provided they're given a regular maintenance schedule, timber units can be the most durable – as evidenced by the fact

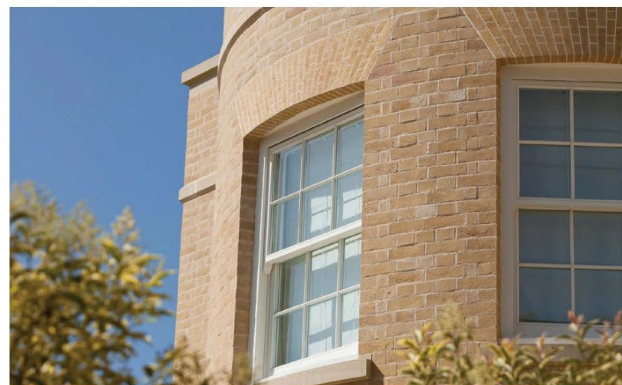
opportunity to find out more about the ordering and installation process (do they use in-house teams or sub-contract the work, for instance?). And don't be afraid to ask to see product certifications so you can satisfy yourself everything's up to scratch.

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



Above right: This new house has a Georgian-style thanks to traditional timber box sash windows with high performance double glazing. This engineered timber model is from Westbury (www.westburyjoinery.com)



standards for easily-accessible glazing (basically, any window within 2m of the ground or an accessible roof). This covers aspects such as tamper-resistant multi-point locking, when panes should be laminated or toughened, etc. The easiest route to compliance is to check the windows meet British Standard PAS24:2016 (one option is to go for products with Secured by Design status). Ask your supplier for evidence of how their units meet the criteria.

that centuries-old originals still grace many heritage properties.

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

design, for a different effect inside and out?), reveal depths and more.

Most window manufacturers work to a lead time of six to 12 weeks for made-to-measure products – but check in with the supplier, so you can factor their timings into your 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.



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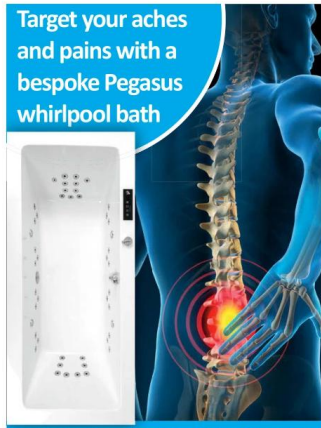
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Pegasus Whirlpool Baths - The UK's Whirlpool Bath Specialists



Fast, reliable supplier of Aluminium Bi Folding Doors, Roof Lanterns and Thermal Rooflights

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Silkali

Design and buy your Aluminium Bi Folding Doors online today!

www.silkali.com 0161 468 2628

SELF BUILD Directory



The self builder's
guide to sourcing
key products
and information

ARCHITECTS

Allister Godfrey Architects

ALLISTER
GODFREY
architects

Established
2005

UK projects per annum
15

Areas Served
Oxfordshire & Thames Valley

We are award-winning RIBA architects based in Oxfordshire. Transforming clients' ideas into delightful homes is a privilege. We listen carefully to you and what you hope your home will become, to create great spaces you will love to live in.

Tel: 01235 760693 **Web:** www.allistergodfrey.com

lapd Architects

Established
2005

UK projects per annum
100

Areas Served
Nationwide, especially Oxfordshire
and the Home Counties

lapd
architects



Lapd Architects are award winning self-build and residential architects. We understand how having real choice is at the heart of any successful project.

Choice in great design: great design happens when we listen to you.

Choice in build methods: we give you the flexibility to choose your desired procurement route.

Choice from beginning to end: we filter the noise to keep you in control.

Get in touch to book your free initial consultation, over zoom or phone, to find out how we can help you realise your dream home.

Tel: 01865 407722 **Web:** www.lapdarchitects.co.uk



Julian Owen Associates Architects

JULIAN OWEN ASSOCIATES
ARCHITECTS

Established 1992

UK projects per annum
50

Areas Served
Nottinghamshire, Derbyshire,
Leicestershire & Lincolnshire

We have a proven track record of successful house design, self builds, one off houses, listed buildings, conversions extensions and alterations. Full range of services from feasibility to management of contractors. Free factsheets and list of East Midlands development plots on our website.

