

FREE BOOK *Discover Build It's Real-Life Self Build Project*

Build It

SELF BUILD + RENOVATION + EXTENSION + CONVERSION

Plan,
design &
build your
**dream
home**

Home Design Guides Expert Tips for Project Success

- Future-Proof Your Self Build
- Renovation Design Details
- Making the Most of a Plot

REVEALED Are
Woodburning
Stoves Really
Eco Friendly?

NEED TO KNOW

Planning Secrets: Keeping
Your Neighbours Happy

Getting Flat Roofs Right

Sound Proofing: How
to Create a Quiet Home

“Our Wow Factor
Extension has Added
Light, Space & Value”

JANUARY 2020

£4.99



9 772052 557061



Windows. Designed & made in Denmark

Better Windows. Better Homes.



THE WINDOW OF
THE FUTURE HAS

idealcore™

Lasts longer
Insulates better

idealcombi 

BETTER WINDOWS. BETTER HOMES.



Welcome

In the December 2018 issue we announced that we, the Build It team, were going to put all our practical knowledge to the test by taking on our own self build project at the innovative Graven Hill development – a first for a magazine! I visited the build at various stages to see how things were progressing and I can certainly say that I've now experienced first hand the buzz of self building; the satisfaction of seeing a house literally rise from the ground before your eyes is brilliant. It's just over a year since the issue where we shared our project plans with you and now all the hard work from Chris (Build It editor and now self build project manager!) and the rest of our fantastic team on site has paid off. The result is a fine example of how a bespoke home built from scratch can knock spots off those found on mass developed estates. And the best thing about this house is that it's going to be open for you, our readers, to learn all about self building by seeing one in the flesh. Our Education House will be opening to the public soon – so watch this space! In the meantime you can read all about how we achieved our dream home in the free House Guide bundled with this issue and over at the Build It website by going to www.self-build.co.uk/ourhouse.

Back to this issue and we've got lots of inspiring and practical info for you to make your project a success. If you're self building then check out my breakdown of the main structural systems on [page 63](#), Julian Owen's guide to how your building plot should influence your design ([page 99](#)) and Mike Dade's advice on keeping your neighbours on side with your build ([page 89](#)). This month's renovation series installment is looking at restoring original period details ([page 58](#)) and Alan Tierney is discussing draught proofing old buildings ([page 95](#)). If you're extending then don't miss our breathtaking cover house on [page 18](#).



Emily

EMILY SMITH, ACTING EDITOR

69



84

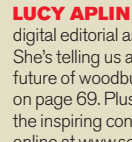


MEET THE TEAM

CHRIS BATES is Build It's editor. He's been project managing the magazine's real-life self build at Graven Hill. Don't miss the book all about this exciting venture bundled with this issue.



ANAMIKA TALWARIA is Build It's editorial assistant, and newest recruit. She has a passion for design and loves discovering innovative products. On [page 77](#) she's exploring flat roof coverings.



LUCY APLIN is Build It's digital editorial assistant. She's telling us all about the future of woodburning stoves on [page 69](#). Plus, check out the inspiring content she's put online at www.self-build.co.uk



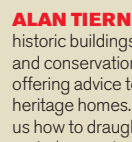
TIM DOHERTY was the founding MD of the NSBRC and runs Dobanti property surveyors. He's highlighting the importance of acoustic performance in your house on [page 103](#).



MIKE DADE is a planning specialist and plot-finding expert. Every issue he takes a closer look at a site for sale ([page 116](#)). He's also advising on how to keep the folks next door happy ([page 89](#)).



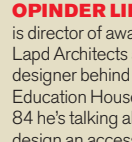
JULIAN OWEN is a self build architect and founder of the Association of Self-Build Architects. On [page 99](#) he's looking at the various ways your plot can influence your home design.



ALAN TIERNEY is a historic buildings consultant and conservation specialist, offering advice to owners of heritage homes. He's telling us how to draught proof a period property on [page 95](#).



MIKE HARDWICK is a consultant and project management specialist. This month he's outlining a basic schedule for your self build so that you know what to expect and when ([page 92](#)).



OPINDER LIDDAR is director of award-winning Lapid Architects and was the designer behind the Build It Education House. On [page 84](#) he's talking about how to design an accessible home.



NIGEL GRIFFITHS is a sustainability consultant and a fount of knowledge for heating solutions. Over on [page 74](#) he's sharing advice on the best ways to keep your property well ventilated.

SUBSCRIBE TODAY

See [page 94](#) for this month's subscription offer or visit www.self-build.co.uk/subscribe



18



42

27



35



49

READERS' HOMES

COVER STORY

Family affair

18

Laurence and Debbie Osborne had a wealth of contacts to help them achieve their dream of a characterful modern extension to a grade II listed barn conversion

Scaling new heights

27

Bill and Carol Haygarth decided to address their inefficient and exposed home by building something brand new to withstand the elements and meet their exact requirements

Traditional style

35

It took Nick and Sue Price 15 years to find the right spot to construct their ideal abode, but it was well worth the wait

Tailor-made home

42

David and Debbie Sesay opted to renovate their end of terrace property to better accommodate their son, creating an accessible layout for the whole family to enjoy

Green home, green fingers

49

Torn between renovating a dilapidated bungalow and starting from scratch, Chris and Nicola Pelmear chose to self build an incredibly energy efficient dwelling

COVER STORY

Restoring period features

58

From fireplaces to wood panelling, Richard Webber explains how to breathe new life into existing heritage details

Structural systems

63

Emily Smith breaks down the different ways to build, to help you find the right option for your dream home

COVER STORY

The future of woodburning stoves

69

The government's Clean Air Strategy means some changes for stoves. Lucy Aplin outlines what you need to know

Ventilation for new builds

74

Nigel Griffiths presents the options for ensuring a healthy airflow so that you have a comfortable living environment

COVER STORY

Guide to flat roof coverings

77

With lots of choice out there for your roof's surface, Anamika Talwar explores the benefits of what's available

Build cost basics: roof tiles

81

Adrian Wild discusses how much you might spend on your property's roof tiles, depending on pitch and style



69



95



77



74



58



84



103

EXPERT HELP

COVER STORY

Accessible to all 84

Architect Opinder Liddar goes through ways to create a future-proof home, designing out any potential issues

COVER STORY

Dealing with neighbours 89

Mike Dade advises on the importance of keeping local residents onside during your scheme, and how to do it

Project management guide 92

In the third part to this series, Mike Hardwick outlines how to create a schedule of works for your scheme

Draught proofing a period home 95

Alan Tierney helps you find the balance between a historic house that can breathe and a pleasant environment to live in

COVER STORY

How a site impacts design 99

Architect Julian Owen explores how the surrounding area can shape the way you self build your bespoke dwelling

COVER STORY

Acoustic performance 103

Tim Doherty explains how to minimise noise inside your home, and the regulations behind this

REGULARS

Inspiration 9

News & ideas to spark your project plans

Subscribe today 94

Self build mortgages 107

Ask our experts 108

Our specialists tackle your project queries

Finding land 111

Top tips for securing a plot – plus a selection of sites for sale (page 115)

Plot watch 116

Mike Dade assesses a site's potential

Next month 129

Coming up in the February edition

Focus on 130

Steve Goodhew talks to us about CobBauge – a new building material

steel reinforced natural
hardwood doors

entrance doors

internal feature doors

garage doors

oversized doors

passive house
certified doors

made and designed in UK

+44 (0)1494 778787

info@urbanfront.co.uk

www.urbanfront.com

For beautifully handcrafted
contemporary handles visit
pushpull.co.uk

**PULL-
HANDLE**



urban | front[®]

#doorcouture





SPATEX 2020

THE POOL, SPA & WELLNESS SHOW

TUESDAY 28 JANUARY – THURSDAY 30 JANUARY 2020

ERICSSON EXHIBITION HALL • RICOH ARENA • COVENTRY UK



THE UK'S ONLY INTERNATIONAL POOL, SPA AND WELLNESS EXHIBITION

SPATEX represents all sectors of the wet leisure industry from pools, spas, saunas to hydrotherapy, steam rooms and play equipment, in both the domestic and commercial arena. More than just an exhibition, SPATEX is also the venue for a free to attend and unrivalled double seminar and workshop programme, hosted by industry associations ISPE, STA, PWTAG and more!

FOR MORE INFORMATION AND TO REGISTER FOR FREE VISIT:
WWW.SPATEX.CO.UK OR CALL +44 1264 358558

IMAGE COURTESY OF CRANBOURNE STONE

BUILDING TRULY BESPOKE TIMBER FRAMED HOMES SINCE 1929

- Award-winning self-build specialists
- Insulation options from 0.10–0.18 W/m²K
- Nationwide architectural partners
- Oak framing options/oak hybrid systems
- Part or full project management optional



FAST CONSTRUCTION



LOWER ENERGY BILLS



FRIENDLY SERVICE



EXPERT ADVICE

Email us your plans now for a free quotation
and appraisal:

customerservices@englishbrothers.co.uk
or call 01945 427985



English Brothers
BESPOKE TIMBER FRAMES

www.eb-bespoke.co.uk



inspiration



DENNIS GILBERT

Wow factor rural design

Atelier Architecture and Design was the creative brain behind this stunning contemporary home, christened La Madonnina. The project combines timber cladding with extensive aluminium framed glazing. This specific palette of materials was chosen to help the scheme blend into the surrounding rural landscape. The south-facing rear soaks up magnificent countryside views through vast swathes of glass and the dwelling's orientation bathes the house in natural light. This enables the homeowners to harness warmth from the sun (passive solar gain), helping to lower heating bills.

Specialists IQ Glass provided all of the glazing for this unique self build – a feature that was key to bringing the architect's ultra-modern vision to life. The slimmest possible sightlines have been specified for all the windows and sliding doors, maintaining a virtually seamless transition between the internal and external spaces. The double height elevations of glass for the master bedroom are an impressive feature that draw the eye immediately to the highest point of the building. A single storey block links the collection of eclectic forms in a line, contributing to the property's contemporary vibe.

For more information call 01494 722880 or log on to www.iqglassuk.com. Learn more about the design practice by calling 01442 828201 or visiting www.atelier-architects.co.uk

PROJECT OF THE MONTH

House-within-a-house

by Alma-nac

This striking London home is a modern twist on the traditional-looking properties that currently line the road. Now three-storeys, the reworked form is wrapped around the original building – a two-level 1950s house, which was built to replace a bomb-damaged Victorian terrace. The architectural practice, Alma-nac, designed this to be sympathetic to the local vernacular, using muted grey bricks and keeping the shape of the existing home underneath.

In redeveloping the house, Alma-nac removed the double-pitched roof and added a rear extension and extra storey to give the family of seven ample room to live comfortably. The facade of the extension into the back garden is clad in stained white timber, to complement the grey blend of bricks. This also ties in with the exposed beams that make up the pitched roof structure for this additional space.

The open plan internal scheme provides a sociable living space for the homeowners and occasional pops of colour run throughout the largely neutral decor. The house has been devised to be thermally efficient and sustainable, with a robust palette of materials, like brick and timber, which were key criteria for the clients.



For more information call 020 7928 2092 or visit www.alma-nac.com

UK dwellings become increasingly automatic

According to a report from AMA Research, there has been a 14% increase in the home technology market between the years 2014 and 2018. While sophisticated systems were once only available to the most elite properties, innovation and competition have brought the prices of smart tech down significantly, plus wireless options can be retrofitted to existing homes. Self builders in particular are drawn to these products, for a fully tailored abode plus the excellent levels of energy efficiency and cost savings.

58%

Of local authorities in England are actively supporting local self and custom builders, according to figures from the National Custom and Self Build Association's (NaCSBA) Right to Build Task Force. The analysis suggests that over half of English councils either have current or emerging policies to facilitate self builders wanting to construct their own homes. "However, our research has also found that there is still a long way to go," says Mario Wolf, director of the Right to Build Task Force.

Slow growth in the housing market

The Office for National Statistics' (ONS) report for September shows that average house prices in the UK have risen by just 1.3% over 2019. The south-east of England is still performing poorly, with a downturn of 0.4% on the previous year in London. This still marks a big improvement, however, as the figures for the capital were declining annually at 3% as recently as May 2019. Estate agent Yopa predicts the figures for the end of the year to show an average annual growth somewhere between 0% and 1%.

What's on?

CITY CRIT: MODERN CAMDEN HOUSING

9TH DEC
£15
CAMDEN
architecturefoundation.org.uk

FIBREGLASS FLAT ROOFING

11TH DEC
£175
SURREY
thebtc.co.uk

KITCHEN & BATHROOM MASTERCLASS

14TH DEC
FREE
ST NEOTS
potton.co.uk

COMMUNITY HOUSES

12TH DEC
FREE
CAMBERLEY
surreycommunityhousingpartnership.org

FIVE DAYS BRICKLAYING

16TH - 20TH DEC
£375
SURREY
thebtc.co.uk

TWO DAYS HOME MAINTENANCE

4TH - 5TH JAN
£230
SURREY
thebtc.co.uk

LOW ENERGY BUILDINGS

6TH - 10TH JAN
£700
POWYS
courses.cat.org.uk

DIY IN A DAY: DRILLS

11TH JAN
£175
LONDON
thegoodlifecentre.co.uk

SELF BUILD COURSE

11TH - 13TH JAN
£395
SWINDON
nsbrc.co.uk

CONSTRUCTION MARKET

13TH JAN
FREE
LEICESTERSHIRE
businessmarketevents.co.uk

ANTIQUES & TEXTILES FAIR

21ST - 26TH JAN
£10
BATTERSEA
decorativefair.com

SPATEX CONFERENCE

28TH - 30TH JAN
FREE
COVENTRY
spatex.co.uk



Unhealthy living environments put UK youth at risk

39% of children under the age of 15 are at risk of health issues caused by their own homes, according to new research by Rand Europe. A dangerous climate inside the house can include poor air quality, a lack of natural light, cold temperatures or excessive noise. Almost 2.5 million under-15s report that they are living in damp or leaky homes, with rot or mould, and more than 750,000 say their homes do not stay adequately warm. These problems are 1.7 times more likely to cause health risks, such as asthma, eczema and poor respiratory health. Children in homes with a combination of these issues are up to 4.2 times more likely to experience complications. Eradicating such problems tends to be a priority for self builders, keen on the best home possible.

**MUST-ATTEND
EVENT!**

**INCLUSIVE
DESIGN**
29TH JAN
FROM £47
MANCHESTER
architecture.com

**SELF BUILD &
RENOVATION SHOW**
31ST JAN - 2ND FEB
FREE
SWINDON
nsbr.co.uk

BUILD IT LIVE

KENT EVENT CENTRE
8TH - 9TH FEBRUARY

EVENT CITY MANCHESTER
22ND - 23RD FEBRUARY

builditlive.co.uk

need to know

How far has self build come?

30 October 2019 was a momentous day on two counts. Firstly, it was the first ever Right to Build Day – the day of reckoning for local authorities across England. They have to own up to how well they have handled the first tranche of self build legislation introduced in 2016. To remind you, under the law championed by Richard Bacon MP, all councils in England were obliged to keep a register of those wishing to construct their own homes. Subsequent legislation within the Housing Act further compels councils to permission enough serviced plots for these parties.

The National Custom and Self Build Association (NaCSBA) have successfully lobbied the government to write to each of the local authorities demanding they report on how they have met their legal responsibilities. Some will take great pride in how well they have embraced the challenge. Most will say they have complied, or will find a way of making it look like they have at least tried. Meanwhile, others will be wondering what on earth they can say to cover up three years of inactivity or, in a few shameful cases, intentional obfuscation to avoid meeting their legal obligations. It will be interesting to see the results and I'm sure NaCSBA will be pushing for those local authorities who are not pulling their weight to get their houses in order. If you are actively looking for land for your project, visit www.nacsb.org.uk/campaigns/right-to-build-portal to get your name down.

The other great event was the soft launch of Build It's Self Build Education House at Graven Hill in Bicester. No doubt you will be reading all about this project in the book bundled with this issue but let me add my congratulations to the team involved for a truly magnificent achievement. The house itself is superb and showcases all that is good about self building. Immediately you notice how much light and space has been created using a modest footprint. The spot of land is relatively compact and the design is built to make the most of the approved plot passport's maximum dimensions. The scheme features non-square rooms, a basement and a SIPs attic room which, combined with an open-plan design that uses pocket doors and a triple-height hallway, creates the appearance of a much larger house than the external dimensions would have you believe. If you get the opportunity to drop in, then do so. I bet, like most of us there, you'll have the feeling that you'd be happy to move in tomorrow!

While at Graven Hill, I took the opportunity to check up on progress at the main site. The first release of what will eventually be 1,900 plots is almost sold out, with a range of individually designed homes at or nearing completion. The whole place is as far from a typical housing development as you could imagine, with a massive variety of schemes, from traditional through to contemporary. It's going to be a great place to live, especially as everyone will have their own self build story to tell.



MIKE HARDWICK

is a self build consultant and project management specialist. He is also NaCSBA's general manager. He has first hand experience of the processes involved and is a regular expert at the Build It Live shows.

Follow Mike's blog online:
self-build.co.uk/mike-hardwick



Internorm®



Internorm, the leading window brand in Europe, offers high quality low-energy and Passive House window and door systems. The company's innovative product range, includes UPVC, UPVC/ aluminium and timber/aluminium windows and doors. The high quality brand leading range offers no limits and full individuality.

For further information please contact

Internorm Windows UK Ltd

Unit D · Colindale Business Park · 2–10 Carlisle Road · London · NW9 0HN

Tel.: +44 (0) 208 205 9991 · Fax: +44 (0) 208 905 8744

E-Mail: office@internorm.co.uk · www.internorm.co.uk

spend✓save

£2,000



This timber front door is made-to-order and can be specified to match the unique character and details of your property.

Made from European redwood, it is strong and uses Secured By Design approved locking techniques for added security. The ironmongery is specially tailored for extra kerb appeal.

Timber entrance door, from £2,000, lomaxwood.co.uk

£750



This classic entryway is made from composite timber and marries traditional design with a modern material that is low-

maintenance for convenience. The door can be tailored to suit your aesthetic preferences, and each one is designed to increase the thermal efficiency within your house. **Composite front door, from £750, stormclad.co.uk**

product news

Great shopping ideas for your custom home project



UPDATED DESIGN

Bosch's screwdriver has a new look, with sleeker lines, a variety of colours and a more comfortable grip. The tool is lightweight, and packed with useful features, including highly sensitive speed control, precise screwdriving and an LED display showing its charging status. **Bosch IXO screwdriver, £49.99, bosch-do-it.com**



SECURE OPTION

Combining stylish design with smart technology, these shutters automatically close at dusk. This triggers internal lighting to switch on, giving your home a cosy ambience, as well as the appearance that the building is occupied. **Smart-tilt shutters, £495 per m², ehenleyshutters.com**

EASY APPLY

An innovation in insulation, this spray foam has a speedier installation time compared to traditional application methods. It expands to fill cavities, creating a comfortable and energy efficient home. **Lapolla 4G, from £20 per m², lapolla.co.uk**



FLEXIBLE USE

These dual-faced units from Imperial Brick give you the option to use either a standard plain face or a weathered one in the same style. Self builders can choose to match or mix the units to create different looks.

Pre war common brick, £1,068 per 1,000, imperial handmade bricks.co.uk



3 of the best RANGE COOKERS



1 Esse 990 hybrid, from £7,600, esse.com



2 Smeg TR62i Victoria, from £1,549, smeguk.com



3 Rosa, from £1,643, ludlowstoves.co.uk



Firing imaginations for over 37 years



WOODBURNING | GAS



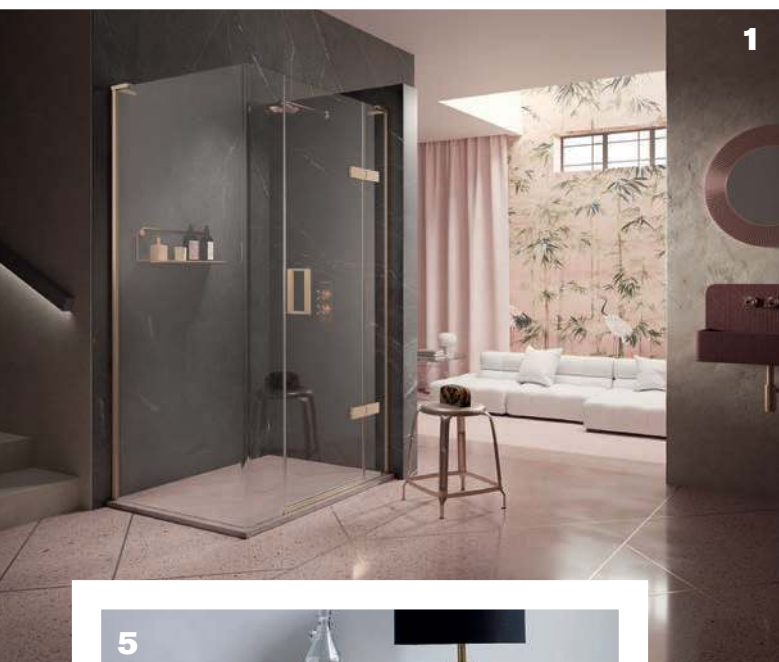
MULTI-FUEL | ELECTRIC

STOVAX | **GAZCO**
Fire Your Imagination

Find your local retailer at stovax.com

interiors notebook

As a new decade comes into swing, we're looking back at the roaring 20s. Here's how to add Art Deco style to your home, with a modern twist for the 21st century



1



3



5



4

Shopping list

- 1** The simple lines and metallic finish give this shower surround an Art Deco vibe. The dark walls offset it and create drama. **Eauzone plus radius 20 enclosure**, from £3,100, matki.co.uk
- 2** This group of pendant lights marries block silhouettes with intricate detailing. The delicate units are available in four glass finishes. **Decanter range**, £1,245, christopherwray.com
- 3** The geometric shapes in this wallpaper are typical of Gatsby-era elegance and the metallic shine brings a contemporary twist. **Metro Jet wallpaper**, £65 per roll, 1838wallcoverings.com
- 4** This classic Chesterfield design brings sophistication to the living room. The sofa embodies 1920s grandeur, with luxurious velvet and rich blue tones. **Hampton blue velvet two-seater**, £599.99, furniturechoice.co.uk
- 5** Combining warm tones with golden accents and clean rounded lines, this table is useful and oozes opulence. The range offers various sizes to fit your space. **Rockefeller console table**, £399, atkinandthyme.co.uk

OAKWRIGHTS®

Beautiful by Nature

Oakwrights are widely recognised as the uk's most forward-thinking company in the oak framing market. From **garden buildings**, **garages** and **home extensions**, right through to our incredible timber framed **homes**, building with oak starts with Oakwrights.

01432 353 353 | enquiries@oakwrights.co.uk



oakwrights.co.uk



Readers' homes

SELF BUILD + RENOVATION + EXTENSION + CONVERSION + IMPROVEMENT



18

18 FAMILY AFFAIR

The Osbornes have added a modern extension onto their 18th-century barn, aided by their son and son-in-law



27

27 SCALING NEW HEIGHTS

An elevated position was key to the design of Bill and Carol Haygarth's stylish self build



42

35 TRADITIONAL STYLE

Working with package company Potton, Nick and Sue Price have created their dream dwelling

42 TAILOR-MADE HOME

Debbie and David Sesay's inclusive house now offers suitable accommodation for all the family

49 GREEN HOME GREEN FINGERS

Knock down and rebuild was the answer to the Pelmears' quest for an eco abode



35

MORE ONLINE >>

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



49



Family affair

Debbie and Laurence Osborne had long dreamt of extending their 18th century barn by adding a sun-drenched garden room, where they could sit and enjoy views of the outdoors. However, due to their property's grade II listed status, plus its position adjacent to a grade I listed manor house, the couple weren't optimistic about their chances of obtaining planning permission and listed building consent.

"We always thought it was a bit ambitious," says Debbie. But a chance conversation with someone from English Heritage who happened to be visiting the nearby manor house generated some intriguing nuggets. "His opinion was that it's better to upgrade

period homes to modern standards of living, provided the original structure is conserved. It turned out he was more than happy with a proposal for an ultra-modern extension."

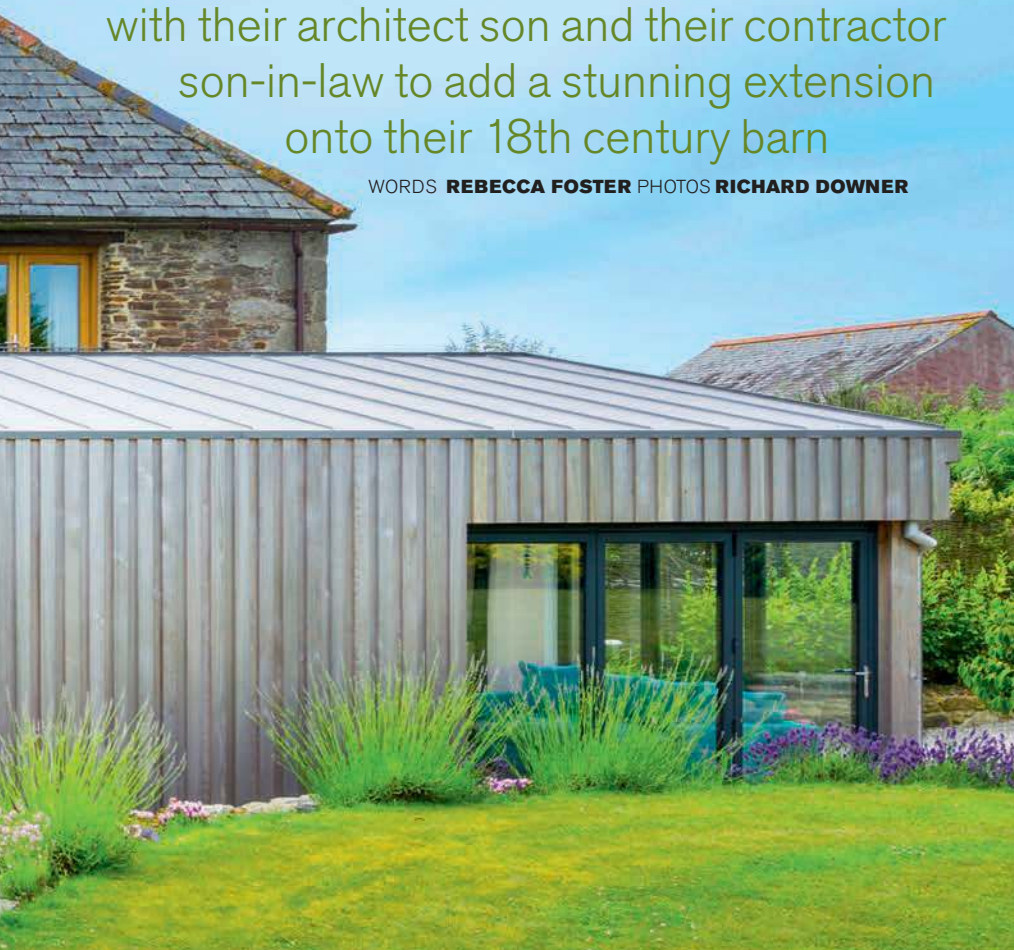
It was in this way that Debbie and Laurence's plans began to gain momentum. "English Heritage said that any extension we ended up building should be able to be taken down again, with no evidence of the new structure having affected the existing barn," says Debbie.

Countryside home

When the couple first viewed the barn, back in 2000, it was love at first sight. "We were keen to move out of the hustle and bustle of

Laurence and Debbie Osborne worked with their architect son and their contractor son-in-law to add a stunning extension onto their 18th century barn

WORDS **REBECCA FOSTER** PHOTOS **RICHARD DOWNER**



FACT FILE

NAMES Laurence & Debbie Osborne

OCCUPATIONS Directors of a property development company

LOCATION Cornwall

TYPE OF PROJECT Extension to converted agricultural building

STYLE Contemporary addition to 18th century barn

CONSTRUCTION METHOD Steel portal frame with timber infill panels

PROJECT ROUTE Architect designed, homeowners employed main contractor for construction & project management

PLOT SIZE 0.7 acres

PROPERTY COST £175,000

BOUGHT 2000

HOUSE SIZE 195m² (incl. 55m² extension)

EXTENSION COST £145,632

EXTENSION COST PER M² £2,648

TOTAL COST £320,632

BUILDING WORK COMMENCED December 2016

BUILDING WORK TOOK 16 weeks

CURRENT VALUE £600,000



Above: The cedar cladding on the extension helps form a clear visual distinction between the new addition and the original stone barn

town life and into something a bit more rural," says Debbie. "We bought the barn from a builder who converted it for us, to our own design specification." When the pair first saw the agricultural structure, it was the unusual scissor truss roof that had initially captured Laurence's attention. "The design for the conversion completely ignored this feature, so we re-jigged the proposal – the barn already had planning permission – to establish a lounge on the first floor that made the most of the timber structure overhead."

While the couple enjoyed living in their rural abode, it was far from perfect. "I like to live in a sunny house, but an old barn with 1m thick walls isn't the brightest of places," says Debbie. "That was what

drove the idea for a garden room extension. Plus, our family is increasing in size in terms of grandchildren, so we wanted a bigger living space." Over the years, the idea of a light-filled, contemporary addition slowly evolved, eventually confirmed by the pair's chance meeting with the consultant from English Heritage.

All hands on deck

Debbie, a former maths teacher, and Laurence, who was previously managing director of a planning consultancy, Laurence Associates, already had plenty of experience with this type of project. "We've done a lot of property development in our spare time – we set up



“I love the original building, but I wanted a stronger connection with the garden”

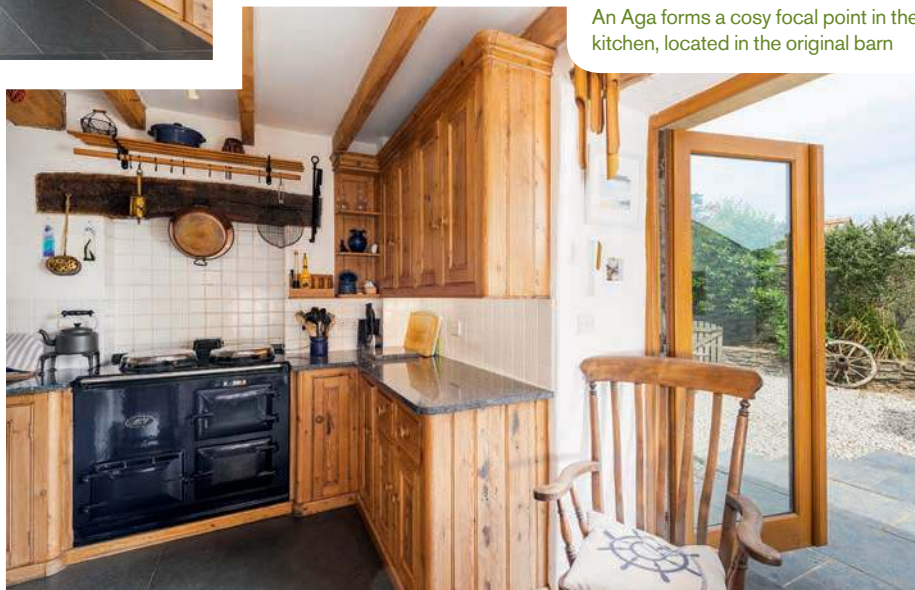
differentiated from the original barn.” In fact, creating a clear visual distinction between the barn and the extension was one of the key goals of the design. Maximising natural light was another priority.

“The barn is primarily north-facing, so we had to approach the process carefully,” says Laurence. “We wanted to draw in as much sunlight as possible, so we decided the addition should project out from the western elevation of the original building.”

our own company,” says Debbie. “Normally the two of us, or our contractor son-in-law, manages the scheme.” The couple didn’t have to look far to find a professional designer either, as their son Adam Collier is a director at Truro-based practice Kast Architects.

Having received good feedback from the English Heritage consultant, Laurence and Debbie sat down with Adam to progress their ideas. “I’d already done some initial sketches, so it was a case of developing those further,” says Adam. “My parents had been advised to create something in the style of a lean-to cart shed that could be easily

The original part of the building was previously a barn, which Laurence and Debbie converted when they bought the property in 2000



An Aga forms a cosy focal point in the kitchen, located in the original barn





The original external wall of the barn has been left exposed internally, highlighting the boundaries between the old building and new extension



A new set of doors was installed to help connect the new extension with the rest of house

Adam played with different layouts, using computer software to model where sunlight would fall at various times of the day and year.

The choice of external materials palette was an important factor in setting the modern extension apart from the original barn. In the end, the couple put together a proposal for a single-storey cedar clad addition with a zinc roof. “The pitch was about 15°, which would have been too low to put slate on,” says Laurence.

“The metal covering was another factor that had come up in the course of our conversations with English Heritage.”

After all their careful groundwork at the design phase, Debbie and Laurence’s extension plans achieved planning permission and listed building consent without any issues. “We submitted a supporting statement that outlined how we’d adapted our plans based on the advice we received from English Heritage,” says Laurence. “It was entirely in accordance with what they wanted, which meant there were no problems when we submitted the formal application.”

Smooth build process

With full consent in the bag, Laurence and Debbie brought in their son-in-law, Jonathan Rogers, director of JDS Properties & Developments, to handle the construction. As no alterations were being made to the original building as part of the project, the Osbornes were able to carry on living in the barn while work was going on. “The team were outside for the majority of the time,” says Debbie. “They brought a container onto site, which formed their office and a storage place for tools. There was never much of a need for them to come into the main house.” While the couple chose not to get hands on with the build, it was handy being on site every day to keep a close eye on progress. “We were able to make small changes as we went along,” says Debbie.

A steel portal frame with timber infill panels was chosen as the structural system. “The metal skeleton was important for us to achieve the big open spans inside the extension,” says contractor Jonathan. Cedar cladding has been used to cover up any areas of exposed metal. The addition is topped with a pitched timber roof and finished with a standing seam zinc covering.

One of the key construction challenges revolved around uniting the contemporary extension with the original period dwelling. “We were working with an old barn with walls that weren’t truly straight – they flared out towards the bottom,” says Jonathan. “Tying a modern addition into a heritage building can be tricky.”



WE LEARNED...

YOUR PLANNING APPLICATION

will have the best chance of success if you do all the prep and groundwork in advance. Don't just throw something in and give it a punt. We were lucky enough to know which direction the obstacles were coming from, so we were able to create a tailor-made strategy to counter any objections before they even arose.

POSITIONING THE PLUG

sockets was one of the trickiest things for us. When you've not lived in a room, it's difficult to decide how you're going to use it. It's worth sitting down with your electrician and your builder, dedicating plenty of careful thought and planning to this aspect of the scheme.

DURING THE DESIGN

phase, it's important to try and imagine yourself living in the house you want to create. Have a clear starting point and know exactly what you want to achieve from the project. Visualise yourself walking in and out, opening windows, sitting there, eating at the table. Try to get a sense of how the extension will impact on the way you use the rest of the house, too. It may be that you don't need to enlarge your home at all, but simply re-jig the existing layout to make better use of the space.

Above: The living room is upstairs in the original part of the house. Right: Situated on the first floor, the main bathroom is decorated in a traditional style to complement the barn's character



The team got around this obstacle by measuring each of the building components and cutting them to size individually. "Once the steel frame was up we were able to add everything else in," says Jonathan. "Obviously, we had anticipated this hurdle, but it still takes a lot of careful detailing to get the end product right."

Jonathan brought in a specialist project manager to handle the day to day running of the project. "He was on site three or four times a week, and the site foreman was here every day," says Debbie. "I'm not just saying this because it's my son-in-law's company, but they were the tidiest team I've ever worked with. At the end of each day, they'd sweep up and put everything away in the container. They were lovely people, too, and always happy to help with any questions."

Fantastic result

Now the extension is complete, it has delivered on all of the Osbornes' design goals. "It satisfies everything I wanted that hadn't

been present in the existing barn," says Debbie. "I love the original building, but I wanted a stronger connection with the garden, which this project has enabled." For Debbie, one of the high points of the works was when the bifold doors were installed. The glazed panels can be drawn back to create a seamless connection between inside and out. "We have the slate floor running through to the patio, which instantly created this flow between the house and garden."

The extension provides a new main entrance to the property, positioned under the flat roof section of the structure. The new open-plan space is divided into two zones – a lounge on one side and dining room on the other. "We had a party here recently with 50 people in the room, without it feeling too crowded," says Laurence. "The space is so flexible in terms of how we can use it."

The extension has had a significant impact on how Debbie and Laurence use the entire house, too. In the summer, the couple like to spend the majority of their time in the extension, making the most



Debbie and Laurence's bedroom features direct access to an outdoor terrace with its own hot tub

closer look

Agricultural style...

Creating a design proposal that honoured the original heritage of the barn was a key part of the Osbornes' strategy for this project.

"We used materials that respected the existing structure," says architect Adam Collier. "We used timber cladding, laid in lapped overboards in an agricultural style. This was a nod to a Dutch barn that was demolished when my parents' home was converted."

Cedar planks were chosen, as they will weather from their original reddish-gold hue to an attractive silvery grey. "We're delighted with how the wood finish helps the extension stand apart from the original stone barn," says Laurence.



Timber-clad addition

of their sun-soaked new zone. "It's amazing to sit here in the evenings and watch all the birds and animals in the garden," says Debbie. On the cold winter evenings, however, the couple still have their original lounge on the first floor of the barn to retreat to. "It's so cosy to shut the curtains up there and light the woodburner."

The couple's son and architect, Adam, is also pleased with the outcome of the scheme. "We definitely achieved what my parents wanted," he says. "The space is so light and airy, it's a great family room where everyone can sit around the table together."

Another bonus is that the extension scores high in terms of its energy-efficiency. Underfloor heating has been paired with slate

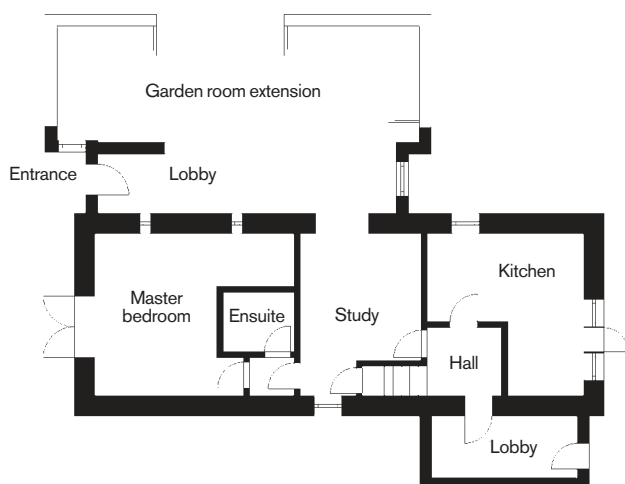
flooring to create an ambient source of warmth underfoot. A new boiler was installed in the main barn to power the property's entire central heating setup. "The solar gain in the room is staggering," says Debbie. "Even during winter, all it takes is a weak bit of sunshine, and the space will be warmed considerably. We installed plenty of insulation, too, so the extension retains the heat."

While the experience of doing this project certainly hasn't put the couple off doing another build, they agree this is their forever home. "This is our house for life and we've already made the decision that we never want to move from here," says Debbie. "What we've created is perfect. If I was to do it all again, I wouldn't change a thing."

