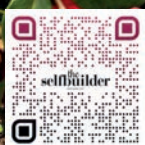


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EDITOR

Roseanne Field

PUBLISHER

Anthony Parker

ACCOUNT DIRECTOR

Midge Myatt

ACCOUNT MANAGER

Nathan Hunt

DIGITAL MARKETING & PR**ACCOUNT MANAGER**

Suzanne Easter

OPERATIONS DIRECTOR

Shelley Collyer

EDITORIAL CONTRIBUTORS

Alexandra Pratt

Debbie Jeffery

Nik Hunter

EVENTS COORDINATOR &**EDITORIAL ASSISTANT**

Amy Madigan

STUDIO MANAGER

Mikey Pooley

PRODUCTION ASSISTANT

Georgia Musson

DIGITAL PRODUCTION COORDINATOR

Kimberley Musson

FEATURE COORDINATOR &**PUBLISHER'S ASSISTANT**

Kim Neville

FINANCE DIRECTOR

Simon Reed

PUBLISHED BY

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Cointronic House,
Station Road, Heathfield
East Sussex, TN21 8DF

ADVERTISING &**ADMINISTRATION**

01435 863500

info@netmagmedia.co.uk

PRESS RELEASES

editorial@netmagmedia.co.uk

REGISTRATION &**CIRCULATION ENQUIRIES**

info@netmagmedia.co.uk



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FROM THE EDITOR...

Ask self-builders to highlight some of the more tumultuous times of their project and many will undoubtedly reference their experience gaining planning permission. It's something we've seen come up in our case studies time and time again, and is often more widely criticised as one of the biggest obstacles preventing the self-build market from reaching its full potential in the UK.

In its annual Custom & Self Build Market report, the National Custom & Self Build Association (NaCSBA) has highlighted the problems facing would-be self-builders and where it would like to see Labour take some positive action, with planning unsurprisingly proving to be a real sticking point.

In particular, the report refers to issues with local authorities, and the fact the Government isn't doing enough to fix the failures within the system. There are some alarming stats included, such as the fact that following an initial refusal, large sites are five times more likely to gain approval on appeal. It also found that Right to Build legislation is only given weight in approximately a quarter of situations. Right to Build came into force in 2016 and means local authorities are obliged to keep a register of those interested in building their own home, and ensure there is adequate land provision for it.

Despite the problems with planning, it's not all doom and gloom. NaCSBA also shared some positive developments, namely that it has helped secure changes to improve Right to Build legislation and exemptions for most self-builds from Biodiversity Net Gain requirements. You can read more about the association's report and find out how to obtain your copy on page 8.

It also wouldn't be fair to tar all local authorities with the same brush. What might have seemed an almost impossible task for Glen and Jane – as revealed in one of our self-builder case studies on page 44 – gaining approval for a detached annexe in the garden of their Grade II listed home was surprisingly pain-free. With the help of their architect, the couple and their local council proved that clear communication and cooperation means the planning process doesn't have to be an arduous task.



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ON THE COVER...

© FRENCH & TYE (PAGE 38)

Creating a masterpiece

Gwen and Patricia's renovation transformed their unassuming home into an art-inspired masterpiece

Making a splash

Martin Carroll explains why you shouldn't shy away from making bold design choices in your bathroom

A risky move

Robert and Isla took a big gamble when they bought a rural cottage that was too small for their growing family



10



12

REGULARS

08

News

10

Home Styling: A splash of colour

Duravit UK's Martin Carroll explains how bathroom design has evolved from functional to artistic, with homeowners embracing bold colours, luxurious furnishings, and unique wallpapers.

12

Interior Inspiration: Kitchens & Dining

Few rooms in the house will cost more than the kitchen, making it one of the biggest interior elements of your project. Take inspiration from our selection of kitchen and dining products, from high end units, sinks and taps to unique tables and bar stools.



14



18

PRODUCT FEATURES

14

Framing your self-build

ecoHaus Windows & Doors' Craig Luff offers a comprehensive guide for self-builders and renovators on selecting the ideal windows and doors for your home.

29

The perfect blend of style, comfort & practicality

Paul Higgins of TuffX explores why bi-fold doors remain a top choice for self-build and renovation projects, innovative ways to configure them, and how technology advancements allow them to serve as an efficient heat source.

31

Let there be light

Tracey Jackson of Howells Patent Glazing explains why daylighting is a vital consideration for self-builders and renovators and how to achieve the best results.

35

Breathe easy

Ashley Cooper of WMS explores how underfloor heating provides the ideal balance between indoor air quality, comfort and efficiency.



CONTENTS MAY/JUN 2025

PRODUCTS

FINANCE & INSURANCE	26
SITE PREPARATION	28
STRUCTURAL COMPONENTS	
Timber Frame	26
BUILDING ENVELOPE	
Bricks & Blocks	30
Doors & Windows	14
Garage Doors	33
Glass & Glazing	30
Membranes	33
Natural Light	31
Stone	30
HEATING, VENTILATION & SERVICES	
Indoor Air Quality	35
INSULATION	34
INTERIORS	
Flooring	37
Kitchens	37
Stairs	37
SAFETY, SECURITY & SMART HOMES	48

CASE STUDIES

18

The gamble pays off

Buying a new home which was too small was a risk that the Leggett family were willing to take.

38

An inspired choice

Gwen Williams' and Patricia Lynch's Victorian terrace fuses the latest sustainable techniques and materials with inspiration from some iconic 20th century artists.

44

A stone's throw

Glen Bacon and Jane Healy have built an annexe suitable for elderly parents in the garden of their listed house, choosing a varied palette of cladding materials which includes limestone and flint.

Let the *outside in*

Recent studies have shown that on average people spend 90% of their time indoors.

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NaCSBA says there is “much to be done” to help unlock full potential of self-build in the UK

The National Custom & Self Build Association (NaCSBA) has released its annual Custom & Self Build Market Report, offering a detailed overview of the UK's custom and self-build sector and highlighting the array of challenges facing prospective self-builders.

Despite the association's optimism for positive change under the Labour government, the report outlines that the self-build sector as a whole is feeling the impact of the cost of living crisis, the pandemic and crucially, a planning system that tends to work against small-scale development.

Years of instability and disruption from Brexit, Covid, the wars in Ukraine and Gaza and the cost of living have distracted the government from pushing forward with what NaCSBA calls “the important task of building more and better homes.”

While NaCSBA praises the former Conservative government for its philosophical support, it blames a “failing housing delivery system” for the general opposition new homes face, along with constrained local authority resources. It also criticises the planning system which it says is skewed in favour of large developments, finding that following an initial refusal there's a 68% success rate for large-scale developments on appeal, compared to just 13% for individual plots.

The combined outcome of these issues is that since the Right to Build legislation came into force – intended

to simplify matters for would-be self-builders – it has ironically become harder to self-build. Right to Build legislation, part of the Self and Custom Housebuilding Act 2015, means local authorities are obliged to ensure adequate land provision for self-build and keep a register of individuals interested in building their own home.