Tel: 0115 922 9831 **Web:** www.julianowen.co.uk

BASEMENTS

Surrey Basements

Established
2008

UK projects per annum
40-50

Areas Served
Nationwide (structural
waterproofing); London & Home
Counties (basement conversion)



Does your basement require waterproofing? Surrey Basements design and install all aspects of structural waterproofing in compliance with the current British Standard BS8102:2009.

We are waterproofing design specialists with in-house cssw surveyors and are registered installers for a number of manufacturers and distributors. We are fully regulated members of the trade body The Property Care Association.

Surrey Basements have time served installers of 20+ years experience in structural waterproofing installations. All Surrey Basements installations are covered by their company installation guarantee which can be insurance backed by the GPI on request. All aspects of basement works are considered.

Tel: 01483 458648 **Web:** www.surreybasements.co.uk

ICF Structures**Established** 2020**UK projects per annum**

24 (ICF Structures & Basement Structures)

Areas Served

Nationwide

The team at ICF Structures have over 30 years' experience in above and below ground waterproofing, ICF builds, basements, pools and superstructures. Fully warranted and indemnified waterproofing and basement experts. Full support, design and structural services available.

Tel: **07841 352195** Web: www.icfstructures.co.uk**CDI Innovative Construction Materials****Established**

2009

UK projects per annum

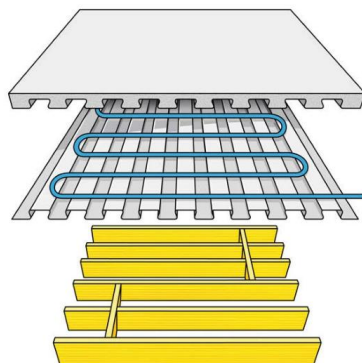
150

Areas Served

UK & Ireland



Innovative Construction Materials Ltd



CDI supplies several concrete or screed floor systems that are usually used for either the 1st floor or roof of self-build homes.

These provide simple to install solid floors that are also relatively lightweight, they give the same feel as a solid concrete ground floor with the added benefits of allowing the inclusion of underfloor heating, providing excellent levels of fire and acoustic separation and floors that definitely don't squeak or creak.

The most popular system for self-build is the Lewis Deck system installed over timber joists.

Tel: **01388 728833** Web: www.cdi-icm.co.uk**Dreadnought Tiles****Established**

1805

UK projects per annum

50

Areas Served

Nationwide

UK manufacturers of the finest Staffordshire clay roof tiles in a wide range of natural clay colours. See for yourself the beauty of Dreadnought clay roof tiles at Graven Hill on the Build It Educational House and in Grand Designs' The Street.

Tel: **01384 77405** Web: www.dreadnought-tiles.co.uk**Furness Brick****Established**

1845

UK projects per annum

500+

Areas Served

Nationwide

Celebrating our 175th anniversary of brick making, Furness Brick is still a family-run British brickworks specialising in traditional coal fired pressed smooth and clamp facing bricks. Established in 1845 we produce bricks with character seldom seen in new bricks.

Tel: **01229 462411** Web: www.furnessbrick.co.uk**K Rend****Established**

1939

UK projects per annum

1,000+

Areas Served

UK & Ireland

K Rend is the UK's market-leading manufacturer of silicone coloured renders. Our ranges are suitable for new build and refurbishment, offering a variety of colours, textures, waterproofing, breathability and 30 year guarantees – never mind the attractive kerb appeal.

Tel: **028 2826 0766** Web: www.k-rend.co.uk**Northcot Brick****Established**

1925

UK projects per annum

500+

Areas Served

Nationwide

CHOSEN FOR CHARACTER
ESTABLISHED 1925

Northcot Brick manufactures genuine handmade bricks, wirecut facing bricks, reclaimed looking bricks and matching "specials" that will add individuality and value to your property.

Our master brick makers combine modern technology with traditional bench mould and coal firing techniques to produce an exciting range of naturally coloured bricks of real quality and character.

With our specialist brick-matching and bespoke expertise, we can replicate most regional brick variations and are often specified for modern self build homes and extensions, as well as the restoration of period properties and listed buildings.

Tel: **01386 700551** Web: www.northcotbrick.co.uk

Rainclear Systems

Established
2004

UK projects per annum
4,800

Areas Served
Nationwide

The UK's leading online retailer and stockist of metal rainwater systems – effective and long-lasting guttering and downpipes to protect and enhance your property. Our friendly, knowledgeable team is available from 8am-5pm on a freephone number for quotes, advice and take-offs.