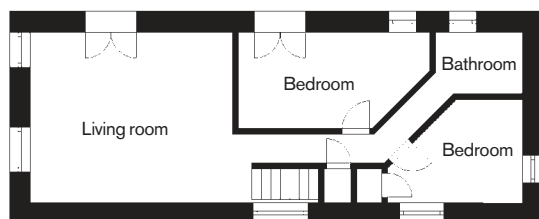


Floor plans

Ground floor



First floor



House plans re-created using
Build It 3D Home Designer software.
www.buildit.co.uk/3dsoftware



TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Preliminaries	£80	3%	£4,404
Architect	£18	<1%	£1,000
Structural engineer	£26	1%	£1,400
Steel frame & structural panels	£342	13%	£18,834
Mono pitch & flat roof structure (incl. covering)	£361	14%	£19,830
Glazing (incl. doors)	£349	13%	£19,200
Cladding & downpipes	£139	5%	£7,626
Alterations to pipework	£22	1%	£1,218
Moving radon vent & associated work	£19	1%	£1,050
Excavation/DPC/Slab	£298	11%	£16,386
Drainage	£53	2%	£2,892
Miscellaneous building materials	£31	1%	£1,716
Electrics	£113	4%	£6,222
New boiler & underfloor heating in extension	£207	8%	£11,400
Screed	£36	2%	£1,980
Slate flooring	£120	5%	£6,600
Outside works	£237	9%	£13,026
Internal finishes & decorations	£109	4%	£5,988
Light fittings	£36	1%	£2,000
Alarms	£7	<1%	£360
Contingency	£45	2%	£2,500
Grand total			£145,632

Note: The costs shown here are for the extension only. They reflect the original prices for materials, labour and services at the time this project was undertaken. As a general guide, inflation in the construction market runs at

Useful contacts

ARCHITECT **Kast Architects** 01872 241111 www.kastarchitects.com CONTRACTOR **JDS Properties & Developments** 01209 614726 www.jds-properties.co.uk
STRUCTURAL ENGINEER **LB Structures** 01872 865073 www.lbstructures.co.uk LIGHTING **Tom Raffield** 01326 722725 www.tomraffield.com





Slide and
Turn Doors



Slim Line
Roof Lanterns

TODAY **co**

Quality Brands
at Online Prices

Visit **TODAYco.UK** or
call **0113 531 2121**



Slim Frame
Sliding Doors



Glass
Verandas



Bifold
Doors



Flat Roof
Lights

For additional discounts on our website, use code "**BLD261**"



WE DESIGN
WE MANUFACTURE
WE INSTALL
WE CARE

BESPOKE TIMBER FRAME

*Quality timber frame homes
National Supply and Install
Established over 30 years*



As Seen on GRAND DESIGNS
Leominster - Episode 4 2018

www.turnertimber.co.uk
hello@turnertimber.co.uk

Get an extra **15% OFF**
ALL TILES & BATHROOMS

Use Discount Code: **BUILD17**

Offer Ends 31.4.20

0% APR
REPRESENTATIVE

Finance Available
Subject to status. Minimum order £500.



**FREE 3D
DESIGN**

& Home Measure

Rated 'Excellent'



★ Trustpilot



**STORES
NATIONWIDE**

Open 7 Days a Week



EASY BATHROOMS

SIMPLY LUXURIOUS



0330 660 1120

easybathrooms.com



*Terms and conditions apply. Minimum order £500. Subject to age and status. E & OE



Scaling new heights

Bill and Carol Haygarth demolished their 1980s house to create an award-winning contemporary home that makes the most of its elevated position WORDS **KAREN WILSON** PHOTOS **KATIE LEE**

When Bill and Carol Haygarth bought their six-bedroom, three-storey house in West Yorkshire in 2004 they didn't intend to knock it down. However, building a new property in its place has allowed them to fix all the bugbears that annoyed them during the 11 years they lived there. Initially they had fallen for the 1980s building's elevated position and the stunning views on three sides of the property. But they soon realised that being 244m above sea level made it very exposed and easily battered by the winds.

With detached garages at the highest point of the plot, it had a meandering 45m-long sloping driveway with a big turning circle behind the house, so removing snow was a two-hour job. "One

particular winter I cleared it 20 times before I stopped counting," says Bill, who is 65. "I remember sitting in my study looking out the window thinking, please let's make this the last winter I do that."

Despite having replaced the doors and windows, insulated under the floorboards and switched the two boilers with a 48kW commercial model, the house was still cold. Yet, the woodburner made the lounge too hot. "There was no happy medium," Bill says.

All change

As Bill had never liked the dormer style of the property and Carol craved a protected rear garden, the couple became increasingly frustrated with what should have been their dream home. To find





The stunning double height dining area is bathed in natural light thanks to the broad expanses of glazing on the ground and first floors

a solution, they brought in an architect with a view to modifying the house by altering the dormer shape and installing a proper roof.

"It quickly became apparent that keeping any of the existing structure would be too much of a compromise. It made more sense to knock it down and rebuild," says Bill. "This would enable us to move the garage from the top of the plot and shorten the

“Our new home couldn’t be more different from the old one it’s replaced”

driveway. We’d also be able to replace the rear turning circle with an area of lawn, plus a courtyard that would be protected from wind.”

After a year of research, during which the couple visited building shows, read magazines and conducted online investigations, they were ready to have plans drawn up. “I’d read about Passivhaus and thought that this strategy would ensure we got a warm home,” says Bill. “But it would mean lots of insulation, high spec windows and a mechanical ventilation and heat recovery (MVHR) system. With my technical background, I also wanted AV cabling in every room for TV and internet, as well as a heated driveway.”

A property developer friend recommended two architects, and the Haygarths chose Adam Clark at Halliday Clark. “We preferred his design and could see ourselves working with him,” says Bill. Adam suggested a U-shaped contemporary style house built from structural insulated panels (SIPs) provided by SIPs@Clays, covered with stone cladding. A decorative oak frame would be seen from inside to add a striking aesthetic feature. Solar photovoltaic panels would also be positioned on the side elevation.

“I assumed we’d be using brick and block but Adam said we’d have a better chance of meeting the Passivhaus standard if we used a timber form of construction, as it’s easier to get airtight,” says Bill.





Being open to the dining area and kitchen, the sitting room gets plenty of use. It has a recessed section so the TV is set back into the wall

FACT FILE

NAMES Bill & Carol Haygarth

OCCUPATIONS Retired senior IT manager & nurse

LOCATION West Yorkshire

TYPE OF PROJECT Self build

STYLE Contemporary

CONSTRUCTION METHOD Structural insulated panels (SIPs)

PROJECT ROUTE Architect designed, builder project managed

PLOT SIZE 0.8 acres

PROPERTY COST £795,000

BOUGHT 2004

HOUSE SIZE 523m²

PROJECT COST £1,505,000

PROJECT COST PER M² £2,878

TOTAL COST £2,300,000

BUILDING WORK COMMENCED October 2015

BUILDING WORK TOOK 15 months

CURRENT VALUE £1,750,000



The kitchen features a large island for practical purposes, as there's so much glass and therefore fewer walls to mount units on

"It's a quicker construction method as build components can be erected in three weeks."

After struggling to find UK-made window frames that met Passivhaus standards, Adam sourced Fusionline composite alternatives from Austrian manufacturer Gaulhofer. Bought via Scottish firm Ecwin, the wood and aluminium surrounds of these products offer the best of both worlds in terms of thermal protection and a contemporary aesthetic. "We wanted to maximise the views, so the new house has far more glass than the old one," says Bill. "But as the walls are as thick as a medieval castle, we didn't want to increase the insulation further. Instead, we lost five Velux windows at the rear to try and meet the standard."

Bill also wanted a tin roof, as the slates on the old house were constantly blowing off. "The planners felt that this material was only suitable for an agricultural building," he says. "I think with imagination you can make a tin roof look like slate tiles, but our council wasn't having it." Instead, Adam suggested Marley Eternit slate-effect roof tiles made from fibre cement. "They're pegged and very secure," says Bill. "We haven't lost any yet."

Working out a budget

Luckily no neighbours objected to Bill and Carol's plans for the new house. Plus, architect Adam didn't foresee any issues in obtaining formal consent from the local authority since the Haygarths were replacing the existing dwelling with a more

WE LEARNED...

GET A FIXED PRICE from your quantity surveyor. Using this professional can save you money, but if their fee is a percentage of the build cost, there may not be much incentive for them to keep a lid on quotes and spending.

WE WISH WE'D HIRED a mechanical and electrical consultant because we had some issues with the placement of electrical elements. Every ceiling has six recessed lights, two audio speakers, a mechanical ventilation and heat recovery (MVHR) vent and a fire alarm sensor – but they were all installed by different contractors. It all looked a bit of a mess, so we had to get the builder to make changes so that everything lined up.

TO MEET PASSIVHAUS standards, the most suitable house shape is a box with a roof on rather than something as convoluted as our lopsided U-shape design. We would've given serious thought to making the house a more regular layout if we'd realised that.

energy efficient, compact design with a slightly lower roof and less square footage. His predictions were correct, and the plans were approved on the last day of the statutory eight weeks with no amendments.

However, it wasn't all plain sailing when it came to budgeting for the self build. "I mistakenly thought the initial figure of £650,000 to £750,000 had come from the quantity surveyor, Stephen Brigg of Michael Eyres Partnership. It had actually been the architect's original thoughts," says Bill. "Stephen's figure was more like £1,350,000. But I thought it might end up costing about £1,500,000 and I wasn't far off."

As Bill and Carol had ample savings, they weren't too worried about the escalating costs. The project was tendered to four construction firms, one of which declined to quote, with all the estimates coming in higher than expected. "I wasn't surprised as I've spent 30 years managing projects; everything always takes longer and costs more than you think," says Bill.

After viewing projects by all the builders, Bill and Carol decided to go with James Tiffany from Roger Tiffany. Construction started in October 2015 and the couple moved into a rented house nearby. However, it wasn't the best time of year to start. "They had to shift lots of earth and pump out water to dig out the lower ground floor," says Bill. "But there were no issues with the foundations as surveys had already been done and soil samples were taken beforehand."

Weekly meetings and regular site visits proved to be invaluable during the build. "There was one point where I spotted the plumber running the hot and cold pipes too close together," says Bill. "Plus the thermostats for the mechanical ventilation and heat recovery (MVHR) system had been put next to the light switches. This looked awful, so I had them moved behind the doors. Generally, though, the team were great. James produces very high-quality work and we still

Right & below: Inspired by an open tread staircase with glass balustrade that the couple had seen in another house, Bill and Carol commissioned Nelson Joinery & Building to produce a similar style



use the plumber, electrician and roofer for maintenance."

Light-filled interiors

You enter the property on the lower-ground floor, which features a three-car garage, utility room with boot rack made by a local carpenter, and a cinema room. "In the initial plans, Adam had the utility next to my study on the ground floor. But I wanted a bigger work space, so they dug out more earth to have the utility directly below," says Bill.

The ground floor features a spectacular central atrium, which spans the full height from the entrance lobby to the roof.

An open-plan dining area is within this, right in the middle of the house, flanked by a kitchen and sitting area on either side. A separate family room has proved handy for the couple's three grandchildren.

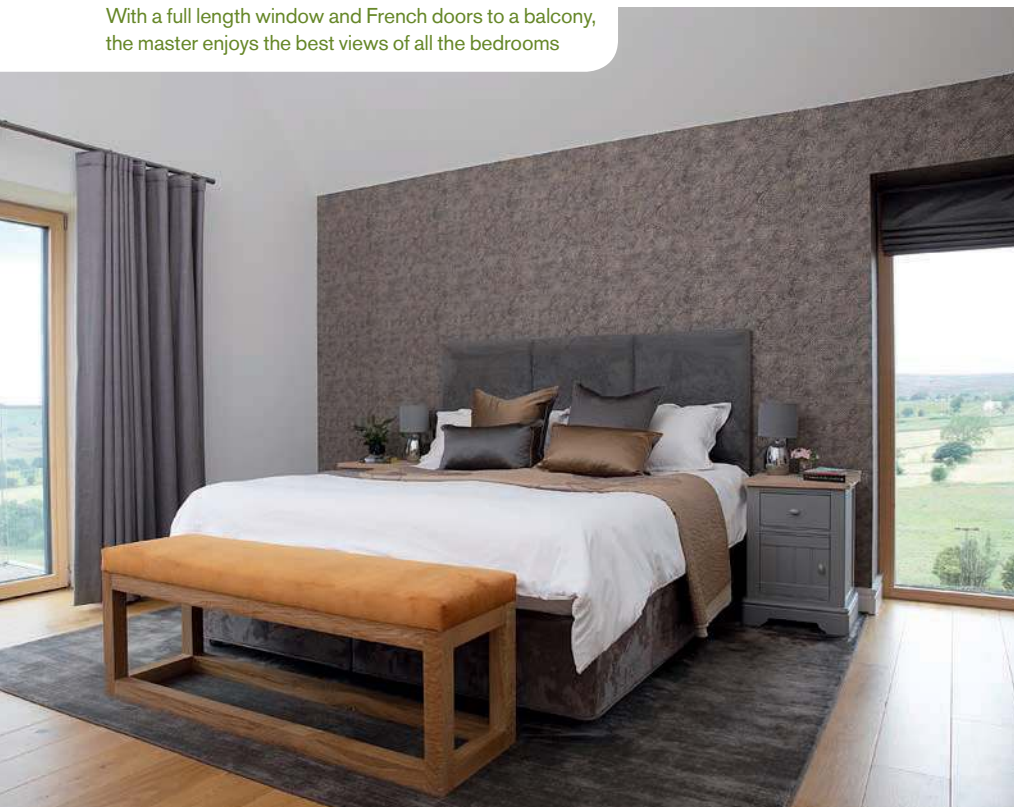
To future proof, this floor has a self-contained annexe with a sitting room, bedroom, shower room and kitchenette, plus a lift. "It means we could have live-in carers instead of going into a nursing home when we get older," says Bill. "But at the moment our eldest daughter uses the space as a studio for her personal styling business."

Upstairs is four bedrooms, two of which are ensuite, and a family bathroom. "We didn't want a loft as we think having that space just encourages you to hoard stuff," says Bill. "Instead we have high ceilings in the bedrooms, which I much prefer."

Project success

At the end of January 2017, building works were completed – five months over schedule. The pair moved in the following month. In the end, the house didn't quite meet Passivhaus standards but it

With a full length window and French doors to a balcony, the master enjoys the best views of all the bedrooms



came pretty close. "Our new home couldn't be more different from the old one it's replaced. It uses a lot of power, but it's more energy efficient," says Bill. "As we only have two small areas of underfloor heating in the entrance lobby and sitting area, plus a small 18kW boiler to power the setup, we were fearful it would still be cold." However, the couple needn't have been worried. "If anything, it's too warm in summer. We only need a 1.5 tog duvet on our bed."

As is the case with many self builds, the project went slightly over budget. The standard JCT contract with the builders had included several variable elements such as the kitchen, which ended up costing twice as much as anticipated. Other aspects like the AV

technology, hard wired fire alarm and lift, all conspired to push fees upwards. "To be fair, the quantity surveyor would suggest ways to save money, but we wanted what we wanted and weren't prepared to compromise," says Bill. The Haygarths' quest for perfection no doubt contributed to their house winning an accolade for Best Individual New Home at the Local Authority Building Excellence Awards.

Although taking on a knock down and rebuild could've been a financial gamble, Bill and Carol feel they wouldn't have found another site with such amazing views. "Carol loves having a back garden sheltered from the breeze. I like watching movies in the new cinema room and, of course, not having to clear the snow," says Bill.

Sliding doors on both sides of the dining area create an impressive indoor-outdoor space either side of the central atrium of the building



closer look

High-tech solution...

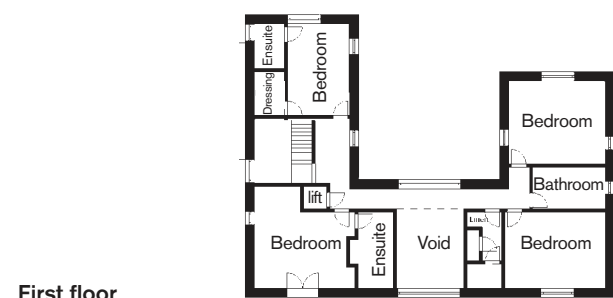
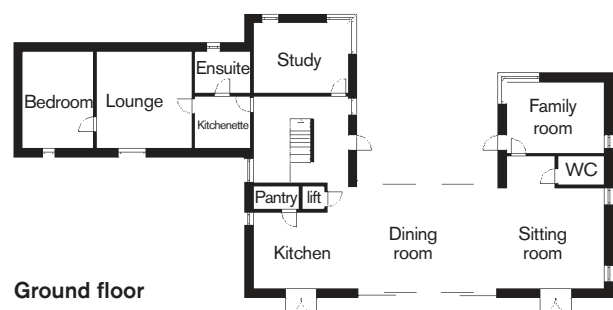
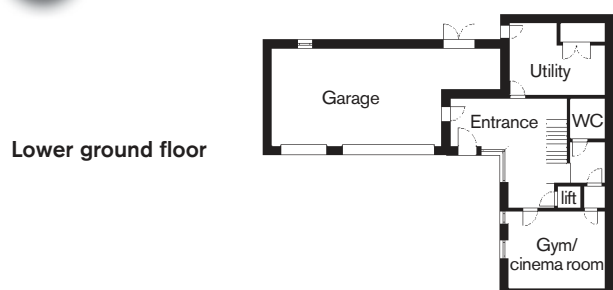
One of Bill's favourite aspects of the new house is the heated driveway. Specifying this element has proved to be so effective that he never has to clear the snow during winter. The system was supplied by OJ Electronics and comes with sensors to monitor the ground temperature, plus a timer so it's only used when needed. "It's effectively like a big electric blanket," says Bill. However, as there was no specialist mechanical and electrical consultant, it didn't become apparent until late in the build that the standard domestic setup wasn't going to be enough to cater for the amount of power needed. "It would've taken all day to melt any snow," says Bill. "As a solution, we upgraded the transformer in the field opposite; this required a second pole to support the extra weight. By the time we'd negotiated a wayleave agreement with the farmer, we'd been in the house for a year, so I still had another winter of clearing the snow."



Heated driveway



Floor plans



House plans re-created using
Build It 3D Home Designer software.
www.buildit.co.uk/3dsoftware



TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Preliminaries	£108	4%	£56,408
Demolition	£24	<1%	£12,399
Substructure	£188	6%	£98,110
Structure	£984	34%	£514,771
Windows & external doors	£203	7%	£106,172
Finishes	£228	8%	£119,283
Fittings	£161	7%	£84,360
Mechanical & electrical	£519	18%	£271,414
Lift	£45	1%	£23,197
External works	£365	13%	£191,024
Contingencies	£53	2%	£27,862

Grand total £1,505,000

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

Useful contacts

ARCHITECT Halliday Clark Architects 01943 604123 www.hallidayclark.co.uk
QUANTITY SURVEYOR Michael Eyres Partnership 01274 480011 www.eyres.co.uk
BUILDER Roger Tiffany 01756 793734 www.rogertiffany.co.uk
SIPS & TIMBER FRAME SIPS@Clays 01756 799498 www.clays.com
ROOF TILES Marley 01283 722588 www.marley.co.uk
WINDOWS Ecwin 01383 824458 www.ecwin.co.uk
GARAGE DOORS Zap Garage Doors 01924 938075 www.zapgaragedoors.com
HEATED DRIVEWAY OJ Electronics www.ojelectronics.com
STAIRCASE Nelson Joinery & Building 01282 615550
SECURITY Gough & Kelly 0344 880 7100 www.gough-kelly.co.uk
AUDIO VISUAL Finite Solutions 0113 537 8141 www.finitesolutions.co.uk
KITCHEN Townhouse Design 01423 701555 www.townhousedesign.co.uk
BATHROOMS Easy Bathrooms 0330 660 1120 www.easybathrooms.com
CABINETRY Manor Cabinet Makers 07966 284206 www.manorcabinetmakers.co.uk
SOFT FURNISHINGS Georgia Brown Interiors 07774 186949



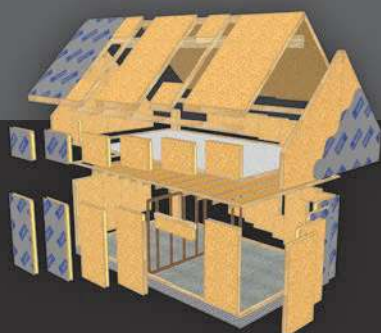


A fresh approach to home building

Are you planning a self build?

Speak to **SIPS@Clays** about a high performance, *Structural Insulated Panel*, self build home.

 **Kingspan TEK®**
a  **Delivery Partner**

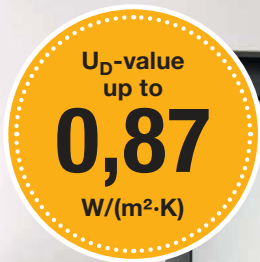


Over 15 years of building design, innovation and SIP expertise to bring you stylish, low energy homes.



SIPS
@CLAYS LLP

Full details at www.clays.com or call **01756 799498**



HOFFMANN



Entrance door Thermo65 style 015 in CH 703 Anthracite metallic with embellishments in stainless steel look

More Entrance Door for Your Money: Entrance Door Thermo65

- Eye-catching attractive door appearance due to a 65 mm door leaf without visible leaf profile
- Particularly secure thanks to standard 5-point security lock
- Especially high thermal insulation with U_D -value of up to $0.87 \text{ W}/(\text{m}^2 \cdot \text{K})$



01530 516868
doorsales.lei@hormann.co.uk

HÖRMANN
Doors for Home and Industry



Traditional Style



After years of searching for a self build opportunity, **Nick and Sue Price** realised their dream home on an idyllic plot in Hampshire

WORDS & PHOTOS **KATY DONALDSON**

Nick and Sue Price had dreamt of building their own home for 15 years before they finally found the perfect plot to transform their vision into reality. During that time they lived in a modern property in a commuter village in Hampshire. "It was very convenient for family life," says Sue. "It was great that the children could walk to school and cycle around the village to meet up with their friends. When they grew up and left home we wanted something a little more rural in a quieter situation, and with a garden that wasn't overlooked."

Having lived in Hampshire for 25 years, the couple were keen to stay in the same area, so looked within a 30 mile radius of Alton. They kept their eyes and ears open for a suitable site, but experienced two unsuccessful bids for plots as they weren't able to sell their existing house quickly enough. "We realised, through bitter

experience, that the only way that we were going to get our hands on a suitable plot was to be in a position to move swiftly," says Nick.

Fortunately, the ideal self build plot soon presented itself: a two-bed bungalow set within two acres of flat land with planning consent for a replacement dwelling. The permission was for a six-bedroom townhouse and a three-car garage with accommodation above. This was larger than Nick and Sue wanted and wasn't a style they were keen on. Therefore, they decided to put in a new planning application for something that was better suited to their requirements.

Inspiration & research

Encouraged by a local friend who has built several Potton homes, including the barn-style one he currently lives in, Sue and Nick were interested in a similar kind of abode. They conducted thorough

research, visiting a number of self build exhibitions and an event at the National Self Build and Renovation Centre in Swindon. There they saw the Potton show house, which led to a journey to the company's show centre in St Neots for a presentation about budgeting for a bespoke project. "Creating your own house can be daunting so we wanted to have a clear understanding of the whole process," says Nick.

The couple soon decided that Potton's Milchester House design would suit them, but they wanted a scaled down version of the standard scheme. With help from the firm's consultant/designer Sean Adams, Sue and Nick reduced the size of the plans and played around with the layouts until they had their perfect floorplan.

The bespoke design included a large open-plan kitchen-living area and a vaulted

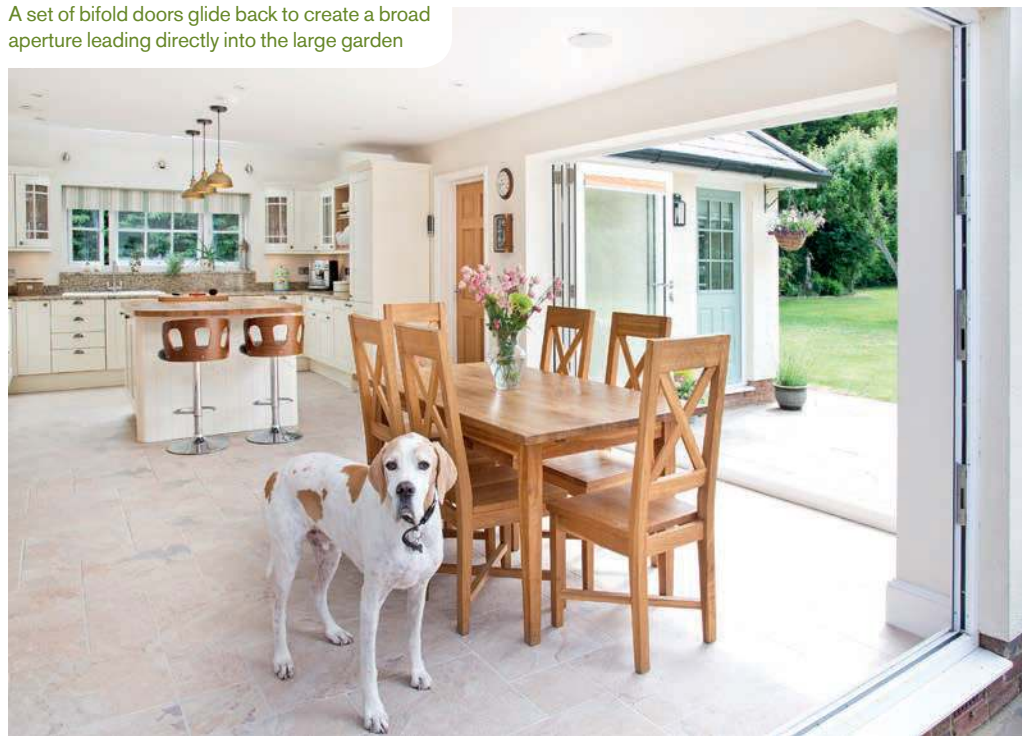
master bedroom, plus an inglenook

fireplace in the living room.

The 260m² house would give the couple everything they wanted, including four

bedrooms, while still feeling like a manageable size. With Potton producing the technical and construction drawings, Sue and Nick could leave everything safely in the package company's hands rather than using a separate architect.

A set of bifold doors glide back to create a broad aperture leading directly into the large garden



The new property was built behind the original bungalow

"I wish we had done this 10 years ago"



FACT FILE

NAMES Nick & Sue Price

OCCUPATIONS Finance director & operations manager

LOCATION Hampshire

TYPE OF PROJECT Self build

STYLE Georgian

CONSTRUCTION METHOD
Timber frame with external finish in block & render

PROJECT ROUTE
Design & planning by Potton. Homeowners project managed

PLOT SIZE 1.8 acres

LAND COST £628,000

BOUGHT October 2014

HOUSE SIZE 270m²

PROJECT COST £445,000

PROJECT COST PER M² £1,648

TOTAL COST £1,073,000

BUILDING WORK COMMENCED
June 2016

BUILDING WORK TOOK
46 weeks

CURRENT VALUE
£1,300,000



Sliding sash windows enhance the traditional feel of the property



The kitchen island provides a central area for preparing food, with plenty of space for storage underneath

WE LEARNED...

ONCE YOU'VE DECIDED to self build, make sure that you are in a position to move quickly when it comes to securing a plot. It is frustrating and disheartening to set your heart on a place, only to lose out to someone else who is able to move faster than you.

DECIDE ON YOUR BUDGET and then stick to it. The easiest way to do this is to make sure that you're happy with all your design decisions before you get started, and then don't make any alterations. Modifications will mean extra costs and the budget can very easily go astray as a result.

ALLOW A CONTINGENCY of an extra 5-10% of the cost for each stage of the build. Also remember to take into account the price of removing debris and soil from the site. If landscaping, don't forget to factor in the cost of topsoil.

ALWAYS TRY TO DEVELOP A GOOD RELATIONSHIP with the people working on your site. We made sure we paid every bill within 24 hours of receiving it, which helped to keep the building teams and tradesmen happy. We're sure that meant they were keen to do a good job and go the extra mile.

THE DEVIL IS IN THE DETAIL. Make sure you really understand what each person on site is meant to be doing and that they take responsibility for their work. Construction sites often have several people working there at the same time, so inevitably errors can occur.

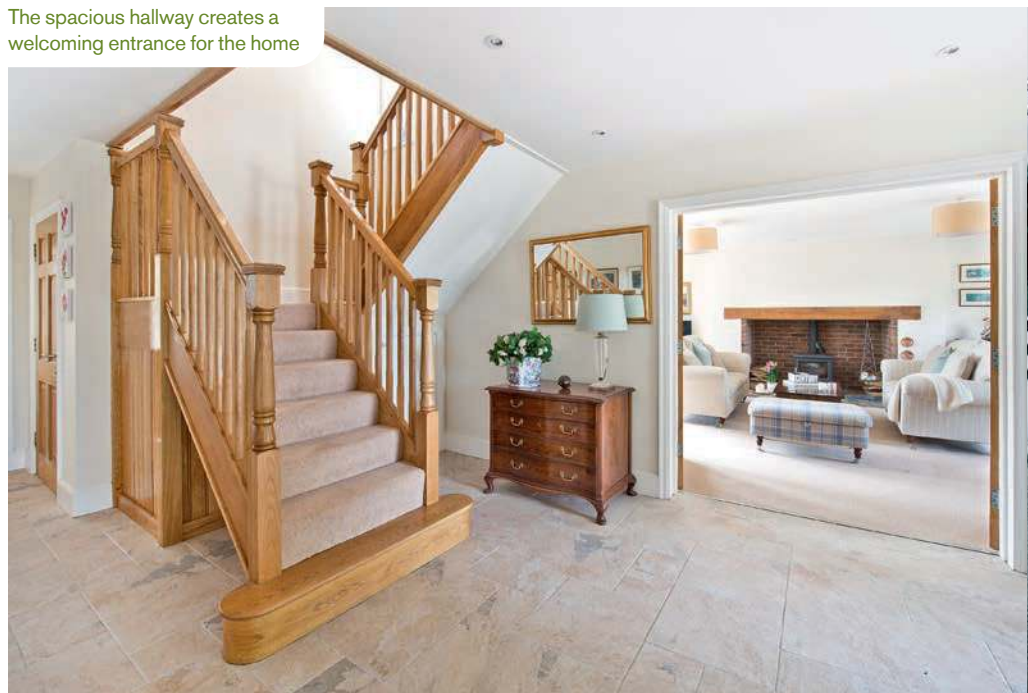
As the site had been bought with full planning permission in place, the couple assumed that all the relevant boxes had been ticked. They were confident that getting consent for a smaller property than was previously agreed would be straightforward, but things didn't turn out to be that simple.

When the pair put in the new application for their final design, they were informed they needed to carry out ecological and bat surveys. It transpired that this step had, unfortunately, been overlooked previously. "The bat assessment was very thorough," says Nick. "They even sent two representatives to conduct an overnight watch in the pouring rain!" The couple were then told they couldn't demolish the bungalow between October and March, as there was a possibility that bats might roost there during that period. As it turned out, no bats were found, but the Prices were several thousand pounds out of pocket.

One of the benefits of this particular plot was that the new house had consent to be sited on a different footprint from the bungalow, which would be demolished when the new home was finished. This meant Nick and Sue could live on site throughout the build. This saved money on rent and meant they were always on hand.

Nick, a finance director, chose to take on the role of project manager. Years earlier he had worked as an officer in the Corps of Royal Engineers building bridges, roads and even airfields, so

The spacious hallway creates a welcoming entrance for the home



The inglenook fireplace in the living room contains a cosy woodburning stove



he could read and understand technical drawings. The decision to be on site was a sensible one, but it wasn't always easy. "Trying to keep a tiny bungalow clean and habitable when you're living on a building site in the winter, with an unbelievable amount of mud, was an impossible task," says Sue. "Having a large dog only made it harder!"

Construction begins

Nick recruited a retired local builder to work as a part-time project consultant, who turned out to be invaluable in advising on some of the technical and detailed aspects of the scheme. He put the Prices in touch with good contractors, including excellent local ground workers who constructed the foundations and slab.

This stage was fairly straightforward; there was only about 1m of clay to get through before they hit chalk. Even so, the Potton team were very impressed with the accuracy, saying the levels were absolutely spot on – apparently a rarity. Nick and Sue were



Rooflights have been fitted in the bathroom to ensure the space is flooded with natural light

financial gain. It wasn't long before he reconsidered and threw the concrete roof tiles into a pile of hardcore.

The Prices got onto the roof to put their mark on the new self build by carving their initials and the date into the chimney when the final brick was laid. They've included a time capsule in the haunches just below the chimney pot. This holds contemporary items such as a newspaper cutting, a little money and a note to future owners.

Successful venture

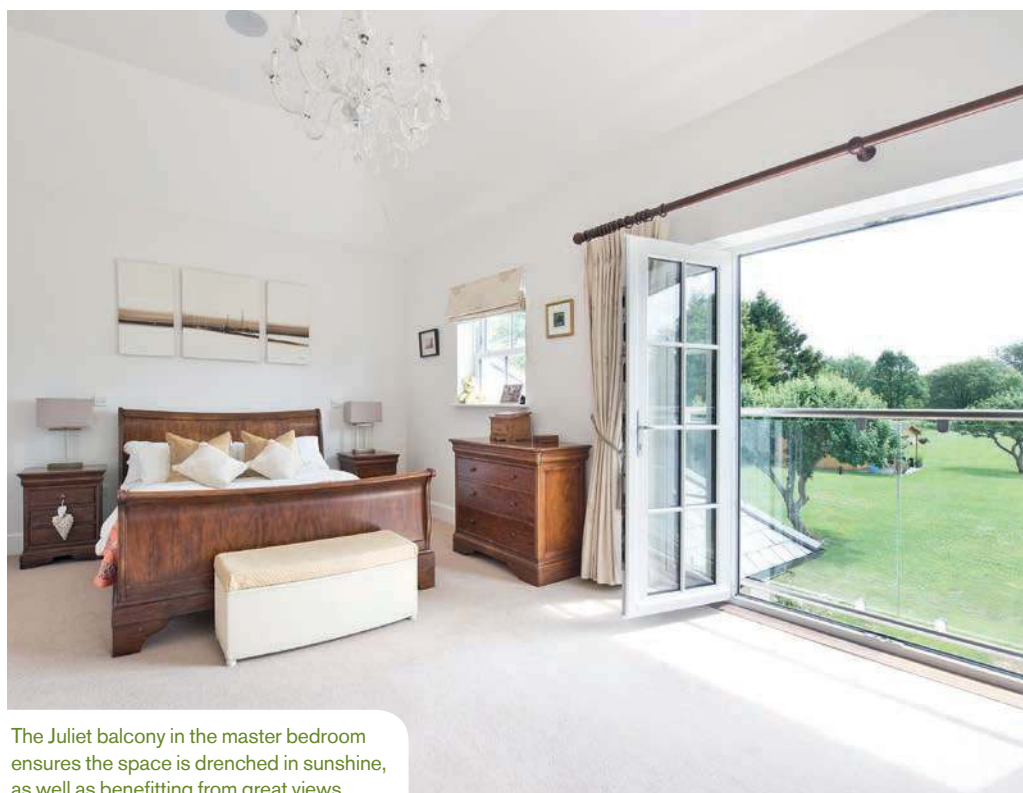
After 15 years of dreaming about tackling a self build project, Nick and Sue were finally able to create their own bespoke home – and what a great sense of satisfaction they had when it was all completed. “It was certainly hard work and extremely tiring,” says Sue. “The last three months felt like forever.” Her favourite part of the whole process was putting together the finishing

so pleased with the initial work they decided to use the same team for the external brick and block application, as well as the hard landscaping. The couple were also delighted with their brilliant roofing contractor. They were impressed with how quickly and efficiently the Potton frame was erected, too. “It was fantastic to see a house all of a sudden,” says Sue. “It was definitely one of the highlights of the build.”

Hands-on project

By their own admission Nick and Sue are both doers so, as well as project managing their build whilst working full time, they were also happy to get stuck in and do some of the physical jobs themselves. They fitted the insulation and ran the cables for the sound system, which reaches into every room of the new property. They also laid the wooden floor in the dining room and erected the beautiful gazebo in the garden. The Prices worked hard to keep the site organised and tidy (notwithstanding the mud) which helped to keep the works running smoothly. They even learned how to drive dumper trucks.

Nick demolished the bungalow himself at the end of the project. Hoping to recoup some of the costs by selling the salvaged materials, he carefully and methodically removed the roof tiles before realising that the time involved wasn't going to be worth the potentially minor



The Juliet balcony in the master bedroom ensures the space is drenched in sunshine, as well as benefitting from great views

touches, such as picking out soft furnishings and planning the decorative scheme. For Nick, the construction side of things was both exciting and rewarding. “I wish we had done this 10 years ago,” he says, although he freely admits the biggest thing he learned during the process is that he is 58 – not 28.

Useful contacts

DESIGN, PLANNING & TIMBER FRAME **Potton** 01767 676400 www.potton.co.uk ELECTRICAL CONTRACTOR **RWE Electrical** 07884 493293
BUILDING MATERIALS **Buildbase** 0345 685 4467 www.buildbase.co.uk ROOFER **Beacon Roofing** 01483 202828 www.beaconroofing.co.uk SCAFFOLDING
RS Cane Scaffolding 07836 259399 **PV SOLAR PANELS** **Solstice Energy** 020 8789 4717 www.solsticeenergy.co.uk **MVHR Regavent** 01767 600499
www.regavent.co.uk **RAINWATER GOODS** **Yeoman Rainguard** 0113 279 5854 www.rainguard.co.uk **PLASTERING & RENDERING** **J Murphy** 07774 457390
SANITARYWARE **Bathstore** 01256 814441 www.bathstore.com **KITCHEN & UTILITY ROOM** **Howdens** www.howdens.com **MUCKAWAY & CONCRETE**
SUPPLY **Chambers Recycling** 01483 504595 www.chambers-group.co.uk



closer look

Solar panels...

Nick and Sue's electricity is powered by a photovoltaic (PV) array on their roof. They opted for a setup built flush into the tiles rather than having a system fitted on top. This has provided clean lines and a subtle appearance. Although this style costs more, it doesn't involve the double battens needed to support standard solar panels. The Prices are happy with the arrangement, although a problem with the solar panel inverter, which is now fixed, means that so far they have not yet had a full year of uninterrupted supply to gauge the cost benefits.