NaCSBA did have positives to report – namely that it helped secure policy changes to improve the Right to Build within the Levelling Up and Regeneration Act 2023, and that it managed to gain exemption for some self-builds from Biodiversity Net Gain (BNG) requirements. The association hopes further improvements to Right to Build will address what it describes as “dirty tricks” used by some local authorities to swerve their obligations.

The Labour government has committed to delivering 1.5m homes and made changes to the National Planning Policy Framework (NPPF) to encourage diversity on large sites, including provision for custom and self-build plots. Labour has also promised to release a housing white paper this summer.

However, NaCSBA points out that Labour faces the same problem the Conservatives did – that local authorities are often unable or unwilling to approve the right mix of sites. Many of the rules required exist, but aren't being enforced or applied fairly. The result, it says, is that “the small guy is being failed by the system.”

Backed up by NaCSBA's own research, the report highlights that smaller, community-friendly developments and infill housing is the type of development favoured by the public. Both this and Labour's ambitious housing target are, it says, good news for the self- and custom-build sector.

NaCSBA has ongoing initiatives, including collaboration with SME builders and community housing groups to widen its influence and ensure Labour addresses the current issues. It lists four key points it would like to see in the summer white paper: more work to ensure the Right to Build works as intended; more diversity on large sites; ensuring more small sites come forward and the process sets these up for planning approval; and that a greater number of these small sites includes gardens, infilling and smoothing of settlement boundaries.

The report concludes that the sector has a big role to play in helping Labour meet its target, and NaCSBA implores the government to take action and ensure change is actually delivered and implemented. While it remains confident that demand for self- and custom-build is there and is pleased to see it becoming embedded in mainstream policies, it says there is “much still to be done” to deliver growth in the sector.

To find out more about NaCSBA's work or to purchase your copy of the full report visit nacsba.org.uk

THE BEST OF THE BEST: THE UK'S EXEMPLARY SUSTAINABLE SELF-BUILDS

Three self-build projects have made it to the shortlist of the Exemplar Sustainable Buildings Awards 2025.

The awards aim to recognise the energy use of buildings, the embodied carbon of the materials used to build them, and occupant health and wellbeing. To meet the awards requirements, entrants must demonstrate that the building performs as designed, evidenced by monitoring data.

The majority of shortlisted projects across all categories have achieved either Passivhaus or EnerPHit certification, or have used the Passivhaus methodology in the design and construction. The three shortlisted self-builds are Abhainn in Hamilton, Long Four Acres in North Norfolk, and The Seed in Dundee.

Abhainn is a development of three detached houses, certified to Passivhaus Classic standard. The project meets RIBA 2030 Climate Challenge metrics – a series of ambitious targets for operational energy, embodied carbon and water consumption. The homes are also compliant with the exacting

Gold higher level of sustainability in Section 7 of the Scottish Technical Standards.

Long Four Acres is a two storey self-build modelled in Passive House Planning Package (PHPP) and designed, but not certified, to Passivhaus Plus standard. Its airtightness of 0.8 ach @ 50 Pa is just shy of Passivhaus criteria (0.6 ach @ 50 Pa), but the building performance in practice aligns closely with PHPP Passivhaus Plus expectations.

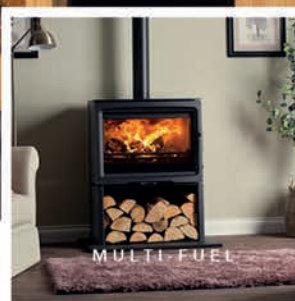
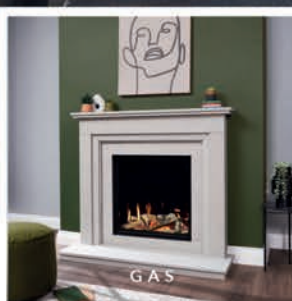
Replacing a derelict building, The Seed is a co-living home for two households in a woodland garden. It's almost entirely timber and meets both Passivhaus Classic standard and RIBA 2030 Climate Challenge embodied carbon requirements. It provides a great example of how Passivhaus can work in locations with site constraints and restricted solar gain.

To see the full shortlist visit www.esba.uk. The ceremony will take place on 24 June and is free to watch online, where you will also have the chance to vote for the winning entries: www.esba.uk/#awards-ceremony



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A SPLASH OF COLOUR

Duravit UK's Martin Carroll explains how bathroom design has evolved from functional to artistic, with homeowners embracing bold colours, luxurious furnishings, and unique wallpapers.

When planning a bathroom scheme, colour is a key consideration. No longer limited to classic white, colour can be used in a bathroom in multiple ways to create the desired mood.

A subtle layered tonal scheme can evoke the tranquil feel of a spa, while a vibrant combination of colourful patterned wallpaper with a bold suite can be energising and dramatic. Additionally, colour has a home in a minimalist scheme, such as introducing a pop of colour with a bold bath as the focus in an otherwise neutral space.

The Vitrium range is one such example of how this can be achieved. The furniture and washbasins with their simplicity of form are ideal as a bold, colourful focal point, having the aesthetic effect of an artistic sculpture.

When designing the range of colour-saturated cabinets, units, toilets and baths, Christian Werner considered how colour works in the bathroom, what impact it has on the products and what value colours communicate.

He felt that it was important that colours work on their own, while harmoniously interacting with each

other, enabling them to be used as an accent in addition to the formation of an interior theme. This creates a presence without dominating the space, and provides a warm contrast to wood, stone surfaces, concrete or matching tiles. This considered approach can be followed by the self-builder when designing their own bathroom space.

"Colour determines how we perceive a product," he explains. "It's an emotion because everyone responds to it differently. Multiple colours create a kind of colour resonance, something that ideally creates a harmony. And colours for an interior should never be considered in isolation, but rather in the context of the entire space. The green, blue, cinnamon and neutral range of matt colours helps transform the bathroom into a favourite room."

When choosing bathroom products and furniture in a bold colour scheme it may be wise to select clean and unfussy shaped pieces. In this instance products whose forms take inspiration from simple geometric shapes are ideal. A minimalist console vanity unit combined with a matching colour round or square above-counter washbasin can work well whether placed against a vibrantly patterned wallpaper wall, tiles, or as a focal point in a more understated scheme, creating either a rich, dramatic atmosphere or a simpler, graphic look with personality.

BRASSWARE

Another element that can be used to create colour accents in the bathroom, or to compliment and complete a colourful scheme is brassware. Metal elements including showers, taps, handles and towel holders are now readily available in a wide range of colour choices such as golds, bronzes, blacks,



coppers and rose gold, in addition to polished or brushed textures.

Colour in the bathroom is not limited to creating a bold statement or an exotic atmosphere. A tranquil architectural aesthetic can be achieved with a more restrained palette. For example, finishing the bathroom with accentuating chrome or black brassware



works well for self-builders who want to produce a more relaxing, subtly coloured bathroom. Philippe Starck designed his Sivida collection to include chrome and diamond black brassware and a balanced and gentle colour palette of tone-on-tone pale green, white and dark grey.

"It is a very essential design but with the colourful twist of life. Pale

green, white and dark grey can create duo combinations that fit all environments," explains Philippe Starck. "It is elegant, joyful and functional for our everyday life."