Tel: 0800 644 4426 **Web:** www.rainclear.co.uk

**Russwood**

Established
1990

UK projects per annum
500

Areas Served
Nationwide

RUSSWOOD
selected sustainable timber
FLOORING • CLADDING • DECKING



With a wealth of timber knowledge and understanding of how our selection of sustainable cladding and decking will react in the UK's climate, Russwood's team of experts can advise on which species is most suitable for your project, which coatings are most appropriate and which fixings should be selected to ensure the timber both performs well and looks its best, for decades to come.

We can also offer expert advice on our range of interior wall cladding and solid and engineered European Oak flooring which can be customised to suit your exact specifications.

Tel: 01540 673648 **Web:** www.russwood.co.uk

**SureSet UK**

Established
1997

UK projects per annum
350

Areas Served
Nationwide

SureSet resin bound paving is perfect for driveways, patios, pathways and other outdoor surfaces around your home. It is permeable, smooth, durable and available in different colours and textures to complement your surroundings, all with a 21-year guarantee.

Tel: 01985 841180 **Web:** www.sureset.co.uk

**Alto Energy**

Established
2017

UK projects per annum
150-175

Areas Served
Nationwide

Alto Energy is an MCS accredited installer ensuring your eligibility for generous government grants for installing heat pumps. We are the UK distributor for IVT Bosch heat pumps and a Business Solutions Partner for Mitsubishi Ecodan air source heat pumps.

Tel: 01993 220699 **Web:** www.altoenergy.co.uk

CVC Direct

Established
1985

UK projects per annum
300

Areas Served
Nationwide



CVC Direct is one of the UK's leading designers, suppliers and installers of ventilation systems, with nearly 25 years' experience in the industry.

CVC Direct offers a free design and quote service; each design is bespoke to the project and we work alongside others involved in the project, to ensure the best system is provided for the project.

With a team of national installers positioned around the UK, CVC Direct can provide installation of all our systems wherever your build may be.

Tel: 01491 836666 **Web:** www.cvcdirect.co.uk

Environment Logic

Established
2013

UK projects per annum
75

Areas Served
Nationwide

Environment Logic is a leading specialist on Solar & Battery Storage including ancillary technology such as EV Chargers dedicated to the self build & renovation sector. Our expert teams offer impartial advice, full design, installation & maintenance services.

Tel: 0800 970 3474 **Web:** www.environmentlogic.com



Kensa Heat Pumps

Established
1999

UK projects per annum
400

Areas Served
Nationwide



Manufacture | Design | Installation | Support.

Kensa Heat Pumps is the UK's most popular ground source heat pumps brand with an award-winning heritage since 1999. From the heart of Cornwall, Kensa Heat Pumps manufactures the UK's widest range of ground source heat pumps and accessories.

Kensa works as a partner with many self-builders, offering design and installation support with the very best ground source heat pump technical experts. Together with a nationwide network of Kensa approved installers, and an MCS umbrella scheme to aid first-time installers, you can be sure to receive the UK's very best ground source heat pump experience with Kensa Heat Pumps.

Tel: 0342 222 4328 **Web:** www.kensaheatpumps.com

Nu-Heat Underfloor Heating & Renewables

Nu-Heat
Feel the difference

Established
1992

UK projects per annum
4,000

Areas Served
Nationwide

Helping guide you with a full design, supply and support service, Nu-Heat's award-winning underfloor heating systems and integrated heat pump and solar thermal solutions enable you to enjoy a perfectly designed and wonderfully warm home.

Tel: 01404 540650 **Web:** www.nu-heat.co.uk



Screedflo



Established
2006

UK projects per annum
600

Areas Served
South East

Screedflo manufactures, supplies and installs liquid anhydrite screed, controlling the process from manufacture to installation, so you can be sure of receiving the highest quality products and excellent service. We supply the exact amount required so there is no waste.

Tel: 01621 874781 **Web:** www.screedflo.co.uk



Total Home Environment

Established 1998

UK projects per annum
400-600

Areas Served
Sales nationwide; installation in England & Wales



As seen in four homes on Grand Designs: The Street, we design, supply and install heat recovery ventilation, heat pump ventilation and central vacuum systems. For 20 years we have ensured customers' homes are energy efficient with fresh, filtered air.