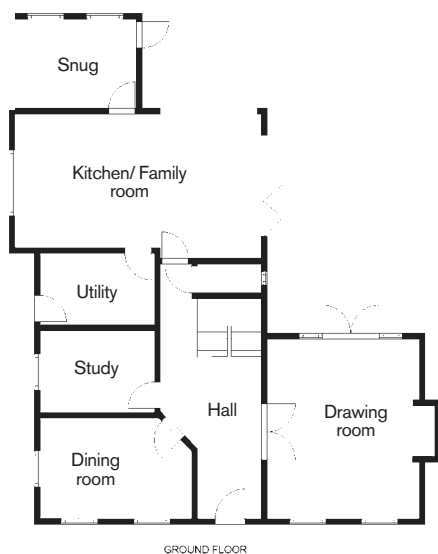


Renewable energy

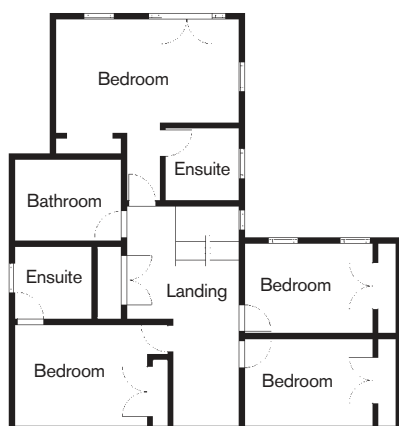


Floor plans

Ground floor



First floor



House plans re-created using
Build It 3D Home Designer software.
www.buildit.co.uk/3dsoftware



TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Preliminaries (incl. design, planning & surveys)	£48	3%	£13,000
Foundations & drainage	£226	14%	£61,000
Scaffolding	£35	2%	£9,500
Timber frame, joinery, doors, windows & staircase	£520	32%	£140,500
Roof structure, covering & rainwater goods	£104	6%	£28,000
Solar panels	£35	2%	£9,500
Floor screed & internal plastering	£48	3%	£13,000
Construction of external block walls, chimney & fireplace (incl. external quoins & sills)	£119	7%	£32,000
External Rendering	£44	3%	£12,000
Plumbing & heating (incl. bathroom & kitchen)	£181	11%	£49,000
Electrics incl. IT, Hipsmart music network, TV & security system	£104	6%	£28,000
Floor & wall tiling	£20	1%	£5,500
Decorating	£19	1%	£5,000
Car port & workshop	£82	5%	£22,000
Fees (project consultant)	£26	2%	£7,000
External works (incl. landscaping, patios & drive)	£31	2%	£8,500
Miscellaneous	£6	<1%	£1,500
Grand total			£445,000

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

Get your self-build home watertight

within a matter
of weeks



- Protected from the weather
- Prevents unwanted intruders
- Completes the heavy construction work
- Enables the fit out to start earlier
- Enables you to self manage
- Lightens your workload

FIND OUT MORE ONLINE AT WWW.POTTON.CO.UK OR CALL
01767 676400 TO ASK ABOUT OUR WATERTIGHT PACKAGE



Tailor-made home

As well as transforming their 1960s abode, **Debbie and David Sesay's** renovation project has created a home where the whole family can enjoy time together

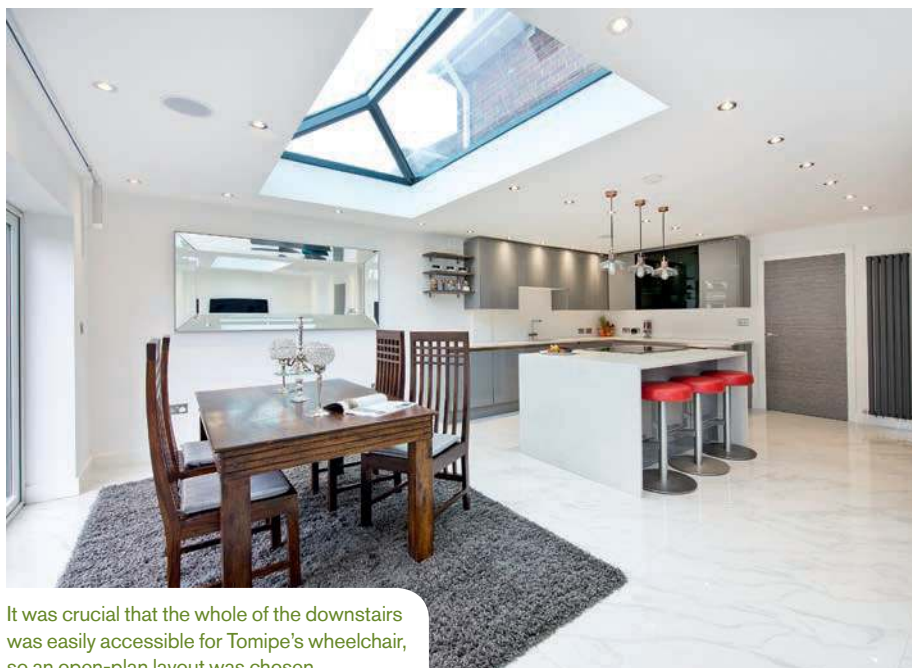
WORDS & PHOTOS **KATY DONALDSON**

David and Debbie Sesay live in Grays, Essex with their two children, Tomipe and Maboneh, in a house they bought in 2010. Their ex-authority end of terrace property was constructed in the 1960s. It had a conventional layout featuring a separate living room and kitchen on the ground floor, plus three bedrooms and a bathroom upstairs, topped off with a large attic. Tomipe is disabled so the family had to use a lift to move him to and from his bedroom on the first floor.

David and Debbie were keen for Tomipe, now 13, to be at the centre of everyday family life, with a space tailored to his specific needs. They considered moving but quickly realised that any house would need adapting, so decided to radically alter their existing home instead. "Tomipe goes to school nearby and we have a strong support network here, with several local carers who regularly come to help. There were many advantages to staying put", says David.

Getting started

To realise their ideas the couple commissioned Barry Stott-Brookes of Architects Atelier to design and oversee what would turn out to



It was crucial that the whole of the downstairs was easily accessible for Tomipe's wheelchair, so an open-plan layout was chosen



The Sesay family

FACT FILE

NAMES Debbie & David Sesay

OCCUPATIONS Business consultant & IT consultant

LOCATION Essex

TYPE OF PROJECT Renovation incl. rear extension and loft conversion

STYLE Contemporary

CONSTRUCTION METHOD

Brick & block, with cladding finish

PROJECT ROUTE

Architect designed and project managed, builder hired for construction

PROPERTY COST £240,000

BOUGHT 1994

HOUSE SIZE 189m²

PROJECT COST £229,000

PROJECT COST PER M² £1,212

TOTAL COST £469,000

BUILDING WORK COMMENCED

July 2018

BUILDING WORK TOOK

24 weeks

CURRENT VALUE

£570,000

be a complete transformation of their house. Barry took their long list of requirements and devised a scheme that would give them the beautiful home they wanted and revolutionise the way they live. As well as completely re-jigging the floorplan, Barry put together plans for a new rear extension and a loft conversion.

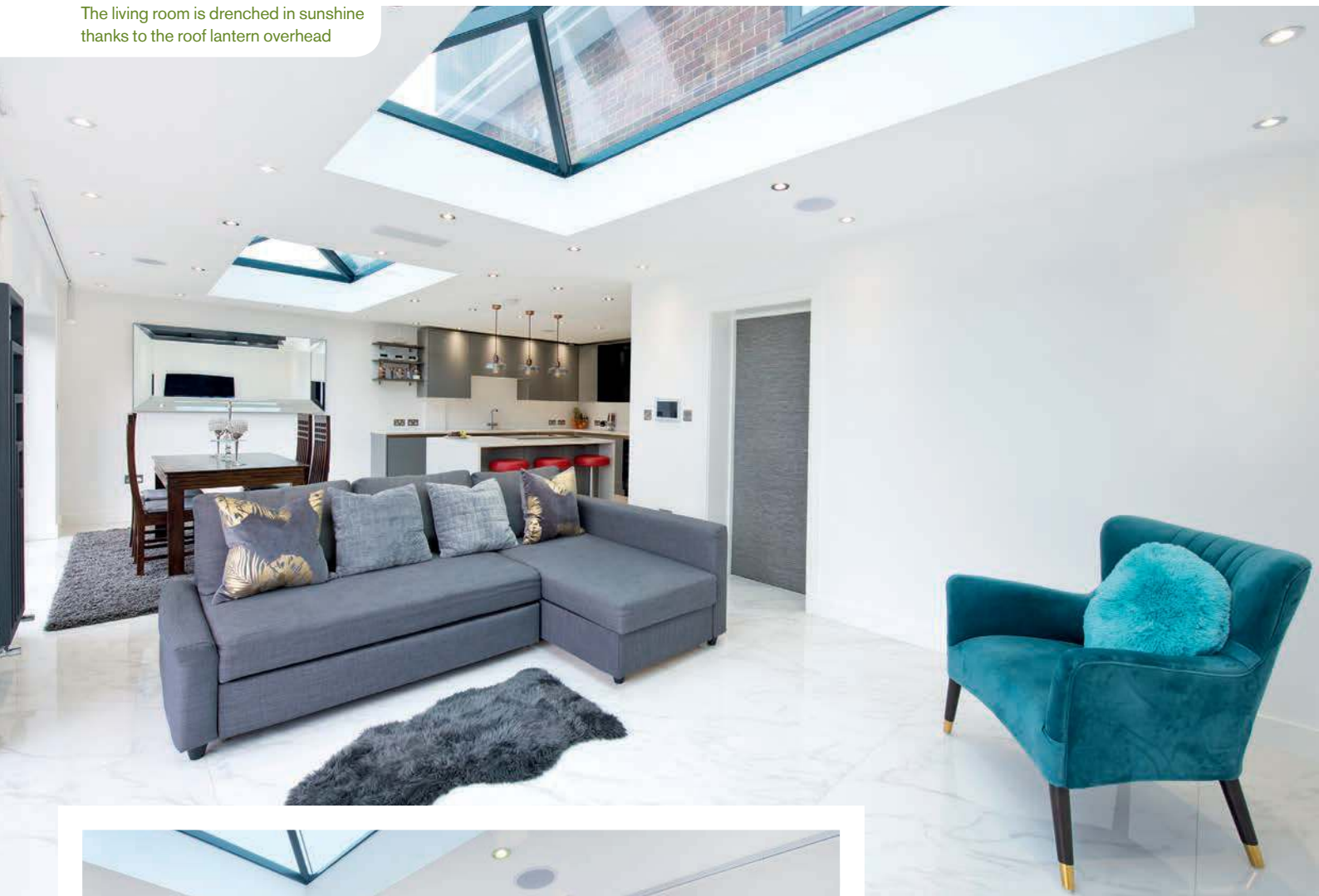
The first thing he did was to create a large garden studio across the entire width of the back garden to accommodate the whole family for the duration of the 20-week build. However, before construction could even begin, the Sesays had to obtain the go ahead from the local council. In the end, it took Debbie and David nine months to receive planning consent. "If you're doing a project like this, apply for all your alterations and extensions at once so you don't have too many amendments or additions further down the line," says Debbie. "Even if you're not ready to do all the work, it's much easier to get all the permissions in place at the beginning."

According to Debbie, employing a professional to oversee the scheme was key to its overall success. "I can't stress enough how important it is to bring in a specialist. We are not builders – we have full time jobs and two children to take care of. One of the best



The Wren kitchen was chosen for its sleek, contemporary and unfussy finish

The living room is drenched in sunshine thanks to the roof lantern overhead



decisions we made was to employ Barry as the project manager so he could deal with the ins and outs of the construction process."

The transformation begins

When the Sesays put the project out to tender, they were surprised by the huge variations in price that were quoted. They eventually decided to go with the contractor who was completely transparent in his costings for the finished project. His price was higher than others, however, there were no hidden fees. "He became like another member of the family," says Debbie. "It was really sad to see him go at

the end of the project, we really missed having him around."

Although architect Barry managed the build, David was very involved in the day to day work on the scheme, too. Living on site meant it was easy to have regular discussions with the builder, who was happy to listen to his ideas and was keen to collaborate. "One of the great things about the contractor we chose is that he's a perfectionist," explains Debbie. "I was delighted with that, as I'm an obsessively neat and tidy person!"

Maboneh, who is 11, was keen to get involved in some of the practical work for the renovation project, too. She learned how to do plastering, as well as pitching in to help with the painting. Along the way, she

also picked up some Albanian phrases, as the workers taught her some expressions and songs from their native language.

But, as with all projects, there were several obstacles to overcome. The building inspector insisted that the foundations be made deeper than the Sesays had anticipated, after an assessment showed that the property sits on mixed soil. This created delays which ultimately held up the installation of the underfloor heating in the new kitchen and living rooms. There were also some problems with the attic beams in the loft, so the ceilings on the first floor all had to be lowered. David and Debbie, however, remained upbeat. "We were confident that

“We really loved the transformation journey. We’re absolutely thrilled with the end result”

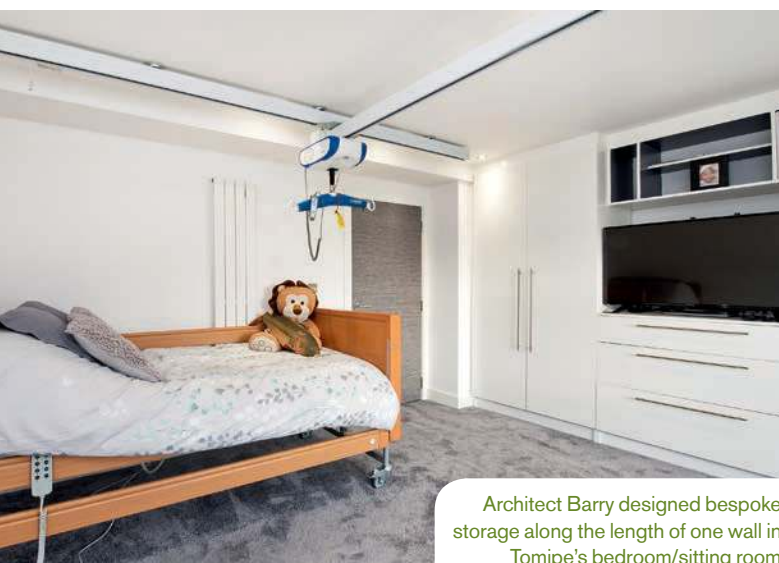
if we trusted our architect and followed his advice, we’d get a wonderful home at the end – and we were right,” says David.

New interior layout

Now the build is complete, the Sesays are delighted with the outcome. As the main purpose of the project was to create a dedicated space for Tomipe in the thick of the action, the original family living room was redesigned. It was transformed into a sociable room, large enough to easily accommodate Tomipe’s hospital-style bed, wheelchair and other equipment, as well as a sofa. Accessed directly from this is a large wet room that makes life much easier for everybody in the family. Barry also designed a custom-built storage unit that stretches the length of one wall in Tomipe’s room, with space for a wall-mounted television visible from the bed and the sofa. Now, Maboneh (and her parents) can chill out with her brother, watching television.

Drawing on Debbie’s love of light and minimalist contemporary design, the large single-storey extension at the back of the house has been arranged in an open-plan layout. To ensure the space is flooded with light, two roof lanterns have been fitted overhead and large bifold doors open out onto the enclosed garden. This zone is divided into a sleek modern kitchen and a sunny living area, with easy access to Tomipe’s room just next door so he can be included in the noise and daily life of the family. Where the original utility room and lift

Level thresholds were used between rooms, giving smooth transitions from carpet to hard floors, which can sometimes be tricky for wheelchairs



Architect Barry designed bespoke storage along the length of one wall in Tomipe’s bedroom/sitting room

used to be positioned, there is now a cosy snug with comfortable sofas, plus another television for when anyone wants a bit of time to themselves. “Open-plan living is lovely and sociable but we also wanted to incorporate a space for those times when somebody might want a little bit of peace and quiet,” says Debbie.

The three bedrooms on the first floor were all redecorated and have been styled in a similarly uncluttered fashion. The new bathroom is Debbie’s favourite place in the house. “I totally love it!” she says. “It is simple, yet luxurious at the same time.” In the loft, there’s now an impressive master suite. Thanks to architect Barry’s



Flush flooring in the bathroom makes the space accessible for all the family

WE LEARNED...

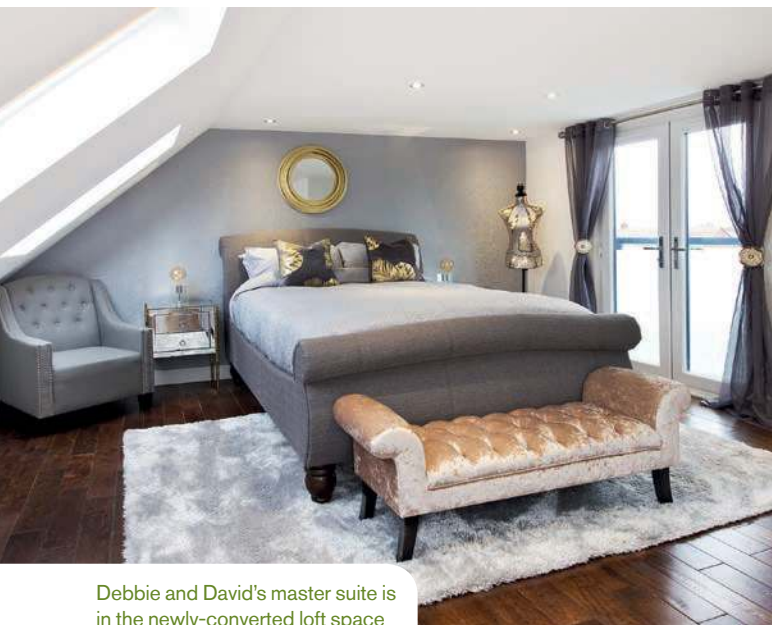
EMPLOY AN ARCHITECT to project manage everything. We both work and have a busy family life. We soon realised we couldn't take on a large renovation project like this ourselves. An expert is experienced and will deal with all the inevitable problems that tend to crop up during a build project.

THE BUILDER who provides the lowest quote isn't necessarily the one you should go for, as there may well be extras that haven't been included. The contractor we chose wasn't the cheapest, but he was transparent in his fees and there were no hidden extras.

FINALISE YOUR DESIGN before going to planning. This will avoid costs and delays associated with any changes you make further down the line.

CHOOSE YOUR WINDOW manufacturer early on. Our project was delayed by eight weeks because of a setback in the delivery of the glazing.

Above right: Debbie loves the simple, yet luxurious bathroom. It's her favourite space in the house. Right: Rooflights flood David and Debbie's dressing room with natural light



Debbie and David's master suite is in the newly-converted loft space

smart use of space, some of the attic storage has been retained. A large Cedral Click-clad dormer was constructed to the rear of the structure, allowing a spacious bedroom to be created in the eaves. Off this is a cleverly designed dressing room that gives access to the small but perfectly formed ensuite shower room.

The finished house

The Sesay family are keen to point out that doing a major project like theirs isn't as daunting as people often think. "When you watch

programmes on TV it seems that every scheme is fraught with issues and stress," says David. "But that wasn't our experience. We loved the transformation journey. We're thrilled with the end result. With a bit of careful planning and preparation you can have your dream property – and you don't have to move house to achieve it."

Even squeezing the whole family – including Granny when she came to visit – into the cabin in the garden was part of the fun, and of course the family think it was totally worth it. They now have a beautiful home tailored to their very specific needs. Tomipe has a large, specially laid-out room with all the equipment he requires to ensure he is comfortable and at the centre of family life. Maboneh has a stylish bedroom, plus a little snug where she can have some quality time to herself, with her friends or her parents. Debbie and David have the whole of the top floor to themselves.

The experience certainly hasn't put the Sesays off doing another build in the future. When asked if they'd ever consider taking on a new scheme, their answer is an emphatic, "Yes!" The ideal would be to create a house with sea views. "We'd love a contemporary property. It'd have to include a grand hallway with a curved double staircase, like something you'd see in Los Angeles," says Debbie.

Useful contacts

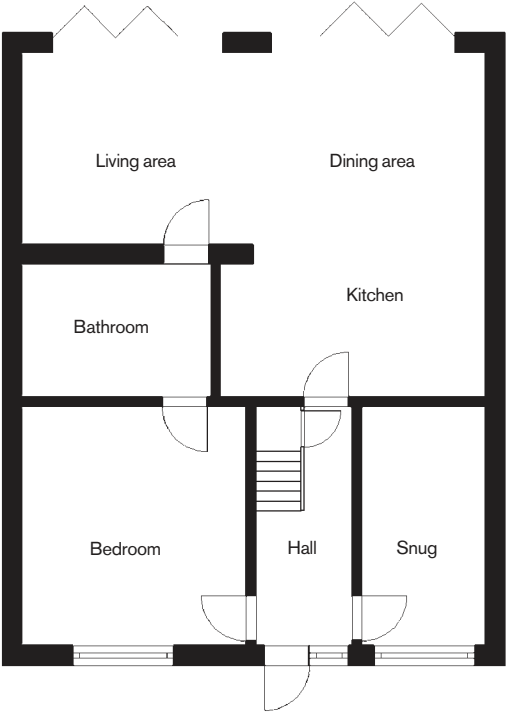
ARCHITECT Architects Atelier (Barry Stott-Brookes) www.thearchitectsatelier.com **CONTRACTOR** A Flora Bespoke Builders (Ahmet Flora) 07544 181910 www.florabuild.com **WINDOWS, DOORS & ROOF LANTERN** Safe Style 0808 274 4531 www.safestyle-windows.co.uk **CLADDING** Cedral Click 01283 501555 www.cedral.world **UNDERFLOOR HEATING** The Underfloor heating Store 01268 567016 www.theunderfloorheatingstore.com **KITCHEN** Wren Kitchens (Lakeside) 01708 209209 www.wrenkitchens.com



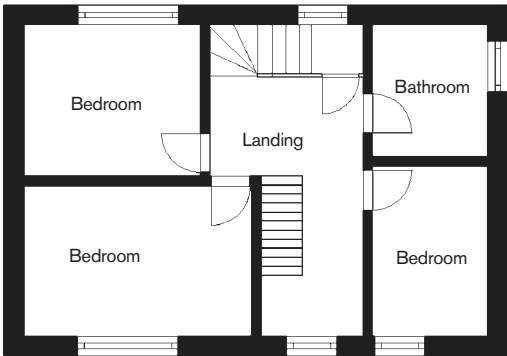


Floor plans

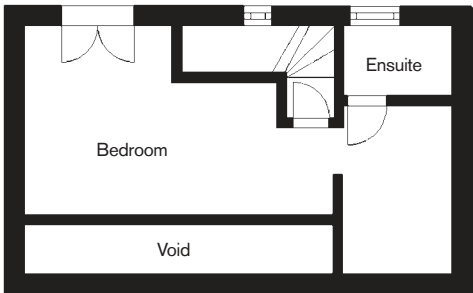
Ground floor



First floor



Loft conversion



closer look

Sun-drenched interiors...

As the kitchen-diner extension is north facing, it was important to channel as much sunshine inside as possible.

This was achieved via bifold doors, plus roof lanterns in the ceiling, both sourced from Safe Style. David and Debbie chose solar controlled self-cleaning glass, which is blue tinted to prevent too much heat entering or leaving the room. Specifying the glazing correctly was a vital element for the project to meet Building Regs, as a large proportion of the extension is formed from glass. These overhead features also act as visual dividers, delineating the kitchen from the living and dining space, as well as adding elegance and grandeur.



Glass features

£ TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Preliminaries	£48	4%	£9,000
Foundations	£79	7%	£15,000
External walls & windows	£318	26%	£60,000
Roof structure & covering	£95	8%	£18,000
Internal walls	£42	4%	£8,000
Floor, wall & ceiling finishes	£132	11%	£25,000
Joinery & fittings	£64	5%	£12,000
Plumbing & heating (incl. bathroom & kitchen)	£270	22%	£51,000
Electrics	£48	4%	£9,000
Decorating	£26	2%	£5,000
Fees	£64	5%	£12,000
External works	£26	2%	£5,000

Grand total £229,000

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



DELIVERING HIGH QUALITY WINDOWS & DOORS YOU CAN TRUST



Internorm

ecoHaus is the No1 Internorm partner in the UK since 2012

- Triple Glazed as Standard
- Passivhaus Certified
- Timber Composite
- U-Values as low as 0.62
- Integrated Blinds
- Loxone Compatibility

Visi|line

Large Scale Minimal Aluminium Sliding Doors

- 20mm Sightlines
- Flush level threshold
- Up to 3.2m High
- U-Values as low as 1.1
- Electric Lock as standard
- PAS24 Certified



CONTACT US

0800 612 6519 sales@ecohausinternorm.com www.ecohausinternorm.com

SHOWROOMS

GLOUCESTERSHIRE ■ SURREY ■ CAMBRIDGE ■ SWANSEA ■ GLASGOW





GREEN HOME

GREEN fingers

The simple elegance to **Nicola and Chris Pelmear's** home belies its complex eco credentials, where even the snowdrops were salvaged

WORDS **SOPHIE GALE** PHOTOS **CAMILLA REYNOLDS**

The minute they walked through the gate into an overgrown plot in Nailsea, Somerset, Nicola and Chris Pelmear were enchanted. At first glance, it was a mess.

The site was home to a seriously dilapidated bungalow. On all sides, the land was knee-deep in brambles. But their eyes were drawn to the lawns carpeted in snowdrops. "They were covered in flowers," recalls Nicola. "I'd always loved pottering about with plants and the thought of owning a garden like this was a dream for me." True to that passion, before any major works began on the plot, Nicola dug up and temporarily potted all the shrubs, perennials and bulbs they could salvage, ready for rehoming when works were



The mezzanine space overlooks the large open-plan kitchen-living area

completed. This kind of forward thinking on their landscape has given them a dream home with a garden to match.

Spot of luck

The couple, who had been living in central Bristol for 40 years, knew Nailsea well. They had visited while caring for Chris' mother. She had dementia and sadly passed away during the build. They later lived in her house during the project. Nicola had been working as a local government officer, and Chris ran his own facilities management company, but as retirement approached, the thought of a quieter life appealed. They wanted a grander garden, but there was no desire to be remote. "In Bristol, we could walk to probably 200 different restaurants with ease. Theatres, cinemas, pubs; it was all on our doorstep," explains Chris. But there were no qualms about leaving their life in a draughty Victorian townhouse. They wanted a better insulated home, with low utility bills. Selling that property would be the means to achieving their dream.

This was the first – and only – piece of land that the couple looked at, having been



Green credentials were high on the list of priorities when Nicola and Chris designed their home, with sustainable timber cladding chosen to blend seamlessly with the surroundings



Nicola has turned the overgrown outdoor space into her dream garden, making use of the leftover scaffolding planks

“We just wanted a feel-good house with minimal running costs. And that’s what we achieved”

very selective online. This one ticked every box. “Greenery, views, yet only six minutes’ walk to Waitrose. What more could you ask for?” says Chris. There was an added bonus, too: the extent of the land. “The agent we spoke to had significantly undersold it,” says Chris. “Their details indicated it was ‘large’ but, given the fact it was one third of an acre, it wasn’t listed with the prominence it deserved.”

Going green

The couple set about visiting eco-build fairs, including exploring low-carbon homes as part of Bristol’s Green Doors open house trail. They quickly realised that Passivhaus building standards would be high on their wish list. This approach, developed in Germany in the 1990s, involves angling a property towards the sun for maximum solar gain, and insulating hugely to optimise the heat in the building. And the plot’s crumbling bungalow, with its sunny aspect of south-facing front rooms, provided the perfect starting point. That said, when the sale went through in June 2013, the enormity of the task

Below: The mezzanine level is supported by steel beams. It has a fantastic view over the lower level and beyond, thanks to the double-height window span

FACT FILE

NAMES Nicola & Chris Pelmeor

OCCUPATIONS Retired local government officer & retired managing director

LOCATION Somerset

TYPE OF PROJECT Self build

STYLE Contemporary

CONSTRUCTION METHOD
Timber frame

PROJECT ROUTE

Architect designed and helped source a main contractor to manage the timber frame build

PLOT SIZE 0.3 acres

HOUSE SIZE 344m²

PROJECT COST £446,586

PROJECT COST PER M² £1,298

BUILDING WORK COMMENCED
June 2016

BUILDING WORK TOOK
52 weeks

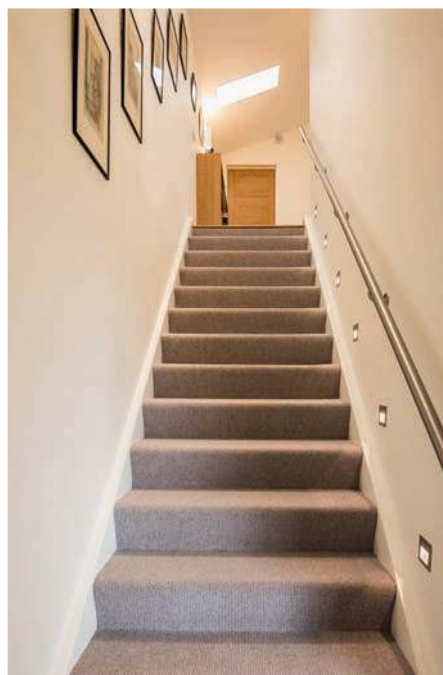


WE LEARNED...

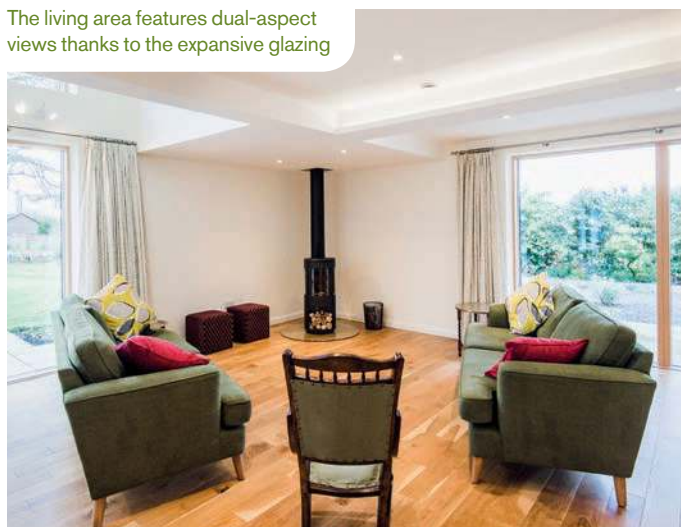
START BY DECIDING on the kitchen you want and fit the rest of the house around that. Ours is the centre of our universe! All views, and connections to the wider home, happen from here.

COMPROMISE is inevitable and sticking to your principles can prove expensive! We settled on off-the-shelf fittings, and we don't feel it detracted from the rest of the house at all.

THINK ABOUT your future needs as well as current requirements. We designed ours for wheelchair accessibility so we know this can be our forever home.



The living area features dual-aspect views thanks to the expansive glazing



before them suddenly struck home. "I remember putting my head in my hands," says Chris, "and saying to Nicola 'What have we done?'"

Tentative tender

At first, the possibility of refurbishing the bungalow to a high spec was not ruled out. However, the prospect of being able to reclaim VAT on a self build option hadn't escaped the couple's attention. Therefore, between September and October 2014 they invited quotes looking at both a refurbishment and the demolition and rebuild from four architects, all sourced via The Green Register. One of those four made an impression. "MJW had experience of working

on Passivhaus projects – not easy to find in the UK for what is still considered to be a groundbreaking technology," says Chris. "They also gave us a detailed spec – some 70 pages, with a choice of six designs based on our brief." The couple were sold.

On the question of whether to retrofit the existing bungalow or start anew, everyone agreed – a self build from scratch would unquestionably be more cost effective for what the couple wanted to achieve. "The risk with keeping the 1920s bungalow was we could unearth more problems along the way," says Chris. Indeed, when the dwelling was eventually demolished, it came to light that it had virtually no foundations. "That's not unusual, but had we wanted to expand upwards, the structure would have needed more support," he says. "Then we might have been looking at spending just as much as on a new build, but for something less perfect."

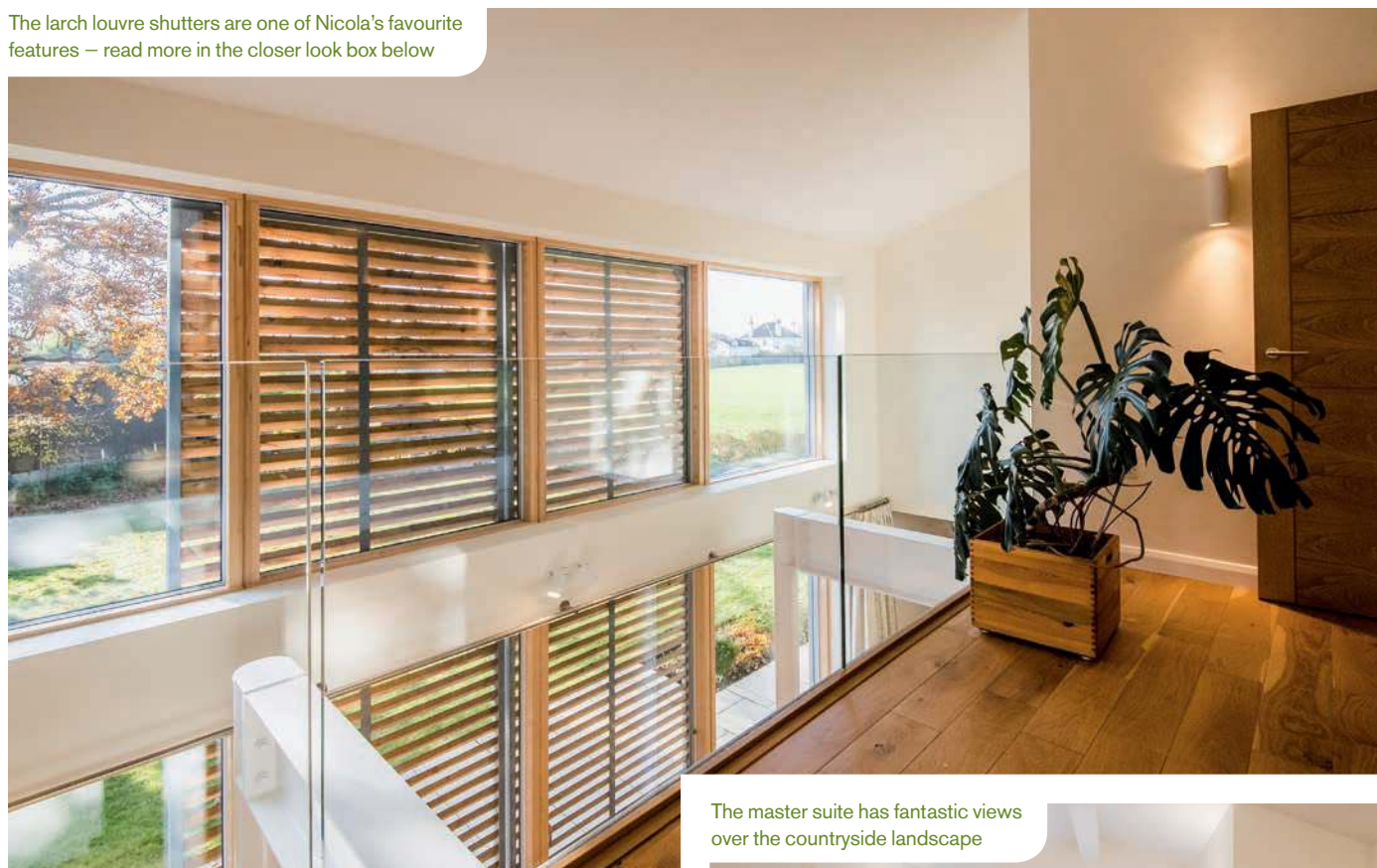
In April 2014, MJW submitted a planning application for a new dwelling that would be close to the same footprint as the bungalow. Consent was granted in July 2014, at which point Nicola and Chris looked around for a contractor. The couple had to make three tenders before a suitable builder, at an acceptable fee, was found. This drew out the process significantly with demolition of the house deferred until May 2016 and construction beginning a month later. During the wait, tree and soil surveys were conducted. The arboricultural report detailed the trees that must stay, including the mature oaks that give the home its name – Four Oaks. A company called John Dean cut the trial pit into the ground for the soil survey. "It was only a small task, but they did a cracking job at a reasonable fee," says Chris. They remembered this when quotes coming in from other builders were sky high. "We were budgeting perhaps 20% extra to cover passive techniques. But at one point, our architect actually contacted a contractor to ask if they'd put the decimal point in the right place!" To the couple's relief, John Dean offered them a fixed price bid at a manageable quote.

Walking on air

The rectangular design of the house was chosen for added simplicity. "It requires less labour and material than more complex shapes," says Nicola, "as well as being good for heat retention and easier to make airtight, due to fewer junctions." Energy efficient homes tend to be wrapped in insulation from top to toe, but the presence of radon gas in the ground required a slightly different approach. A cavity was left between concrete strip foundations and the precast beam and block floor above, in order to vent the radioactive gas. A timber frame sole plate sits atop, overlaid with rigid polyisocyanurate (PIR) insulation boards, then concrete screed over it all. MJW's managing director, Michael Williams, says: "This configuration not only removed radon gas, but also improved the house's thermal insulation."

The timber frame and panelling construction was one of Nicola's favourite parts of the process. "It went up so quickly," she says. "A new building appeared in a matter of days!" The prefabricated twin frame walls involve layers of studwork and insulation with minimal connections, small amounts of battening, allowing fewer routes for heat to escape through cold bridging. A particular risk area was the large open plan kitchen-living room, where steel supports hold up a first-floor gallery. To mitigate heat loss, all the steel is fixed into the timber frame and does not extend outside the insulated envelope.

The larch louvre shutters are one of Nicola's favourite features – read more in the closer look box below

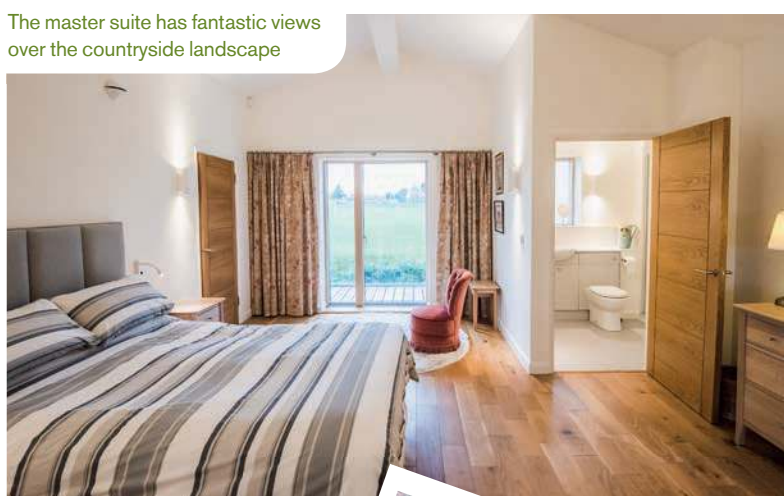


The master suite has fantastic views over the countryside landscape

Wanting to make the most of morning light, the couple chose to include slit windows on the east and south faces of the building, in addition to the large bank of glass to the south side, which brings in as much heat and light as possible. To quell heat gain in the heights of summer, the house has extensive shutters.

Low bills

With everything designed to be snugly airtight, a mechanical ventilation and heat recovery (MVHR) unit becomes an essential piece of kit. "It's very good value and works beautifully," says Chris. "The windows in the bathroom don't open. Yet if you're having a shower, the mirrors steam up, then clear in moments." Though not

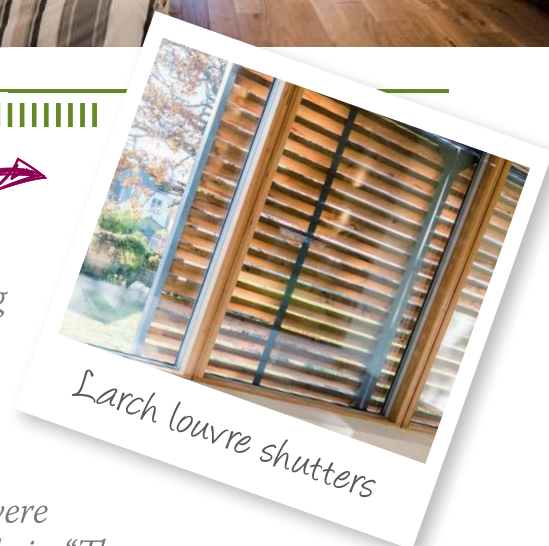


closer look

Stunning window feature...