The use of colour is a great way to inject personality and atmosphere into a bathroom. It can be challenging to choose a colour scheme so it's essential

to take a step-by-step approach. Initially decide on the feeling you wish the room to create and from there you can go on to select furniture and sanitaryware in colours that suit, followed by accessories and wall coverings to bring the scheme together.

Martin Carroll is MD at Duravit UK



INTERIOR INSPIRATION: KITCHENS & DINING

Few rooms in the house will cost more than the kitchen, making it one of the biggest interior elements of your project. Take inspiration from our selection of kitchen and dining products, from high end units, sinks and taps to unique tables and bar stools.



1. The **Butler & Rose Fluted Ceramic Fireclay Double Belfast/Butler Kitchen Sink**, available from **Tap Warehouse**, features a unique fluted front design that blends timeless sophistication with a touch of individuality and two deep bowls. The hard-wearing fireclay ceramic offers a robust and impact-resistant construction, and the non-porous glaze leaves nowhere for odours and bacteria to get trapped. Each sink is hand-finished, ensuring excellent standards in craftsmanship. Taps, wastes and pipework are all sold separately. Price: £329.99
www.tapwarehouse.com



2. The 66cm high **Cesca bar stool** from **Where Saints Go** expertly blends classic materials with an industrial, contemporary design. The striking wood and rattan seat mark a lovely contrast to the polished chrome base. Fashioned from cane webbing, wood and tubular steel, this cantilevered bar stool mixes the industrial with the organic. The stool is available with a brown or natural finish seat, both with a chrome-finish frame, and will bring a European vibe to your kitchen. Price: £229
wheresaintsgo.co.uk

3. This on-trend **classic bespoke handpainted kitchen with stained oak island**, designed by Darren Taylor, is just one example of the style of kitchens on offer at Searle & Taylor Kitchens. Floor-to-ceiling cabinetry features 22mm thick door and drawer fronts with 18mm broken ogee bead mouldings and it is handpainted in Stone 2 by Paint & Paper Library. The island features vertical grain veneered oak fronts and the worktop is 30mm thick Bianco Superiore Hones Quartzite, which is also used for the splashback and the floating shelves. Prices from £35,000
www.searle-taylor.co.uk

4. With bold retro inspired shapes, the **Astrid Dining Table** from **Sweetpea & Willow** will bring a little 70s cool to your

dining room. Made from Mango wood stained to a dark tone highlighting the rich grains, the striking angled, U-shaped carved legs of this table really grab your attention. The table seats four to six people, and coordinating dining bench and further pieces are also available. Price: £1250
www.sweetpeaandwillow.com

5. The **QETTLE Signature Modern 4 in 1 Tap** delivers true, 100°C boiling water, filtered drinking water and normal hot and cold flows. UK designed and precision engineered from premium stainless steel, it features two-stage safety, is simple to use and easy to install. Choose from buffed stainless steel, brass, copper (pictured), matte black or gunmetal. Price: £1,025
www.qettle.com

6. The **Everhot 120i** (pictured in Mushroom) from **Everhot Cookers** is a three oven heat storage range cooker. On the left you'll find the roasting and baking ovens, and on the right a slow cooking oven for when you have a houseful. The final door conceals all the controls necessary to run the cooker. In addition to the classic cast iron hot and simmer plates, the 120i also incorporates a three zone induction hob. Price: £13,500
everhot.co.uk



Framing your self-build

ecoHaus Windows & Doors' Craig Luff offers a comprehensive guide for self-builders and renovators on selecting the ideal windows and doors for your home.



When starting your self-build project, the decisions made during the planning stages set the tone for the entire home. Among the most crucial choices and investment are the windows and doors – elements that significantly impact energy efficiency, comfort, aesthetics, and overall performance.

With numerous options available, it can be challenging to decide what best fits the vision of your self-built home. Understanding the various factors at play, such as U-values, material choices, glazing options and design, will help you make informed decisions to ensure both function and form are achieved.

ENERGY EFFICIENCY & U-VALUES

The energy performance of windows and doors is one of the most important considerations for self-builders, especially for those looking to meet specific energy standards. U-values measure the rate at which heat is lost through a material –

lower U-values indicate better thermal insulation. For self-builders, achieving an excellent U-value is essential not only for comfort but also for reducing heating costs and environmental impact.

If you are aiming for high energy efficiency, such as meeting Passivhaus standards, look for windows and doors with U-values that align with these stringent requirements. Passivhaus certification demands very low heat loss, so triple-glazed units with U-values as low as 0.8 W/m²K may be necessary. For those looking at less stringent energy standards like EnerPHit (the retrofitting standard for Passivhaus), slightly higher U-values may be acceptable, but energy efficiency will still be a priority.

MATERIAL CONSIDERATIONS

The material of your windows and doors has a significant impact on both performance and aesthetics. There are several options available, each offering different benefits.

Timber aluminium composite is a popular choice for its natural beauty and excellent insulation properties. It's especially well-suited for traditional-style homes or those seeking to blend with natural surroundings. However, it requires more maintenance compared to other materials, such as uPVC or aluminium.

All aluminium on the other hand, offers sleek, modern aesthetics and is incredibly strong, which makes it ideal for large glazing areas. While it has higher thermal conductivity than uPVC or timber, modern aluminium windows come with thermal break technology that helps to reduce heat loss. These can be a great option if you are looking to achieve a contemporary design with large, expansive windows.

GLAZING: DOUBLE OR TRIPLE?

When it comes to glazing, the choice between double and triple glazing will largely depend on your energy goals, location, and budget. Double glazing



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is the standard for most self-builders, providing a good balance between thermal insulation, soundproofing, and cost-effectiveness. Double-glazed windows are suitable for many climates and can help you meet basic energy efficiency standards.

However, for those aiming for higher levels of energy performance, triple glazing is a worthy investment. Triple-glazed units provide superior insulation by incorporating an additional layer of glass and gas fill between the panes. This is particularly beneficial for colder climates, where heat retention is essential. Triple glazing is often a key component for achieving Passivhaus or EnerPHit standards. Though more expensive, the long-term energy savings can outweigh the initial investment.

MATCHING YOUR INTERIOR DESIGN

Windows and doors are not just functional elements; they are also integral to the interior design and flow of your self-built home. Whether you're going for a traditional look or a modern aesthetic, it's essential to consider how your windows and doors will complement

your interior decor.

For a contemporary style, sleek and minimalistic aluminium frames with expansive glazing are ideal. The slim profiles help to maximise natural light, create a sense of space, and provide unobstructed views. If your design leans towards a more traditional or rustic feel, timber-framed windows and doors may be a better choice, adding warmth and character to the interior.

In terms of finishes, you'll also want to ensure that the colour and style of the window and door frames harmonise with the rest of your home's design. The finish of your windows and doors, of which the options are many, can be a key factor in bringing your entire interior design vision to life.