Our flagship product, the HPV Series, was chosen for Build It's Self Build Education House at Graven Hill. We complete room-by-room heat loss appraisals to understand the best heating solution for you and your home. We design heat pump systems with MCS certification, so you can get money-back with the RHI.

Tel: 0345 260 0123 **Web:** www.totalhome.co.uk



Andrew Jones (The VATman)

Established
2013

UK projects per annum
1,000

Areas Served
Nationwide



If you create a new dwelling in the form of a new build, converting a building not previously lived in or renovating a dwelling that was empty for 10 years or more you then qualify to reclaim the VAT under what's known as the DIY scheme.

This is a scheme we specialise in and can offer a number of services from advising what rate of VAT you should pay on your project to start with, through to processing & submitting your reclaim.

Tel: 01269 825248 **Web:** www.vat431.co.uk

ABC+ Structural Warranty**Established**

2012

UK projects per annum

1,000s

Areas Served

Nationwide


ABC+ Warranty
 architectscertificate.co.uk
APPROVED BUILDING CERTIFICATES AND WARRANTY


Award winning ABC+ Warranty is the perfect Structural Warranty solution. Our Quick Quote provides the fastest Warranty quotation in the UK. ABC+ is the most cost-effective Warranty in the UK. Our dedicated team of RICS Surveyors are here to help and have monitored properties since 1989.

As members of the Council of Mortgage Lenders, ABC+ is mortgage lender approved providing peace of mind for potential purchasers. Our Warranty team are always available to speak to and provide free impartial advice throughout your project. ABC+ promises to beat any other quotations.

Tel: 0161 928 8804**Web: www.architectscertificate.co.uk****Self-Build Zone****Established**

2003

UK projects per annum

1,000s

Areas Served

Nationwide



Self-Build Zone is the market leading provider for self-build insurance in the UK. Our products include Site Insurance, Structural Warranties, Site Surveys and more.

Site Insurance can cover you from the moment you purchase a plot right up to completion, including existing structures. During your build we can arrange your Site Surveys, combining your building control, technical audits and other surveys to save you time.

Our Structural Warranties are approved by the majority of lenders in the UK and are backed by an A-rated insurer.

Tel: 0345 230 9874 Web: www.selfbuildzone.com**Amina Technologies**

THE INVISIBLE SPEAKER CO.

Established

1999

UK projects per annum

800+

Areas Served

Nationwide

Next Generation Loudspeakers, inspired by nature, designed for immersive music perfection. Amina has developed its surface sound technology over the last two decades to create incredible, completely invisible audio solutions for discerning clients across the globe.

Tel: 01480 354390 Web: www.aminasound.com**Moss Technical Services****Established**

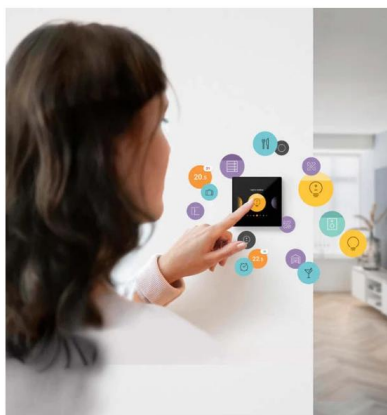
2001

UK projects per annum

100

Areas Served

Nationwide

niko
 Illuminating ideas.
 BY
 MOSS TECHNICAL


Niko Home Control is the modern electrical installation for the home that integrates lighting, heating, ventilation, shading and music control etc.

By controlling these elements within the same Control Eco-System, gives many benefits for you and your electrical installation. Benefits like energy saving, future proofing, flexibility, safety and security benefits, plus many including adding value to your home.

The key to any installation is an early design so that the installation specification and your budget for this balance and that you have time to value engineer your design according to budget.

Contact us for more information:

Tel: 01656 746766 Web: www.homecontrol.uk.com**Alchester Tiles****Established**

2010

UK projects per annum

500

Areas Served

Bicester & surrounding areas

Alchester Tiles are your go-to bathroom design and tile specialists in Bicester. With a large showroom showcasing 30 fixed bathroom settings, you can explore our wide range of tiles, bathrooms, underfloor heating options, panels & sanitary ware.

Tel: 01869 240201 Web: www.alchestertiles.co.uk

Hard Rock Flooring

Established

1987

UK projects per annum

250

Areas Served

Nationwide



We are proud to be an Official Partner with Build It's Self Build Education House.