The couple chose to attach louvre shutters made from larch to the main south-facing windows. These stop the house overheating on bright days, but have another unexpected benefit. "When it's sunny, the dappled light effect within the house is magical, giving the feel of a plantation house," says Nicola. There were some unforeseen complications, however, when it came to the large models needed for the substantial south-facing windows. These were far heavier than anticipated. "It took us a bit by surprise!" says Chris. "The realisation dawned that the timber frame would not be strong enough to support them." But this problem was circumvented with the use of freestanding steel posts, to which the shutters are attached at the top. "In summer when the large windows are open, it can get windy," says Nicola. "We often have the shutters pulled across to limit the sun's rays and also diffuse the breeze."



Larch louvre shutters

a fully certified Passivhaus, the home's energy consumption has lived up to expectations. Electricity use has been 10% lower than in the previous house – despite running similar appliances. Gas, hot water and heating costs are projected to be less than £300 for the year, and that's considering that the couple don't let the internal temperature drop below a warm 20°C. The property achieved an EPC rating of A – the recommendation suggested this could be improved further by adding a wind turbine to the grounds.

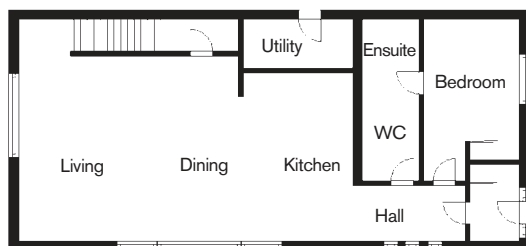
"In deference to the neighbours we decided not to follow this route," says Chris. "Achieving that last 20% of Passivhaus standards is hard and you get diminishing returns. However, even just reaching the 80% creates a very comfortable environment."

The house provides an amenable climate to live in, and not just for Chris and Nicola. In salvaging thousands of bulbs early on, the couple were able to ensure a beautiful garden display in spring 2018,

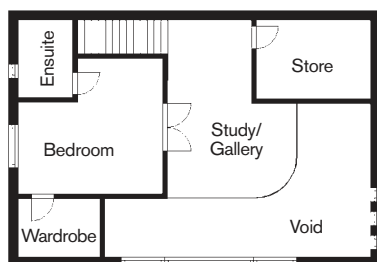
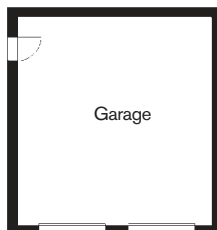
not long after moving in, drawing compliments from neighbours. Wanting to make the most of leftover building materials, scaffolding planks were transformed into raised vegetable beds and a small shipping container was reinvented as the couple's garden shed. "You can actually buy these off the shelf," says Nicola. "They are extremely secure and dry. Ours has a silver galvanised finish, though we clad it in larch." Water butts from the previous owner have all been reused – there is now a water storage capacity well in excess of 1,000 litres. Paving stones from the bungalow patio have also been reused as stepping stones in the two large borders at the front of the house, while stone from an old rockery was used to face the new front boundary wall. "We care strongly about the environment and our carbon footprint – but we are not exactly eco warriors," says Chris. "Neither are we terribly technically minded. We just wanted a feel-good house, with minimal running costs. That's what we achieved."



Floor plans



Ground floor



First floor



House plans re-created using
Build It 3D Home Designer software.
www.buildit.co.uk/3dsoftware



TOTAL BUILD COST BREAKDOWN

Elements	Cost m ²	Cost %	Total cost
Preliminaries	£42	3%	£14,445
Foundations & site preparations	£49	4%	£16,800
Groundwork & services	£33	3%	£11,381
Structural framework	£268	21%	£92,335
Roofing	£92	7%	£31,503
Floors	£94	7%	£32,390
Blockwork	£14	1%	£5,000
Timber cladding	£70	5%	£24,175
Guttering	£17	1%	£6,000
Windows, rooflights & doors	£78	6%	£26,740
Stairs & balustrades	£30	2%	£10,159
Kitchens & bathrooms	£54	4%	£18,534
Log burner, MVHR & solar panels	£53	4%	£18,103
Electrical & heating	£56	4%	£19,205
Plastering & decorating	£49	4%	£17,000
Carpentry & fitting	£88	7%	£30,350
Landscape	£40	3%	£13,793
Garage	£74	6%	£25,348
Additional fees	£97	8%	£33,325
Grand total			£446,586

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

Useful contacts

ARCHITECT MJW Architects 01749 840180 www.mjwarchitects.com **The Green Register** 0117 3773490 www.greenregister.org.uk **STRUCTURAL ENGINEER David Bearman** 01278 685250 www.davidbearman.co.uk **SUSTAINABILITY CONSULTANT Laura Meehan** www.msustainability.co.uk **MAIN CONTRACTOR John Dean Contractors** 01179 611163 www.johndeanbuilding.co.uk **WINDOWS AND DOORS Velfac** 01536 313552 www.velfac.co.uk **ROOFLIGHTS The Rooflight Company** 01993 833155 www.therooflightcompany.co.uk **SOLAR SHUTTERS Contral** 01727 809459 www.contrasol.com **GLAZED BALUSTRADES The Glass Balustrade Company** 01746 763477 www.glassbalustradecompany.co.uk **MECHANICAL VENTILATION & HEAT RECOVERY SYSTEM Green Building Store** 01484 461705 www.greenbuildingstore.co.uk **METAL ROOFING Rheinzink** 01276 686725 www.rheinzink.co.uk



neo
Advance

NEW top performing energy efficient neo Advance rooflight

the
Rooflight
Company

- Achieves whole window U-value of 1.06 W/m²K for a double glazed rooflight
- No condensation and mould problems thanks to our unique thermal shield technology
- Free from unsightly fixings inside and out
- Aluminium frame is ideal for coastal locations

Choose from 7 neo™ Advance flat standard sizes up to 3 x 1 metres



PROUD TO BE A MEMBER OF
EOA EMPLOYEE OWNERSHIP ASSOCIATION
BETTER BUSINESS TOGETHER

Visit: www.therooflightcompany.co.uk | Email: enquiries@therooflightcompany.co.uk | Tel: 01993 833155

Designed and built in Oxfordshire



LAKELAND TIMBER FRAME

Lakeland Timber Frame offer a flexible, personal service for professionals and individuals for self-build projects.



We combine high quality craftsmanship and attention to detail with the latest developments in technology to provide timber framed homes and buildings for the twenty first century.

Contact us to find out how we can offer you practical, value for money timber frame construction solutions to suit your project and your budget.

• **Nationwide service** • **Free estimates**

Tel: 01524 782596 Email: info@lakelandtimberframe.co.uk

lakelandtimberframe.co.uk



Build It Live

SELF-BUILDING | RENOVATING | EXTENDING

SOUTH EAST
8 - 9 FEBRUARY 2020
KENT EVENT CENTRE

NORTH WEST
22 - 23 FEBRUARY 2020
EVENTCITY, MANCHESTER

BIGGER
THAN EVER
WITH SOME GREAT
NEW FEATURES!**

MAKE YOUR DREAM HOME HAPPEN



**Planning a self-build? Renovating a property?
Or looking to add more space to your current home?**

Make sure you spend a day at Build It Live - Build It magazine's dedicated exhibition for self-builders and home renovators.

- FIND PRACTICAL SOLUTIONS TO YOUR PROJECT
- MEET BUILD IT'S TEAM OF EXPERTS FOR FREE ONE TO ONE ADVICE
- ATTEND OUR INSPIRING FREE SEMINARS & WORKSHOPS
- SEE 1000S OF INNOVATIVE & TRADITIONAL PRODUCTS
- IN 2 GREAT LOCATIONS THIS FEBRUARY!

BOUGHT TO YOU BY:



COME & JOIN US IN FEBRUARY!

FOR MORE INFORMATION & TO REGISTER
FOR EARLY BIRD DISCOUNTS VISIT:

www.builditlive.co.uk/early

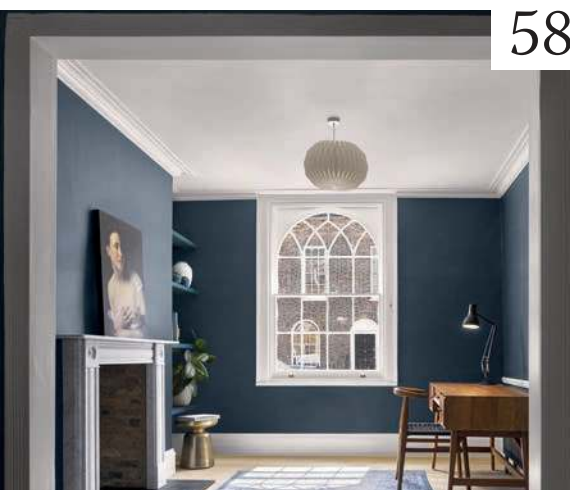
TO EXHIBIT
CONTACT SARAH ON
0203 627 3247

Magazine subscribers will receive their free tickets in December



Renovation & building

SELF BUILD + RENOVATION + EXTENSION + CONVERSION + IMPROVEMENT



58



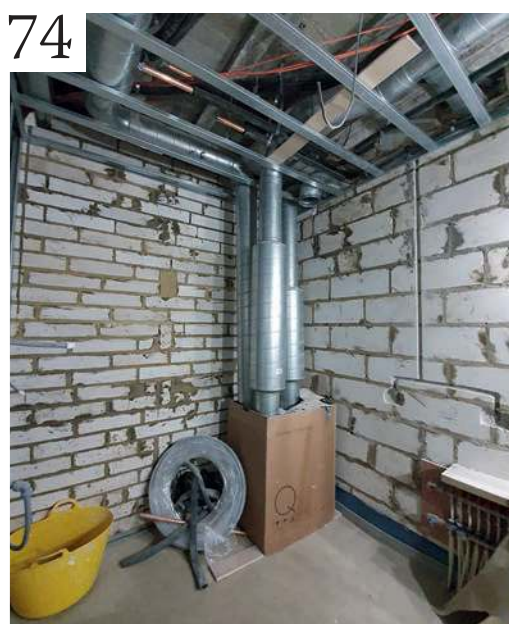
69



81



63



74



77

58 RESTORING PERIOD FEATURES

Richard Webber advises on how to bring your home's original elements back to their former glory

63 STRUCTURAL SYSTEMS

Emily Smith outlines the different materials you can use to construct a house and what could work for you

69 THE FUTURE OF WOODBURNING STOVES

Now that the government's Clean Air Strategy is in play, Lucy Aplin explains what you need to know

74 VENTILATION FOR NEW BUILDS

Nigel Griffiths discusses how to create a healthy living environment with fresh air circulating your home

77 GUIDE TO FLAT ROOF COVERINGS

With various options to consider, Anamika Talwar's summary will help you decide on the right material

81 BUILD COST BASICS

Adrian Wild goes through the considerations to think about when budgeting for your project's roof tiles

MORE ONLINE >>
GET MORE ESSENTIAL
PROJECT ADVICE AT
SELF-BUILD.CO.UK/BUILD-IT



Complete guide to renovating a house

part 7 Restoring period features

From authentic timber sash windows to decorative plaster details, **Richard Webber** outlines the key features you should look to reinstate to enhance your home's heritage appeal

Below: Dominic McKenzie Architects have renovated this 1830s home and added an extension that blends sympathetically with the existing building. The painted timberwork inside the house was stripped back and repainted, and a new Carrara marble fireplace was introduced

It's easy to fall in love with a period property, especially one that's in tip-top condition with its characteristic features intact. Maintaining such old houses, though, requires much effort. But it's nothing compared to the hard graft involved if you're contemplating the complete refurbishment of a neglected heritage home.

The level of satisfaction would-be renovators will experience once the project is complete should not be underestimated. Whether it's Victorian, Georgian or Tudor, any period house deserves to be looked after. "If you own a period property, it's important to make sure that your little piece of history remains in excellent condition," says Tom Barfield, joinery sales manager at Scotts of Thrapston.

Each architectural era has its own individual features, from the pillared doorways and stucco-fronted buildings of the Georgian period to the bay windows and tiled hallways

of the Victorian. So, for any renovation the goal must be to retain the property's authenticity wherever possible.

Whatever your intentions, it's also worth remembering that some period dwellings are listed. If this is the case, additional consent will be required. You'll need to consult the local authority before any works begin, to ensure you comply with the regulations. Over the next few pages I'm looking at a selection of original period features that are worth the time and effort to restore to their former glory.

Victorian floor tiles

Approximately one third of Britain's houses were built before the First World War, with most dating from the Victorian era. In addition to high ceilings, ornate gable trims and bay windows, floor tiles are synonymous with Victorian decor. "Many homes built from around 1860 would have

had a tiled front path, entrance hall, porch or kitchen," says Scott Robson, head designer at Original Style. "Being a classic staple of this era, those who renovate this type of house typically find themselves looking to reinstate geometric Victorian floor tiles to achieve genuine charm and character in their home."

If original units are already in situ, it's almost inevitable that some will be damaged; you might even have to replace them all if they're beyond repair. Whatever the situation, it's advisable to hire a Victorian tile specialist to undertake the work.





You can buy new replica traditional tiles in a batch or, in cases where a small repair is needed, individuals. But unlike many contemporary products, they won't be supplied on a mesh. "Victorian houses weren't built square — they came with their quirks. Therefore, using individual shapes allows flexibility in terms of adapting the tile pattern to the floor space it's installed into," says Scott.

The way in which the tiles are laid also has a profound impact on the result. They must be installed as flat as possible, which means attention to the subfloor surface is crucial. If you're laying them on an existing timber floor, it's worth covering the surface with well-secured marine plywood sealed with a bonding agent. Though many new Victorian-style tiles are suitable for outside use, it's important they're laid in such a way that rainwater drains away freely. Sealing off the tiles is also recommended, both as a protective measure and as a cleaning aid.

Windows

Fenestration styles have developed over the decades due to advances in glass-making techniques, rather than purely as a result of passing fashion trends. Typically, Georgian sash windows sported numerous small panes of glass with intricate glazing bars. But by the time the Victorian era dawned, improvements in glass production meant that larger single panes were available.

According to Historic England, one of the main threats to our architectural heritage is the loss of these kinds of traditional windows from period buildings, with the older units often made from wood far superior than is available today. Therefore, where possible, it's important to repair rather than replace windows. If the energy efficiency of

original windows is a concern, ensure they fit as snugly as possible within the frame by adding draught-proof strips. These will eliminate the in-flow of chilly air and reduce heat loss. Window shutters and curtains also provide efficient insulation. But for even better energy



performance, consider secondary glazing that doesn't affect the external appearance of the building.

"If you're renovating a Georgian sash window, it's worth noting that the original pane would have been made of crown spun glass," explains David Conlon, founder of En Masse Bespoke Interiors. "This glazing contained ripples and imperfections, where it was spun and cut to the size of the window. This caused shadowing and reflections that can't be produced with newly manufactured glass. Therefore, it's important to stick with traditional glazing, where possible, to produce an authentic look."

Inevitably, there are occasions when replacement is the only solution. "Very often, inappropriate products have already been introduced to the property or, perhaps the originals aren't repairable due to rotting," says Tom Barfield. In such cases, responsible substitutions are advisable. This also affords renovators the chance to consider upgrading to double glazing rather than keeping the initial windows.

"If done properly, there will be almost zero variation in appearance from the single glazed original," says Tom. Though double glazing should provide superior thermal performance, units that are poorly designed or fitted badly will have a negative impact on the overall performance of the setup. "It's important for people to source windows from experienced manufacturers that use top quality materials, can offer consistency in the performance and quality of the products, plus provide lengthy warranties. This should give you peace of mind," says Tom.

Wood panelling

This handsome feature adorns the walls of many period properties, particularly Georgian and Victorian, adding a degree of character and regality. It's best not to disturb this kind of timber surface unless it's broken or otherwise unsound. If a clean is all that's required to spruce it up, a wipe over with methylated spirits will remove surface dirt without affecting the original colour.

If, however, sections do require replacing, it's essential that you approach a specialist. Modern wood could move

Left & inset: Cousins & Cousins masterminded the complete renovation of this Georgian house in North London. Careful attention was paid to the restoration of authentic historic detailing including corning, wood panelling and fireplaces. As well as maintaining and restoring the period features, the project boosted the house's energy efficiency



Above: These Victorian floor tiles from Original Style show a bespoke pattern in black, Dover white and Holkham Dune units. Right: Oliver Leech Architects put together the design for the renovation and extension of this Victorian house in West London. The intricate plaster work around the front entrance and windows is typical of properties built in this era

differently to the original panels, resulting in unsightly gaps. By employing experts, it's possible to match mouldings and panel profiles, plus produce identical finishes by mixing bespoke stains. Etons of Bath, for instance, are specialists in Georgian interiors.

Doors

For many people, the front entrance is the focal point of a house, setting the scene for what lies beyond. Therefore, this is one feature you'll certainly want to get right if you're renovating a heritage home. Chances are, the original doors are still intact, but will have suffered through years of repainting. Stripping these back in order to repaint or stain is one straightforward solution.

If any of the paint layers are pre-1960s, it's advisable to employ a professional. Paint from this era invariably contains lead, so without specialist knowledge its removal can present a health risk. The British Coatings Federation, representing manufacturers of paints, printing inks and wall coverings, provides detailed advice on the matter. Their website explains the precautions that should be carried out if you intend to remove such coatings.

When stripping doors, dipping each unit into a large vat of alkaline solution provides a cost-effective solution – but bear in mind that chemicals used in the process can damage some doors. Furthermore, any ironwork will need to be removed before the procedure can begin. It's also a good idea to take out any original glass embedded in the door which could be damaged and difficult to replace. If you're worried about the potential risks associated with dipping, then consider professional hand-stripping. Due to its specialist nature, however, this will be more expensive.

Once doors are stripped back, they should be sanded lightly. At that stage, they will be ready to paint. Take the time to research what colours were used during the era that your house was built in. With many paint suppliers now producing period-specific colours, restoring your door to its original aesthetic should be fairly straightforward.

Plasterwork

Intricate cornicing and coving, including mouldings, are a feature present in many period homes. Decorative examples can play an important role in establishing the traditional character of the room. If plasterwork is sound



but a little dirty, surface stains can be removed with a bleach solution. Alternatively, you could choose to strip away old paint. Where signs of damage exist, it may be necessary to consult a specialist in the field who can offer a restoration and bespoke design service to perfectly match the existing mouldings.

Fireplaces

In many period properties, it's not unusual to find this feature in every room, simply because it was the primary means of warming the home. The development of central heating led to many of these fireplaces being boarded up or removed. Uncovering a hidden gem behind a piece of plasterboard can be very satisfying and restoring it can add significant value to your home.

Before undertaking any revival, it's worth checking with your local authority about any regulations that might exist, especially when a new appliance is to be added. Once uncovered, the fireplace could reveal a multitude of issues, like damaged tile surrounds, cracked hearths or excess paint. Most of these can be dealt with by a competent DIYer. However, the chimney will need to be swept and inspected by a professional to ensure it's in working order. Any new appliance must be installed by a specialist.

Cast iron fireplaces can be cleaned using a little Liberon paste applied with a soft cloth. To help in the makeover, consider applying a heat-resistant matt black paint. If old layers of paint need removing, use a chemical stripper, as cast iron is brittle and liable to crack under high temperature differentials. However, it's vital you remember the advice from The British Coatings Federation, as you must consider the possibility of older paints containing lead. For any missing components or in situations where the fireplace is proving difficult to restore, a visit to your local reclamation yard may prove fruitful.

CONTACTS

Cousins & Cousins 020 7482 4009 www.cousinsandcousins.com **Dominic McKenzie Architects** 020 3327 4780 www.dominicmckenzie.co.uk
En Masse Bespoke Interiors 07887 776178 www.enmasseinteriors.co.uk **Etons of Bath** 01225 639002 www.etonsofbath.com **Historic England**
 0370 333 0607 www.historicengland.org.uk **Oliver Leech Architects** 020 7183 7977 www.oliverleech.com **Original Style** 01392 473004 www.originalstyle.com **Scotts of Thrapston** 01832 732366 www.scottsofthrapston.co.uk **The British Coatings Federation** 0247 693 5390 www.coatings.org.uk

PLANNING ON BUILDING YOUR **DREAM HOME?**

Sips Eco is the UK's Premier Award Winning
EPS Structural Insulated Panel Manufacturer



**TYPICAL HOUSE ERECTED IN 5-7 DAYS, INCLUDING THE ROOF.
7 X STRONGER THAN TIMBER FRAME.
3 X STRONGER THAN BRICK & BLOCK.
ENERGY EFFICIENT STRONG PRE-INSULATED STRUCTURE**

EXCELLENT U-VALUES AS LOW AS 0.13 | INCREASED USABLE ROOF SPACE | HIGH
LEVELS OF AIR TIGHTNESS | REDUCED COLD BRIDGING | COST EFFECTIVE, HUGE
SAVINGS ON LABOUR | NATURALLY GREENER THAN OTHER BUILD TYPES



CONTACT US TODAY FOR A FREE NO OBLIGATION QUOTE

TEL: 01592 631636 EMAIL: ADMIN@SIPSECO PANELS.CO.UK WWW.SIPSECO PANELS.CO.UK



We passionately transform properties
through the supply of creatively designed and
beautifully crafted, contemporary doors and
windows.

Our expert team have decades of
experience in all aspects of the fenestration
industry to offer the optimum combination
of appearance, performance and professional
installation services.

New showroom now open in Crawley,
West Sussex. Call us today to arrange a visit or
to discuss your requirements.



SENIOR ARCHITECTURAL SYSTEMS



www.solusarchitecturalglazing.co.uk

Tel: 01293 978060 or email info@solusarchitecturalglazing.co.uk

windows - doors - curtain walling – steel - timber - aluminium – aluminium clad timber

Dream to Reality



Complete Timber Frame Solutions

- Highest quality construction standards and methods
- Environmental compliance through the use of Eco-Friendly materials.
- Customer service, reliability, affordability and competitiveness in the market place.
- Craftsmanship and rigorous attention to detail.
- MBC also have a Passive standard foundation that can work with all of the MBC Timber Frame systems, this offers a huge benefit of the foundation and timber frame system coming from the same supplier.

MBC Timber Frame is a long established company that specialise in the production of super insulated, precision engineered, energy efficient timber frame and passive standard homes throughout the UK. We are a registered Gold member of the Structural Timber Association and are quality accredited with an outstanding reputation.

At MBC our experience and continuous focus on quality enables our team to satisfy the specific needs and requirements of each individual project, while at the same time provide outstanding service and support to our clients.

Superb energy efficient passive homes - reduced energy costs
MBC also offer high performance windows & doors

UK Office: Quedgeley Court, Shepherd Road, GL2 5EL

mbctimberframe.co.uk Tel: 01452 346499 info@mbctimberframe.co.uk



scotframe timber frame | homes

We provide our customers a complete package, not only do we design, manufacture and deliver the timberframe structure, but we also supply the windows, external doors, internal door sets, stairs, architrave, skirtings, finishings insulation, plasterboard and a whole lot more.

**Scotframe Offices
Sales and
Manufacturing**

Inverurie
Tel: 01467 624440

Cumbernauld
Tel: 01236 861200

Regional Sales Offices

Inverness
Tel: 01463 717328

Dundee
Tel: 01382 561772

Swindon
Tel: 01793 234503

Manchester
Tel: 01616 670225



www.scotframe.co.uk

Structural systems: the options

Choosing your construction method is one of the most important decisions when self building, so getting it right is crucial. **Emily Smith** takes a look at the main structural systems available, their benefits and some real-life examples



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 as little of the project as you want – from simply specifying the

manufacturer to supply and erect the frame right 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.

CASE STUDY

Location Cornwall **Structural system** Timber frame **System supplier** Potton **House size** 370m² **Build cost** £630,000



Bob and Mandy Williams decided to self build after they couldn't find a suitable property on the market in the area they wanted to live. After some research, they chose to adapt one of Potton's timber frame designs into their ideal home. The couple worked with one of the company's in-house designers to make extensive modifications to the design they liked, which was then put through planning by the Potton team.

Work on site got underway in March 2018; the couple were particularly impressed at just how quickly the timber frame went up on their plot. Bob and Mandy moved into their new home in December the same year.

The finished property features a white rendered exterior and light-filled interiors thanks to large windows and glazed doors. The pale grey composite fenestration and aluminium rainwater goods create a modern look. An air source heat pump works alongside underfloor heating to create a comfortable home, which the pair are delighted with.



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 working 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 building this way. 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 as you go in comparison to off-site manufactured systems.
- You can buy design and build packages from suppliers, some of which offer project management and turnkey options.
- Bricks and blocks have high thermal mass properties, which means they absorb heat during the day and release it into your home at night.
- You can source locally manufactured or reclaimed bricks and the units can be recycled at the end of their lifespan.

Main considerations

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

CASE STUDY

Location Essex **Structural system** Brick & block
House size 372m² **Build cost** £670,000



For their demolish and rebuild project Sophie and Stephen Keane had strict guidelines for the design imposed by their local council, but that wasn't a problem for these forward-thinking self builders. They worked with an architect to come up with a suitable brick and block design and hired a builder they had previously worked with to project manage.

One month into the build they came up against a problem with the bricklaying. "We made the mistake of selecting expensive bricks and the cheapest labour quote," says Stephen. "We wanted straight arches above some of the windows using thinner vertical pointed products, but instead, our bricklayer turned the normal units on their vertical side. We stuck to our guns and found another firm to do the task, but obviously it caused unnecessary stress and delays." Thankfully the rest of the scheme came together smoothly and the couple are delighted with their new masonry dwelling, which boasts a traditional aesthetic and a homely feel.



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

Main considerations

- Make sure your designer has experience in working with oak frame.
- The frame will need to 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.

CASE STUDY

Location Worcestershire **Structural system** Oak frame **System supplier** Oakwrights **House size** 305m² **Build cost** £1,200,000



After 17 years of living in their 1980s property, Rachel and Darren Luke were fed up with its cold rooms and subsidence issues. The solution was to knock down and build their dream home in its place.

The couple were inspired by a nearby house. "We spoke to the owners to get advice; their oak frame was from Oakwrights," says Rachel. They chose to work with the same company, whose team put together the design. A key part of Rachel and Darren's brief was to avoid the flooding issues they'd experienced, which resulted in a house raised 1m above ground with 81 five-metre piles below.

Once delivered to site, the oak frame took just seven days to build. Darren took on the role of project manager and did a lot of the work himself. They also employed Specialist Foundations & Construction and builders Furber Young Developments.

The finished building is clad in oak, with sections of render and stone. The oak frame has been wrapped in Oakwrights' Wrightwall Natural encapsulation system to ensure a thermally efficient and airtight building. Inside, the frame is exposed, creating warm honey colour focal features within the contemporary decor.



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 structural envelope.

Key benefits

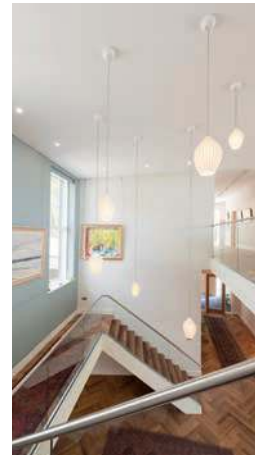
- Structural insulated panels are known for providing excellent thermal performance once built.
- Off-site manufacture can help with budgeting and scheduling.
- Computer-aided factory-precision to meet bespoke requirements.
- You can get panels with windows and doors already fitted.
- Groundworks and 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.
- Can be paired with other construction methods easily.
- Walls can be finished in pretty much any type of cladding 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.

CASE STUDY

Location Northumberland **Structural system** SIPs **System supplier** SIPs@Clays **House size** 500m²



Richard and Ros Maudslay worked with the team at SIPs@Clays to create their new dream home. The complex design spreads across two levels, with only one 90° square corner in the whole property. Other interesting architectural features include large spans of glazed walls and a 4.5m overhang created from structural insulated panels.

Off-site precision engineering was the right solution for this ambitious build, but the tight access via rural lanes was a challenge for getting the system delivered to the plot. However, once there, the SIPs@Clays team quickly assembled the structure, with the home watertight in just over a month. "Seeing the SIPs structure rise from the ground was one of the high points of our project," says Richard.



ICF

Insulated concrete formwork wall systems are created using hollow blocks (usually made of expanded polystyrene), which are interlocked and stacked, reinforced with steel and filled with concrete.

Key benefits

- ICF 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.
- Very little waste is produced on site – offcuts can be re-used and you can order the exact amount of ready-mixed concrete needed.
- This heavyweight structure boasts great acoustic performance.
- ICF is an excellent structural choice for basement construction.

Main considerations

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

CASE STUDY

Location Carlisle **Structural system** ICF **System supplier** ICF Scotland/Nudura **House size** 510m² **Build cost** £464,000



When the owners of this contemporary new home struggled to find a property they liked on the market, they decided self building was the best solution to a bigger home that catered for their young family. After investigating which construction methods would offer a speedy build time and an energy efficient result, the couple decided that insulated concrete formwork (ICF) ticked all the boxes on their brief. They sourced their structural system from ICF Scotland, which supplies Nudura blocks.

Work started on site in January 2016 and the whole family got hands-on with laying the ICF blocks – one of the benefits of this system. Although they were set back by extreme weather and flooding, plus frustrating delays because of problems concerning getting utilities connected, they were determined to be in the house for Christmas. Less than a year after they started, they moved into their new home on 23rd December. The result is an energy efficient home that boasts and MVHR system, underfloor heating and triple glazing.



CENTRE FOR ALTERNATIVE TECHNOLOGY

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 system.
- 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 is thought to date 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.
- Once built, the finished cob structure will require maintenance from homeowners, including an annual lime wash.
- New research is underway about advancements in this technique – go to page 130 to read about the CobBauge initiative.

CASE STUDY

Location Gloucestershire **Structural system** Straw bale **System supplier** Straw Works **House size** 25m² **Build cost** 70,000

Alison and Stuart Sedgwick-Taylor used straw bale to build a small house in their garden, either to house their adult children returning home or Alison's mother, who was looking to downsize. They wanted the space to feel organic and, having been inspired by an earth sheltered house they saw on the edge of a beach in rural Wales, they looked into this method. "We found out that one of the people behind that project specialises in straw bale construction and is now running a company called Straw Works," says Stuart. "We got in touch with builder Barbara Jones and were delighted when she said she wanted to work with us."

The couple made an agreement with Straw Works that their project could be used for training purposes, which meant hosting four building courses to create their new property. "It made it difficult to keep control of quality of the build or to know who was accountable



for the work completed," says Stuart. But it all came together, and Alison particularly enjoyed placing the straw bales: "It was like playing with great big giant toy bricks made out of straw," she says.

CONTACTS

TIMBER FRAME

Baufritz 01223 235632 www.baufritz.com
English Brothers 01945 427985 www.eb-bespoke.co.uk **Facit Homes** 020 3034 0720 www.facit-homes.com **Fleming Homes** 01361 883785 www.fleminghomes.co.uk
Frame Technologies 01544 267124 www.frame-technologies.co.uk **Hanse Haus** 0800 302 9220 www.hanse-haus.co.uk **Lakeland Timber Frame** 01524 782596 www.lakelandtimberframe.co.uk **MBC Timberframe** 01452 346499 www.mbc-timberframe.co.uk **Potton** 01767 676400 www.potton.co.uk **Scandia Hus** 01342 838060 www.scandia-hus.co.uk **Scotframe** 01467 624440 www.scotframe.co.uk **Target timber** 01403 782600 www.targettimber.com **Turner Timber** 01482 218945 www.turnertimber.co.uk

MASONRY

CB Homes 01829 730244 www.cbhomes.co.uk **Northcot Brick** 0800 038 9575 www.northcotbrick.co.uk

OAK FRAME

Border Oak 01568 708752 www.borderoak.com **Carpenter Oak** 01803 732900 www.carpenteroak.com **Oakwrights** 01432 353353 www.oakwrights.co.uk **Welsh Oak Frame** 01686 688000 www.welshoakframe.com

SIPS

Eco SIPs Homes 07577 791936 www.ecosipshomes.co.uk **Glosford** 01432 842999 www.glosfordsips.co.uk **Kingspan Timber Solutions** 01767 676400 www.kingspan.com **Siphus** 01209 215663 www.sip-hus.com

SIPs Eco Panels 01592 631636 www.sips-ecopanels.co.uk **SIPS@Clays** 01756 799498 www.clays.com

ICF

Beco Wallform 01652 653844 www.becowallform.co.uk **Durisol** 01495 249400 www.durisoluk.com **ICF Scotland** 01506 240279 www.icfsuppliesltd.co.uk **Jackson** 01204 221089 www.jackson-insulation.co.uk **Nudura** 0800 014 8901 www.nudura.co.uk

ALTERNATIVES

British Log Cabins 01694 781399 www.britishlogcabins.com **Centre for Alternative Technology** 01654 705950 www.cat.org.uk **CobBauge** www.cobbauge.eu



TARGET TIMBER SYSTEMS

Traditional Values using Modern Methods of Construction



If you are a Property Developer or Builder looking at Timber Frame structures for Houses and Apartments, or a family looking for their dream Self-build Home Target Timber Systems are here to help.

We offer a professional service which includes fully certified design and engineering, supply and erect of factory insulated panels, engineered floor beams and floor deck, roof trusses and bracing along with full chain of custody certification."

For further information
please contact Gary Gooch
or Nick Whittle on
01403 782600
or email
info@targettimber.com

Target Timber Systems Ltd, 29 High Street, Billingshurst, West Sussex RH14 9PP



**A GLIMPSE
of the
FUTURE**

Murelle Revolution 30
The first completely integrated
boiler and heat pump in a single
cased product

- No external unit, installed inside and hung on the wall like a conventional boiler
- ErP A++ energy efficiency
- Suitable for natural gas or LPG
- Can be installed by any registered Gas Safe installer in a single process, no F-gas certification needed!
- Average seasonal heating performance of 134%



**MURELLE
REVOLUTION**

sime
VALUING YOUR CLIMATE

Telephone: 0345 901 1114
Email: enquiries@sime.co.uk

f **t** **in**

www.sime.co.uk

We

build every room, every space, every corner...



...exactly the way you dreamt it

Design your dream home and build a beautiful life with WeberHaus, German house builders since 1960. From start to finish creating your home is a truly personal and enjoyable experience. Our bespoke, luxury homes are custom designed, lovingly crafted, perfectly engineered and beautifully built.

To get in touch with one of our advisors, or for more information, please visit **weberhaus.co.uk**

WeberHaus
— build a beautiful life

Simply the **Best Way** to Fit a Stove

THE
STOVE
BOX

Use a Stove Box to get the best from your stove

- Gets hotter quicker
- Stays hotter longer
- Uses less fuel

The Stove Box can be connected to flue liners and is ideal for twinwall in a no chimney situation.

An HETAS listed product approved by building control.



KIWA evaluation
energy test gives
The Stove Box
a Glowing Report



Chop into an existing chimney breast



Build around with our False Chimney Breast system



Use our Eco-Space Saver



For more information please see our website www.thestovebox.co.uk or visit our store at 13 Island Carr Road, Brigg, Lincolnshire DN20 8PD

A Natural Warmth



Yeoman
A NATURAL WARMTH

WOOD • MULTI-FUEL • GAS • ELECTRIC • BOILER STOVES

For more information on all Yeoman stoves, (including high output boiler models), please visit www.yeomanstoves.co.uk



Following the government's Clean Air Strategy legislation, Lucy Aplin explains everything you need to know about buying and installing a woodburning stove

The future of woodburning stoves



Nothing can beat the cosy ambience and welcoming heat of a flickering flame in a woodburning stove. It's for this romantic reason that stoves remain a desirable fixture in British homes, decades after the introduction of central heating.

Alongside the traditional appeal, sustainably forested wood offers a renewable heat source for those that wish to avoid using fossil fuels and reduce their carbon footprint in our increasingly eco-conscious world.

This being said, woodburning stoves are not without fault. The latest figures show that the use of wood and coal on open fires and old stoves causes 38% of harmful

particulate matter (PM) and significant amounts of the sulphur dioxide currently found in the UK air.

In January 2019, the government released The Clean Air Strategy with the hope of reducing the harmful effects of toxic air pollution by 50%. The strategy aims to tackle all types of pollutants, ranging from the typical large-scale manufacturers and transport industries, down to personal woodburner usage within the home.

Part of the strategy has seen the government pledge that by 2022, only the cleanest stoves will be available for homeowners to buy, but this doesn't mean that you will have to remove or adjust your old appliance. "The most

Above: The Stovax Vision Midi T woodburning stove offers a tall and expansive flame picture. Below: The Purevision PVR Stove by Charlton & Jenrick is Ecodesign Ready. This model is available from Ludlow Stoves

BURNING THE RIGHT FUEL

There is no point in buying an efficient stove if you then use it with the incorrect fuel. For example, you can't burn newspapers in an appliance specifically designed for timber. If you want to have fuel flexibility, consider a multi-fuel appliance.

You should also ensure you use logs with less than 20% moisture content. This is because water-logged timber releases significantly more smoke than dried wood, causing a higher concentration of harmful gases and pollutants to enter the air and your home.

DEFRA suggest using fuel that has been branded with the Woodsure's Ready to Burn logo; this sticker comes with the guarantee that the bag of timber has less than 20% water content. "You can also use a moisture meter if you want to check the dampness of your firewood prior to burning," says Nic Snell, managing director of Certainly Wood.

One of the benefits of an Ecodesign Ready appliance, is that you won't need to use a lot of fuel in modern homes. "Many new houses now have a big, ultra-efficient inset stove. In this case, just use two or three logs in the fire and make sure the wood burns properly before reloading," explains Vicky Naylor, general manager of ACR Heat.





Above: The Christon 750 Mendip Stove, brought to you by Eurostove, has an output of 8.7kW and is Ecodesign Ready

important thing to understand is that stoves were not made illegal in January 2019," says Vicky Naylor, general manager from ACR Heat. "All that has happened is the government has introduced legislation to simply encourage the sale of safer woodburning stoves."

So, what kind of stoves are deemed 'safe' under the government's new official guidelines?

Ecodesign Ready Stoves

According to The Department for Environment Food and Rural Affairs (DEFRA), the safest appliances with the lowest PM emissions are recognised as Ecodesign Ready Stoves, which also support the government's Clean Air Strategy. "These advanced stoves burn so cleanly that they meet, and in many cases even exceed, 2022 air quality and efficiency targets," says Michael Coke, senior development engineer at Stovax.

"An Ecodesign Ready Stove produces 90% less emissions than an open fire and 80% less than a stove



Above: This illustration, provided by the Stove Industry Alliance (SIA), outlines the difference in harmful PM emissions between Ecodesign Ready Stoves and other, less efficient alternatives

manufactured 10 years ago," explains Erica Malkin, secretary general of The Stove Industry Alliance (SIA).

This new range of eco-friendly stoves is far more precision engineered than its predecessors. Through clever use of flue systems, an Ecodesign Ready Stove channels airflow to encourage a thorough and fast-burning combustion. This ensures that the timber burns thoroughly and efficiently, meaning that the flames release significantly less polluting PM emissions into the surrounding atmosphere.

The SIA have been working alongside DEFRA to ensure that by 2022, Ecodesign Ready Stoves will be the only woodburners available to purchase in the UK. The Clean Air Strategy was introduced just one year ago, but there have already been seismic shifts within the woodburning stove industry. "By the time we reach 2020, SIA members will be developing exclusively Ecodesign Ready appliances," says Vicky.