AESTHETIC APPEAL & NATURAL LIGHT

In addition to performance, windows and doors play an important role in enhancing the overall aesthetic of your home. When selecting window and door designs, it is important to consider how they will influence natural light and the feel of the space. Large windows or sliding doors can flood rooms with

natural light, making even smaller spaces feel more expansive and welcoming. If privacy is a concern, consider designs that allow for large windows while maintaining a sense of seclusion, such as privacy glass or carefully placed window openings.

Openings that allow for easy access to outdoor areas can also create a seamless flow between the inside and outside, further enhancing your living experience. An increasingly popular choice is sliding doors, for instance, which are perfect for connecting indoor and outdoor living spaces.

Performance and aesthetics aside, it's also a good idea to choose a supplier and installer who has a strong industry reputation whether that's through a friend's recommendation or directly from your builder or architect. Look for evidence of their experience in the type of project you're embarking on and ensure you take a look through online case studies and galleries to gather inspiration for what you want to achieve.


Craig Luff is managing director at ecoHaus Windows & Doors

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CASE STUDY

THE GAMBLE PAYS OFF

Buying a new home which was too small was a risk that the Leggett family were willing to take.

TEXT NIK HUNTER IMAGES ROBERT PERRY

Robert and Isla Leggett had been living in Edinburgh's Leith for 15 years but after the arrival of their baby girl, Arabella, they decided it was time for a change and a move, but to where?

"We didn't have a location in mind," Isla recalls. "We thought about building our own house and even went to a couple of the home building and renovating shows," Robert adds. "However, as we were self-employed, we knew that the banks wouldn't lend to us."

Their next step was to offer on a house in East Lothian which they bought but the sale fell through within two weeks of the moving date.

"Luckily, we found this cottage, viewed it and bought it right away," says Isla.

Originally part of the Balbirnie Estate in Fife, the cottage was a former gate house and was a few minutes' walk away from the town of Markinch. "We bought it because of the garden and the outdoor space," Isla remembers. "It's so close to the town, it's on the main train line, walking distance to schools and shops but none of that is visible, the view out the windows and from the garden is incredibly rural."

As Isla grew up on a small holding, she was aware of the ups and downs of rural living. "Once you have kids yourself you wonder what

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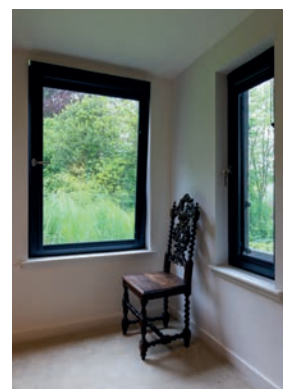


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your parents were thinking! I love the idea of being embedded in nature, but you need logistics and practicalities and here we have the best of both worlds."

While the location was spot on, size was an issue as Robert explains: "We knew right away it was too small. And that was with one child and one dog! Quite quickly we added another dog, and the intention was always to extend but we didn't know if it was possible as the building is C Listed." As the location ticked all the boxes, the couple decided to take a risk and see if they could make the cottage work for them. Fortunately, they found an architect who could help them do just that, Fermín Beltrán Dos Santos at Fife Architects.

The original cottage layout was stereotypical with the front door entering into the living space, a bedroom on either side, a small shower room and a galley kitchen to the rear, definitely not big enough for an expanding family. So, within two weeks of moving in, the couple arranged a meeting with Fermín.

"When we visited his office, it was everything we wanted from an architect's office," Isla remembers. "It had a really cool vibe and there were lots of amazing designs on the walls but in every shape and size. We didn't feel like we weren't meant to be there; it felt right."

Isla and Robert had a wish list of living requirements for Fermín which included a third bedroom, more living space in whatever combination it could be achieved and direct access to the garden. In the kitchen there was a door which accessed an external deck with a set of stairs leading to the cottage cellars and this was what Isla and Robert thought they could utilise but weren't quite sure how.

Happy to internalise the cellars, initially Isla and Robert thought everything would be incorporated onto this lower level, but Fermín had other ideas. "Given the slope of the garden this lower level was the sensible, extendable footprint, however, right at the first meeting, Fermín suggested putting the third bedroom on the ground floor which we hadn't expected,"

HIGH POINT

"When we finally realised the dream had become reality and now having the space to invite family and friends over – that's a huge bonus."

— Robert



LOW POINT

"The delays that were caused by the pandemic and the surprise and expense of the underpinning."

— Robert

says Isla.

Planning and the tender process took some time but by March 2020 everything was in place except that now the country was in the middle of a pandemic. This impacted massively on timescale and costs. "I was relieved we hadn't started but it delayed things significantly," says Robert. Eventually the project started in March 2022 and was completed in March 2023 but during that time material costs increased considerably.

Isla explains: "We went through a re-tender process, and it was quite frightening how much prices and demand had altered over the two years." There were other things that impacted on the budget such as the entire house needing to be underpinned. "Apparently our house was built on 'love and hope' said our contractor," Isla remembers. "It had been built well; it wasn't going anywhere, but to extend we had to underpin it and that immediately took care of our contingency fund. However, we did discover lovely corner stones which we have retained."

"We went through a re-tender process, and it was quite frightening how much prices and demand had altered over the two years."

Fortunately, the contractors, Total Reinstatement Services, who had been recommended by the Leggett's quantity surveyor were worth their weight in gold as Isla recalls: "Their craftsmanship was exceptional but also their ability to understand what we were



trying to achieve." They also took on board that the family were living in the project. "We didn't have the luxury of moving out, but they were mindful that the kids and the dogs were here too. I also think they found it useful me being on site – at least I hope they did!"

While the build did go over the original budget, it was for the right reasons as Isla explains: "We made choices throughout the build; there were certain things we said we'd prefer x instead of y and that increased costs. Life changed in that time too, we had another daughter, Corran, and when we first met Fermín, we had only been living in the cottage for two weeks. When we started again after Covid we had a better understanding of what we wanted and could achieve."

As the couple had never renovated a property before – Isla works as a PA and Robert as a dental technician – the process was an interesting one for them. "The old house upstairs got smaller and smaller throughout the build as it became more and more closed in," says Isla. "It was an odd way to live with the windows boarded up, like living in a cave. When the contractors finally knocked through it was such an amazing feeling, all that space and daylight flooding in."

While the layout had been decided promptly, what to put in the space took a little longer. The cottage's galley kitchen and decking became the

principal bedroom and ensuite, but it took Isla a while to get her head around this idea. "I was convinced that the ensuite wasn't big enough for a shower and a bath but it was and is."

Along with its deceptively spacious ensuite, the principal bedroom also benefits from a wonderful view of nature. "The slim line windows are a brilliant addition to the bedroom and frame the view of the green roof with its extraordinary wildflowers," says Isla. "I love the green roof," Robert continues. "It came out as a cost initially as we didn't think we could afford it, but we managed to factor it back in and it really gives us a connection with the garden."

The kitchen design also took a while to come to fruition: "Kitchen showrooms – good gracious, I don't ever want to visit one again!" Isla exclaims. "It was a horrible experience until we discovered MGM Timber which we had visited to look at flooring – we didn't know they sold kitchens." Fortunately for Isla, at MGM there was no hard sell, and a quote was promptly arranged. "They were brilliant, and super helpful, but then everything was delayed because of Covid."