We supply the latest ranges in Italian porcelain and prestige limestones from around the world. Call to book your personal tailored consultation in our beautiful showroom and let us help you achieve the look you want for your project.

We have new bathroom and kitchen display areas in our showroom to give some ideas of how our products can work for you.

We are next door to Jane Cheel Furniture and opposite Kloeber Windows in Grendon Underwood.

Tel: 01296 770859

Web: www.hardrockflooring.co.uk



Klopping TSS

Established

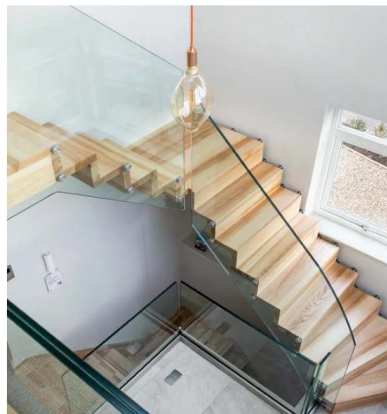
2013

UK projects per annum

50

Areas Served

Nationwide



We at Klopping TSS Limited are dedicated to creating the perfect staircase for every customer.

You have a distinctive home, an individual lifestyle and your own vision, we condense all these aspects of your life into a unique staircase for your home. A dedicated project manager will work with you from design to installation to ensure you receive the attention to detail you deserve.

We are guided by what is right for you, not by what is easy for us. We work with any material, from solid hardwood to metal, glass and more to create your unique staircase. Share your dream staircase ideas with us and we'll make them come true!

Tel: 01622 541077 Web: www.kloppingtss.co.uk



The Granite House



Established 2005

UK projects per annum 600

Areas Served

Oxfordshire, Buckinghamshire, Northamptonshire, Warwickshire and London

The Granite House specialise in the bespoke template, fabrication and installation of Granite, Quartz and Marble surfaces. Whether it's for your kitchen, bathroom, wet room or outside area come and visit our showroom in Bicester.

Tel: 01869 324442 Web: www.thegranitehouse.co.uk



Woodside Joinery

Established

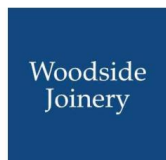
1973

UK projects per annum

100+

Areas Served

Nationwide



Woodside Joinery is a long-established, UK-based family business, specialising in the production of high quality bespoke staircases and staircase furniture.

Woodside Joinery manufactures a wide variety of traditional and contemporary staircase configurations, combining the best traditions of craftsmanship with up-to-date production techniques to produce the highest finish possible in conjunction with the customer.

A custom-built contemporary/traditional staircase is only limited by the designers imagination, making use of a wide variety of materials to produce what are often strikingly original forms.

Tel: 01633 875232 Web: www.woodsidejoinery.com

Jøtul UK



Established

1853

UK projects per annum

1,000+

Areas Served

Nationwide dealer network

The Jøtul Group is a leading worldwide brand. Its extensive stove portfolio delivers on all dimensions; the crackling sound of fire, the view of a perfect flame, optimised clean burn technology and timeless design to suit any home.

Tel: 01527 506010 Web: www.jotul.co.uk



Benfield ATT Group**Established**

1998

UK projects per annum

100

Areas Served

Nationwide

Brands: ● Easy Timber Frame – DIY modular components
● TradTruss – Green Oak etc Trusses ● SolidLox – stylish garages, carports ● Simply Self Build – Full Design & Build. Energy saving, time saving, cost saving. Choose Modular Green for your project.

Tel: 01291 437050 **Web:** www.benfieldatt.uk

Border Oak**Established**

1980

UK projects per annum

100

Areas Served

Nationwide

Border Oak have a bespoke architectural team, and offer a wide range of sustainable packages – supply only & turnkey options – for a fixed price, including project management. Cottages, farmhouses, manor houses, barns, contemporary, outbuildings, annexes, cabins & commercial projects.

Tel: 01568 708752 **Web:** www.borderoak.com

Dan-Wood**Established**

1995

UK projects per annum

50

Areas Served

Nationwide



Dan-Wood timber-frame homes are available as bungalows, 1.5 or 2-storey detached houses and offer exceptional quality, energy-efficiency and value. Over 80 house styles can be modified to suit your lifestyle.

The Dan-Wood turn-key fixed price option includes managing the structural elements of the house, including heating and ventilation systems, stairs, sanitary ware, doors, flooring, plumbing and interior decoration.