Buying advice

In the wake of The Clean Air Strategy, you can still buy stoves that don't match Ecodesign Ready standards. However, if you're purchasing a new woodburner, it makes sense to buy one with the accreditation. These appliances are not only sustainable, but could also save you money on fuel. "It is a responsible, future-proof purchase," says Vicky.

"You should also take professional advice on the heat output that will be required for the size of the room that the stove is to be installed in," suggests Erica.

Your local independent stove and fireplace retailer will be able to advise you on choosing the right size model but, as a rule of thumb, you need a stove with approximately 1kW of heat output for every 14m³ of space.

Essential maintenance

Once you've chosen a suitable stove, you need to look after it properly. Ensure your chimney is swept annually and regularly check the glass and other components for signs of wear. Always consult the manufacturer's advice.

SMOKE CONTROL ZONES

If you are in a smoke control zone (most people living in cities and towns will be), then you are required by law to have a DEFRA-exempt stove. These models have been designed to limit the amount of smoke produced at the point of combustion. The installation of DEFRA-exempt stoves in smoke control zones has been a legal requirement for decades now; this has not changed since the introduction of The Clean Air Strategy in 2019, nor should it any time soon. You can find out if you live in a smoke control zone by contacting your council.

"Your local retailer will be able to tell you if your appliance is approved for smoke control zones," explains Michael Coke, senior development engineer at Stovax. "Alternatively, multi-fuel stoves give the option to burn authorised smokeless fuels in these areas."

CONTACTS

ACR Heat Products 0121 706 8266 www.acrheatproducts.com
Charlton & Jenrick 0845 5195 991 www.charltonandjenrick.co.uk
Certainly Wood 01981 251796 www.certainlywood.co.uk **Eurostove** 01934 750500
www.eurostove.co.uk **Ludlow Stoves** 01584 878552 www.ludlowstoves.co.uk **Stovax** 01392
 474000 www.stovax.com **The Stove Box** 01652 656495 www.thestovebox.co.uk **The SIA**
www.stoveindustryalliance.com **Woodsure** 01684 278188 www.woodsurre.co.uk



THE QUINTESSENCE OF COMFORT

An ESSE stove creates a focal point at the heart of the home filling the entire space with radiant, welcoming warmth and, we'd like to think, your heart with joy!

www.esse.com

ESSE

01282 813235

MADE IN BRITAIN

Mendip Stoves

Woodburning & Multi Fuels

Ashcott
Wide



Mendip Stoves Ltd

01934 750 500 • www.mendipstoves.co.uk

CAPITAL — STOVES —

ECO 2022

FULLY COMPLIANT STOVES

CAPITAL ECO STOVES HAVE BEEN
DESIGNED TO SIGNIFICANTLY
REDUCE THE LEVEL OF HARMFUL
AIR POLLUTANTS TO MEET THE
ECODESIGN READY REGULATIONS.

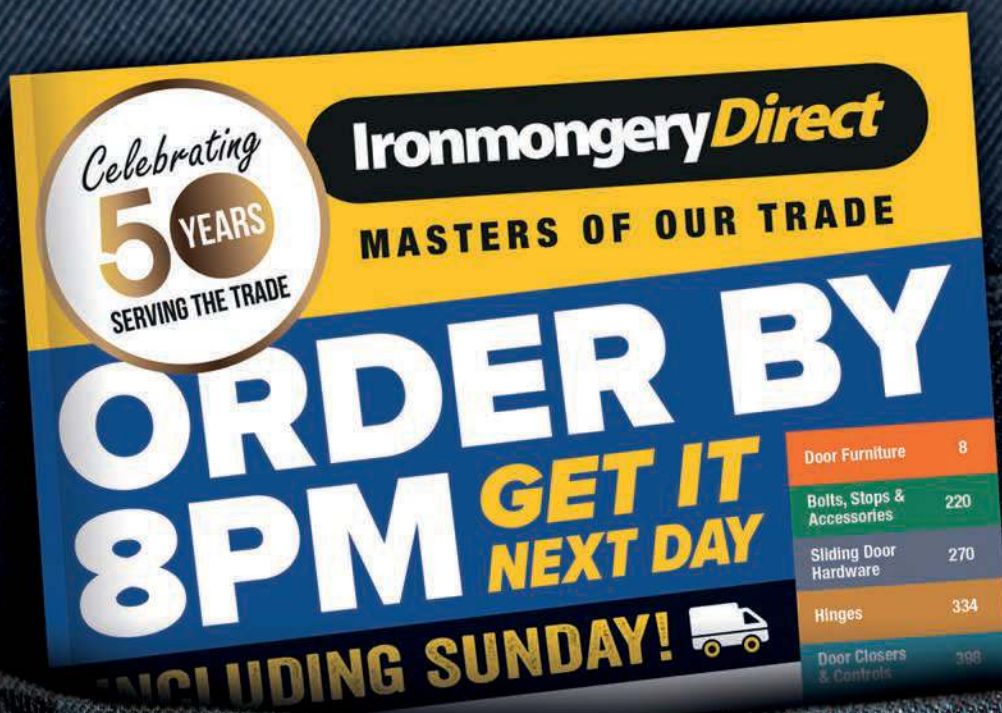
VIEW THE FULL RANGE & REQUEST
A BROCHURE AT

www.capitalfireplaces.co.uk



A SERVICE

YOU CAN RELY ON



Celebrating
50 YEARS
SERVING THE TRADE

Ironmongery Direct
MASTERS OF OUR TRADE

ORDER BY 8PM *GET IT NEXT DAY*

INCLUDING SUNDAY! 

Door Furniture	8
Bolts, Stops & Accessories	220
Sliding Door Hardware	270
Hinges	334
Door Closers & Controls	398

**UK'S
BIGGEST
RANGE
IN STOCK
FOR **FREE**
NEXT DAY
DELIVERY***

RATED
EXCELLENT

 **Trustpilot**



Join the **1000's** of customers who shop with us every day!

*Orders over £45 Ex VAT when you order by 8pm.



***“First class
service, good
quality material
and excellent
delivery service”***

Norman Ellis - Online review



It's what **every tradesperson** needs!

We won't let you down

Get your FREE CATALOGUE today! Order by phone or online



CALL: 7am-8pm 7 days a week

0808 168 22 74



ONLINE: Shop 24/7!

IronmongeryDirect.com

IronmongeryDirect

MASTERS OF OUR TRADE



Ventilation for new builds

Eco expert **Nigel Griffiths** discusses how to get the air flow right in your house – an essential element for creating a healthy home

Above: The Larch Corner Passivhaus was designed by Mark Siddall at Leap Architecture (www.leap4.it). When completed, the Cotswolds home was the UK's most airtight self build. Green Building Store (www.greenbuildingstore.co.uk) supplied numerous materials and products for the development, including the MVHR system – a Paul Novus 300 MVHR unit, with a 200mm Maico grille on the exterior wall

As our homes have become progressively more airtight, principally in order to reduce heat losses, ventilation has become increasingly important. The advent of modern sealants, improved window technology, better quality control of site work and, finally the introduction of airtightness membranes, means there is little to no air leakage in modern structures. This is why we need to make provisions for letting fresh, clean air into our homes.

Purpose provided ventilation

There are three main ways to let fresh air in. In practice, a combination of the below are used in most dwellings:

- Extract systems, such as extractor fans in kitchens or bathrooms, are designed to remove water vapour and pollutants and to prevent or minimise their spread to other parts of the building.
- Whole dwelling ventilation provides fresh air and is used to remove residual vapour and pollutants that are not dealt with by extract systems. This includes openings in walls or trickle vents, but also integrated whole house setups.
- Purge ventilation basically means opening a window so high concentrations of pollutants can be removed quickly. Normally used after burning the toast!

Whole house arrangements can either be actively powered by fans or passively driven. Perhaps surprisingly, the former use little power. Passive systems, on the other hand, rely on the stack effect, which arises from differences between indoor and outdoor air pressures and temperatures. This example of natural ventilation is normally known as Passive Stack Ventilation (PSV). It is worth noting that



properties featuring these solutions have far less risk of failure, provided that the building is constructed correctly.

Ventilation systems

There are four main types, which are:

- Background ventilators and intermittent extractor fans
- Passive stack ventilation
- Continuous mechanical extract ventilation
- Mechanical ventilation and heat recovery (MVHR)

How the ventilation system is controlled is an important factor. This may simply be the ability to open or close a vent, or could be more complex, as with whole house MVHR setups. Even permanent background vents, which should always be open, can be compromised either by obstructions or by changes to the building fabric. Kitchen and bathroom fans use a combination of manual switching and automatic control, such as timers and humidity sensors. Essentially, they operate as needed.

Active whole house ventilation systems often have a much more sophisticated means of operation. They can be run continuously, or switched on intermittently when sensors indicate a high level of a pollutant. Normally, the sensors work on either humidity or CO2 levels. These are not the only important pollutants in dwellings, but they are a good indicator of broader air quality and thus the need to ventilate. Ideally, this type of ventilation system should monitor and control air quality in every habitable part of a property, so this requires ducting to each room.

By using a centralised system, air flow can be concentrated to take the warmth from what is being expelled and use it to raise the temperature of incoming fresh air. This is known as a mechanical ventilation and

BUILDING REGULATIONS ON VENTILATION

Approved Document F or "Part F" of the Building Regulations sets the standard for the minimum amount of fresh air that needs to be provided in new dwellings.

As the regulations need to cover buildings that are constructed to very exacting airtightness standards, two models are used:

- In the default option the guidance assumes zero air permeability (Passive dwellings can approach this), so the building relies entirely on purpose-provided ventilation.
- The alternative option assumes that the building will have a permeability of (ie be leakier than) $5\text{m}^3/\text{m}^2/\text{hr}$ at a rate of 50 Pa (Pascals), so assumes an air change rate of 0.15.

The Building Regulations set out the extract rate in litres per second required for kitchens, bathrooms, utility rooms and

sanitary accommodation, in addition to whole dwelling ventilation rates per m^2 of internal floor area.

There are two main problems with the Part F approach. Firstly, a ventilation design is not normally submitted to Building Control, and the provision of background ventilators is normally left to window designers. Secondly, in practice, the provision of fresh air is rarely tested and natural ventilation almost never. Most mechanical systems can deliver on the 0.3l/s/m^2 but they have to run at full power to do this, so noise becomes an issue.

It is worth noting that Part F is currently under review and a new 2020 edition is currently out for consultation. The proposed document dispenses with much of the prescriptive advice in the current regs and moves instead to a performance specification. For more advice, visit www.planningportal.co.uk.

heat recovery system (MVHR). Going one step further, if a heat pump is integrated into the system, the MVHR can become the main source of space heating – and the dwelling is operated more like a larger non-domestic building, where such systems are the norm. Thankfully, there is a half-way house that is pleasantly low tech! This is to provide a heat bank based on coils of pipework laid underground leading to a heat exchanger in the incoming air duct. This provides a stable $10\text{--}12^\circ\text{C}$ which can be used to warm incoming air in winter or to cool air in the summer.

Lastly, we should mention positive input ventilation (PIV). Essentially, this is the opposite of extract ventilation. By forcing air into a building, an adequate fresh air supply is provided, and pollutants can then escape through

current regulations for PSV, continuous extract systems and MVHR setups. Also bear in mind that basements will require special treatment, and even Building Regs recommend that you consult an expert. Whole house ventilation arrangements are classed as mechanical systems and therefore have to be formally commissioned, too, which provides another layer of protection.

It is important for MVHR systems to be designed and fitted by a specialist provider to ensure your setup runs as effectively as possible. The use of flexible ducting is to be discouraged – rigid ducting is less prone to installation issues such as kinks or compression of pipework. Poor co-ordination with the structural design of your house can sometimes lead to non alignment of the ductwork. Therefore, it pays to involve a specialist ventilation designer at an early stage in the structural design of your new property.

In reality, one of the major reasons that MVHR systems fail is a lack of maintenance. It is recommended that filters are checked regularly and changed at least every six months, as they can become clogged with dust, dirt and grease – especially in busy kitchens.

The ducting in this self build scheme by Model Projects (www.modelprojects.co.uk), located in Wimbledon, London, forms part of a whole house ventilation system



This project by Welsh Oak Frame (www.welshoakframe.com) was designed to be as airtight as possible. It has a separate plant room to house all the eco tech installed in the home

designed openings or through leaks (gaps) in the external building envelope. This is not a recommended strategy for new buildings but, in some circumstances, it can be used safely and to great effect in existing buildings.

Design & fitting

Many self builders design to high levels of airtightness, and will therefore want to adopt a whole house system. This is subject to Building Regulations and a professional design will be required. The work will need to be carried out by a qualified supplier, but it is much better to use an independent expert who will provide unbiased advice.

It is necessary to balance the different kinds of vents in the building, and to be aware of the stipulations in the

NIGEL GRIFFITHS



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



Resourcefulness is in our nature

Nature is our greatest source of energy. With a NIBE ground source heat pump, you can harvest the power stored in the ground to heat your home and create the perfect indoor climate. And by using local natural power, together we can build a more sustainable future.

IT'S IN OUR NATURE

WWW.NIBE.CO.UK

 **NIBE**



Guide to flat roof coverings

Anamika Talwar outlines the options available for your flat roof's finish, and the key considerations to make

Selecting a material for your flat roof can be a daunting prospect, especially as these once held the stigma of being leaky and less capable of directing water away from a building. However, modern construction and coverings mean that a level roof can protect your home just as effectively as a pitched one. Technically, flat roofs are never completely flat – they need a slope to allow water to be channeled away and avoid water pooling, which is how leaks start. Any covering lower than 10° comes under the flat category.

Other than low-flying planes and occupants looking out over a flat roof lower storey, few people are likely to see this level. So, rather than the look, perhaps budget constraints and durability will dictate the material you choose. However, if aesthetics are important to you, it may be worth spending extra on a more attractive covering. So with this in mind, what are the available options for a flat roof finish and which is right for your home?

Torch-on materials

These are coverings such as felt and bitumen, which are placed on the roof surface and blowtorched to melt and weld panels together. This process attaches them to the roof surface and creates a watertight seal. It's a popular installation method, but is a job best left to the experts.

Modified bitumen is one of the most common materials installed this way. The asphalt-based covering is strong

and durable, with a lifespan of around 20 years. It's at the higher end, price wise, compared to other torch-on options.

Despite being less sturdy, felt is still widely used on domestic roofs. "This continued use is due to its low price and long-standing tradition in the industry," says Reggie Norman at Roofinglines. "But it's harder to maintain – you have to torch a new layer of felt on top of the existing one."

Synthetic roofing

An alternative to torch-on roofing is a single ply membrane, which is strong and flexible, made predominantly from synthetic polymers. Popular options include PVC (polyvinyl

Above: This modern home with a flat roof was created by BWP Architects. Below: The Metal Roof Company provided this lightweight steel covering with a finish to imitate zinc



chloride), TPO (thermoplastic polyolefin) and EPDM (ethylene propylene diene terpolymer).

"EPDM is essentially a sheet of man-made rubber glued to a clean roof decking," says Reggie. It comes in two thicknesses, 1.14mm and 1.52mm. When in place,

Right: This house extension in Marlborough by Designscape Architects benefits from a green roof, giving the homeowners a picturesque view from the window above



the surface is smooth and durable, but some people aren't keen on its rubber-like appearance.

PVC roofing typically comes in sheet form, too. It's a strong and lightweight material, with a useful lifespan of around 20 years. This covering comes in a wider range of profiles, so it can be easier to manipulate and apply than EPDM. PVC tends to be a low-cost solution for sheet roofing, despite the benefits it offers.

TPO membranes are a great modern option for flat roofs, especially as an alternative to lead. TPO is chemically welded using solvents and once stuck, it stays stuck. Make sure it's installed by a professional and backed up with an insurance-backed guarantee.

A high-end alternative

If you're after a roof terrace, a glass reinforced plastic (GRP) roof could be the perfect solution. "They are extremely popular for their aesthetically pleasing grey or white finish and ability to take regular foot traffic," says Reggie. Being able to bear the weight of people makes this an ideal option for an outdoor living space. This high level of functionality and attractiveness puts GRP at the upper end of the pricing scale. "It might be expensive, but its durability could be a big money saver in the long run," says Reggie. As with any option, GRP does have some limitations. "This kind of covering can only be affixed to oriented strand board (OSB), whereas felt can be easily laid onto plywood," says Reggie. You should factor these materials in early on in the design and construction process, so that you don't accidentally go over budget.

Going green

Referred to as green or sedum roofs, installing a plant eco-system on a flat roof is a popular choice for modern builds. "One of the main benefits of this kind of covering is its

ability to remove air pollutants from the surrounding atmosphere," says Jake Locke at Sky Garden. "It also requires minimal maintenance post-installation, as long as it has access to sunlight and water reserves."

With most roof coverings you try to keep water off, but with this solution the opposite is true. This makes accurate, professional installation and insurance-backed guarantees an absolute must for sedum roofs because if you get a leak it could be tricky to trace and a nightmare to fix.

The design process is quite in-depth as you need to consider the extra weight that your roof will have to bear. "There must be a minimum of 50mm deep substrate for the sedum to grow successfully and some kind of storage element for water for the drier seasons," says Jake.

Standing seam

These roof systems are made up of metal sheets joined by a crimping technique, which forms a seam. Underneath sits a layer of insulation and timber, creating a watertight, long-lasting roof which retains heat and avoids echoes.

Zinc is a popular option for a standing seam roof, but comes with a higher price tag than other metals. "A metal sheet roof should have a lifespan of over 50 years," says Sean McHugh, director at The Metal Roof Company. "There are many zinc roofs that were installed over 100 years ago and are still in good working condition today."

Steel roof systems offer similar benefits, but at around half the cost. "When compared to a large zinc roof, there is usually a considerable saving," says Sean. Steel can also offer a number of finishes, like different colours and glossy or matt looks, which makes it appealing to self-builders who want to customise every aspect of their home.

Code 4 Lead is another good option for flat roofs, especially for small areas. It's advisable to use in spots that are out of reach as they have a tendency to be stolen.

WHY CHOOSE A FLAT ROOF?

Any roof with less than a 10° pitch is considered flat. This design can offer a raft of benefits to your build. "Flat roofs are usually quicker and cheaper to construct than pitched designs, will lower the height of a building, and can be used to host sedum coverings," says Leigh Brooks, director at BWP Architects. The covering you choose to finish the roof will have a dramatic impact on the entire house, so it's important to design it well. Leigh says: "the decision between a flat or pitched roof is often a matter of aesthetics rather than function." For instance, if you're building a traditional-style

home, something level might not work. "When designing a roof, we consider various factors, like the client's architectural desires, the style of nearby properties and the local environment," says Leigh.

Your roof's intended use will heavily influence the covering you specify, too. If your garden is small, for example, you might decide to incorporate a roof terrace or balcony. You also need to account for the weight of foot traffic, which means your covering should be load-bearing. What's more, if you want a green roof, it will need to cater for not only the weight of a plant roof, but also irrigation.

CONTACTS

Britmet 01295 250998 www.britmet.co.uk **BWP Architects** 01252 821114 www.bwparchitects.com **Designscape Architects** 01225 858500 www.dscape.co.uk **Roofinglines** 01303 769990 www.roofinglines.co.uk **SIG Roofing** 01480 466777 www.sigroofing.co.uk **Sky Garden** 01242 620905 www.sky-garden.co.uk **The Metal Roof Company** 020 8810 0120 www.themetalroofcompany.co.uk **World Health Organisation** www.who.int

PUREVISION

Stoves of the future – here today



Charlton & Jenrick^{LTD}

Best of British fires, fireplaces & stoves

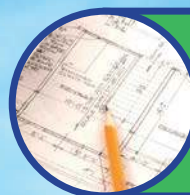
T: 0845 519 5991 www.charltonandjenrick.co.uk



www.facebook.com/cjfires



Whole House Ventilation with Heat Recovery...



Send your plans for a **FREE** ventilation design and a competitive quotation

- Virtually silent operation
- Low energy DC electric motors
- Range of control options
- Acoustically insulated ducting
- Filter reduces effects of respiratory allergies
- Reduces heating bills
- Can promote conditions for improved health
- Easy to install for DIYer or professional alike
- Conforms to Building regulations
- Full installation service available

...for a fresher, healthier, home

Rega's unique WhisperFlow® technology ensures that even when operating at full 'Boost' mode (usually during the morning bathroom rush hour!) the system remains whisper quiet - unobtrusively and effectively venting stale, damp air, replacing it with air that's been gently warmed and filtered.

Low energy DC fans, insulated ducting and a high efficiency heat exchanger also ensure that power usage and energy losses are kept to an absolute minimum.

RegaVent systems are designed and built here in the UK, to our own stringent quality assured standards, you can be sure that your RegaVent system will give you the optimum balance of a technical specification that's exactly right for the UK climate, coupled with low energy consumption - for lower heating bills!



Rega Ventilation Limited

21/22 Eldon Way, Biggleswade, Beds SG18 8NH

fax: 01767 600487 email: sales@rega-uk.com

Call us on **01767 600499** or visit
www.regavent.co.uk

Build cost basics: roof tiles

Adrian Wild from the Build It Estimating Service takes a closer look at what you can expect to pay for your home's roof tiles



Adrian Wild is managing director of HBXL Building Software, which powers the Build It Estimating Service. The service will enable you to calculate your project costs right down to the last roof tile. Find out more at www.self-build.co.uk/estimate



Tiles are a popular covering for pitched roofs, but there are lots of options to choose from. Plus, each style works best on specific roof pitches, so it's important to do your research before ordering. But before I get into details about the materials themselves, let's look at how the different gradients could affect your choice.

Roof pitches

The most suitable topping for your self build or extension will be influenced by your budget, how the space will be used and, possibly, the thoughts of the local planning department. Other considerations include geographical location, building orientation and wind exposure on your site.

The roof pitch on a ground floor single-level extension is generally going to be lower than those on higher storeys – mostly because of its visual appearance (a high pitch on a low building can be a very dominant feature) and the practical element of needing to fit the roof below/between existing upper floor windows. But a pitch of 15° or less is unlikely to be tiled due to wind uplift and penetration by wind driven rain, particularly in areas of severe exposure.

As a rule, lower pitches require greater overlap between tiles, which means more units and therefore higher costs per m². Tile spacing on steeper designs is generally wider; although the price per m² will reduce, it will not make the roof cheaper overall because the steeper angle has a bigger surface to cover. However, the larger area beneath this can provide an opportunity to create additional living space.

Tile options

There are different styles and materials available to cover a pitched roof, but here are some popular solutions:

Pantiles: Featuring an S-shape profile, lapped tiles are available in various designs to create a roof with rolls and

troughs. They are available in single and double tiles, non-interlocking and interlocking, clay and concrete. Some are suitable for pitches down to around 15°. These units are generally lighter and the most cost-effective in comparison to the other options I'm discussing here. You can also get pantiles that simulate the look of plain tiles.

Plain tiles: Mostly made of clay, these flat designs require double lapping to prevent water penetrating the gaps between adjoining tiles, which can increase the load on the structure by as much as 50% more than interlocking units. The extra nailing requirements make a big difference to labour costs, which is why you'll see in the table below that they are the most expensive option I'm investigating. Plain tiles are not generally suitable for pitches below 35°.

Slate: These units need at least double lapping for a watertight finish. They usually require a pitch of 30° or more; larger sizes are suitable for lower designs as they are heavier, but they are also more expensive.

Estimating costs

The prices shown below are presenting a 12m x 8m house and a 5m x 5m extension project, both with apex roofs. The costs include the labour and materials (tiles, timber, membranes, undercloak, nails, mortar, guttering, fascia, soffit, bargeboards, plus insulation and plastering to the ceiling). The main exclusions are design charges, planning costs and fees. We haven't included VAT, overheads and profit. Self build projects qualify for zero-rated VAT on labour and materials (the latter will be reclaimed after the project), but renovators will need to pay the usual 20%.

We're looking at a standard gable-to-gable roof design, so I've included the gable wall costs as these will change depending on pitch height. The prices shown below are based on brick and block construction.



New house

Plain tiles come in as the most expensive option on our 12m x 8m roof. The roof pitch creates a price difference of £8,641 in the most extreme example below.



Extension

Pantiles are the only option here that are suitable for our lowest roof pitch of 15°. Going higher than 45° on an extension is likely to restrict views from upper storeys.

Roof pitch	Pantiles	Plain tiles	Slates	Gable wall cost
35°	£17,349	£24,597	£20,852	£3,741
40°	£17,863	£25,565	£21,606	£4,471
45°	£18,467	£26,755	£22,531	£5,317
50°	£19,255	£28,302	£23,725	£6,324
55°	£20,357	£30,383	£25,256	£7,566
60°	£21,837	£33,238	£27,579	£9,163

Roof pitch	Pantiles	Plain tiles	Slates	Gable wall cost
15°	£6,158*	(Not suitable)	(Not suitable)	£315
20°	£6,240	(Not suitable)	£7,692**	£419
25°	£6,315	(Not suitable)	£7,700**	£530
30°	£6,466	(Not suitable)	£7,454	£651
35°	£6,663	£8,950	£7,709	£784
40°	£7,077	£9,509	£8,142	£935
45°	£7,394	£9,998	£8,547	£1,109

* Limited range of tiles suitable below 17.5° pitches ** Larger slate tiles needed to resist wind uplift



Bifold & Sliding Door Systems offer high quality bespoke window and door systems.

Our systems take on all the core elements of quality including: design, soundproofing, security value and energy efficiency. Modernise your home or business today.

For a free survey or quote do not hesitate to contact us!

www.bifoldsldingsystems.co.uk

Facebook @bifoldsldingdoor

Email

info@bifoldsldingsystems.co.uk

Tel: 0121 558 0409



BIFOLD &
SLIDING DOOR SYSTEMS



FRAMETM
TECHNOLOGIES
SELF-BUILD TIMBER FRAME

TURNING YOUR VISION
INTO A **PREMIUM**
QUALITY HOME



Specialising in beautiful bespoke homes, Frame Technologies is at the forefront of innovation in timber frame construction. Through a wealth of experience gained over two decades in the industry, we can help you through every stage of your design and construction journey - turning your vision into premium quality, energy efficient home.

Contact a member of the team today!

T 01544 267124 E enquiries@frametechnologies.co.uk

www.frametechnologies.co.uk



Expert help

SELF BUILD + RENOVATION + EXTENSION + CONVERSION + IMPROVEMENT

92



103



84



95



99



84 ACCESSIBLE TO ALL

Architect Opinder Liddar advises on how to design your home with disability issues in mind from the beginning

89 DEALING WITH NEIGHBOURS

Local residents can have a huge impact on your project. Mike Dade investigates how to keep them onside

92 PROJECT MANAGEMENT: PART THREE

Mike Hardwick tackles the importance of good scheduling for build success

95 DRAUGHT PROOFING A PERIOD HOME

Alan Tierney explains how to let your old building breathe, while ensuring comfort

99 HOW A SITE IMPACTS DESIGN

A plot's surroundings will influence the way you plan and build your abode, says architect Julian Owen

103 ACOUSTIC PERFORMANCE

Avoid an overly noisy home with Tim Doherty's guide to sound proofing

PLUS: FINDING LAND (PAGE 111), YOUR QUESTIONS ANSWERED (PAGE 108), PLOT WATCH (PAGE 116) & SELF BUILD MORTGAGE TABLE (PAGE 107) >>



Accessible to all

Inclusive design isn't costly. By embracing it from the outset, your home will benefit you and your guests for the rest of your lives, says architect Opinder Liddar

I put my back out earlier this year. I wasn't able to walk upstairs and, although I could sleep on the ground floor of my house, the journey from there to our sanitary facilities was a long one. It was an interesting and difficult few weeks, and it made me wish that I lived in a house that had been designed with inclusivity in mind.

When buildings are created from the outset to be accessible, you will not notice the inclusive elements, because they are part of the design. However, many properties that have been adapted after their original construction have a cluttered feel, as the changes have to be tacked on as an afterthought.

Since the early 1990s, there has been a big legislative push for dwellings to make provision for disabled access. Now, for example, every new property must have an accessible front door and ground-floor WC. However, there are many other features that can also be easily incorporated into a house's design, which can add value without significantly increasing the budget, so long as they are considered in the early briefing and design stages.

Part M of the Building Regulations (Access To and Use of Buildings) is the most relevant to this subject. However,

treat these standards as the bare minimum. With more of an embracing attitude towards inclusivity, you can ensure that your home will benefit you and anyone else that comes to live there for the rest of your lives.

External features

Starting from where you park your car, the space should be 3.3m wide on a level area so doors can open fully to help you get out of the vehicle. Aim to place one of these spots close to the entrance. The area immediately outside the front door should have a cover such as a porch, with level flooring. So, if you're juggling with crutches, a buggy or a wheelchair while getting your keys out, you're able to stay balanced. Keyless entry could make things even easier.

Make sure that the front door opening is at least a clear 775mm width. There are some fantastic wide designs on the market that exceed this width and create better access. You cannot have any lip at the threshold of an entrance that is greater than 15mm but, by installing a channel drain, you could have a perfectly level approach at this junction. Consider introducing this to every external door, so everyone can enjoy easy access to all entry points of the house. Large bifolds or sliding openings are a popular solution to the rear of properties. It is possible to introduce drainage channels to enable a level means of approach across the width of your glazed feature doors.

Internal features

Design corridors and internal openings so that they are wider than usual and aim for a width of 1,000mm where possible (minimum 900mm). When a door is open in front

Above: Extra-wide front doors with flush thresholds may be popular, but they also dovetail perfectly with inclusive design ideals. This Porto oak door is by Urban Front (www.urbanfront.com)

of you, the clear distance from the edge of the handle to the point at which the panel would close (into the door stop) should be 775mm. I've recently used 926mm-wide units in my own self build project. Just this subtle tweak is making all the difference in terms of ease of access, even for when you are simply carrying a tea tray or items of furniture. Try and keep obstructions, such as radiators, away from particularly tight areas like narrow hallways. In a confined corridor, doorways that are perpendicular to the direction of movement (that turn at right angles from the corridor) should be made wider for ease of access, although using 926mm doors will be fine.

We at Lapd design staircases so that the risers are lower than the Building Regulations height, which results in more steps with deeper treads. We also add handrails to both sides of the flight. These subtle alterations mean that you will be able to use the steps for much longer into old age than if a standard arrangement with one rail had been installed. These design features also reduce the risk of the user falling, as the treads are more generous and you have something to hold on to with both hands.

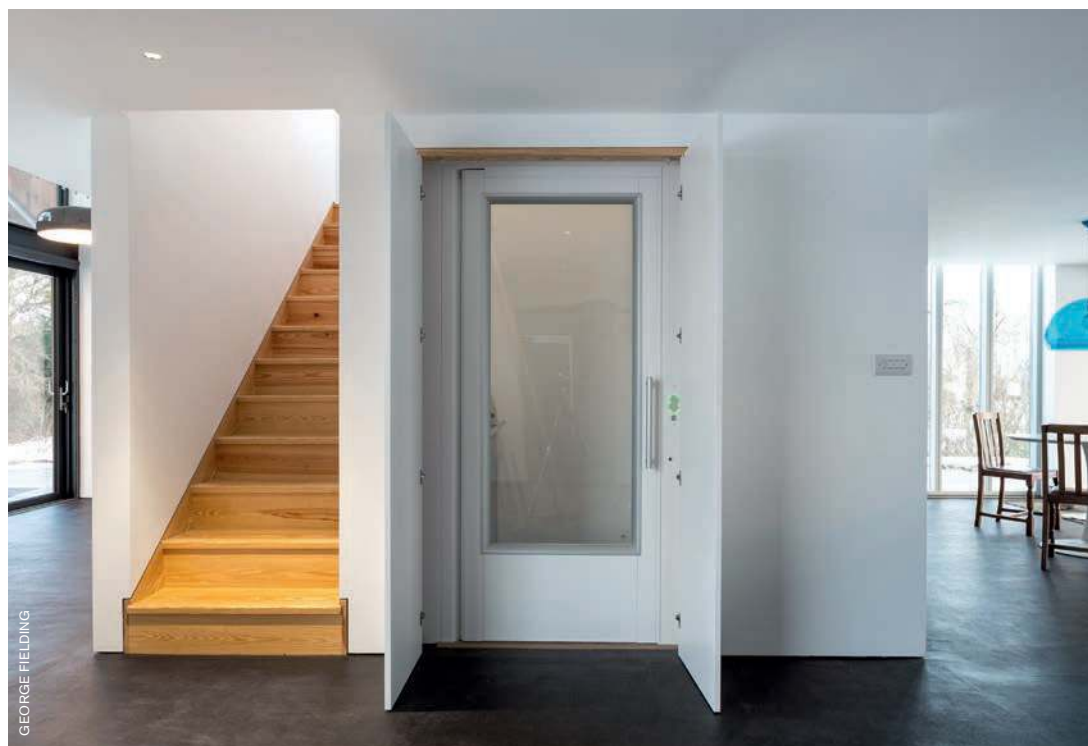
Bending down can be a challenge as we get older so, these days, electrical switches and sockets have to be sited within an accessible zone. This is a useful requirement and in newer houses you'll find power sockets higher and light switches slightly lower. If for whatever reason you find you spend more time seated or in bed, lower sill heights will be appreciated as you'll have clear views of the outdoors. You will require a WC at the entrance level of your home

bedroom with access to a shower and WC. The downstairs cloakroom is positioned next to this potential bedroom area, and the dividing wall is constructed in such a way that a door-shaped panel can be easily removed, so you have the potential to create an ensuite. The cloakroom will have been designed with plumbing already in place to install a shower, which doesn't cost too much to do. Ideally, this zone should be fitted out as a wetroom (ie, waterproofed, with a floor gully in place), so that it is all ready to fit the shower and a screen at a later date. This type of bathing area should have a level entry to get into the shower.

If your home's floorplan does not allow for a ground floor bedroom, think about future lift provision. This is an expensive item to supply. Therefore, if you allow for the future installation within your initial build, at least you won't have the additional construction costs later on, on top of the outlay for the lift itself. You can construct your first storey so that, as with the shower room idea, a panel can be simply removed to enable installation and access. Carefully consider where this can be positioned so you have a clear area on the ground floor and first floor for easy access to and for use of this feature. Access to sanitary facilities is important, too, so you may want the lift to open into a bedroom with an ensuite bathroom.

When building in timber frame or constructing internal stud walls, it's a good idea to allow for an additional layer of plywood sheet to line the walls. Not only is this useful for hanging shelves and toilet roll holders but will also allow you to fix grab rails to ease movement in the future.

Below & below left: New British Design (www.newbritishdesign.com) planned this house for a homeowner paralysed from the neck down. The scheme includes a lift and a hoist slotted into the roof truss above the bed



and need to make sure that the room is wide enough to accommodate someone who uses a wheelchair.

Future proofing

Your property should be able to adapt as your various requirements change. Whenever we design new homes at Lapd, we create a space on the ground floor that, no matter its immediate intended use, can easily become a

Without this, you'd require specialist fixings or need to build in new structures at a later date.

In some special circumstances, we have designed ceiling joists that are strong enough to carry hoist systems that enable people to move from a bed to the sanitary facilities. Carefully consider your own needs and the likelihood of requiring such provisions at the outset, as they are relatively easy to install as part of the original

construction. However, they are far more costly if you are adapting an existing structure.

Latest technology

Great leaps have been made recently in home automation and these new high-tech products have the power to significantly adapt our use of our dwellings, even beyond the physical changes that can be designed and built in.

Voice recognition allows lights, sound and visual devices to switch on and off so that you can operate your property without moving. Heating and ventilation can be monitored from your mobile phone, enabling efficient and comfortable control of the temperature of individual areas of a house.



Above & above right: This house by Hunter Architects (www.hunterarchitects.co.uk) is Lifetime Homes accredited. It includes a wetroom on the ground floor. Building Regs state that a WC needs to be sited on the ground floor, but a wetroom goes one better as it can potentially be used to service an adjacent bedroom

I've even incorporated electrically operated blinds on windows that have been timed to co-ordinate with the sunrise and sunset at different times of the year.

Conclusion

The Lifetime Homes standard (www.lifetimehomes.org.uk), a set of 16 criteria for inclusive residential design, covers much of what I've described here and is a good reference to point your designer towards. Its aim is to assist everyone, regardless of age, gender or disability, to make full use of buildings. Some local authorities have adopted the criteria as part of their planning requirements.

Whether regulations apply or not, many of the changes described here make sense to consider even if you are not required to by law. I've designed houses for all age groups and have applied these principles to everyone. When designed well, these adaptations do not stand out in comparison to those that are subsequently added where the occupants' situation changes.

INTERNAL DOORS

The requirement for clear accessible widths has been set in the Building Regulations for well over 20 years. However, I've been surprised in my own self build project at the current lack of choice and availability of regulation-compliant doors, in particular for the glazed doors that are currently on the market. Bear this in mind when carrying out your own project. It is possible to have glass units that are purpose-made, but you would probably be looking at a three-month lead-in period to have these manufactured, which may impact on the overall timescales of your build.



It can, quite literally, be a real pain when you no longer have the maneuverability that others take for granted. Taking on board these straightforward requirements in your design will make things significantly easier for everyone using your home and for future occupants if and when you ever decide to sell.

OPINDER LIDAR



Opinder Liddar is a Build It Award-winning designer and a director at Lapd Architects. He specialises in self build homes and renovation projects, and is a regular expert at Build It Live. For more information

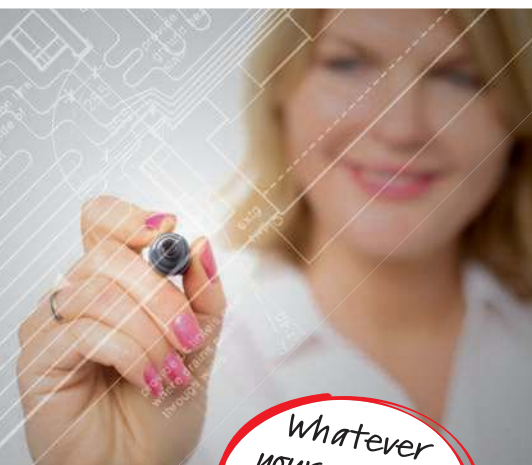
about Lapd Architects call 01865 407722 or visit www.lapdarchitects.co.uk



the **underfloor heating** store

Considering underfloor heating for your home?

- ✓ Free design service
- ✓ Dedicated support
- ✓ Lifetime warranty
- ✓ Assured quality



Underfloor heating systems to suit **any room & every budget**

Whatever your project, we've got it covered!

Kitchen: 12m² electric foil system

£357.29
inc vat



Bathroom: 6m² electric mat system

£191.69
inc vat



5 bed home: 120m² water system

£1439.99
inc vat



Conservatory: 30m² water system

£507.59
inc vat



1000's of positive reviews



We're rated Excellent!

10% OFF
EVERYTHING!

WHEN YOU BUY ONLINE

discount code: **BIDISCOUNT**

www.theunderfloorheatingstore.com

The smarter way to heat your home!

0844 800 3396

LIFETIME WARRANTY

FREE DELIVERY

we are a...

Which?
Trusted trader

STRUCTURAL WARRANTY SITE INSPECTIONS SITE INSURANCE



SELF-BUILD
INSURANCE



Self-Build Zone provides Site Insurance and 10-Year Structural Warranty policies for anyone starting new building works, as well as covering any existing structures on site. We can aid Building Control and Technical Audits through our in-house Technical Services Company, Build-Zone Survey Services.