When the couple started the project again, they still had to finalise their bathroom and kitchen choices. Fortunately, MGM still had their original design on file and with the contractors onsite the Leggetts were finally in a position to move forward. The dark midnight blue

CONTACTS/ SUPPLIERS

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FLOORING

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The colour of the cladding ensures that the house sits in its landscape rather than on it

kitchen complements the open plan kitchen/dining/living space perfectly and with the major appliances hidden in the cellars, the kitchen furniture remains sleek and streamlined and doesn't overshadow the living space.

A new utility/boot room also keeps the clutter to a minimum and was supposed to be the dogs' bedroom as well. "It's a great addition and ideal for towelling down the dogs after a walk," says Robert. "But unsurprisingly, the dogs never sleep there when there's a sofa to be had."

What has been achieved is impressive especially as in real terms there's very little change to the actual footprint of the building. "We've gained a view," says Isla. "Previously, you had to stand at a window in the cottage to appreciate the view now we're in the view. However, we haven't really impacted on the garden as the extension is almost the original footprint of the decking. And, even when you walk past the front of the house you don't really see the extension – it doesn't overshadow the original house."

Robert continues: "I think because we were keeping the old building, we wanted the new part to tie in with it and most importantly not to distract from what was outside. Right from the start of the design process it was all about keeping it as close to nature as we could. One of the things that was so impressive about Fermín and the builders was that Fermín had a very solid idea of how it would look."

To ensure the new extension complemented

the woodland around it and blended into its rural habitat, Fermín thoroughly researched how the project would appear from every angle, spending time in the woodland and fields across from the original cottage and he decided the choice of cladding and its application was a key element.

"You can see the cladding is erected in different elevations which we didn't realise until it started to go up," Robert explains. "It was a lot of work for the builders. They took all the cladding and spread it out in the garden to ensure there were no joins on the sides that would be seen – that attention to detail was impressive."

The colour of the cladding also ensures that the house sits in its landscape rather than on it and while the extension can be seen from the rear of the property, at the front of the house, the external appearance is still of an original gate house which the couple are delighted about.

There are still some tasks to be completed, and Robert and Isla have many plans for the garden as Isla explains: "Our nature-friendly garden has run out of steam a bit because it's been a long haul and we're a bit tired, but this year we'll start anew again." Tiredness aside, the Leggetts are now focussing on enjoying their new home as Robert affirms: "We've realised the dream. Whenever I've been away from the house for a few days and I come home, I realise how privileged I am to live here." The gamble paid off. ■



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The perfect blend of style, comfort & practicality

Paul Higgins of TuffX explores why bi-fold doors remain a top choice for self-build and renovation projects, innovative ways to configure them, and how technology advancements allow them to serve as an efficient heat source.



A VERSATILE SOLUTION FOR EVERY SPACE

Bi-fold doors have become a staple in modern home design, offering a balance of practicality, aesthetics, and functionality. Whether it's a compact two door unit adding depth to a small living space or a five metre wide system opening up a home to the garden, bi-folds create a seamless connection between indoors and outdoors.

Bi-folds are the ideal solution to maximise natural daylight and remain a popular choice for both new builds and renovations, especially when paired with rooflights. With the planning permission in place, if required, they can also be integrated into existing properties, complementing period brickwork while creating a striking feature.

When planning a bi-fold installation, consider how it will interact with both interior and exterior spaces. Consider whether to include a traffic door for easy access or the best direction for the doors to fold and stack, either internally or externally, to ensure flexibility in your layout – whether on the patio or inside your home.

MAXIMISING VIEWS WITH MINIMAL SIGHTLINES

When choosing bi-fold doors for your home, reducing sightlines is key to enhancing your view and maximising natural light. Any non-glass element in a bi-fold system, such as the frame and the vertical mullions between panes, affects the openness of your space. The more panels you have, the more mullions there

will be, which is why thoughtful design and specification are essential.

To keep sightlines minimal, opting for wider individual panels reduces the number of mullions, creating a more seamless connection with the outdoors. Slimline frame designs also allow for larger panes of glass with fewer divisions, increasing the amount of daylight entering your home. For a bi-fold door design, a minimum panel width of 1,400mm is recommended, allowing for just two panels while maintaining a sleek, modern aesthetic. Larger openings can accommodate multiple doors, but this requires additional tracking systems to ensure smooth operation.

For the most uninterrupted views, fully frameless slide-and-fold systems provide

a 'wall of glass' effect, eliminating vertical obstructions almost entirely. While not strictly bi-folds, these systems offer an ultra-minimalist aesthetic that enhances any contemporary home design.

CREATIVE DESIGN OPTIONS

While a straight-line configuration is the most common, more ambitious designs can enhance a home's appeal and value. A cornerless bi-fold setup, where two sets of doors meet at a 90° or 135° angle, creates a striking open-plan space – perfect for modern extensions.

Two adjoining corners with bi-folds for larger projects can establish a dramatic single-storey living area. However, structural considerations are essential. A structural engineer may recommend a corner post and RSJs (rolled steel joists) to support the upper floors or a cantilevered roof for an open-plan effect. Ensuring the door frame isn't under excessive weight is crucial to maintaining a smooth operation.

CASE STUDY: THE FUTURE OF COMFORT

A homeowner adding a large 6.4m x 4.2m extension to their Hertfordshire property needed a glazing solution that maximised natural light while ensuring warmth and comfort. With plans for 70% glazing – including bi-fold doors



on two sides, a floor-to-ceiling window, and a roof lantern – traditional heating options were unsuitable. The gas boiler was already at capacity, and limited wall space ruled out radiators.

Premier Frames supplied Tuffx's glow-heated glass for the bi-fold doors and large side window, making it the extension's primary heat source. Future Homes Standard-ready glow-heated glass features an invisible conductive coating that converts electric power into radiant heat. Using infrared heating technology ensures an even, comfortable temperature while reducing condensation for uninterrupted outdoor views. From a visual perspective, it appears identical to standard glass but functions as an energy-efficient heat source.

The pre-wired units enabled a quick and easy installation, similar to standard double glazing, with simple electrical connections to the existing mains supply.

Glow glass reaches 35-40°C and is thermostatically controlled via a wall-mounted thermostat or smartphone app. With U-values as low as 0.7m²K, it delivers efficient heating at an average cost of just 9p per bi-fold door per hour, providing a stylish and practical solution for a high-glazing extension.

This completed installation met the homeowner's brief of creating an almost seamless connection to the garden space while ensuring a warm and comfortable environment inside the newly created open-plan space. As the glazing offers a multifunctional solution, the homeowners have complete interior layout freedom without any concerns about blocking wall-hung heat emitters with furniture.

Additionally, heated glass significantly reduces condensation, maintaining clear views and promoting a healthier indoor environment. With no ongoing maintenance required, it's a hassle-free heating solution that aligns with the growing demand for energy-efficient home upgrades.