Over 20 Dan-Wood houses have now been built at Graven Hill. For more details, or to make an appointment to view the Dan-Wood showhome there, contact Lucy Yendell on lucy.yendell@dan-wood.com or 07903 406926.

Tel: 01896 752271 **Web:** www.dan-wood.co.uk

DG Timber Solutions**Established**

2011

UK projects per annum

50+

Areas Served

Nationwide

This family run business combines 6+ decades' experience in timber manufacturing and the construction industry. Our tailor-made packages - design, manufacture and construction - are ideal for self-builders, developers and contractors looking for high quality, certified, sustainable timber frame solutions.

Tel: 01933 653818 **Web:** www.dgtimbersolutions.co.uk

Durisol UK**Established**

2005

UK projects per annum

50

Areas Served

Nationwide



Featured on "Grand Designs: The Street", British-made insulated concrete formwork (ICF), Durisol, is the quick, easy and sustainable construction method which can save you time and money.

The eco-friendly building system, made from recycled timber and cement (woodcrete), is ideal for self-builders as it's so versatile and easy to construct.

Durisol units are also thermally efficient (exceeding UK building regulation requirements); fire resistant; and suitable for most external finishes.

Regular free training sessions are available to give self-builders the confidence and skills to build with Durisol.

Tel: 01495 249400 **Web:** www.durisoluk.com

English Brothers**Established** 1895**UK projects per annum** 40**Areas Served**

South West, South East, London, East Anglia, East Midlands, West Midlands, Wales

An established, family owned business, English Brothers have won several prestigious industry awards and are regarded as one of the most experienced companies in all aspects of bespoke timber frame design and manufacture. Whatever you want, we'll make it happen.

Tel: 01945 427985 **Web:** www.eb-bespoke.co.uk

Excel Structures

EXCEL
STRUCTURES
Established 2008**UK projects per annum**
10-15**Areas Served**London & South East,
Midlands, East Anglia

Tailored self-build packages – Timber Frame, SIPs, Light Gauge Steel Frame and CLT, plus Rational timber/alu-clad timber windows and doors. Offering a comprehensive design, supply and installation service to self-builders. Free initial consultations.

Tel: 01234 924050 **Web:** www.excelstructures.co.uk**Glosford Timber Solutions**

Glosford
... SIPs
Established
2009**UK projects per annum**
120**Areas Served**

Nationwide

Specialist SIP company with over 10 years' experience working with self builders. Using BBA certified Kingspan TEK panels we have our own CNC factory and design facility offering a fully warranted installation service across the UK.

Tel: 01432 842999 **Web:** www.glosfordsips.co.uk**Fleming Homes****Established**
1986**UK projects per annum**
80**Areas Served**

Nationwide



FLEMINGHOMES



Our reason for being, our purpose, is to help you create an amazing home that, simply put, is just right for you. Each one of the timber frame kit homes we have manufactured since 1986 has been bespoke, a one-off home created to meet the exact requirements of the self-builder.

Accredited to international standards with ISO 9001:2015, we have gained a sterling reputation for the quality of our work.

Putting you at the very heart of your project, you will find us there for the journey – not just for your timber frame.

Tel: 01361 883785 **Web:** www.fleminghomes.co.uk**Frame Technologies****Established**
2015**UK projects per annum**
20-25**Areas Served**

England & Wales


FRAME
TECHNOLOGIES
SELF-BUILD TIMBER FRAME


Frame Technologies is at the forefront of innovation in timber frame construction, specialising in beautiful bespoke homes.

Offering a selection of timber frame systems to meet clients' unique needs, we provide a fully-flexible range of services to cover full supply and erect or supply-only packages, including engineered timber products and roof systems.

Our friendly, experienced team works closely with you at every stage, turning your dream home into a reality with a personal, end to end service and one point of contact from enquiry to completion.

Tel: 01544 267124
Web: www.frametechnologies.co.uk**ICF Supplies**SUPPLIES LTD

Authorized Distributor**Established**
2012**UK projects per annum**
100**Areas Served**

Nationwide

We can advise and supply specific NUDURA products capable of achieving Passivhaus standards and are Patrons of the Passivhaus Trust. NUDURA is proven capable and ready to play its part in achieving Net Zero in new builds.