Your New Build, Renovation, Conversion, Extension deserves the best cover

0345 230 9874
WWW.SELFBUILDZONE.COM



Dealing with neighbours

Mike Dade investigates the level of influence other local residents can have on your project, and how to successfully navigate issues and objections they bring up

Most self build projects are likely to include a degree of involvement with your neighbours. It could be at any stage — when going through your initial ideas, during the process of getting planning permission or even when you're completing the works. Love them or hate them, the people next-door, and even beyond, can carry clout over what you build, how you do it, or even whether you can go ahead at all. So, let's look at their main areas of influence, what you can do to get their support and how to minimise potential objections.

Neighbours' role

Your local community formally comes into the planning process when you submit your application. They are automatically notified by the council and have the opportunity to object if they don't like your plans. If you seek pre-application advice from the local authority before you make a formal submission, your neighbours aren't consulted, but some councils post pre-app enquiries online which an eagle-eyed person might spot. For those wanting to build a larger rear

extension as permitted development, there's a notification process where a neighbour objection enables the council to have a closer look at your plans, as opposed to just waving them through unchecked.

Influencing decisions

Some residents in the area almost invariably object. With a new house, it's likely you'll get opposition pop up from somewhere. Unfortunately, it only takes one vocal and determined challenger to wind up others, start a petition, or lobby local councillors. It would be nice to think that objections from neighbours would only affect the outcome of an application if they were raising genuine planning issues, like overlooking, a dangerous access, or loss of significant trees. Unfortunately, the sheer force of numbers, rather than quality of arguments, can, and sometimes does, significantly impact the council's planning decisions.

So, try to avoid resistance from neighbours in the first place. Tell them about your plans before submitting a proposal, offer to adapt the scheme to meet any concerns they might have and generally maintain good relations.



Of course, in some situations, if you're certain your neighbours will oppose to anything you propose, you might be inclined to put forth your application without telling them, to minimise the period they have to galvanise others to object. Similarly, you can pre-empt your neighbours by approaching councillors, both parish and district or borough, in an effort to get them onside, before your fellow residents know what you're intending.

Where applications are decided by a planning committee, neighbours can exert particular influence on the decision. One might persuade your local councillor to call your application to committee and then turn up and speak against your project. You have the opportunity to speak in favour, so can counter any negativity. But stick to the facts and keep it cordial — a public row is unlikely to win you any sympathy or positive votes.

Why they might object

Neighbours could challenge new projects for a wide variety of reasons. Some, such as noise and disturbance during the build, are generally ignored by planners. So too are the vague

Above: Anthony and Teresa Ralph described their project as a Marmite house: "people either love it or hate it!" By communicating with neighbours at the planning stage, they were able to overcome objections and create their dream abode



Above: Even though neighbours objected to the proposed height of this project, built on a street full of bungalows, Barry and Jenny Tape managed to get planning permission within five short weeks

assertions about inadequate school or doctor places, or the number of potholes in the road. However, others, like loss of privacy or light, are taken more seriously, so you must carefully consider the effect your scheme will have on neighbours as part of your design process. In severe cases, your new house or extension could infringe on your neighbour's legal right to light. Although this would usually be picked up by the planners, bear in mind that if you do intrude on this, neighbours could seek compensation or changes to your scheme under common law, separate to planning.

Before you begin

Let's assume that you've obtained consent, despite your neighbours' best efforts to thwart your plans. Be very careful that you adhere to any conditions that might be attached to your permission, as a disgruntled neighbour might well be monitoring.

In addition to planning, there's still one significant issue to deal with: the Party Wall Act. This doesn't just apply to shared walls, such as you find in between terraced or semi-detached

houses, but also garden walls, and buildings close to boundaries. The Act identifies the situations where it is applicable and sets out a code of practice for notifying neighbours of works, appointing surveyors, gaining access to their land and recording and remedying any damage to their property — this also protects you from any unjust claims.

During your build

This might seem obvious, but make sure you build within your permitted plans. Some people succumb to the temptation to stretch their new home a little. A few decide to make design changes on the hoof, while others fall victim to sloppy builders who simply don't accurately follow the plans. Worse still, the commencement of the works sometimes reveals flaws in the plans — an inaccurate survey, for example, which means the house that you've been permitted won't actually fit on your plot. While minor discrepancies might go unnoticed, negative neighbours could pick up on anything significant and be on the phone to the planners in a flash. You can minimise their resistance to your project by keeping them informed of its progress. Tipping them off about when noisy activities are going to take place and preventing the trades from playing radios at full blast can help keep relations on an even keel.

Creating opportunities

Where your garden is too small for a whole new house, or you don't have

quite enough room for your dream extension, cooperating with next-door might just be the key to unlocking the problem. There's no reason at all why you couldn't assemble a sizeable plot from your land combined with one or more neighbours', and if there's a fair share of the profits in it for them, you can at least expect to pique their interest. Sometimes it might be that you just need another metre of space to create the plot you want. Again, a fair offer, perhaps with some perks thrown in like funding a new boundary fence, or planting some trees, might not only enable your project to move forward, but could even guarantee their enthusiastic support. Bear in mind though, that if a metre of garden is what makes or breaks your scheme, then neighbours could hold back for a substantial share of the plot value, even though they're only contributing a tiny proportion of the land area.

Legal matters

It's not uncommon for neighbours to share rights of access over private drives. One may even have the benefit of a covenant that can affect what another neighbour can build on their land. Planning departments ignore these private legal issues, so they may well grant permission to build on a plot, but the intricate legalities can prevent the project from going ahead. You should approach these situations with care — seek legal advice before you try to unravel an impasse that's halting your progress. These are potential ransom situations, so it could take an awful lot more than a token bottle of wine or homemade meal to persuade your neighbours to release you from a covenant.

Conclusions

Neighbours are an integral part of any self build project. Good bonds can make for a quicker, cheaper and altogether more enjoyable project. Poor relations can add immeasurable amounts of time, cost and stress. If you're looking to buy a plot, one of the first things you should check out is the neighbours. If you're purchasing land that has already been granted planning permission, find out early if the neighbours objected. Either way, launch a big public relations drive to win them over. Keep their interests in mind to ensure a dispute-free build.

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.

Site Insurance & Structural Warranty

Arranging suitable site insurance and structural warranty cover on your project is absolutely essential. Whether it's a party wall issue or a difficult site, we can help.

Protek provide insurance for new build, conversion, extension and renovation projects anywhere in the UK.

- Experienced underwriting team
- Deal direct with the provider
- Structural Warranty - Lender Approved
- Fast & responsive claims service
- Competitive



New Build • Conversion • Renovation • Extension



Quotes & cover available online at:
protekselfbuild.co.uk or 0333 456 8030

Protek Group Limited is an Appointed Representative of Stackhouse Poland Limited who is Authorised and Regulated by the Financial Conduct Authority (Firm Reference Number 309340).



NEATWOOD HOMES Ltd

www.neatwoodhomes.co.uk

The Ultimate Choice In Timber Frame Construction

A company with a knowledge base exceeding 40 years of experience in the designing and manufacturing of Timber Frame Packages for the Domestic, Commercial and Leisure markets.

Our Dedicated Team are ready and waiting to help you with your build now !!!

Flexibility, quality and personal attention at all times.



Services

At Neatwood Homes sales office

Introduction & Guide to building your Dream Home

Computer Aided Design (CAD) service available

Free quotation provided with detailed breakdown of costs

Supply only or supply & Erect

Extensive range of products Including External & Internal Joinery Packages

All designs individually certified by a qualified Structural Engineer

All components supplied to NHBC requirements

Delivery Program to suit your Build



Individual Service

Technical Excellence

Precision Manufacturing

Quality Products



Unit 6, Westwood Industrial Estate | Pontrilas | Herefordshire | HR2 0EL
Tel: 01981 240860 | sales@neatwoodhomes.co.uk



Project management **guide:**

Scheduling

Understanding what's likely to happen when on site is key to a successful project. **Mike Hardwick** looks at the basic sequence of events for a typical self build venture

Above: This home was built by Glosford SIPs (www.glosfordsips.co.uk), who get the house to weathertight stage, leaving you to coordinate the internal fit out. Right: The kitchen will be installed at the fit out stage, but you'll need to plan for it earlier. This contemporary open-plan design is by Mereway Kitchens (www.mereway.co.uk)

Understanding what needs to happen and the order of it all varies from project to project. There may be some flexibility at later stages of the build, but until it is wind and watertight, the order of work is fairly obvious. This month, I'm looking at how to draw up a simple schedule that can be used as a high-level plan for your scheme. I'm assuming that you have already acquired a plot and that there is an architect or designer on board with drawings at an advanced stage.

Statutory requirements

Before anything happens on site, it is vital that you have obtained detailed planning permission and that you have satisfied any conditions that are required to be cleared before development commences. If the community infrastructure levy (CIL) applies in your local authority, then make sure you have already sought your exemption and that you submit the correct notice of commencement before any work starts on site. Failure to do this can mean that you forfeit your exemption and a charge will



be payable. Your Building Regulations provider must also be notified at least 48 hours before work begins.

Hiring the team

Having selected your builder, you should take the time to run through the pre-contract arrangements and formally agree who's doing what and how much it'll cost. Use a small works contract, such as those provided by

the Federation of Master Builders (FMB) or the Joint Contracts Tribunal (JCT). You can expect your builder to coordinate the sub-contractors on site. If you are self-managing the project, then you will need to source the individual trades yourself and agree rough dates for when they will be required. Each of these should be able to give you an indication of how long their part of the build will take and you should keep them updated of any changes to the schedule to ensure continuity during the project.

Early works

On commencement of the build, the site will be cleared and access to and from the highway will be established, if not already in place. Roadways and simple hardstanding areas might be created from compacted stone ballast or scalplings, to stop the ground from turning to mud. It's worth drawing up a simple management plan of the plot, indicating where the materials will be stored and where the site office can go. It's essential to contact the service providers so that you have a good idea of where things like electricity, water and drainage will be coming

from. Once these have been advised by the supplier, you will know where any service trenches will need to run so you can keep these areas clear.

Groundworks

The footprint of the house should be set out in exactly the right place, ready for the foundation trenches to be excavated or for any engineered foundation solution. If in doubt, get

this done by a professional as it will be too late to move once the building work starts. Once concrete has been poured, the footings, oversite and slab, or beam and block flooring can be laid. If this is in preparation for the erection of a timber frame, accuracy is essential. While the plant is still available, you should dig the service trenches and any holes for underground tanks you may require.

Superstructure

If a timber frame is being used, the scaffolding may well be erected at this stage, ready for the panels to be craned into position. If traditional masonry is employed, then it'll go up as required and raised in a number of lifts as the build progresses, along with any platforms that are necessary to construct chimneys or roof details. As first floor level is reached, the floor joists will be installed.

Sorting the roof

When the external walls are up to the required height, the roof trusses can be lifted into position and held in place with timber windbracing. More complex dormer windows will be put together on site. The brickies will then come back to build up any gable ends into the gable ladders. Once this is done, the roofers will lay down the felt (usually a breathable membrane) and fit the battens before the tiles or other coverings are loaded up onto the roof and laid at the correct spacing. If you are considering a flat roof for your build, don't miss the feature on page 77 to see your covering options.

Maximising scaffolding

It's sensible to get all the work at great heights done while the scaffolding is still in place. This is the time to fit the soffits, fascias and bargeboards, install the guttering, windows and any other external bits like satellite dishes or security cameras, that would be difficult to set up using a ladder. Any high-level painting or staining should be done while the scaffolding is still around. Once the windows are in, the structure should now be wind and watertight, so internal work can begin.

Readying the interiors

The first step for the inside of your home is the first fix for plumbing, electrics and joinery. This term refers

to all of the components that will be hidden from view once the house is complete. For example, the decking boards, electrical wiring and socket boxes, as well as underfloor heating and waste pipes. Once the plastering or dry lining is complete, the second fix – the elements that are visible in the finished home – can be installed. This will include skirting boards and architraves, electrical switches and sockets, as well as sinks, baths and radiators. It's a good idea to have decided on some of these smaller details earlier in the project.

Fitting out

Now is the time for kitchens and bathrooms to be fitted. This can be either before or after floor finishes have been laid, but remember that if you revamp the space in the future, any bare flooring could be exposed and would need to be filled in or redone, which isn't always possible. If you plan to keep expensive tiled or stone floors for any length of time, it can pay to have these fully covered first and then fit your units on top.

Decoration & tiling

Once everything is fitted inside, the decoration can begin. Ceramic tiling should be done first and the painting after to ensure a neat finish. External painting and decoration can take place at the same time.

External elements

When the internal construction work is complete, you should start thinking about works outside, like boundary treatments and gates. Plus, consider what you want from your drives, paths and patios. Once these are finished, any landscaping work including laying lawns and flowerbeds can be tackled.

Completion and post-contract work

Once construction has wrapped up, you can expect a thorough inspection by your Building Control provider. If you have complied with the Building Regulations to their expectations, you will be issued with a completion certificate. The good news is that you are now the proud owner of a fully-fledged dwelling instead of a dusty building site. The bad news is that council tax is now due! At some point after completion, you will go around



KATY DONALDSON

the house with your builder and agree a snagging list of little details that need fixing or things that have been missed. Once this work is done, the build is officially complete.

Inspection regime

Throughout the process there will be visits from both your Building Control provider and your structural warranty supplier (they might well be the same person if you buy both services from the same company). These visits can vary depending on the complexity of the build and the risk, so I couldn't say exactly when this might be for your project. However, they will usually tell you beforehand, and if you are using a self build mortgage, the dates will invariably be linked to the agreed release stages to ensure work to date is up to the required standard.

For further details, you can read my week-by-week breakdown of a typical build schedule at www.self-build.co.uk/self-build-planner

Above: Build It readers Chris and Christina Hughes were on the cusp of laying out their foundations when the planning compliance officer told them to cease work immediately. Some elements of the house hadn't been officially signed off yet, so the couple faced a 13-week delay before they were allowed to continue constructing their timber frame abode

MIKE HARDWICK



Since successfully finishing his own bespoke scheme, Mike has become a well-respected project manager and self build consultant. He is general manager at the National Custom & Self Build Association.

Build It

The perfect Christmas gift!

Treat a partner or a friend this Christmas to a copy of Build It each month.

12 issues delivered for just £19.99

INCLUDES
2 FREE tickets
to your nearest
BUILD IT Live
Show
worth £24!

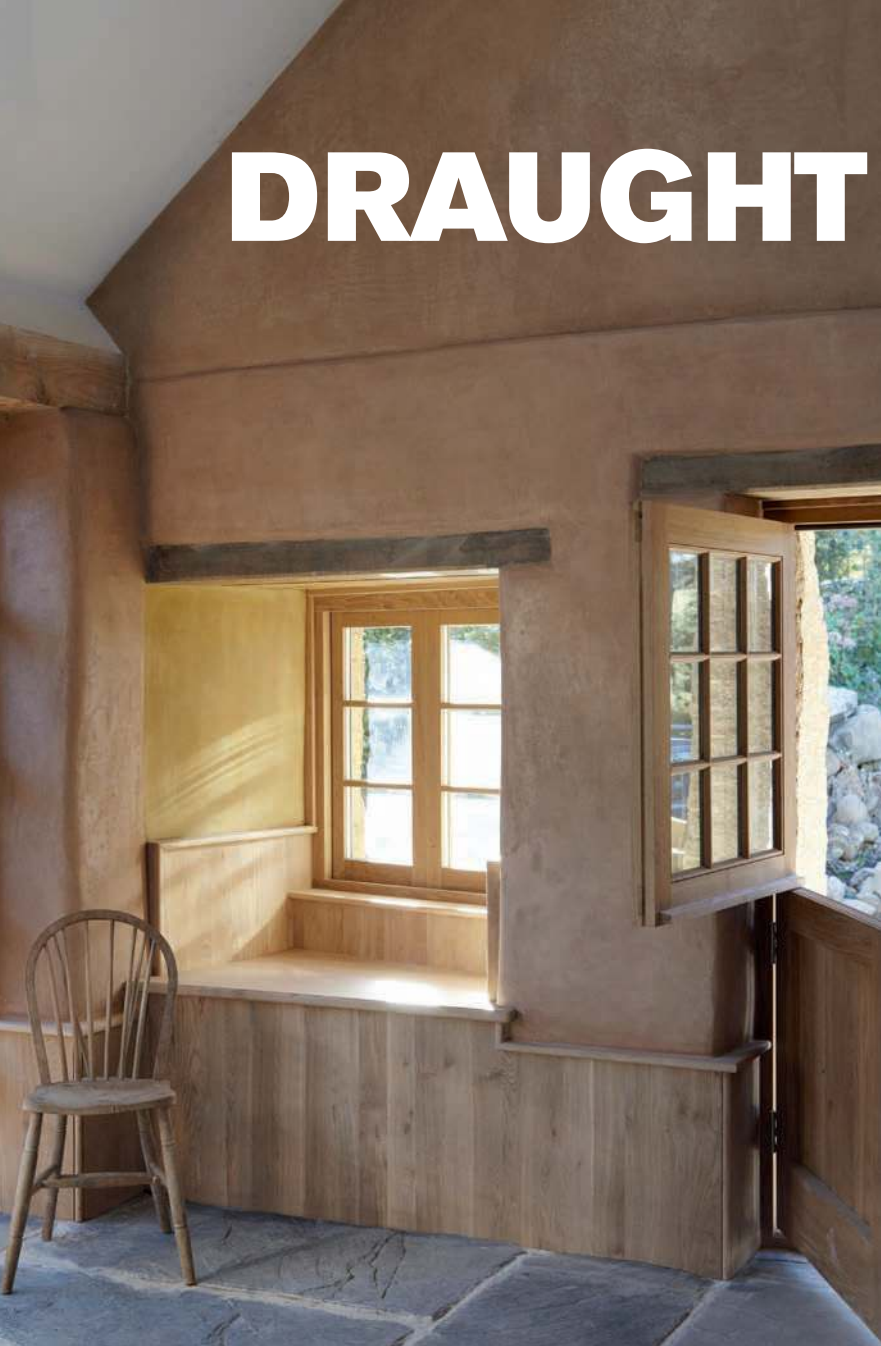


Subscribe now!

Visit www.self-build.co.uk/xmas
or call 01442 820580 quoting 'XMAS'

DRAUGHT PROOFING a period home

Historic buildings expert **Alan Tierney** explains how to make a period home comfortable and free of cold spots, without compromising its ability to breathe



Some of the most important priorities for homeowners are energy efficiency and comfort. There is generally a perception that period homes are colder and more draughty compared with modern ones, but this doesn't necessarily have to be the case.

If you are taking on a refurbishment project, there is bound to be some deficit in past maintenance and repair that is likely to include issues around draughts and airtightness. In most cases, that's more a factor of age and a lack of TLC than any inherent problems with the building itself. In fact, the worst structures tend to be those built in the 1960s to 1980s.

Why is draught proofing important?

Draughts have a disproportionate effect on how comfortable we feel

in our homes. As well as having a negative impact on temperatures in rooms, air movement causes us to feel colder than we would otherwise. So, if a house is draughty, it will be more uncomfortable than a property at the same temperature without draughts. This means that you will need to heat the space to a higher temperature to feel comfortable, as well as countering the actual heat loss. The result is that draughts have a disproportionate impact on fuel costs and CO2 emissions.

Where are draughts likely to occur?

The prime culprits are usually doors and windows. Even if glazing was originally well fitted, several factors such as movement over time, wear and tear and repeated decoration is likely to create gaps around sashes,

frames and casements. Homeowners will often pay a lot of attention as to whether their windows are single or double glazed, but heat loss tends to be generally much greater around units than through them. Likewise, doors have similar issues with air leakage around them and hardware, such as letter flaps and key holes, allow a surprising opportunity for draughts in homes, too.

The majority of older properties in the UK will have a number of chimney stacks, many or all of which are likely to be unused. These can provide an opportunity for a large direct channel for air exchange with the outside.

Suspended timber floors often have gaps between the boards with a ventilated void below. This can generate a draught through the floor. Interestingly, this feature was an intended result of their original design

Above & above left: Replacing modern plaster with a breathable equivalent, such as clay, will act as a defence against draughts in the building envelope. This project in Cornwall was undertaken by specialists Clayworks (www.clay-works.com)

Right: Ventrolla (www.ventrolla.co.uk) specialises in the sensitive overhaul of period windows, including cill repair, discreet draughtproofing, secondary glazing, and other upgrades

as they were considered healthy in the 18th and 19th centuries.

There can also be gaps in the fabric of the structural envelope causing draughts. This is particularly common in timber frame buildings where junctions between the frame and infill have opened up. It can also occur in solid walls where past alterations (especially blocked openings) have left straight joints in the masonry. In extreme examples, severe cracks can penetrate the full depth of the wall – this is likely to indicate a structural problem needing attention beyond just draught proofing.

Possible solutions

Windows and doors can easily be refurbished and draught-stripped to improve their fit and airtightness. If they are old, this option will always be preferable to replacement. Even sash windows can be made quite



Right: A membrane and insulation under a suspended timber floor gives the combined benefit of both draught proofing and insulation



efficient this way. However, there will still be an inherent risk of air leakage at the meeting of rails and around the sash boxes, so adding a second line of defence is also advisable. Possible options are shutters, secondary glazing, insulated curtains or blinds, or a combination of these. Doors can also benefit greatly from an insulated

curtain as well as additional covers over keyholes and letter flaps.

Gaps around the frames can be more tricky to fix without major intervention. You should avoid mastics or silicon sealant because these will interfere with moisture movement through the building fabric and can cause decay in the frames and any

associated timber. Large gaps or failed pointing should be fixed using lime mortar. A solution for smaller gaps is to pack them with oakum – made up of hemp or jute fibres impregnated with tar. It will provide a long-lasting, breathable solution.

Unused chimney stacks should be capped to reduce heat loss, but it is

essential to maintain ventilation of the stack to prevent damp. If a chimney is being used, lining the flue will help. What's more, stoves tend to avoid the draughts associated with open fires.

The gaps between boards in a suspended timber floor can be caulked using oakum to prevent draughts. If the boards can be lifted without causing damage this is usually better, so that a breathable membrane can be draped over the joists. The pockets formed between the joists can be topped up with a loose fill, natural insulation such as cellulose (recycled newspaper) to provide both insulation, as well as essential draught proofing.

The primary defence against draughts through gaps in the building envelope is the internal plaster layer. Old, worn or cracked plaster will not be effective. The best solution will depend greatly on what you have to

interfere with the breathability of a wall. In this situation. The best solution is to strip back the plaster and replace it with a sympathetic covering of lime or clay-based plaster.

You may also find that there is a mixture of different generations of plaster. If this is the case, you will need to decide as to whether it is best to replace or better to repair. The main objective is to achieve a good, intact covering of a breathable plaster finish. Often, in timber frame buildings, there will be junctions that aren't plastered over. These can usually be treated, similar to gaps

breathable performance relies on the ready evaporation of moisture from the fabric into the internal environment. It is



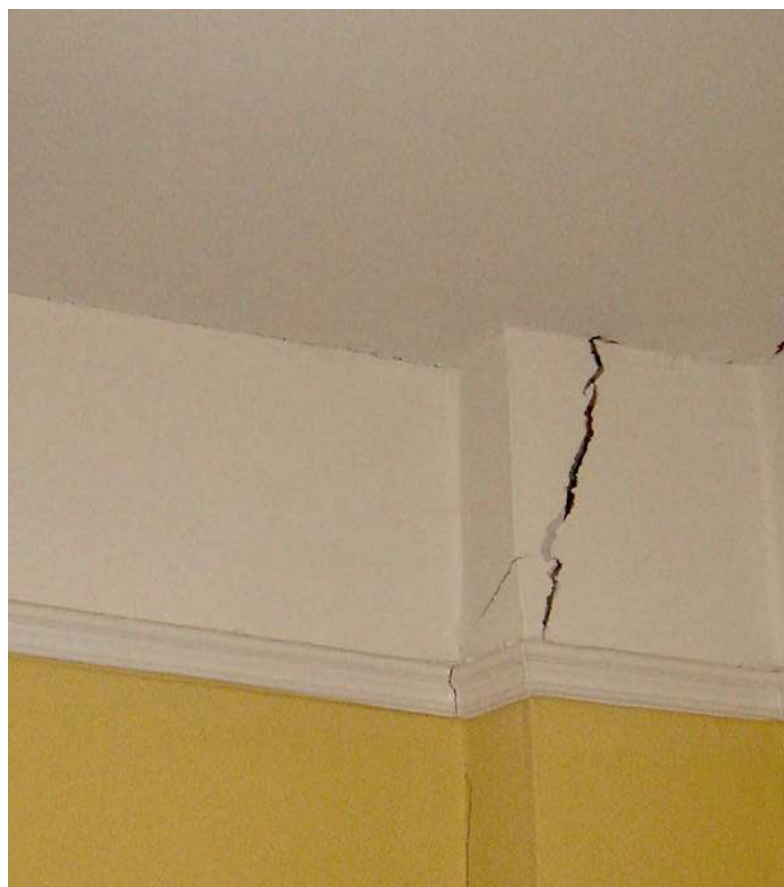
essential that moisture vapour within the building – most of

it generated by the activities of the occupants – is able to escape from the building. This means that good extract ventilation will need to be installed (and properly operating) in all wet spaces, such as kitchens, bathrooms and utility rooms.

Carrying out a careful programme of draught proofing should increase the comfort and energy efficiency of a period property without the need for an extensive ventilation system. However, it is sometimes necessary to go much further and install measures to achieve very high levels of airtightness. This carries a high degree of risk and requires very careful detail and specification – it is unlikely the benefits would justify the amount of work and cost in most situations. If this approach is taken, considerable attention must be paid to the provision of a suitable and sophisticated ventilation system.

If ventilation isn't sufficient, the relative humidity levels inside the building will become very high. This will promote condensation and mould growth, and create a very unhealthy living environment. Ultimately the fabric of the building would become damp and result in decay.

Above: Front doors can present opportunities for draughts to get through. The Letterplate Eco can help minimise these gaps (www.ecoflap.co.uk)



Left: Major cracks create draughts, but are also a sign of a more serious structural issue which should be investigated further

start with. For example, if there are important historic plaster layers surviving, then a very careful and sympathetic repair is required. If all the historic plaster has been removed and replaced with modern plaster, this will probably have cracked because of its incompatibility with the underlying wall fabric. Modern plaster can often

around windows and doors, with lime pointing or oakum.

Balancing airtightness with ventilation

Good ventilation is of vital importance for the health of both the house and its occupants. This is particularly true of period buildings because their

ALAN TIERNEY



Alan Tierney is a period property consultant and conservation specialist. He runs Picketts Historic Building Conservation (www.pickettsconservation.co.uk), which offers hands-on advice to owners of heritage homes.



01243 884 104

info@zakuna.co.uk

www.zakuna.co.uk

GARAGE DOORS • ENTRANCE DOORS • STAIRS • INTERNAL DOORS • FLOORS • WALL CLADDING

NEW BUILDS, CONVERSIONS, RENOVATIONS & EXTENSIONS INSURANCE

- Specialist brokers for over 15 years
- Experienced and qualified staff
- Deal with 1 advisor from start to finish
- The same price as direct, but with free independent advice

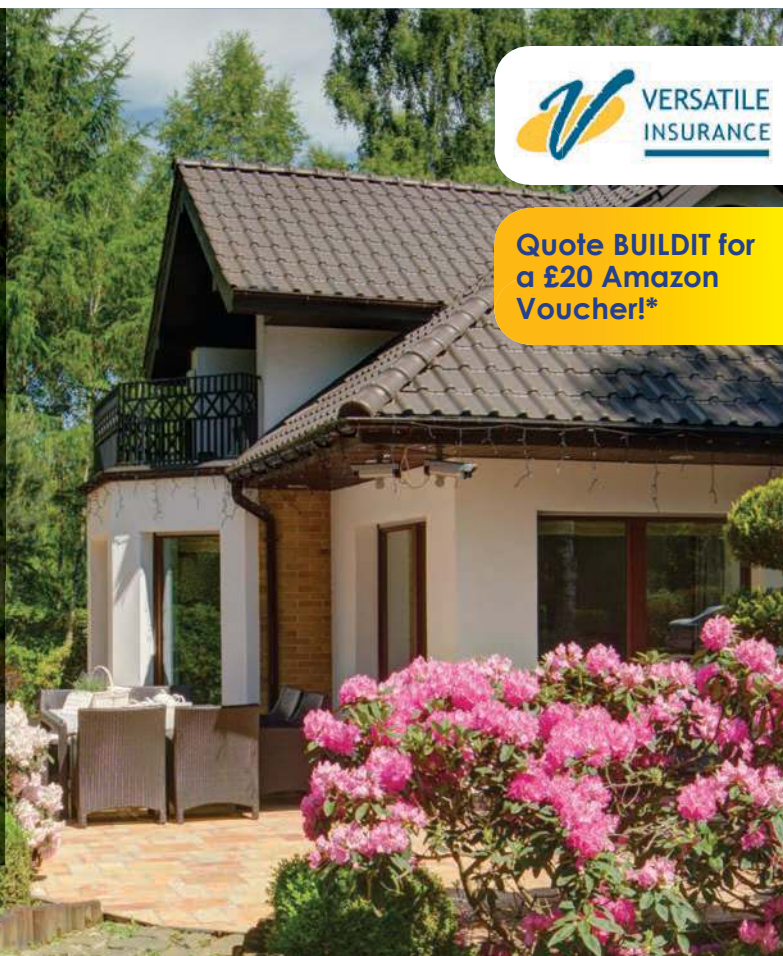
Call us on **01837 658955**

Email info@versatileinsurance.co.uk
Or visit www.versatileinsurance.co.uk

*New customers only. Amazon Vouchers will be provided 3 weeks after you buy a policy. Versatile Insurance Professionals Limited is authorised and regulated by the Financial Conduct Authority.



Quote BUILDIT for
a £20 Amazon
Voucher!*





How a site influences house design

From trees and other geographical features through to local materials, what's on and around your plot can feed in to the way a dwelling's design takes shape. This can often make for an interesting result, says architect **Julian Owen**

There are three essential ingredients for creating the perfect bespoke house design: the budget; where it is built; and the needs and aspirations of the future occupants. To ensure the design is special, respect the land that it sits upon and its location. Even a simple plot has features and qualities that make it unique, and the trick is to weave these into your brief and budget to create a home that is anchored into its location.

Initial considerations

The Highways Agency has the power to influence what is given planning consent and expects the point of entry on to a site for cars to be safe, with good visibility on to the road as they leave. If the plot is adjacent to a busy road this may affect the floor layout: rooms that have less need of peace and quiet, such as a bathroom or utility room, can go on the side of the property facing the highway. If traffic is noisy, consider placing the bedrooms at a lower storey facing away from the road, with the land level raised on the other side to absorb the worst of it.

A professional developer will treat a big change of level across a site as a nuisance, but for an architect it is often

seen as an asset because it can offer endless creative possibilities, such as split-level floors, or a front door on the middle storey, perhaps reached along a raised walkway. If the site has a steep slope away from the road it makes sense for living areas to be situated on the middle level because there is more daylight than the lower rooms where you can tuck away the bedrooms.

Sometimes the garden layout is left to the end of a project, almost as an afterthought, but what visitors are presented with when they first see a property is a key moment for the success of a design. It is generally accepted to be a good thing if you can see the front door straight away – you'd have to be a bit antisocial to want your guests and visitors to wander around your plot trying to find the entrance to your home!

New & existing trees

Contrary to popular belief, a line of trees will not help with sound attenuation, although it could reduce pollution from exhaust fumes. If you're lucky there'll be some interesting trees around that provide contact with nature and attract wildlife. If you are unlucky there may be trees that are

Above: The brief given to 2020 Architects (www.2020architects.co.uk) from the owners of this barn-style home in County Down, Northern Ireland, was to create something that engaged with the landscape. Fibre-cement corrugated cladding echoes vernacular agricultural buildings

LOCAL AUTHORITY DESIGN GUIDES

One of the most powerful influences on the design of a new house is the attitude of the local council. Many have detailed guides that should be followed if you want to avoid ending up in a time-wasting spat trying to convince them that your proposal is worthy of approval. Some planning officers may attempt to micromanage your design, especially if the construction site is in a conservation area or near a listed building. An early exponent of these sort of standardised requirements was the Essex Design Guide, which was created in 1973. It was a brave attempt to force developers to create houses that were firmly rooted in the building traditions of the county, but the result was so prescriptive many Essex housing estates in the following decades looked very similar. The resulting blandness was eventually recognised as a problem and the latest incarnations being produced by councils across the UK specifically allow more scope for innovation and modern architectural styles.

Below: Blee Halligan Architects (www.bleehalligan.co.uk) wrapped this house in cedar shingles. The timber cladding responds to its location in a tree-filled plot, but its sharp angles and minimal design makes the property distinctly modern

protected by law, which restrict where you can build and reduce the daylight levels inside the house unless the plan is adjusted to accommodate them. However, provided that they are not so over-dominating that it is impossible to build on the site, they can usually be made into a feature.

All trees have an area around them about 800mm below ground where any excavations might cause them damage. This is called a root protection area. This has to be estimated by tree experts, but it is sometimes possible to build quite close to the trunk, depending on the age, species and subsoil. If the tree is in a particularly awkward

location, it is possible to find the exact locations of the important roots using an air spade to excavate the earth without causing any damage.

Local styles & materials

When it comes to locking a house into its location, the elevations have the most visual impact. When you are in the early stages of developing a design in an area that you don't know very well, you may find it helpful to take some time to wonder around the locality and get a feel for its character. Take some inspiration from newer buildings,





as well as older ones. One way to ensure that a new home is firmly part of its surroundings is to build using traditional materials, such as local stone in the Lake District, cob in Devon or brick and pantile in the East Midlands. However, be cautious with your selection as you can run the risk of your home looking like a pastiche because the rules of thumb used by our ancestors for building also affected the massing and proportions of their homes.

The style of simple buildings from times past is called vernacular and, if it is carried through with conviction, copying this style can have a very pleasing result. However, there is an altogether more subtle way of linking into the past which some call contemporary vernacular. It goes beyond simply copying from history and combines traditional building forms and materials with modern construction techniques, sustainable, energy-efficient design and the social characteristics of a region. So, a house might be bedded into its site in a form that reflects the vernacular look of an agricultural structure, but be built with contemporary rendered walls and topped with a zinc roof. There could be large areas of glazing in keeping with our desire for plenty of natural light, but similar in scale and proportions to traditional barn doors.

Council guidelines

Apart from the obvious physical features of the plot and its surroundings, the invisible hand of the local planning

department will also come into play and affect the design. Councils usually have a set of guidelines that they will apply to the location, size and appearance of the house you intend to build. They typically impose limitations such as how close you can place a two-storey wall to a neighbour's windows, how the ridge height relates to adjacent buildings and even the materials that are likely to be acceptable. Some are more prescriptive than others, but generally speaking, modern design is easier to get past the council in an urban setting than in a close-knit village or conservation area. Contrary to the situation ten or 15 years ago, many planners now actively encourage fresh, creative ideas. However, it pays to ensure that your architect has a clear and thorough understanding of what style of self build is likely to be acceptable in the area and how best to present a scheme to them persuasively.

Above: Townscape Architects (www.townscape-architects.co.uk) built this barn-style home on land formerly occupied by farm buildings, and local planners required that the house reflected the traditional look and feel of a farmstead

JULIAN OWEN



Julian Owen is an East Midlands-based chartered architect and author of several books on self build and house alterations. His publications include *Self Build*; *Home Extension Design*; and *Kit and Modern Timber Frame Homes*. He's also the founder of the ASBA Architects network. To find out more visit www.asba-architects.org.

Perfectly Crafted Oak Framed Homes



WELSH
OAK
FRAME

Award winning oak frame
homes, extensions, garden
rooms & orangeries.

Planning – Architectural Design – Build

Contact us:

01686 688 000

info@welshoakframe.com

welshoakframe.com



Structural Acoustic

Not only is sound proofing a requirement of Building Regs, it's a necessity for a quiet and peaceful interior environment, says expert **Tim Doherty**

There are two different types of noise that self builders and home improvers should know about – airborne and impact generated sound. Sources of the former include talking, TVs, music and media, and the latter comes from occupants walking or bouncing on floors or the slamming of doors.

Sound travels in waves; anything that is airborne-generated (say from speech) will create vibrations that transfers to walls, floors and ceilings. If building elements are of a light specification or density, the vibrations can travel through the materials and enable sound to be heard



on the opposing side. Impact sound travels in the same way, except the waves are more intense as they are the result of a heavy load crashing into a floor, for example.

There are ways to help reduce the passage of airborne and impact sound through enclosing building elements, but it is essential that this detailing is appropriate to each development and environmental situation. Otherwise the noise will find an alternative route in. Reduction is known as flanking sound, and this is the key to your acoustic success. If sound waves are blocked from going through a building element, they will try to find an easier route over or around the obstruction; often in hidden parts of your floor, walls or ceilings where two or more elements meet.

Sound characteristics

Sound pitch is measured in Hertz (Hz) with the range for the human ear being 20Hz to 20,000Hz. The intensity of a sound is measured in Decibels (dB), where its loudness

details: performance



will double for every 10dB increase. For reference, rustling leaves start at 20dB and ordinary speech at 60dB. Louder noises might include traffic at 70dB.

Reverberation is the length of time that a sound lingers after its source has come to a stop. A low reverberation environment is encouraged for dwellings, either through sound absorbing building elements or soft furnishings. Reverberation time is measured in how long it takes a sound to reduce by 60dB after it has stopped. Typical absorbers which may provide relief include fibrous materials, dense membranes, furniture and carpets.

Building Regulations

For acoustics and soundproofing, the relevant document is Part E: Resistance to the Passage of Sound. Sections E1 and E2 set the standard for new homes and conversion projects. E1 deals with limiting sound that's travelling from different areas of the same property and from adjoining buildings, such as terrace houses and flats. E2 looks at reasonable resistance to sound transmission from within the property through floors and walls. It doesn't apply to walls that include doors, a wall between a bedroom and its ensuite or existing walls or floors in a conversion.

Part E looks at airborne and impact sound and sets minimum levels in homes for both (ie you need to use materials that reduce noise to a minimum level, creating a layer of resistance/sound reduction). Regarding airborne sound in new builds (E1), the minimal level of sound resistance for dividing walls or floors between homes is 45dB; for conversions, the standard is 43dB. Regarding impact sound, a minimum of 62dB is required from floors and stairs in new builds, which again is slightly different for a conversion project at 64dB. For E2 to be met, the

Above: If using a vast amount of glazing in your project, choose acoustic insulation glazing from a specialist company, such as IQ Glass. It helps to reduce sound frequency to around 100Hz. **Left:** This Wiltshire home incorporates triple glazing from Green Building Store (www.greenbuildingstore.co.uk) which adds to the home's soundproofing. The basement is built partially underground using ICF, while the main house is made up of engineered timber I-beam with 300mm Warmcell insulation



Above: Front doors from Urban Front (urbanfront.com) are crafted to ensure strength, and rigidity. The calculated door leaf insulation is $1.112\text{W/m}^2\text{K}$ and 32dB for sound insulation. This project features the Porto e80 doorset in European Oak with a concealed handle and sandblasted sidelites. Right: Junckers (www.junckers.co.uk) has launched The New Era acoustics range, for use with its solid wood floors. It's height is adjustable for use on structural concrete slabs, block and beam floors and almost any other type of sound, dry load-bearing base. When installed correctly, it can achieve an impact sound reduction of up to 28dB

minimum performance standard is for a 40dB reduction between all new floors and walls in any dwelling or flat, regardless of whether or not it is a conversion project (this is for airborne sound reduction only, with no actual minimum requirement for a reduction in impact sound).