Paul Higgins is commercial director at Tuffx



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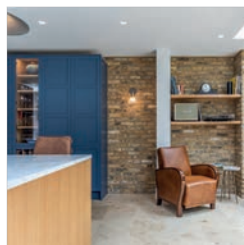


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Reclaimed Brick tiles see surge in demand



The demand for brick tiles is soaring. Across the UK and beyond, brick tiles have become a firm favourite for architects, interior designers, homeowners, and developers looking to inject warmth, texture, and timeless appeal into their spaces. Whether it's an exposed feature wall in a London loft conversion or a rustic kitchen backsplash in a countryside cottage, these versatile tiles are taking centre stage. **Reclaimed Brick Company** have seen a sharp rise in orders for their handmade brick tiles, crafted from

genuine reclaimed bricks salvaged from buildings across the UK. This growing popularity is no surprise – it's a trend driven by a unique mix of aesthetic, environmental, and practical benefits that brick tiles offer.

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Let there be light

Tracey Jackson of Howells Patent Glazing explains why daylighting is a vital consideration for self-builders and renovators and how to achieve the best results.

Natural light is a powerful resource and one of the most important elements in architectural design, with the ability to transform a space and the people within it. Maximising natural light inside our homes contributes to lower energy bills, enhances building performance and improves occupier wellbeing.

Strategically incorporating daylighting (natural light) solutions into a self-build or renovation project will provide diffused illumination. More dynamic than electric lighting as it changes constantly, natural light can be more stimulating and the effect boosts mood, increases focus, reduces eye-strain, promotes productivity, and regulates the body's natural sleep-wake cycle known as circadian rhythm.

With homes now places to work, rest and play, and with many homeowners experiencing higher energy costs, reducing dependency on expensive electric lighting must be factored into decision-making. Using daylight to illuminate spaces reduces the need for artificial lighting, leading to energy savings and a more sustainable home.

LET DAYLIGHT IN

One of the best ways to allow natural light to enter a space is with glazed roof products. Rooflights, roof lanterns, lightwells and patent glazing all maximise light during daylight hours and are proven to deliver up to three times more daylight than a vertical window, illuminating spaces beyond their reach.

For best results, strategic placement is critical. Self-builders and renovators must consider the location, orientation and gradient of their rooflight as part of the design process to avoid glare and unwanted solar gain.

Most rooflight manufacturers manage solar gain with glass. Modern glass technology is incredibly advanced. Solar control glass, for example, can help retain heat in cooler months which helps improve the property's energy performance. Adequate ventilation will



One of the best ways to allow natural light to enter a space is with glazed roof products.

also help dissipate unwanted heat in the warmer months: for this, explore motorised and automated opening rooflights, including voice-activation for easy operation.

WHICH ROOFLIGHT?

With an abundance of styles, materials

and finishes, there's a glazed roof product for every home, whether it's a new build, renovation or restoration of a listed building. 'Off the shelf' rooflights are perhaps the most well known, with household brands leading the market. They're less expensive but use and suitability depends on the size, location



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and scale of the application. Often, they are best suited to a loft conversion.

While a new build can be designed and built to accommodate standard sizes, some applications require a bespoke solution, tailored to their specific requirements. For this, we recommend speaking with several rooflight manufacturers early in the design process, coupled with advice from an architect.

FINDING A SUITABLE ROOFLIGHT SUPPLIER

A high-quality and trusted supplier is likely to have a good digital footprint. Start with magazines and platforms such as Pinterest, then support your findings with Google reviews, testimonials and case studies – both of which can typically be found on the company's website.

Once you've identified a few prospects, consider their product range. Is it limited? Do they provide a bespoke service? Do they buy in from a manufacturer or do they design and make their own products, giving them greater flexibility?

Focus should then turn to the products. Quality and proven performance are critical. Reviews will give a good indication of this but more formally, look for independently verified test certificates for weathertightness,



resistance to snow and permanent load and thermal performance.

CHOOSE ALUMINIUM

Pay attention to the material too as it can impact performance and style. Aluminium is truly the best option for any roof glazing solution. Slim sightlines (the amount of frame/bar you see when you look directly at the rooflight), durability, thermal performance and superb aesthetics make this a desirable, premium option for self-builders and renovators.

Access to thousands of colours and

textures, means the rooflight can be powder coated to match or complement other aluminium window and door products in the home, too.

SUSTAINABLE CHOICE

Aluminium is also the most sustainable choice. With more people opting to include energy-efficient technology, modern methods of construction and eco-friendly solutions in their project, aluminium is a natural ally.

Blending style with sustainability, aluminium is infinitely recyclable – homeowners can be assured that at the end of its life, the aluminium frame can be recycled to begin another useful life. It is corrosion resistant and a good conductor of heat – aiding solar gains in winter and minimising it during the summer months. Also, the use of thermally broken aluminium bars significantly reduces heat transfer and stops cold bridging which aids thermal performance and coupled with other attributes, helps reduce energy usage.

For a practical and stylish daylighting solution, choose an aluminium rooflight tailored to suit the requirements and aspirations of your new home.

Tracey Jackson is business development manager at Howells Patent Glazing

Boat house benefits from A. Proctor Group membranes

A chemical engineer's retirement project to convert a former fishing bothy is taking advantage of the benefits of two different membrane products from the **A. Proctor Group**: Facadeshield® UV and Proctor Air®. The former boat house, complete with double doors leading directly onto a slipway to the beach, has been bricked up for a decade. Now, it is being renovated by David Gibson into a two-storey beach house, fulfilling a long-held ambition. The existing boat house structure provided a tight footprint, being only 3.5m wide by 8m long. David took the existing walls down to around one metre in height, and then began the process of erecting the timber frame that would sit behind. All of this allowed him to use the existing sleeper foundations. Originally, he planned to use an open-jointed timber cladding as the finish above the retained brickwork. He therefore chose the A. Proctor Group's Facadeshield UV membrane, which combines UV resistance, water resistance, and high vapour permeability. Designed specifically for open jointed cladding, Facadeshield UV is also dark in colour to provide a shadow effect in the open joints. On the roof, David chose Proctor Air as an air permeable, low resistance (APLR) membrane, for use below a traditional slate finish. Maintaining a traditional appearance as part of the conversion work is important to David, given the building's history of use.

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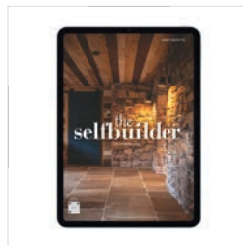
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Breathe easy

Ashley Cooper of WMS explores how underfloor heating provides the ideal balance between indoor air quality, comfort and efficiency.



When planning a self-build, comfort and efficiency are often top priorities, but one crucial factor is sometimes overlooked – indoor air quality. One leading solution to create a healthy indoor environment is hydronic (water-based) underfloor heating, thanks to its ability to minimise airborne particles, reduce humidity-related issues and create consistently comfortable air temperatures.

AN ALL-ROUND SOLUTION

With modern homes designed to be more airtight and well-insulated to meet Building Regulations, it's essential to ensure fresh, clean air within the living environment. As self-builders strive to create energy-efficient and

comfortable homes, indoor air quality (IAQ) must become an increasingly important consideration.