Tel: 01268 542748 **Web:** www.icfsupplies.co.uk**MBC Timber Frame****Established**
2002**UK projects per annum**
60**Areas Served**

Nationwide

MBC Timber Frame are an offsite manufacturer of high performance timber frame systems. From our Passive timber frame and foundation system to our standard timber frame system we have created a series of options that work for all projects.

Tel: 01452 346499 **Web:** www.mbctimberframe.co.uk

Oakwrights**OAKWRIGHTS®****Established** 1999**UK projects per annum**

60 oak frame homes; 130 oak extensions and outbuildings

Areas Served

Nationwide

Oakwrights design and construct bespoke oak frame homes, extensions and outbuildings that last a lifetime. Stay in their show home to experience living with oak; work with their in-house teams and visit their workshops to see how traditional skills and cutting-edge tech combine to create your dream oak frame.

Tel: 01432 353353 **Web:** www.oakwrights.co.uk

Potton**Established** 1964**UK projects per annum** 110**Areas Served**

Nationwide

For over 50 years, Potton has designed and built high-quality homes for thousands of self builders just like you. We'll guide you through every stage of the self build process, from finding the plot through, creating the design, getting you planning permission to constructing the frame.

Tel: 01767 676400 **Web:** www.potton.co.uk

Scandia-Hus**Established** 1974**UK projects per annum** 40-50**Areas Served** Nationwide

scandiahus
SWEDISH ENERGY SAVING HOMES



Scandia-Hus has been creating unique, high-quality timber frame homes in the UK for over 45 years and continues to design and construct bespoke, energy efficient properties for self builders.

Our houses successfully combine the benefits of advanced Swedish technology with the very best of British architectural style and craftsmanship, to provide you with a beautiful and individual dwelling.

Visit our Sussex Show Centre to see both our traditional style build and our contemporary show home. Experience first-hand the exceptional standards of design and construction that have earned us such high acclaim.

Tel: 01342 838060 **Web:** www.scandia-hus.co.uk

Scandinavian Homes**Established** 2012**UK projects per annum** 2-4**Areas Served** Nationwide

Scandinavian Homes



Partnering with Scandinavian Homes allows you to choose a completely customisable package for your self build project, from supply only (for log homes) through shell build, to a complete turnkey option. Take advantage of precision offsite manufacturing combined with highly energy efficient structures to create your ideal home.

Why not start from one of our standard designs (much easier than a blank canvas!) and customise it to suit your individual needs. We can provide inspiration and input on the overall style, working with you to create your dream home.

Tel: 0845 299 6337
Web: www.scandinavianhomes.com

Scotframe Timber Engineering**Established** 1989**UK projects per annum** 200+**Areas Served** UK & Falkland Islands

scotframe
timber frame | engineering



Scotframe have been helping homeowners achieve their dreams for 30 years. We supply award winning timber frame kits for self build and commercial home developers across the UK and internationally. We source only the highest quality sustainable timber and combine cutting edge manufacturing processes with a professional, bespoke service to deliver a fully customised product.

We want you to enjoy your new home as quickly as possible so we provide a comprehensive range of services and products, not only coordinating the manufacture and delivery of your timber structure, but also the supply of windows, internal and external doors, architrave, skirting and finishing, insulation, plasterboard and stairs – everything you need to build your new life.

Tel: 01236 861200 **Web:** www.scotframe.co.uk

SIPCO

Structural Insulated Panels

Established

2010

UK projects per annum

50

Areas Served

Nationwide

SIPCO specialise in the design and supply of Structural insulated panel kits, ranging from high specification garden buildings to complex bespoke detached housing and multiple unit developments. Please call for any advice or technical information.

Tel: **01514 245346** Web: www.thesipcompany.com

**Thermohaus****Established**

2019

UK projects per annum

12

Areas Served

Nationwide



Thermohaus is a unique modular design concept for contemporary, value engineered and highly energy efficient timber frame kit homes designed specifically for the self-builder.

Our designs offer elegant simplicity, putting the right spaces in the right places. The fabric of our homes is super insulated, providing the perfect balance between cost and benefit, and made super airtight to minimise heating requirements. Mechanical ventilation with heat recovery ensures homeowners benefit from a healthy indoor environment. This optimises thermal performance and creates an extraordinary sense of wellbeing.

Don't compromise!

Tel: **07850 753386** Web: www.thermohaus.co.uk

Welsh Oak**Established**

1998

UK projects per annum

55

Areas Served

Nationwide

Welsh Oak Frame are award-winning designers and builders of oak frame homes, extensions and outbuildings offering a range of services including; architectural design and planning, building regulation drawings, encapsulation systems, SIPs, glazing and more.