It's worth noting that the company Robust Details was set up to inform Building Regulations on sound proofing.

Inside single dwellings

Regulations are not onerous and place only a minor obligation to achieve some notional sound reductions. It's always best to speak to manufacturers to understand what kind of sound performance their products can achieve.

Internal walls can be constructed from 75mm metal or timber studwork with two layers of plasterboard on each side, or one layer and a minimum of 25mm , 10kg/m^3 insulation. A better solution would be two layers with the extra insulation. If you're building in masonry, an alternative is concrete blocks with a mass of 120kg/m^2 and either plasterboard or plaster on each side, or, for a slightly lower standard, aircrete blocks with a lower mass of $75\text{--}90\text{kg/m}^2$. For 75kg blocks, you need to dryline the surface with plasterboard to build up the density.

With floors, the recommended solution is concrete planks with a mass of 180kg/m^2 – regulating screeds and ceilings are optional – or a concrete block and beam floor where the blocks and beams provide a mass of 220kg/m^2 . In addition, a bonded screed would be required at a minimum 40mm thickness, with a plasterboard ceiling fixed to the underside of the structure. Lastly, you could try suspended timber or metal joists with a floor board surface (providing a minimum mass of 15kg/m^2), 100mm of sound absorbent mineral wool (with a density of 10kg/m^3) and a sheet of plasterboard under the joists.

Separating walls

Requirements for acoustic reduction between two dwellings or flats (E1) is more demanding. Separating walls must achieve a 45dB reduction for airborne sound and, although this appears only 5dB more than the requirements for E2, the extra 5dB needs an excessive upgrade in specification to ensure performance.

Solutions include thick and dense masonry walling with directly applied plaster to each side. Here, performance is based upon building the mass per unit area of the wall. Alternatively, two skins of masonry with a clear cavity between, and with both of these being plastered on their

exposed faces. Performance is reliant on the mass of the masonry selected, but also the degree of isolation created between the two skins. This can be affected by cavity widths and connections between the skins (needed for stability), much like wall ties and foundations. A single skin of masonry with two independent cladding panels fitted to each side with a cavity between is a third option. This solution relies on mass per metre, and the absorption of the cladding panel materials to soak up sound. Lastly, you could try two skins of timber studwork, completely separate from each other and with mineral wool insulation between the studs and a clear cavity between the two skins. Performance relies on the mass per metre of the timber studwork, absorption of the mineral wool and the isolation of the skins by the cavity width.

Separating floors

As far as separating floors is concerned, the same broad principles apply in terms of building mass and density and/or isolation cavities. One difference is that the new target



for impact noise reduction at 62dB comes into play, which creates a need for absorption through resilient layers.

If you use a dense enough concrete slab as your separating floor, then a soft covering of carpet underfoot, along with a suspended plasterboard ceiling fixed to the underside of the slab, might be all that is needed to meet the necessary performance tests. More likely, however, would be the use of a typical concrete slab with a resilient layer on top (say rubber matting) and then a floating finish that's above using a screed or insulation and chipboard. A similar suspended plasterboard ceiling would be needed on the underside of the slab as well.

Timber frame structures with resilient layers and floating floors can also be used. However, the solution will involve a separated ceiling structure for the unit below, with a clear cavity between the joists which, if lack of space is deemed a problem, could be staggered.

TIM DOHERTY



Tim Doherty was the founding MD of the National Self Build & Renovation Centre and a founding member of NaCSBA. He now runs Dobanti Property Consultants (www.dobanti.com), a specialist surveying & building consultancy providing support to both the residential and commercial sectors.

SOURCING SUPPLIERS FOR YOUR DREAM HOME?



**MAKE SURE YOU
LOOK OUT FOR THESE
NACSBA STAMPS**

The National Custom & Self Build Association campaigns to remove the barriers to more people in the UK building their own home. Look out for the NaCSBA stamp and be assured that you'll be working with a company you can trust.

- All members are committed to working with self-builders in a fair and transparent manner
- All members are funding the growth of the sector so more people can have an individual home
- All members are covered by NaCSBA's consumer Code of Practice – to protect you if things go wrong



A FULL LIST OF MEMBERS CAN BE FOUND AT:
www.selfbuildportal.org.uk/members

Smart self builders & renovators always have the materials they need to hand...



...and that includes the money

The BuildStore Difference

- Borrow up to 95% of your land and build costs
- Stay in your current home until you have finished your new one
- Receive your money when you need it to pay for materials and labour
- Negotiate better deals and keep workmen on site by having the cash to pay your bills
- Choice of leading lenders, products and competitive rates
- Advance stage payments available

The trouble with most self build mortgages is that they're not designed to suit the needs of self builders and renovators.

BuildStore's highly experienced self build mortgage advisers have access to exclusive mortgage schemes individually tailored to suit you and your project, whatever your financial requirements. For example, if you don't have a large amount of cash sitting in the bank to fund the early stages of your project, our exclusive Traditional and Advance Stage Payment mortgage schemes with their higher lending percentages on land and build costs will help you get started. Quite simply, you'll have more money, enhanced cashflow and greater flexibility during your project.

Funds can be released at the beginning or end of each stage of your build to suit your circumstances and we offer a choice of leading lenders and competitive rates.

To find out more about our exclusive mortgage schemes and for expert advice, contact us now.

Call 0345 223 4647



www.buildstore.co.uk

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

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

MAB 7259



Self build & custom build mortgages

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

Advance Stage Payment Mortgages

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

Arrears Stage Payment Mortgages

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

Get In Touch

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

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

Lender	Mortgage Type	Payment Schedule	Contact	LTV Land	LTV End Value	Interest Rate	1st Stage Payment
Bath BS	★ SB & CB	Advance	0345 223 4647	95%	80%	4.44%	DPP & Building Regs
Buckinghamshire BS	★ SB	Advance	0345 223 4647	80%	80%	4.99%	DPP & Building Regs
Darlington BS	★ SB & CB	Advance	0345 223 4647	85%	70%	4.84%	DPP & Building Regs
Furness BS	★ SB & CB	Advance	0345 223 4647	80%	80%	4.15%	DPP & Building Regs
Hanley Economic BS	★ SB & CB	Advance	0345 223 4647	85%	60%	5.04%	DPP & Building Regs
Mansfield BS	★ SB & CB	Advance	0345 223 4647	85%	80%	4.99%	DPP & Building Regs
Newcastle BS	★ SB & CB	Advance	0345 223 4647	85%	80%	5.29%	DPP & Building Regs
Tipton & Colsley BS	★ SB & CB	Advance	0345 223 4647	85%	75%	4.99%	DPP & Building Regs
Vernon BS	★ SB & CB	Advance	0345 223 4647	85%	80%	5.50%	DPP & Building Regs
Buckinghamshire BS	★ SB	Arrears	0345 223 4647	85%	85%	4.84%	Foundations
Chorley BS	★ SB & CB	Arrears	0345 223 4647	85%	80%	4.64%	Foundations
Darlington BS	★ SB & CB	Arrears	0345 223 4647	85%	70%	4.64%	Foundations
Furness BS	★ SB & CB	Arrears	0345 223 4647	80%	80%	3.99%	Foundations
Hanley BS	★ SB & CB	Arrears	0345 223 4647	85%	80%	4.74%	Foundations
Hinckley & Rugby BS	★ SB	Arrears	0345 223 4647	85%	75%	4.99%	Foundations
Ipswich BS	★ SB & CB	Arrears	0345 223 4647	80%	80%	3.99%	Foundations
Loughborough BS	★ SB & CB	Arrears	0345 223 4647	80%	80%	4.39%	Foundations
Mansfield BS	★ SB & CB	Arrears	0345 223 4647	80%	80%	4.49%	Foundations
Newcastle BS	★ SB & CB	Arrears	0345 223 4647	85%	85%	4.99%	Foundations
Nottingham BS	★ SB	Arrears	0345 223 4647	80%	80%	3.99%	Foundations
Stafford Railway BS	★ SB	Arrears	0345 223 4647	85%	75%	4.27%	Foundations
Tipton & Coseley BS	★ SB & CB	Arrears	0345 223 4647	85%	75%	4.49%	Foundations
Vernon BS	★ SB & CB	Arrears	0345 223 4647	85%	80%	4.74%	Foundations
Virgin Money	★ CB	Arrears	0345 223 4647	85%	80%	5.29%	Foundations
West Bromwich BS	★ SB & CB	Arrears	0345 223 4647	85%	80%	4.29%	Foundations
Beverley BS	SB	Arrears	01482 881510	n/a	80%	4.99%	Wall Plate
Cumberland BS	SB	Arrears	01228 403141	75%	85%	Call	Flexible
Earl Shilton BS	SB	Arrears	01455 844422	50%	75%	4.99%	Flexible
Ecology BS	SB	Arrears	08456 745566	80%	80%	4.65%	Flexible
Melton Mowbray BS	SB	Arrears	01664 414141	75%	50%	3.49%	Foundations
Newbury BS	SB	Arrears	Local Branch	66%	75%	4.45%	Foundations
Penrith BS	SB	Arrears	01768 863675	75%	75%	4.99%	Foundations
Saffron BS	SB & CB	Arrears	01482 881510	65%	75%	3.99%	Flexible
Scottish BS	SB	Arrears	0131 313 7700	60%	80%	5.89%	Foundations

Ask the EXPERTS

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



PLANNING

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



FINANCE

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



SUSTAINABILITY

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



SCOTLAND

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



SELF BUILD

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



PROJECT MANAGEMENT

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



DESIGN

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

SELF BUILD

Can I use the Help to Buy scheme for my self build project?

I want to build my own house and was wondering if I can get financial support through the government's Help to Buy scheme. Am I eligible, considering my proposed plans would be for a new build property? If this is possible, should I apply for the scheme before I start building, or after I have finished constructing my home?

Sadly, no. The Help to Buy scheme does not extend to selfbuilders, only to the speculative new build sector. However, one of The National Custom and Self Build Association's (NaCSBA) aims is to introduce a similar initiative under the Right to Build umbrella for self and custom builders.

This is from the NaCSBA Manifesto for England: "Introduce a Help to Build equity loan scheme for custom and self build homes to equalise the position compared with the speculative new build market. Help to Buy Equity Loan has provided a major boost to the speculative new build sector, allowing access to cheaper mortgages with lower deposits by providing a loan of 20% of the value of a property up to £600,000, interest free for the first five years. The scheme is funded until 2021.

"An equivalent but bespoke scheme for the custom and self build sector, using the Right to Build brand, would enable the sector to expand and grow by creating access for those without the substantial cash deposit currently required. The structure of the scheme would ensure that it is focused on more affordable and lower risk builds, capped at a completed market value of £600,000 in line with Help to Build." For more information visit www.nacsb.org.uk/campaigns/help-to-build/



PLANNING

Should I self build on my garden plot or sell the land on?

We have planning permission to build a house at the bottom of our garden. I am trying to gather information to decide whether to take on my own self build or just sell the plot on. My architect told me the site should be worth 33% of the finished house sale price but one builder who has visited the space indicated that 20% was a more accurate valuation. Who is correct?

Valuing a plot by reference to the estimated price of the finished home is no more than a rough rule of thumb. Both the figures you mention sound a bit suspect. 33% is often quoted as a 'typical' percentage, but good sites can sell for a higher figure. 20% sounds very low. I suggest that instead, you talk to an estate agent who sometimes sells plots alongside property; this is likely to give you a more reliable indication of the value of your site.



FINANCE

How do I get public liability insurance for a rebuild project?

I've recently purchased a bungalow which I'm planning to demolish in order to rebuild a new bespoke home to live in. My architect has strongly advised me to take out public liability insurance to cover the time until the existing property is demolished, but I haven't been able to find a company that's willing to insure me.

One broker mentioned 'uninhabited house' cover as a potential route, but they weren't prepared to offer me help in this instance and neither was anyone else that I've contacted. My current lived-in house insurers were also unwilling, and the British Insurance Brokers Association (BIBA) haven't been able to help either. Can you advise on how I can obtain public liability insurance now?

It is certainly good advice get public liability insurance before building, because as the owners of the bungalow you are responsible for the site. However, uninhabited household insurance or public liability only insurance is difficult to get.

Public liability insurance is further complicated when there is an existing property on site that is waiting to be demolished. I would advise that you speak with an expert broker in this field; someone who can collect the details of the plot and put forward a proposal to insurance companies on your behalf.

This will allow you to decipher whether anyone is willing to provide public liability insurance for the time before you start demolition. Details of the current condition of the structure, demolition works and your building plans will be required.

PROJECT MANAGEMENT

Can I make money off of my demolition site?

I am about to demolish my 1950s bungalow and would ideally like to make some money from the materials before it is destroyed. I was planning on selling the big items like the conservatory on Ebay but was wondering where else I can make some profit. For instance, is there value in second-hand radiators, piping or cables?

There used to be a time when the cost of the demolition works could be paid for by the salvage of the materials, but less so today. Sometimes you can be lucky. Perhaps someone might be starting a home building project locally and could benefit from you recycling some of your unwanted goods.

Waste metal always has a value (at the prevailing rate) but no one will want to buy a 1950s radiator as a usable product unless it's a particularly special specimen with retro credentials.

The most attractive items will be clay or slate tiles (but not concrete), good quality stock or engineering bricks, terracotta tiles, solid wood internal doors, fire surrounds, random metals or lead. Windows and doors cannot usually be recycled any longer as extensions now require current energy efficiency standards.



ANY QUESTIONS?

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

YOU HAVE THE RIGHT TO BUILD

Want to build your own home?
Make sure you register with
your local authority for
self-build plots in your area

Find Out More at
righttobuild
portal.org.uk

NACSBA
National Custom & Self Build Association



finding land

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



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

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

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 115 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.

QUICK GUIDE 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

evolution®



WINDOWS REDEFINED

Change the way you think with
timber alternative windows.

T: 0800 773 4045
www.evolutionwindows.com

Clarke PETROL GENERATORS

CHECK FRAME TYPE WHEN ORDERING

FROM ONLY **£99.98** EXC. VAT
£119.98 INC. VAT

MODEL	KVA	HP	EXC. VAT	INC. VAT
G720	0.7	-	£99.98	£119.98
G1200	1.1	-	£159.98	£191.98
G2500	2.2	6.5	£179.98	£215.98
PG3800	3	7	£239.98	£287.98
PG3800DV	3	7	£269.98	£322.80
PG6500DVS	5.5	13	£499.00	£598.80

Honda engine models available

Machine Mart

WHERE QUALITY COSTS LESS

64 SUPERSTORES NATIONWIDE

FREE 508 PAGE CATALOGUE GET YOUR FREE COPY! IN-STORE

PHONE 0844 880 1265

ONLINE www.machinemart.co.uk

Machine Mart

Clarke QUALITY CAST IRON STOVES

5.3KW OVER 20 QUALITY STYLES ON DISPLAY

£299.00 EXC. VAT
£358.80 INC. VAT

ENERGY RATING **A**

defra APPROVED FOR SMOKELESS ZONES

FLUES, COWLS & ACCESSORIES IN STOCK

WENTWORTH

Clarke TURBO FAN GAS HEATERS

Offering low cost, efficient heating

DUAL VOLTAGE 230V

110V IN STOCK FROM £225.80

FROM ONLY **£79.98** EXC. VAT
£95.98 INC. VAT

PROPRANE GAS FIRED

MODEL	MAX OUTPUT KW	EXC. VAT	INC. VAT
Little Devil II	10.3	£79.98	£95.98
Devil 700	15	£99.98	£119.98
Devil 900	24.9	£139.98	£167.98
Devil 1600	36.6	£169.98	£203.98
Devil 2100	49.8	£259.98	£310.80
Devil 4000	131	£429.00	£514.80

Clarke CEMENT MIXERS

CCM110

110V in stock

FROM ONLY **£169.00** EXC. VAT
£202.80 INC. VAT

Clarke CONTRACTOR 18V BRUSHLESS COMBI DRILLS

2 forward and reverse gears

powered by Li-Ion

FROM ONLY **£109.98** EXC. VAT
£131.98 INC. VAT

MODEL	VOLTS	BATTS	EXC. VAT	INC. VAT
CON18LIC	18V	2x 2.0Ah Li-Ion	£109.98	£131.98
CON18LI	18V	2x 4.0Ah Li-Ion	£159.98	£191.98

Clarke CONTRACTOR ROTARY HAMMER DRILLS

CON1500RDV

Powerful heavy duty professional drill ideal for trade use

FROM ONLY **£39.98** EXC. VAT
£47.98 INC. VAT

INC 13MM KEYED DRILL CHUCK, 2X CHISELS, 3X SDS+ DRILL BITS & CARRY CASE

*was £71.98 inc. VAT

MODEL	POWER CAP (W)	MM	EXC. VAT	INC. VAT
CON400RHD	400	10-30	£39.98	£47.98
CRD1100	1100	13-40	£54.99	£65.99
CON1200RD	1200	13-40	£65.99	£79.99
CON720RHD	720	13-40	£84.99	£101.99
CON1500RDV	1500	13-40	£89.98	£107.98

Clarke DIESEL/PARAFFIN HEATERS

FROM ONLY **£189.98** EXC. VAT
£226.80 INC. VAT

Ideal for fast efficient heating

- Extra-long run fuel tanks - up to 53 litres
- Variable heat output with thermostat control

XR80

MODEL	MAX OUTPUT	EXC. VAT	INC. VAT
XR60	14.7KW	£189.00	£226.80
XR80	20.5KW	£239.00	£286.80
XR110	29.3KW	£289.00	£346.80
XR160	46.9KW	£349.00	£418.80
XR210	61.5KW	£399.00	£478.80

Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

Great for sawing, cutting, sanding, polishing, chiselling & much more • 250W motor • Variable speed

CMFT250

FROM ONLY **£37.99** EXC. VAT
£45.99 INC. VAT

Clarke BELT SANDERS

Ideal for surface removal, sanding and finishing

BS1

FROM ONLY **£37.99** EXC. VAT
£45.99 INC. VAT

MODEL	MOTOR	M/MIN	EXC. VAT	INC. VAT
Clarke BS1	900W	380	£37.99	£45.99
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£99.98	£119.98

Clarke PLANERS & THICKNESSERS

Ideal for DIY & Hobby use

Dual purpose, for both finishing & sizing of timber

CPT800

FROM ONLY **£179.98** EXC. VAT
£215.98 INC. VAT

MODEL	PLANING MAX THICK. (mm)	WIDTH (mm)	CAPACITY (mm)	EXC. VAT	INC. VAT
CPT600	6"	120mm	£179.98	£215.98	
CPT800	8"	120mm	£219.98	£263.98	
CPT1000	10"	120mm	£299.00	£358.80	

JIGSAWS

CON750

FROM ONLY **£15.99** EXC. VAT
£19.19 INC. VAT

BEST SELLER

*DIY & Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC. VAT
Clarke CJS380	420W	55/6mm	£15.99	£19.19
Clarke CON750	750W	80/10mm	£27.99	£33.99

Clarke SLIDING COMPOUND MITRE SAWS

For fast, accurate cross, bevel & mitre cutting in hard & soft woods

1800W motor

Laser guide

CMS10S2

PRICE CUT NOW FROM **£74.99** EXC. VAT
£89.99 INC. VAT

WAS £99.98 inc. VAT

MODEL	BLADE DIA/BORE DEPTH/ (mm)	CROSS CUT	EXC. VAT	INC. VAT
CMS210S	210/30	60/120	£74.99	£89.99
CMS210MP	216/30	65/305	£139.98	£167.98
CMS10S2	254/30	78/340	£139.98	£167.98
CMS250S	250/30	85/250	£109.98	£131.98
CMS250MP	255/30	90/305	£189.00	£226.80

Clarke TURBO AIR COMPRESSORS

NEW

FROM ONLY **£89.98** EXC. VAT
£107.98 INC. VAT

Superb range ideal for DIY, hobby & semi-professional use

* V Twin Pump

MODEL	MOTOR CFM	TANK	EXC. VAT	INC. VAT
3/260	2HP	7.5	24ltr	£89.98
7/250	2 HP	7	24ltr	£94.99
11/260	2.5HP	9.5	24ltr	£109.98
8/550	2HP	7.5	50ltr	£119.98
11/550	2.5HP	9.5	50ltr	£139.98
16/510*	3 HP	14.5	50ltr	£209.00
16/1010*	3 HP	14.5	100ltr	£259.98

VAC KING WET & DRY VACUUM CLEANERS

Compact, high performance wet & dry vacuum cleaners for use around the home, workshop, garage etc.

SS - Stainless Steel

FROM ONLY **£49.98** EXC. VAT
£59.98 INC. VAT

MODEL	MOTOR CAPACITY DRY/WET	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

Clarke ANGLE GRINDERS

INC. DISC & HANDLE

CAG800B

FROM ONLY **£24.99** EXC. VAT
£29.99 INC. VAT

MODEL	DISC (MM)	MOTOR	EXC. VAT	INC. VAT
CAG800B	115	800W	£24.99	£29.99
CON1150	115	1150W	£27.99	£33.99
CAG2350C	230	2350W	£52.99	£63.99

PROFESSIONAL ROUTER

Plunge depth up to 66mm

Variable speed

Inc. 1/4", 3/8" & 1/2" collets

CR4

PRICE CUT **£99.98** EXC. VAT
£119.98 INC. VAT

WAS £139.98 inc. VAT

Clarke TABLE SAWS

LEG STAND KITS FOR CTS100 AND CTS11 ONLY £27.59 INC. VAT*

CTS100

BEST SELLER

FROM ONLY **£72.99** EXC. VAT
£87.99 INC. VAT

MODEL	MOTOR	BLADE	EXC. VAT	INC. VAT
CTS800B	600W	200mm	£72.99	£87.99
CTS16	1600W	250mm	£99.98	£119.98
CTS14	1800W	250mm	£129.98	£155.98
CTS11	1500W	254mm	£149.98	£179.98
CTS100	1500W	254mm	£169.98	£203.98

Clarke GARAGES/WORKSHOPS

IDEAL ALL-WEATHER PROTECTION

FROM ONLY **£229.00** EXC. VAT
£274.80 INC. VAT

20'6" x 10'6"

BRIGHT WHITE INTERIOR

LENGTH UP TO 24'

ZIP CLOSE DOOR

*Ideal for use as a garage/workshop • Extra tough triple layer weatherproof cover • Heavy duty powder coated steel tubing

*Ratchet tight tensioning *was £346.80 inc. VAT

Clarke SUBMERSIBLE WATER PUMPS

Auto ON/OFF float switch

FROM ONLY **£49.98** EXC. VAT
£59.98 INC. VAT

HUGE CHOICE INC. BOOSTER PUMPS IN STOCK NOW

PSV1A

HSEC650A

*Pumps solids up to 30mm diameter #Pumps solids up to 35mm diameter #Sewage cutter pump

MODEL	MAX FLOW LPM	MAX HEAD	EXC. VAT	INC. VAT
PSV1A*	140	5.8m	£49.98	£59.98
HP102 (230V)	85	6.0m	£54.99	£66.99
PVP11A*	258	11.0m	£79.98	£95.98
PSP125	125	10.2m	£87.99	£105.99
HSEC650A*	290	9.5m	£199.98	£239.98

Clarke TOPTOWER WORKTOWER

150KG SAFE WORKING LOAD

MAX PLATFORM HEIGHT 2.6M

FROM ONLY **£229.00** EXC. VAT
£274.80 INC. VAT

MODEL	EXC. VAT	INC. VAT
3'11" x 3'11"	£229.00	£274.80
Steel Work tower	£54.99	£65.99
4 adjustable legs	£54.99	£65.99
4 Castor Wheels	£59.98	£71.98

Clarke CIRCULAR SAWS

Great range of DIY and professional saws - ideal for bevel cutting (0-45°)

CON185

FROM ONLY **£41.99** EXC. VAT
£50.39 INC. VAT

*Includes laser guide

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

VISIT YOUR LOCAL SUPERSTORE OPEN MON-FRI 8.30-6.00, SAT 8.30-5.30, SUN 10.00-4.00

BARNSLEY Pontefract Rd. Barnsley, S71 1EZ B'HAM GREAT BARR 4 Birmingham Rd. B'HAM HAY MILLS 1152 Coventry Rd, Hay Mills BOLTON 1 Thynne St. BL3 6BD BRADFORD 105-107 Manningham Lane. BD1 3BN BRIGHTON 123 Lewes Rd. BN2 3QB BRISTOL 1-3 Church Rd, Lawrence Hill. BS5 9JJ BURTON UPON TRENT 12a Lichfield St. DE14 3QZ CAMBRIDGE 181-183 Histon Road, Cambridge. CB4 3HL CARDIFF 44-46 City Rd. CF24 3DN CARLISLE 85 London Rd. CA1 2LG CHELTENHAM 64 Fairview Road. GL52 2EH CHESTER 43-45 St. James Street. CH1 3PE COLCHESTER 4 North Station Rd. CO1 1RE COVENTRY Bishop St. CV1 1HT CROYDON 423-427 Brighton Rd, Sth Croydon DARLINGTON 214 Northgate. DL1 1RB DEAL (KENT) 182-186 High St. CT14 6BQ DERBY Derwent St. DE1 2ED DONCASTER Wheatley Hall Road DUNDEE 24-26 Trades Lane. DD1 3ET EDINBURGH 163-171 Piersfield Terrace	01226 732297 0121 358 7977 0121 7713433 01204 365799 01274 390662 01273 915999 01173 953 1060 01283 564 708 01223 322675 029 2046 5424 01228 591666 01242 514 402 01244 311258 01206 762831 024 7662 4227 020 8763 0640 01325 380 841 01304 373 434 01332 290 931 01302 245 999 01382 225 140 0131 659 5919	EXETER 16 Trusham Rd. EX2 8QG GATESHEAD 50 Lobley Hill Rd. NE8 4YJ GLASGOW 280 Gt Western Rd. G4 9EJ GLOUCESTER 221A Barton St. GL1 4HY GRIMSBY ELLIS WAY, DN32 9BD HULL 810 Holderness Rd. HU9 1EG IPSWICH Unit 1 Ipswich Trade Centre, Commercial Road LEEDS 227-229 Kirkstall Rd. LS4 2AS LEICESTER 69 Melton Rd. LE4 6PN LINCOLN Unit 5, The Pelham Centre, LN5 8HG LIVERPOOL 80-88 London Rd. L3 5NF LONDON CATFORD 289/291 Southend Lane SE6 3RS LONDON 6 Kendal Parade, Edmonton N18 LONDON 503-507 Lea Bridge Rd. Leyton, E10 LUTON Unit 1, 326 Dunstable Rd, Luton LU4 8JS MAIDSTONE 57 Upper Stone St. ME15 6HE MANCHESTER ALTRINCHAM 71 Manchester Rd. Altrincham MANCHESTER CENTRAL 209 Bury New Road M8 0DU MANCHESTER OPENSHAW Unit 5, Tower Mill, Ashton Old Rd MANSFIELD 169 Chesterfield Rd. South MIDDLEBROUGH Mandale Triangle, Thornaby	01392 256 744 0191 493 2520 0141 332 9231 01452 417 948 01472 354435 01482 223611 0208 518 4286 01473 221253 0113 231 0400 0116 261 0688 01522 543 036 0151 709 4484 0208 695 5684 020 8803 0861 020 8558 8264 01582 728 083 01622 769 572 0161 941 6666 0161 221 8851 01623 622160 01642 677881	NORWICH 282a Heigham St. NR2 4LZ NOTTINGHAM 211 Lower Parliament St. PETERBOROUGH 417 Lincoln Rd. Millfield PLYMOUTH 58-64 Embankment Rd. PL4 9HY POOLE 137-139 Bournemouth Rd. Parkstone PORTSMOUTH 277-283 Copnor Rd. Copnor PRESTON 53 Blackpool Rd. PR2 6BU SHEFFIELD 453 London Rd. Heeley. S2 4HJ SIDCUP 13 Blackfen Parade, Blackfen Rd. SOUTHAMPTON 516-518 Portswood Rd. SOUTHEND 1139-1141 London Rd. Leigh on Sea STOKE-ON-TRENT 382-396 Waterloo Rd. Hanley SUNDERLAND 13-15 Ryhope Rd. Grangetown SWANSEA 7 Sarnet Rd. Llansamlet. SA7 9AG SWINDON 21 Victoria Rd. SN1 3AW TWICKENHAM 83-85 Heath Rd. TW1 4AW WARRINGTON Unit 3, Hawley's Trade Pk. WIGAN 2 Harrison Street, WN5 9AU WOLVERHAMPTON Parkfield Rd. Bilston WORCESTER 48a Upper Tything. WR1 1JZ	01603 766402 0115 956 1811 01733 311770 01752 254050 01202 717913 023 9265 4777 01772 703263 0114 258 0831 0208 3042069 023 8055 7788 01702 483 742 01782 287321 0191 510 8773 01792 792969 01793 491717 020 8892 9117 01925 630 937 01942 323 785 01902 494186 01905 723451
--	---	---	---	--	--

29382 Calls to the catalogue request number above (0844 880 1265) cost 7p per minute plus your telephone company's network access charge. For security reasons, calls may be monitored. All prices correct at time of going to press. We reserve the right to change products and prices at any time. All offers subject to availability. E&OE. *Terms & conditions apply see machinemart.co.uk/finance for more details



It's FREE to subscribe to PlotSearch – the UK's premier land finding resource with over 8,000 genuine building opportunities, all with planning permission guaranteed.

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

Land FOR SALE

Location

Kent

Price

£550,000

Plot

143484

This plot has outline planning permission for the construction of one domestic building. It's a fantastic opportunity for a self builder to create a bespoke home by the ocean. Located close to the seaside, the site sits conveniently between Whitstable and Canterbury. Despite a rural setting, the plot benefits from easy travel access to London and the motorway network.



Agent

Christopher Hodgson

Location

Worcestershire

Price

£295,000

Plot number

146282

Housing an existing traditional barn with detailed planning consent, this space is ripe for a total transformation. The change of use that is allowed is for a family dwelling and would be an ambitious project, but perfect for anyone up to the challenge. The peaceful rural surrounding has easy access routes to nearby towns and villages.



Agent

Fisher German

Location

Lancashire

Price

£300,000

Plot number

146970

Incredibly sought-after, this secluded space on the outskirts of Canton village has detailed planning permission for a four-bedroom house, with a separate garage and a private garden. The current proposal details the layout across three storeys, maximising the plot's footprint. The traditional scheme complements the rural views and local architectural style.



Agent

Matthews Benjamin

Location

Carmarthenshire

Price

£125,000

Plot number

147259

Overflowing with potential, this piece of land in rural Wales has outline planning consent for a three-bedroom detached abode. The design is flexible, so a self builder can put their own stamp on the house. With beautiful views across the local area, it's a great chance for a home in a secluded space, while enjoying good access to the motorway network.



Agent

Clee Tompkinson & Francis

Location

Norfolk

Price

£400,000

Plot number

147837

This beautiful spot of land has detailed planning permission for a three-storey detached dwelling. The consent stipulates a barn-style structure, to integrate visually with the local vernacular. Owners of the plot will enjoy stunning rural vistas. The local village, Necton, is equipped with a variety of shops and amenities, and there are larger towns nearby.



Agent

Sowerbys

Location

Perth

Price

£85,000

Plot number

148198

Outline planning consent for a single storey house has been granted for this plot in the heart of the Scottish countryside. The quiet space could be an ideal location for the right self builder. The local village of Methven boasts all essential facilities, including a pub and even an Indian restaurant. Perth is close by, with a wider variety of amenities.



Agent

Miller Hendry

PLOT WATCH: Mike Dade *investigates*

This spot of land has been in Alan Newton's family for generations, but does it have potential for his dream eco home?

WHO Alan Newton

WHAT A plot bordering the village street in an area of outstanding natural beauty

WHERE Hertfordshire



Alan Newton's family has owned land in a Hertfordshire village for several generations. Some of it, fronting the village street, has already been built on. Most recently, this has included an affordable housing scheme. Now, just one small paddock remains behind these dwellings. Alan would love to construct a home for himself – could this space, which he already owns, be a suitable spot?

The site

Alan's plot sits behind the village street and forms part of a larger paddock. A copse of trees and overgrown hedge separate his land from the long back gardens of the adjacent houses. It's enclosed on two other sides by trees. There's a track running along the back of the houses to the plot, which the family retained access to when they sold off parts in the past. The path is overgrown but could readily be cleared. The entire space is approximately 40m long by 20m wide, with a gentle slope down to the east.

Planning basics

Perhaps surprisingly, for an open piece of land like this, it is situated within the village development boundary, which is set out in a reasonably up-to-date Local Plan. Typically, councils will draw these lines pretty tightly around the built-up area of settlements, but not here. Admittedly the plot does bite into the built form of the village, but it's very well separated from it by all the trees. A further twist is that the settlement is within an area of outstanding natural beauty (AONB),

where policy seeks to preserve rural charm and character. This means any planning proposals for a self build on this site will be closely examined to ensure they won't have a harmful effect on the stunning landscape.

Potential to build

Alan would like to construct a three-bedroom home. He wants it to be as energy efficient as possible and would favour contemporary design over something more traditional. This is a reasonable proposition for a good-sized plot like this. Plus, being within a defined development boundary usually means that a new dwelling would be acceptable – in principle. You do occasionally see refusals and dismissed appeals, where harm to the character of the village edge is considered to rule out the benefits of any new building. Here, the AONB status adds significantly to the degree of protection afforded to natural beauty. Consequently, there's no guarantee that permission would be granted, despite Alan's plot being located just inside the village development boundary.

There are two mitigating factors, though. One is that the plot is screened off from its surroundings by trees, so a new structure would have little to no impact on the built character of the village. The second is the fact that Alan's not looking to construct anything too large, and his preferences for the design have the potential to be low key.

Scheme details

It would make sense to consider a design that would sit as inconspicuously as possible



the plot, which could be a habitat for newts. If discovered, protective action will need to be taken before and during the work. It's unlikely that construction will be prohibited.

Finally, it would be worthwhile for Alan to think about the garden and landscaping at an early stage. Maintenance of the external spaces to be as natural as possible might help overcome the potential issue with the impact on the area's beauty. If Alan's getting an ecological survey done, he should ask for recommendations of any environmental and biodiversity enhancements that could be incorporated into the scheme. Any such improvements should really feature in all applications these days, as it's required by government planning policy guidance.

Where to start?

The very first step that I'd recommend Alan take would be to clear the access track, so

stronger position than debating whether it should be used in this way in the first place.

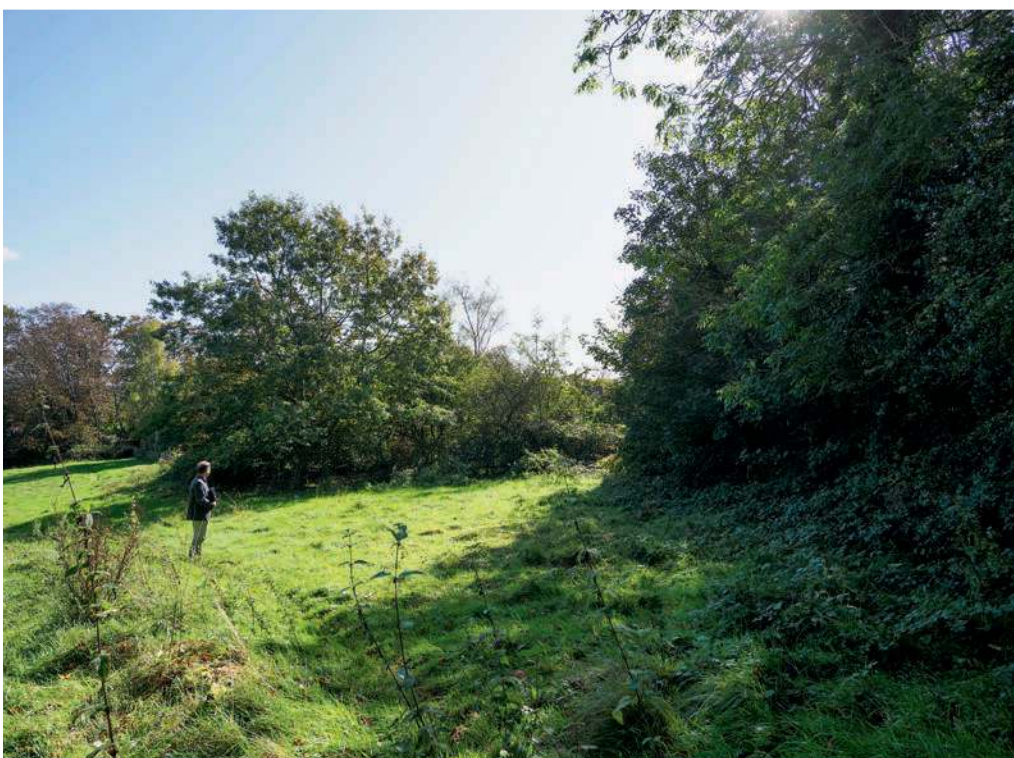
If Alan is prepared to compromise on the details of his scheme, the officer might offer a few suggestions or tweaks. They'll be invested in the outcome, putting Alan in much better standing.

You can't guarantee that the same agent will deal with a formal application after the pre-app, but that's typically the way it goes. Seeking this advice early on would also flush out the council's requirements, in terms of supporting reports and the need to make any financial contributions. The latter is sometimes needed where a council doesn't yet charge Community Infrastructure Levy.

Obtaining consent

Assuming the pre-application advice is positive, Alan can move on to getting the tree and ecological surveys commissioned and pinning down the design. Before he submits the final application to the local authority, he should take advantage of his family's long-standing presence in the village and do a little lobbying. This could include going to immediate neighbours, most of whom he knows, and the Parish Council, where again he has a few contacts. Given that the plot is neatly tucked away, there's a good chance that Alan will be able to avoid objections. This is helpful for any application, and you can find more information on liaising with neighbours on page 89.

If the initial advice is negative, questioning the very principle of building on the land, then Alan should still consider whether an application would be worth a try. His local contacts might give him a shot at getting his application before the planning committee, where individual officers' objections can, on occasion, be overruled. Even if his proposal is refused, it might be worth considering an appeal. Much of this would depend on the reasons for refusal. If the objections could be overcome by design changes, then amending the scheme and re-submitting would be the way to go. If the issues are more deeply rooted, then appeal would be Alan's only option to take matters forward.



in the landscape – low profile green roofs and timber or other muted wall coverings would be a good start. Also, with the slight slope to the plot, the house could be set into the ground a little to further reduce its visual impact. Careful thought would need to go into the access and parking/turning areas, to ensure that cars would be well-screened, too. Both the house and vehicle space would need to be situated away from the boundary trees, and an arboricultural survey and report would be essential to demonstrate that no harm would come to the surrounding trees.

It's also likely the council will want to see an ecological survey to accompany Alan's application. There's a pond about 40m from

that it's more obviously capable of providing entry to the plot. This will also prevent it from getting absorbed further into the woodland. It would then make sense for him to start discussions with an architect, with a view to taking some sketch drawings to the council to get pre-application advice. Preliminary consultations aren't always necessary, but in this case it could be advantageous. With the plot inside the development boundary, there's a reasonable chance a planning officer would wave the new building through without a second thought and instead might focus on the design itself. This would work to Alan's advantage. Having a conversation on how the plot should be developed is a far



Would you like Mike Dade to cast his expert eye over a plot or project you're considering?