Poor IAQ can lead to respiratory issues, allergies, and damp-related problems. Hydronic underfloor heating (UFH), which pairs perfectly with renewable heat sources, such as air source heat pumps, provides the ideal solution. Unlike traditional radiators, UFH uses radiant heat that does not rely on moving air currents to warm the room. This reduces the movement and spread of airborne particles, creating a cleaner indoor environment.

Another key benefit of UFH is its natural ability to regulate humidity levels, creating a healthier home. The consistent, even warmth it provides

helps prevent cold spots and areas where mould can develop, leading to maintenance issues and potential respiratory problems.

Mould growth can be a significant concern, particularly in well-insulated, airtight homes. While ventilation is essential, simply opening windows and doors isn't always practical when conserving energy, which is a priority during colder months. Even with ventilation, condensation can still form if warm, moist air comes into contact with a cold surface below the dew point.

UFH offers a practical solution by generating heat across the entire floor surface, warming the room from the ground up. This radiant heat ensures an even temperature throughout,

reducing the risk of cold surfaces where moisture can settle. By minimising damp conditions, UFH helps improve IAQ and reduces the likelihood of mould growth, creating a healthier, more comfortable living space.

When working alongside a specialist UFH partner to support design and installation, self-builders can feel confident that integrating UFH into the project will enhance comfort and efficiency while also supporting long-term health and well-being.

OPTIMAL PERFORMANCE & CONSISTENT WARMTH

Stable and constant spatial air temperature is essential for creating a comfortable and energy-efficient environment. When selecting a heating system, it's vital to understand its performance at the heat source and across the room. This knowledge ensures comfort, efficiency, and practical room layout.

Research from Energy House 2.0 revealed that UFH has the smallest temperature variation, showing only a 0.8°C difference during tests at -5°C and 0.7°C at +5°C when operated in a SAP heating pattern. This performance is significantly better than that of other heating technologies, which demonstrated variations of up to 4°C,

and traditional radiators, which had a minimum spatial difference of 2.2°C. The results also demonstrated even less spatial difference was seen when the system was run in a constant 'on' scenario.

The research proves that, when combined with air source heat pumps, the constant heating pattern achieved by hydronic UFH maximises efficiency and comfort, ensuring optimal performance and consistent warmth throughout the living space.

However, when evaluating heating technologies, it's essential to consider more than just air temperature in isolation. Factors such as heat loss during off periods, the time required to reach the desired temperature, and the balance between running costs and occupant comfort all play a crucial role.

A system that is cheaper to run but slow to heat offers little benefit if comfort levels are only reached late in the day. A detailed review of the report reveals that UFH delivers the most consistent and comfortable warmth. When holistically accounting for cost and performance, any price difference between UFH and the most cost-efficient alternative is minimal and arguably negligible.

Self-builders can also feel assured by the results from the Final Summative

Assessment of the Energy House 2.0, which concluded that underfloor heating systems' running costs are lower than traditional radiator-only systems. This is due to their efficient design, which maximises heat output while minimising energy input.

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With summers becoming hotter, homes are at increasing risk of overheating. Part O of the Building Regulations, which took effect in England in June 2022, defines requirements for mitigating overheating in new residential buildings.

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Radiant cooling provides a fresh perspective on indoor climate control and aims to work entirely in harmony with nature rather than against it. Instead of forcing cold air out, radiant cooling works by using cold surfaces to remove the heat radiated from objects within a room.

Ashley Cooper is managing director at WMS



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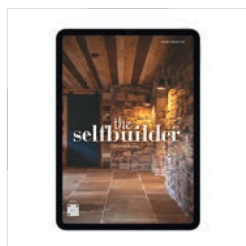


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CASE STUDY

AN INSPIRED CHOICE

Gwen Williams' and Patricia Lynch's Victorian terrace fuses the latest sustainable techniques and materials with inspiration from some iconic 20th century artists.

TEXT ALEXANDRA PRATT IMAGES FRENCH & TYE





To a passer-by, this three bedroom, terraced Victorian home appears no different to the others on its London street. Once inside, the transformation from a traditional home to an art-inspired space defined by simple forms, strong colours and geometric patterns becomes apparent. Yet this is not a gallery, but a much-loved home and a deserving winner at the British Homes Awards 2023.

"When I bought my house in 1999, I was delighted to find original features, such as cornicing and fireplaces," recalls Patricia Lynch, a former furniture restorer. "I loved it from the beginning, but I didn't have enough money to do more than decorate and do some DIY, which included installing a new kitchen myself."

Patricia and her partner Gwen Williams, a former family law solicitor, are now both retired and this became a catalyst for asking themselves "What do we need?" Thinking about the future, they considered moving to a different part of the city, or even self-building, but realised that they already lived in the perfect location; close to transport, services and open spaces, ideal for walking their dog.

"Once you retire, you can have a great time doing all the things you don't have time for when you work!" laughs Gwen. Their conclusion was to stay and "do up" the house to their taste, as well as futureproofing it in terms of energy efficiency. Some of the things Patricia and Gwen wanted to change included the lack of a guest bathroom, limited storage and a problematic

'middle room' between the front sitting room and the kitchen to the rear. One particular bugbear was the solid kitchen wall that blocked views of the garden. "Once we decided to stay, we thought 'let's make it as beautiful and as functional as possible,'" says Patricia.

The couple began to look for an architecture practice to help them realise their ideas and, just before the first lockdown in 2020, they found Bradley van der Straaten. "We were looking for somebody to work with who was exciting and was able to create something special out of something ordinary. We had a fantastic experience," says Patricia. "Ewald really 'got' us!"

"Ewald [van der Straaten] had lots of ideas and energy," recalls Gwen. "The practice also had lots of experience transforming Victorian terraces and they aren't too big a firm." The aim to create a low-energy, visually appealing home essentially broke down the project into two parts: a loft extension and a 'deep retrofit' of the existing building, plus an art-inspired interior fit-out and decoration.

The sustainable approach included the reduction of waste by keeping the overall footprint of the existing house. Yet the project opened up the home, drew in light and increased the overall feel of spaciousness. Gwen and Patricia kept all the external walls, including the wall of the previous extension across the side return (completed in 2008), and added extra insulation. Some things were also reused,

HIGH POINT

"We had bi-monthly site visits. For a while, it was just a building site and we didn't see much obvious progress. But, the day came when we visited and it was so exciting to see our house taking on the shape of what it was to become."



LOW POINT

"The time it took, but that was partly because we added the heat pump at a later stage."

including rooflights now relocated to the new loft extension and the original bath, now in the guest bathroom on the top floor. "I love the loft bathroom; it doesn't get enough attention!" says Patricia. "I love the square tiles, there's so much light, too."

Taking a fabric first approach to the renovation, the couple's architect Ewald van der Straaten focused on making this double-brick-built home thermally efficient, without suffocating the structure and creating condensation. The solution was new breathable cork insulation on internal walls, finished with lime render. These products have lower embodied carbon (i.e. the carbon produced in their manufacture) than conventional foam-based insulation and they allow the old building to 'breathe'. The lime was then finished in natural, water and clay-based paints to minimise toxicity and improve internal air quality.