Tel: **01686 688000** Web: www.welshoakframe.com

Drewett & Hunt**Established**

1981

UK projects per annum

5-6

Areas Served

Oxfordshire & Buckinghamshire



Raising Standards. Protecting Homeowners



Drewett and Hunt Construction have been creating beautiful homes and interiors for nearly 40 years. We pride ourselves on our strong client relationships and exceptional quality of work. This level of craftsmanship is achieved using the best tradesmen and finest materials to deliver the desired product to our client, whatever the budget.

It was a privilege to be selected to partner Build It Magazine as their main contractor for the Build It Self Build Education House, which now serves as a unique information hub for self builders as well as the marketing suite for the ground-breaking Graven Hill project.

Tel: **01865 731214** Web: www.drewettandhunt.com

**IDSystems****Established**

2000

UK projects per annum

1,200

Areas Served

Nationwide



For 20 years, IDSystems has set the standard for superior-quality glazing solutions, from ultra-slim aluminium sliding doors and award-winning bifolds, through to innovative slide & turn doors and Art Deco inspired heritage systems.

We have worked with thousands of self-builders on almost every style and scale of project, from urban extensions to the grandest of TV builds. Today our product range includes versatile aluminium windows, contemporary front doors, internal glass partitions and bespoke glazed roofs – all manufactured and installed across the country by our employed engineers to ensure unrivalled quality and service.

Tel: **01603 408804** Web: www.idsystems.co.uk



JB Kind Doors**Established**
1870**UK projects per annum**
1,000s**Areas Served**
Nationwide

JB Kind Doors are a long established supplier of feature internal and external doors, and renowned for offering unique door designs.

Providing traditional and contemporary designs in a range of real wood veneer, white, painted and laminate options. Most door designs offer glazed partners, FD30 and FD30 glazed options. Bespoke sizes are also available in a large range of door designs.

We have a large showroom at our premises in South Derbyshire, where you can view all door designs offered, which is operated on an appointment only basis.

Tel: 01283 554197 **Web:** www.jbkind.com

**Kloeber UK****Established**
2006**UK projects per annum**
1,000+**Areas Served**
Nationwide

Market-leader Kloeber offers homeowners and self-builders a bespoke range of glazing solutions including bifold, sliding and French doors, the award-winning FunkyFront door, windows, rooflights and fixed glazing elements in timber, aluminium and alu-clad.

Kloeber specialises in providing its clients with the full package, from the initial meeting and showroom visit to liaising with architects and builders involved in the project. They offer detailed site survey to guarantee the perfect installation service, carried out by their own in-house fitting teams. Kloeber's showrooms are now open. With the health and safety of their staff and customers a priority, strict procedures are in place including additional signage and gel stations.

Tel: 01487 740044 **Web:** www.kloeber.co.uk

**Lacuna UK and Ireland****Established**
2015**UK projects per annum**
50**Areas Served**
Nationwide

Lacuna folding doors: Danish design with German engineering.

The Danish Lacuna bifolds blur the boundaries between inside and out. When your bifolds are open, it's like sitting outside – but you're sheltered from the sun and drizzles. In winter, protected by the glass panels, you still have the full pleasure of those garden vistas.

Lacuna supplies a durable, dimensionally stable door in Danish design – and of course with unrivalled U-values and airtightness.

Let the light in and let Lacuna help you to attain even passivhaus performance on your project.

Tel: 0330 001 0552 **Web:** www.lacuna-bifold.co.uk

The Rooflight Company**Established** 1993**UK projects per annum**
100+**Areas Served**
Nationwide

Stylish flat and pitched rooflights.

Energy efficient flat: • Free from unsightly fixings inside and out • Easy installation • Achieves whole window u-values (U_w) as low as 1.06 W/m²K with double glazed units (rather than the glass centre pane value) • No condensation and mould problems thanks to our unique thermal shield • Aluminium frame – ideal for coastal locations

Elegant pitched: • Frameless inside, unobtrusive outside • Top hinged opening - maximise the space below • Style of a bespoke product at standard pricing • Choose from standard sizes or ask about our made to measure service

Tel: 01993 833155
Web: www.therooflightcompany.co.uk

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Swindon M4 Junction 16



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-  Meet architects and designers
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