Email us on buildit@castlemedia.co.uk. Mike can also be contacted through his consultancy at www.speeddade.co.uk

InFocus



Smart Home Technology



Smart Homes and Audio Visual Made Simple

The way we interact with our buildings is changing. We all want life to be comfortable, pleasant and efficient, but it can be difficult to know how to achieve this. At MPAV we offer design, installation, maintenance and advice on all aspects of home automation and audio visual. We understand your project isn't just a project but an extension of your personality. Allow us to help you control your environment with ease, and get it right first time.



Tel: 01296 593818 **Web:** www.mpav.co.uk
Email: www.info@mpav.co.uk



Smart homes – Intelligent Contemporary Living

Imagine a home that perfectly complements your lifestyle.

Smart homes award winning projects are created by reflecting your tastes and your passions. Our designers will integrate both elegant interior finishes with the latest innovative home technologies throughout the home.

Smart homes are focussed on making your life simple by bringing all elements of the home into one easy to operate system incorporating – lighting, heating, multiroom audio & video, Security, home automation and cinema with a huge emphasis on lifestyle and design.



SMART HOMES
INTELLIGENT CONTEMPORARY LIVING™

Tel: 01252 741266
Web: www.smarthomes.tv

SHORTLISTED FOR BEST ACCESSIBLE OR INCLUSIVE HOME, BEST HEATING SYSTEM OR PRODUCT & BEST HOME TECHNOLOGY PRODUCT OR INSTALLATION AT THE BUILD IT AWARDS 2019



Niko Home Control – Changing the way you live in your home

An intelligent home automation system like no other. Beautifully streamlined design, easy to use and cost effective – Niko Home Control automates heating, light and music as well as shading and ventilation seamlessly through touchscreen technology and a huge range of design led switches.

Modern technology has changed the way we live outside of our homes. We have smart phones, cars that think for themselves and computers that allow us to work more efficiently.

Modern wiring technology simplifies the

everyday things we do. Turn all the lights off with the touch of a single button, monitor your energy consumption, activate your music with a simple command or close your blinds at sunset. Niko Home Control thinks for you.

niko
illuminating ideas.
BY
MOSS TECHNICAL

Tel: 01656 746766 **Web:** www.homecontrol.uk.com **Email:** niko@mosstech.co.uk



You Control Smart Homes partner with Loxone to represent home automation excellence

As the demand for smart home technology increases, so does the need for professionals to install it. One such company providing this service are Sussex based home technology experts, You Control Ltd.

As experienced Loxone partners, they specialise in designing and installing smart home systems which create an 'eco-system' within the home, where lighting, heating, security and A/V all work in perfect harmony and all the benefits of a smart home such as convenience, simplicity and energy efficiency can truly be reaped.

Tel: 01444 500175 **Web:** www.youcontrol.uk.com

The CEDIA accredited company offer a free consultation, which is a great opportunity for customers to discuss their needs and ideas with a smart home professional who can help them arrive at the perfect solution to suit their budget. A years free maintenance package is provided with all their smart home systems for peace of mind.



Uponor Smatrix Pulse: smart controls for everyday living

Say hello to Smatrix Pulse, the new easy to use room temperature control system which offers enhanced comfort and compatibility with various smart home applications, including Alexa Voice Control.

Utilising autobalancing technology, the Smatrix Pulse system adapts to changes in your environment i.e. a new floor covering to create a comfortable temperature. What's more heating and cooling can be scheduled whilst you are away via the Smatrix app.

Overall, you can save time, energy and money by choosing Smatrix Pulse.



Tel: 01923 927000 **Web:** www.uponor.co.uk
Email: marketing.uk@uponor.com



Logic Tree design and install bespoke Smart Home solutions

A true smart home combines the key functions of lighting, heating, security, energy and multimedia in your home to work seamlessly together.

Our solutions work intelligently in the background meaning less time pressing switches or managing multiple apps and more time doing things you enjoy. When you want to check in or change settings, everything is there in one app and fully controllable.

We believe your data should stay with you and with our whole house WiFi and

advanced network security your privacy is secure. Whether it is new build, renovation or retrofitting we bring technology together to work for you.

Contact us on 0330 133 0919 or email info@logic-tree.co.uk for a free quotation or to discuss your project. Follow us on Twitter @LogicTreeUK



Tel: 0330 133 0919 **Web:** www.logic-tree.co.uk



Source great products

To find out about more great products for your project, why not sign up to our product of the month newsletter? Every month we round up the best new products for the self build and renovation sector and email them direct to your inbox.

Build It

magazine ■ online ■ live events

Please register online at: www.self-build.co.uk

SHORTLISTED FOR BEST HOME TECHNOLOGY AT THE BUILD IT AWARDS 2019



Audio for Very Smart Spaces

Aminasound lead the world in creating sound solutions that are embedded in walls and ceilings and then decorated over to become completely invisible in your finished home. They are not only totally unseen, audio reproduction is of incredible quality, filling your home with beautiful sound.

See us in the new Build-it Education House at Graven Hill.

Visit aminasound.com/animations to see just how our invisible speakers can fit into your home.

Tel: 01480 354390 Web: www.aminasound.com
Email: Sales@aminasound.com



Make the smart choice for your home technology - use a CEDIA® professional

The smart home is here. Integrating smart home technology is fast becoming the norm for households up and down the country.

Smart home technology is designed to simplify and enhance our day to day lives. It offers the capability for families to control every aspect of their home's entertainment, lighting, security, heating, and integrate the technology to operate from a single touch-screen, tablet and mobile phone.

All this and much more can be achieved without an assortment of unsightly plastic boxes, ugly wires or trailing, trip-hazard cables in sight. Yes, today's integrated home allows you to control, conceal and operate electronic systems within your home as never before – this is the world of CEDIA and its home technology professionals who can make this dream a reality.

How CEDIA Can Help CEDIA (cedia.org) is the leading global authority in the home technology industry, representing professional designers, installers and manufacturers of smart home technology systems. All CEDIA professionals are trained in the latest technologies, design, project management, and installation techniques. Working with a CEDIA member is the best insurance homeowners have that the final system will meet your expectations, without any unexpected set-backs. Your professional will also be able to look after your system: servicing, maintaining and upgrading the technology as required long after your installation is completed.

Build a relationship with a home technology professional

To ensure the best service from design to installation, it's important to build a relationship with a Home Technology Professional from the get-go. CEDIA members understand

that technology in the home is a significant investment and will be able to advise on what technology solution is best for you and your budget.

CEDIA Finder Service CEDIA offers a Finder Service on its website – www.cedia.org, which allows homeowners to locate their nearest home technology professional. Users can search CEDIA member companies by postcode, services, and certification. This provides the homeowners with enough information to decide who they should contact. If you are interested in finding out more on what technology is best for an open-plan space, please contact a CEDIA professional who will be able to provide you with expert advice. You can find your local CEDIA member via www.cedia.org/find-a-edia-professional.

CEDIA members offer: • Professional assistance and guidance in the design of a personalised system • A certified and trained staff of technicians, designers and support personnel to deliver a product of the highest quality • A simple but custom solution you will be proud to have as part of your home and lifestyle

CEDIA

Tel: 01480 213 744 Web: www.cedia.org



Be smart this winter with room-to-room heating control

Take control of your energy bills and your heating this winter with Wiser, the smart multi-room heating system.

Wiser gives you the ability to create independent heating schedules for every room in your house. This means that you can fix the temperature in a baby's nursery at the recommended 18°C, have your living room heated to 21°C for the rest of the family and lower the temperature in empty spare rooms.

Designed by trusted British heating experts Drayton, Wiser allows you to create up to 16 individual heating zones, all via a

handy app.

The Wiser app is available on Android and iOS devices and the system is compatible with IFTTT and smart voice assistants including Amazon Alexa and The Google Assistant.

Wiser™

Tel: 0333 6000 622 Web: wiser.draytoncontrols.co.uk



Smart floor heating in your home with the DEVreg Smart

Offering you luxurious comfort, reliability and control, Gaia has launched the new DEVreg Smart thermostat. Together with the DEVreg Smart App, it enables you to adjust your floor heating from your smartphone. Smart app features let you schedule your floor heating system to fit your lifestyle and reduce energy costs – while enjoying a perfect temperature 24/7. The DEVreg Smart thermostat even adapts to you and learns when to switch on and off the heating. Together the DEVreg Smart and DEVreg Smart App allow you to take full control of the floor heating in your home.



Tel: 01359 242400 Web: www.gaia.co.uk



Looking to add space and value to your home?

If you're thinking about extending your home, knowing a realistic cost before you meet with builders can be vital. Not only will it help you to negotiate the cost of the job but it will also help you better understand your options of finishes and fittings and how this will impact the overall price. This tailored costing service includes a schedule planner and cashflow forecast for your extension – essential if you're looking to get a loan for your project.



Tel: 0117 916 7866
Web: www.buildit.co.uk/estimate

Specify



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



Featured on pages 49-54

Chartered Structural Engineer serving Devon and Somerset

Mainly serving Somerset and Devon, we have experience in most structural materials and forms.

Listed Buildings, barn conversions, new-build dwellings and alterations, and the health sector are typical categories of our work.

As structural engineers, we are often requested to assist with unusual projects such as theatrical props, supporting the world's largest rugby ball, and a civic mast/Christmas tree base!

As a one-man practice, I get equally excited about a state-of-the-art new-build, as I do a 15th Century Oak-framed roof

Tel: 01278 685250 Web: www.davidbearman.co.uk
Email: info@davidbearman.co.uk

David Bearman Ltd



Featured on pages 42-47

A.Flora Bespoke Buildings Ltd.

We offer a complete bespoke service from beginning to end delivering a client experience that includes seamless communication, budgeting, and solid, quality craftsmanship every time. Our past building projects include new builds, extensions, loft conversions and refurbishments with the option to complete the finished look with paving, patio and landscaping leaving the client to just enjoy their new home. We have worked with homeowners, architects and designers to produce work we think you'll love.



Tel: 07544 181910 Web: www.florabuild.com
Email: info@florabuild.com



The new way of converting lofts

Forget heavy steel beams and cranes. TeleBeam is the exciting new way of converting lofts. It is the very first bespoke prefabricated system which deals with a wide range of loft conversion applications. TeleBeam has been primarily designed for the conversion of roof trusses in modern buildings. TeleBeam's unique load sharing arrangement means that is also ideal for converting lofts in modern timber framed buildings and can also be a good solution in older style 'cut' roofs.



Tel: 01380 739000 Web: www.telebeam.co.uk
Email: info@telebeam.co.uk

SHORTLISTED FOR BEST GLAZED DOORS AT THE BUILD IT AWARDS 2019



Steel Impact from Crittall

Innervation® steel-framed sliding doors from Crittall add a further dimension to interiors. Creating a seamless transition between rooms, by opening or closing space, is now possible. These bright, beautifully crafted walls of glazing will complement timeless styles of period property or contemporary homes.

The steel framed sliding doors feature concealed running gear to provide a sleek finish.

Tel: 01376 530800
Web: www.crittall-windows.co.uk
Email: hq@crittall-windows.co.uk



High Quality, Beautiful Flooring

Floors of Stone are leading suppliers of the highest quality natural stone and porcelain tiles. Sourced from around the world, there is something to suit every project. To complement their tile range, they have also introduced their own collection of wood flooring; Planks & Parquet by Floors of Stone. Created from sustainable European Oak, every block and plank is finished by hand in the UK to create a stunning, unique floor. Free samples are available via the website.

FLOORS of STONE LTD

Tel: 01509 234000
Web: www.floorsofstone.com

SHORTLISTED FOR BEST SELF-BUILD LENDER AT THE BUILD IT AWARDS 2019



Helping you realise the dream of designing and building your own home

Tipton and Coseley Building Society can help you realise your dream of designing and building your own home. In partnership with BuildStore, we offer two discounted mortgages that lend up to £450,000 at 85% LTV during the build stages and up to a maximum of 75% LTV at completion of the build. To discuss your requirements in more detail please contact BuildStore direct, on the number below.



Tel: 0345 223 4447 Web: www.thetipton.co.uk/our-mortgages

SHORTLISTED FOR BEST TIMBER FRAME HOME, BEST SUSTAINABLE TECHNOLOGY OR PRODUCT & BEST SELF-BUILD UNDER £250K AT THE BUILD IT AWARDS 2019



Frame Technologies: Bespoke Self-Build Timber Frame Homes

Winner of the 2018 Build It Award for Best Timber Frame Home, Frame Technologies offers timber systems to meet self-builders' individual needs, tailoring every stage of the design and manufacturing process to your requirements. We design, fully engineer and offsite manufacture advanced timber systems in our factory before transporting to site for installation.

Tel: 01544 267124
Web: www.frame technologies.co.uk
Email: simon@frame technologies.co.uk



Source great products

To find out about more great products for your project, why not sign up to our product of the month newsletter? Every month we round up the best new products for the self build and renovation sector and email them direct to your inbox.



Please register online at: www.self-build.co.uk

SHORTLISTED FOR BEST SELF-BUILD LENDER AT THE BUILD IT AWARDS 2019



Furness
BUILDING SOCIETY

Build your dream home with Furness Building Society!

Furness Building Society has helped hundreds of people to build their dream home and by working closely with Buildstore the dedicated and highly experienced lending team make Furness a great choice of lender for your self-build project.

Thanks to their individual approach to lending, Furness can help on a wide range of modern methods of construction including SIPS, ICF, volumetric systems and modern steel/timber and oak frame and they also offer options of advanced or arrears stage payment mortgages.

Tel: 0800 220 568 Web: www.furnessbs.co.uk

SHORTLISTED FOR BRICK HOME AT THE BUILD IT AWARDS 2019



CHOSEN FOR CHARACTER
ESTABLISHED 1985

Be inspired by bricks of character!

"We wanted a gentle but warm tone to compliment nearby traditional-style properties. It was also important to sit well with the contemporary style design and exposed brick used internally and externally. We're delighted to say Northcot got it spot-on!" - Kathy Fabry, owner of Sheerwater (Shortlisted Best Brick Home at the Build It Awards 2019).

As three-time winner of the Build It Awards, you can rely on Northcot to make your home special with our standard of bespoke blends of handmade, wirecut and reclaimed facing bricks.

**Tel: 01386 700 551 Web: www.northcotbrick.co.uk
Email: sales@northcotbrick.co.uk**



Featured
on pages
49-54

Looking to add space and value to your home?

If you're thinking about extending your home, knowing a realistic cost before you meet with builders can be vital. Not only will it help you to negotiate the cost of the job but it will also help you better understand your options of finishes and fittings and how this will impact the overall price. This tailored costing service includes a schedule planner and cashflow forecast for your extension – essential if you're looking to get a loan for your project.

Build It POWERED BY HBXC
ESTIMATING SERVICE
CONTROLLING YOUR SELF-BUILD COSTS

**Tel: 0117 916 7866
Web: www.buildit.co.uk/estimate**

Georgia Brown Interiors

Georgia Brown Interiors is proud to have worked on the Haygarth self build project featured in this issue's reader home section. Supplying the curtains for the project in West Yorkshire, Georgia Brown Interiors is based in Bingley and works with clients with the aim of creating their ideal home interior furnishings.

Georgia Brown Interiors

**Tel: 07774 186949 Web: www.florabuild.com
Email: georgia33@btinternet.com**



Featured
on pages
27-32



Featured
on pages
27-32

TIFFANY

House Builders & Building Contractors

Tiffany - Building For Our Future...

We are an established, family firm who specialise in high-quality residential projects.

Our small team of skilled tradesmen and trusted specialist contractors, co-ordinated by our Professional Project Managers deliver quality projects time after time.

We will always work closely with our clients, and the Project Consultants, throughout the process, in a proactive and non-adversarial manner.

We work regularly with traditional, timber frame and SIPS construction methods

**Tel: 01756 793734 Web: www.rogertiffany.co.uk
Email: info@rogertiffany.co.uk**



Source great products

To find out about more great products for your project, why not sign up to our product of the month newsletter? Every month we round up the best new products for the self build and renovation sector and email them direct to your inbox.

Build It
magazine ■ online ■ live events

Please register online at: www.self-build.co.uk

Contrasol Ltd – External Solar Shading Solutions

We are a design driven company specialising in solar shading solutions for all types of buildings across the UK. Providing a broad range of systems including Brise Soleil, Sliding and Bi-Fold Shutters.

These functional shading systems provide an aesthetic product to help control heat, light and glare, making the internal

living spaces a more comfortable place. We can use a range of materials including Aluminium, Timber and Glass to suit or enhance the design of your Building. Please visit our Showroom by appointment at: Sky House Design Centre, Raans Road, Amersham, Bucks, HP6 6FT

contrasol ltd
solar shading solutions

Tel: 01727 809 459 Web: www.contrasol.com Email: sales@contrasol.com

SHORTLISTED FOR BEST PLUMBING OR DRAINAGE PRODUCT AT THE BUILD IT AWARDS 2019



Guaranteed zero leaks!

WIRQUIN NEO is a new generation of traps guaranteeing zero leaks. One of the most common problems with traps today is missing or distorted washers upon installation. Thanks to bi-injection technology, all washers are over-moulded forming part of the product itself, giving total protection against leaks. The Wirquin NEO Air system function replaces the traditional air admittance valve, preventing noisy gurgling and bad smells.

- Guarantees against leaks
- High-performance flowrate up to 60 L/min
- 80mm water seal
- Simple 1/4 turn captive nut and washer for quick installation

**Tel: 033 32 22 44 88 Web: www.wirquin.co.uk
Email: sales@wirquin.co.uk**

Bespoke Staircases and Balustrades

Bisca's designers approach every staircase or balustrade design with a blank sheet of paper and an open mind. Not having to restrict themselves to creating your design around common parts or stock items, we have complete freedom to create a commission unique to yourself and your property. The measure of a great staircase or balustrade is one that fits its environment and completely integrates into the character of your property. From your first phone call to the final installation, we will take responsibility for your new staircase or balustrade. All Bisca commissions have a 5 year guarantee for complete peace of mind.

**Tel: 01439 771702
Web: www.bisca.co.uk**



BISCA



Simplify your self-build with a package home. Take a look at our newly updated website for some inspiring new ideas for your project. All buildings can be customised to suit your requirements. Closed panel timber frame or log homes; full turnkey build service available.

homes@scandinavianhomes.com
0845 299 6337 | www.scandinavianhomes.com

C A B E R  H O U S E
www.caberhouse.co.uk

Architect Designed Kit Houses
to the Passivhaus & Zero Carbon Standards

Turnkey build options available



contact@caberhouse.co.uk

01369 701 988

ICF Supplies proud suppliers of NUDURA ICF for the Build It Education House



WE PROVIDE:

- Advice and support from concept to completion
- Free estimates and visualisation sketches
- Monthly installation training sessions
- Ongoing site support
- RIBA accredited CPD presentations



Contact one of our team on **01268 542748** or come and see us
I, Ryder Way, Burnt Mills Industrial Estate, Basildon. SS13 1QH
www.icfsupplies.co.uk



Featured
on pages
49-54

Sustainable Design for Readers' Homes

We aim to meet your aspirations through creative high quality design
delivered successfully on time and within your budget.

mjwarchitects

01749 840180

info@mjwarchitects.com www.mjwarchitects.com



DESIGN & BUILD



Southern Counties Winner
2019



We Design and we Build -
a truly one stop complete service.
We are unique and the results are
constantly stunning.
We also offer Design Only across the UK,
utilising our construction knowledge,
first hand understanding of budgets and the
reality of on site construction.

www.chewtonbespokehomes.co.uk

Tel: 01425 600015



HebHomes

Home at last.
www.hebhomes.com



Featured
on pages
27-32



HALLIDAY CLARK
ARCHITECTS

hallidayclark.co.uk



ecosipshomes.co.uk

CALL: 07577 791 936

EMAIL: info@ecosipshomes.co.uk

ECO HOME DESIGN, MANUFACTURE & CONSTRUCTION



Bespoke SIPs house kits made to
your design or Choose from our
stunning new range of 2-5-bedroom
Architect designed SIP house kits.

- DURABLE • SUSTAINABLE
- HIGHLY INSULATED • AFFORDABLE
- LOW ENERGY SIPs HOMES

HOUSE KITS NOW
AVAILABLE WITH
NORDAN DOORS
AND WINDOWS



Northcot Brick

The Home of the Master Brickmakers



T: 01386 700 551

E: sales@northcotbrick.co.uk

W: www.northcotbrick.co.uk



Northcot Brick Ltd, Station Road, Nr. Moreton-in-Marsh, Gloucestershire, GL56 9LH

CHOSEN FOR CHARACTER
ESTABLISHED 1925

COLLECTION
FROM
LD8 2UF



COLLECTION
FROM
LD8 2UF

SECONDS & CO Insulation

WWW.SECONDSANDCO.CO.UK



COLLECTION ONLY PRICES

FOIL FACED BOARDS—1.2 x 2.4m—ALL PRICES +VAT

25/30mm—£8.25	50/55mm—£13
60/65mm—£13	70/80mm—£17
90/100mm—£25.72	105/110mm—£22
115/120mm—£24	130/140mm—£27
150/155mm—£30	

01544 260 501

SEND SOMEONE
TO COLLECT
FOR YOU

Open
Monday to Friday
8:30am to 4pm

SEND SOMEONE
TO COLLECT
FOR YOU



DESIGN4U is a project management only delivery company. We provide to our clients a full management service. Our package of work is delivered with a clear understanding of your project and your requirements. Our services can encompass design, planning, building regulation packages, organising demolition and the full build. We do the full technical delivery of your project.



Whether you are building your own bespoke home, a developer, needing an office or commercial build or alternatively extending or refurbishing your own home then we can help. With considerable years of experience our team will guide you through the path ahead to enjoy the process of completing your project. We manage and deliver all parts of your project and do all the technical requirements at a reduced cost than working with a main contractor. All contracts etc are raised by us on your behalf direct with you and the contractors, so all guarantees are direct with you. All you do is pay the bills. We negotiate the best prices for you on labour and materials for your project.

01323 885111
info@design4upm.co.uk
design4upm.co.uk

Twitter Facebook Instagram
@ DESIGN4U Ltd.



Heat Recovery Ventilation

Established company offering a wide range of HRV units and ducting immediately available from stock.

Choice of several different heat recovery ventilation units including high efficiency Passivhaus certified units from Brink Climate Systems.

Stockists of easy to install, leak free, radial ducting systems.

Central Vacuum Cleaners

Comprehensive choice of vacuum units ranging from compact units to twin motor commercial models.

Wide choice of accessories and hose lengths.

Simple and easy to install.

Free planning and technical support.

Next day delivery.

Tel: 01491 836 666

www.cvcdirect.co.uk

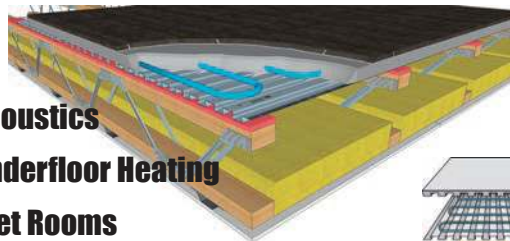


CVC Direct

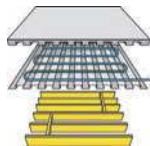


Send your inquiry or plans to plans@cvcdirect.co.uk

LEWIS® DECK



- Acoustics
- Underfloor Heating
- Wet Rooms
- Full Technical Support



01388 728833 • info@CDI-ICM.co.uk • www.CDI-ICM.co.uk

Target your aches and pains with a bespoke Pegasus whirlpool bath



61-62 Lower Dock St, Newport NP20 1EF | 01633 244555 | whirlpoolbaths.co.uk | info@weuk.co.uk



SMART HOMES
INTELLIGENT CONTEMPORARY LIVING™

INTELLIGENT CONTEMPORARY LIVING™



Our award-winning intelligent contemporary living spaces are beautiful, stylish and intuitive. Each project is completely bespoke. We deliver everything you need to turn your house into the home of your dreams.

CALL TODAY TO BOOK YOUR
COMPLIMENTARY CONSULTATION
OR MAKE AN APPOINTMENT TO
VISIT OUR SHOW HOME

T. 08456 888 797
E. INFO@SMARTHOMES.TV

SMARTHOMES.TV



INTERIOR
DESIGN



MULTI-ROOM
AUDIO & VIDEO



HOME
CINEMA



HOME
SECURITY



INTELLIGENT
LIGHTING



INTELLIGENT
CLIMATE
CONTROL



AUTOMATED
CURTAINS &
BLINDS



BESPOKE
FURNISHINGS

100% Solid Wood Kitchens



- No MDF, chipboard or ply
- Dovetail jointed drawers – mortise and tenon joints for carcasses
- Free design service, individual, hand drawn plans
- Non-standard sizes, at no extra cost, to suit your kitchen's dimensions
- Fully assembled units; no annoying flat-pack assembly
- Straightforward, easy to understand costing – prices include VAT & delivery
- Painting and priming of units now available



PANELAND FURNITURE LTD

Visit our website www.pineland.co.uk
Email sales.pineland.co.uk or call our offices
CLEOBURY MORTIMER, SHROPSHIRE 01299 271143
NORTHWICH, CHESHIRE 01606 41292

What is a package home?



Whether you're starting the world of self-build for the first time or you're a seasoned pro looking for a hassle-free route to your new Pegasus home, engaging a specialist company to guide you through the design and construction process is a lot of sense.



PACKAGE HOME BIBLE 2019

From Build It magazine!

This book reveals how working with a specialist package house supplier can take the stress out of commissioning your own scheme – while leaving you in full control of the design and specification.

Build It magazine's Package Home Bible gives you all the advice and inspiration you need to finish your dream home on time and on budget.

PICK UP
YOUR COPY
TODAY

CALL 01442 820580
OR VISIT WWW.SELF-BUILD.CO.UK

ARRIDGE GARAGE DOORS

Est 1989

- BIG DISCOUNTS •
- TOP BRANDS • NATIONWIDE DELIVERY •



Quality Installation Service Available

Remote Controls, Trade & Retail

Suppliers of:

Hormann, Woodrite, Cardeck, Garador, Gliderol, CedarDoor, Cardale, Alurall, Wessex, Alutech, Ryterna

Tel: 01691 670394

www.arridgegaragedoors.co.uk

Antique Buildings Limited

The Leading Company in the UK specialising in ancient oak framed buildings

We have immense stocks of:

Ancient Oak Beams • Ceiling Joists
Bressumers • Wide Oak Floorboards
Handmade Bricks • Peg and Nib Tiles
Terracotta Floor Tiles • Yorkstone Paving

+44 (0) 1483-200477
www.antiquebuildings.com

For more great products visit

self-build.co.uk/gallery

Build It

Making your dream home happen

To advertise a product in this section please call

GALLERY sales

0203 627 3251

Worcestershire Caravan Sales

Over 150 fully refurbished used static caravans.

All in one location.

Ideal for temporary accommodation.



Open 7 days
tel 01299 878872

www.worcestershirecaravansales.com



SnapIT Express

The NEW swifter-to-fit, boltless aluminium system

ALUMINIUM

STEEL

COPPER

CAST IRON

ZINC

Rainclear Systems •

THE HOME OF METAL GUTTERING



Online ordering - pay securely by credit card or PayPal



Next day delivery on a huge choice of stocked items



Take-off service, quotes and technical advice



Unrivalled customer service

HIGH QUALITY
LONG LASTING
CONTEMPORARY & STYLISH
SELFBUILD OR REFURB

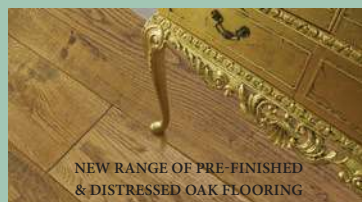


0800 644 44 26 • www.rainclear.co.uk



ORLESTONE OAK

The complete
OAK
SPECIALIST



NEW RANGE OF PRE-FINISHED & DISTRESSED OAK FLOORING



WINDOWS, DOORS, PORCHES & CLADDING



OAK BUILDINGS



OAK DECKING & BEAMS



SEE ALL OUR OAK PRODUCTS AT OUR SHOWROOM

www.orlestoneoak.co.uk 01233 732179

SHOWROOM OPEN MONDAY TO FRIDAY 9am - 5pm, SATURDAY 9am - 12pm

ORLESTONE OAK Nickley Wood, Shadoxhurst, Ashford, Kent TN26 1LZ

Farmhouse Flagstones

Recreating the beauty of time worn traditional flagstones



www.farmhouseflagstones.co.uk

Tel: 01531 822556

Mobile: 07710513582

NEW
from
Build It

**WHAT WILL
IT COST
TO BUILD MY
DREAM HOME?**

**HOW DO
I KNOW
MY BUILDER'S
QUOTE IS A
FAIR PRICE?**

Sign up for the **Build It Estimating Service Report** and send us your house plans... and we'll deliver a full & accurate cost breakdown of your self build... even down to the last roof tile!

The report includes live material costs from leading builders merchants, plus estimated labour costs, a cash flow forecast, indicative build schedule and the ability to make adjustments to suit your budget.

- Detailed self-builder friendly estimate report
- Live material costs from leading builders merchants
- Better understand your build route options
- Fully priced breakdown to present for bank loan
- Tailored, personal service from experienced building specialists

**PRICES
START FROM
JUST
£249**



Build It POWERED BY **HBXL**
ESTIMATING SERVICE
CONTROLLING YOUR SELF BUILD COSTS

For more information and an
Estimate Pack price for your project visit:

www.buildit.co.uk/estimate

or call **0117 916 7866**

Design your dream home with the

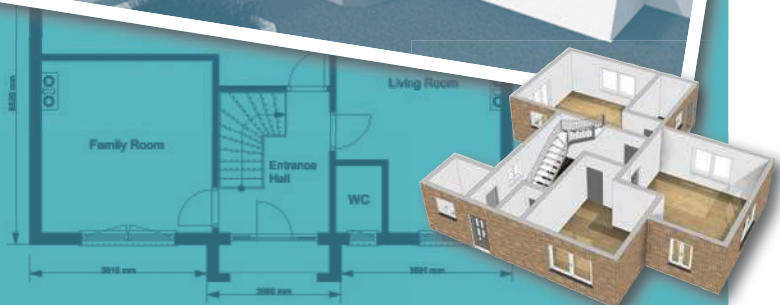
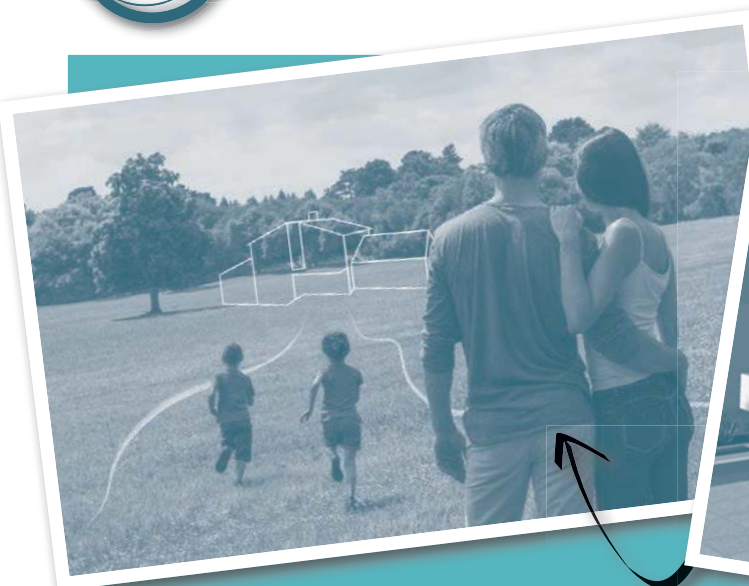
Build It



HOME DESIGNER



NEW FROM BUILD IT!



Whether you're planning to go it alone or simply want to be able to better communicate your project vision to your architect, builder or to aid a planning application - this powerful software is a user-friendly and cost-effective way to engage with the planning stages of your project and see it instantly in 3D.

- ◆ Create detailed plans and drawings in 2D and 3D
- ◆ User-friendly interface with powerful configuration and specification tools
- ◆ Extensive range of pre-loaded windows, doors and other architectural elements
- ◆ Easily add fixtures, fittings and finishes inside and out - and import your own textures
- ◆ Live real-time rendering including daylight, shadows and reflections
- ◆ Walkthrough feature to allow you to visualise your project in full detail

BUY NOW!

BUILD IT 3D HOME DESIGNER IS AVAILABLE TO BUY AS AN ONLINE DOWNLOAD FOR JUST £150

FOR MORE INFORMATION VISIT:

www.buildit.co.uk/3Dsoftware

next month...

February issue on sale 27th December

READERS' PROJECTS ➔

By self building in their large garden, Rosemary French and Norman Simmonds have created a striking new home



OAK FRAME HOMES ➔

What's new with this popular house building method and is it right for you?



OFF-SITE CONSTRUCTION ↗

How eco friendly is this route to a bespoke property?

PLUS RENOVATION HEATING & ELECTRICS, PLANNING ESSENTIALS, BUDGETS & MORE

The *Build It* team

EDITORIAL

Acting editor Emily Smith

Editor Chris Bates

Editorial assistant Anamika Talwaria

Digital editorial assistant Lucy Aplin

Art editor David Flint

Contributors Opinder Liddar, Julian Owen, Emily Brooks, Mike Hardwick, Tim Doherty, Mike Dade, Nigel Griffiths, Rebecca Foster, Sophie Vening, Richard Webber, Alan Tierney

BUSINESS DEVELOPMENT

Business development director

Sarah Wilcock 020 3627 3247

ADVERTISING SALES

Advertising director

Nick Gillam 020 3627 3245

Display sales Emily Neil 020 3553 2378

Gallery/specify sales

Josh Lyle 020 3627 3251

Stephen Smith 020 3627 3251

Switchboard 020 3627 3240

SUBSCRIPTIONS

01442 820580

buildit@webscribe.co.uk

Address: Build It, c/o Webscribe, Unit 4, College Road Business Park, HP22 5EZ

PUBLISHING

Managing director Calum Taylor

Finance director Katherine Taylor

Marketing director Claire Drakeford

Accounts Sinead Charles 020 3627 3253

Published by Castle Media Ltd

Head office: Castle Media Ltd,

Peasemore House, Newbury,

Berkshire, RG20 7JH

Tel: 020 3627 3240

Fax: 0872 331 5207

www.self-build.co.uk

Distributed by Seymour

All the content in *Build It* is governed by copyright and may not be reproduced without the editor's written permission. Every effort is made to feature only reputable companies and products, but readers should make their own enquiries. Information published in *Build It* is intended to provide general guidance only, and the publishers do not accept liability for any loss or damage arising from use of this information. Opinions made by contributors are not necessarily those of *Build It*. Although *Build It* welcomes contributed matter, including unsolicited text and photographs, it does not guarantee to return material.

focus on:

Steve Goodhew from the CobBauge initiative tells us about the team's innovative research into a modern version of this traditional straw-based building material



What is the CobBauge project?

The name is a mix of the English and French terms for cob which is a natural building material that has been used since prehistoric times on both sides of the Channel. It's particularly prevalent in the South West of the UK. We've looked into these conventional techniques to create a strong construction material.

English cob is traditionally a mix of soil, straw and water. It works very well for walls – rooms are warm in winter and cool in summer – but by using the material in its pure form, it isn't easy to create a structure that complies with modern Building Regulations. We've been researching how to keep the method's efficiency while also meeting today's standards.

Our work has been a collaboration with a team in France to combine traditional cob building from both countries. The project aim is to create and monitor two pilot properties made from the result of our research, a material we've called CobBauge. We'll be looking at energy consumption, thermal comfort and indoor air quality and compare it to other buildings. We believe the product is fantastic, but others will need to see it in action.

What has your research found?

We started by looking into what materials would work best to make the product. That collaborative approach gives us an edge, as we had access to techniques and materials both here and in France. For example, we're using reeds, which are normally waste products from the cob-making process in France. They don't really come into it here so would have otherwise passed us by.

It's fantastic to have the findings from both sides of the Channel agree in terms of the best mixture of materials to provide strength, thermal comfort and efficiency. This sharing of resources and results is like our own internal peer review and strengthens our findings that CobBauge is a viable material. Our next step is to create small prototype buildings – these are in addition to the occupied pilot properties still being planned.

How will this next phase work?

Having people live in the pilot buildings is critical. We could try simulated occupation, with various heaters and devices to humidify the air, but there's nothing quite like having people, because they do the unexpected. This is where the team at Hudson Architects come in. They're going to design a fantastic home that uses CobBauge for a client who wants to try an innovative product, but with a long historical lineage behind it.



The CobBauge team have been researching the best ways to create this building material

What are some of the main advantages of building with CobBauge?

It's a thermally efficient material, with built-in insulation and very low embodied energy values. You can be reassured that the property you're putting up has consumed and is only going to use a small amount of energy. There's also very little waste. You can reuse the material at the end of its lifecycle, and there doesn't seem to be any loss of properties when you break it down and remake it. But if you really want to get rid of the stuff, it's just subsoil and natural fibre, so it won't damage the environment. We love that cob also fits in with historical cultural identity throughout the country – many highly energy-efficient building techniques don't because they've not been around very long.

There are some limitations though. If you're constructing a three-storey cob building, the walls tend to get quite thick. At the moment, it's more logical to limit it to two-level properties. However, further research might help us find a solution to that.

Is there anything else people should know about using this construction method?

Speak with your local authority about the material – they can be restrictive in either the technologies used for a new build, or in the overall design. We've come across some people who are interested in using CobBauge for their building projects, but the conditions imposed by their council mean that they don't have the freedom to use this form of building.

How can self builders get involved?

If you're interested in the practicalities of materials going into your home, or you even want to do a lot of the work yourself, then coming to events and experiencing them first-hand is important. Our prototype buildings – in Plymouth and in Normandy – will provide the opportunity for people to actually get their hands dirty by helping to build the structures. We need to train the tradespeople to use this material, so that can include self builders. As the CobBauge project runs through to the next phase and the construction of the pilot buildings, we'll be holding more training events. I'd also encourage anyone interested in this material to link up with Earth Building UK and Ireland (EBUKI).

Find out more about the project at www.cobbauge.eu/en. You can speak to EBUKI by logging on to www.ebuki.co. You can reach Hudson Architects at www.hudsonarchitects.co.uk



helping you
build your
dream

**31st Jan
to 2nd Feb 2020**

Fri & Sat: 9am - 5pm, Sun: 9am - 4pm
Free Parking. Swindon M4 Junction 16



The National Self Build & Renovation Show



-  67,000 sq ft exhibition space
-  Over 250 exhibitors
-  Live demonstrations
-  Learn from experts and self builders
-  Meet architects and designers
-  Theatres with free seminars
-  **FREE** parking

MORE INFO & **FREE TICKETS AT**
WWW.NSBRC.CO.UK
OR £12 PER PERSON ON THE DAY OF EVENT

The home of
Self Build
Custom Build
& Renovation

 **NSBRC**
National Self Build & Renovation Centre

klöeber®

bespoke doors & windows in timber, aluminium & alu-clad

Visit
one of our
nationwide
showrooms



We manufacture, supply and install:

- folding sliding doors
- sliding doors
- french doors
- single doors
- windows
- shaped glazed screens
- entrance doors
- rooflights

telephone

01487 740044

info@kloeber.co.uk

www.kloeber.co.uk

*Visit our showrooms in:
London, Cambridgeshire, Buckinghamshire and West Sussex.*

see website
for directions