The downside of this approach was a tiny reduction in the size of the rooms, but creating a more airtight building meant Patricia and Gwen could install an air source heat pump. "This extended the project by three months and took a huge amount of work, installing underfloor heating on the ground floor and in the new loft conversion, as well as new radiators on the middle floor," says Patricia. "But we're saving a huge amount of money. In the summer, we hardly spend anything. We were cold that first winter, as we hadn't switched it on properly. Now, when you walk through the door, the

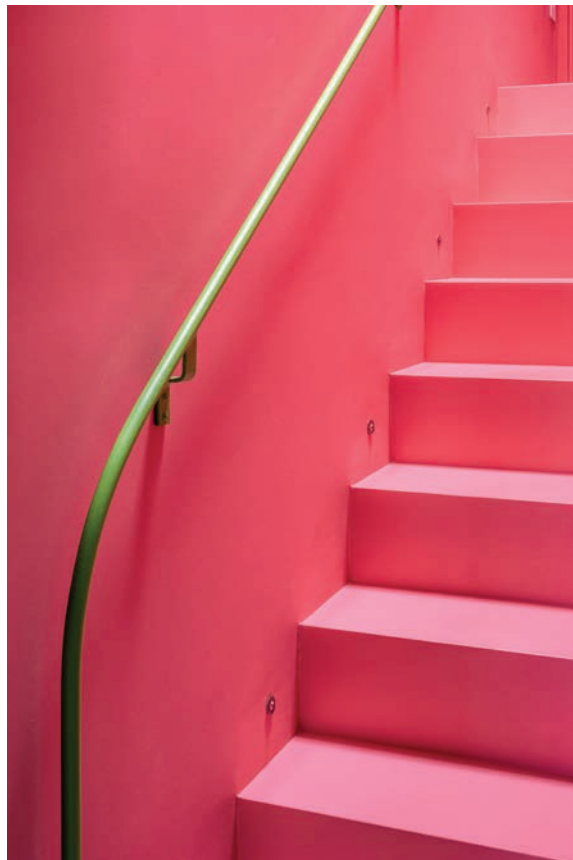
house is warm."

The costs of running the air source heat pump are also offset by the electricity generated by a new photovoltaic solar array on the roof, which allows Patricia and Gwen to sell some back to the grid. Including the newly replaced windows, Ewald has calculated that the structural changes have led to a 74% improvement in kWh consumed per sqm. Thanks to the decision to remove the gas boiler, the house also has zero in-use carbon emissions.

Insulation and technology were only part of the work done to this property, which was extended from a three bedroom, 111m² property to four bedrooms at 138m². This is thanks to the loft conversion, which was passed under permitted development rules. The extension is timber-framed and clad in glass-reinforced concrete panels (GRC).

A slightly unusual choice, this product uses glass reinforcement, is rated A1 for fire retardancy and offers both durability and strength. The textured panels have the appearance of wood with the strength of concrete, although they can be fragile and difficult to transport. The extension also makes the most of both the light and views across London with ultra-slim aluminium framed architectural rooflights from Maxlight.

Above the new stair access to the loft, there is also a visually striking and very clever 'funnel', which drops light from a carefully positioned rooflight down into the stairwell below at an



angle designed to maximise the impact. This is further enhanced by the bright Delilah Pink paint colour used on the walls; a choice inspired by the work of Mexican artist Louis Barragan.

Colour choices have a real impact in this home, from the bespoke blue concrete on the new exterior overlooking the garden to the pale green sitting room or the pink and terrazzo kitchen. Gwen, who has lived in West Africa, owns a small collection of art from the continent. The use of colour in the work of African artist Ato Delaquis in particular has influenced some of her and Patricia's decor choices.

Yet colour wasn't something originally at the top of Patricia and Gwen's list of must-haves.

"We let our architects have free rein, but there was a lot of discussion about colours," recalls Patricia. "They were the architects and we trusted them. We were paying for their expertise. We wouldn't have come up with anything as exciting."

"Edi at Optimal Builders gave us the confidence to embrace the colours," adds Gwen. "He said, 'They're the easiest thing to change,' and we've been really happy."

While colour was a new departure for Gwen and Patricia, the inspiration behind the interior design came entirely from them. Their brief to Bradley van der Straaten referenced architecture, furniture design and art, such as the Brutalist architecture of the Barbican, the iconic lobby of the Chrysler Building, the classic Eames chair, and the photography of Andreas Gursky. However, perhaps the most influential artist was Donald Judd, whose mid-century work

was the catalyst for the unique curved ceiling fins in Gwen and Patricia's kitchen. Cut from inexpensive MDF, they are positioned below the glazing over the former side return. Not only is the design appealing, but the fins create patterns of light and shadow in the space as the sun moves across the sky.

Playful patterns are found throughout the house adding depth and geometric interest. Nowhere shows this off better than the new kitchen and dining area (now opened into the previously unloved 'middle room'). The kitchen island and the wall in the entrance hall are finished in tiles that are concave in shape, creating the look of Roman fluted columns. The splashback tiles are reversed; convex tiles add a finer and softer texture to the space. Fluting is also repeated in the blue concrete wall on the exterior, where it softens the impact of the material.

With an unusual bronze worktop, the island is the stand-out feature in the kitchen, which was built bespoke for the couple. The countertops elsewhere in the kitchen are terrazzo, which "is very beautiful and doesn't show marks," says Gwen. It was a fortunate choice, as both Gwen and Patricia found it difficult to choose materials during the frequent lockdowns and were frustrated they couldn't touch tactile elements before selection.

The kitchen, which had to be adjusted to accommodate the water tank for the air source heat pump, is now genuinely the heart of the home, with birch ply wall covering and a beautiful window that frames views of their

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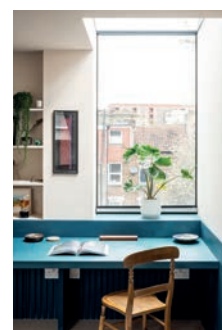
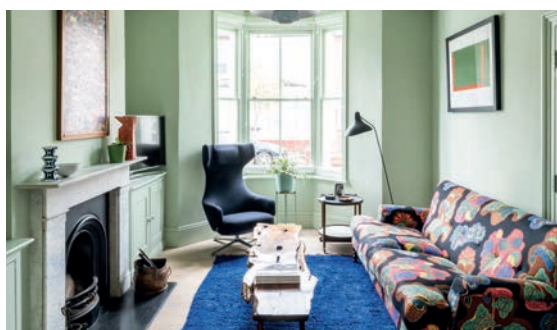
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PATRICIA & GWEN'S TOP TIP

We moved back in before the work was completely finished – that was a mistake as we had the builders in the house every day from 8am for about three weeks. We should have waited. Obviously, try not to alter the scope of your plan mid-build. We are, however, very pleased we did install the heat pump, so doing early research on what positive environmental impact you can have is worth doing



Colour choices have a real impact in this home, from the bespoke blue concrete on the new exterior overlooking the garden to the pale green sitting room or the pink and terrazzo kitchen.

favourite tree, an acer. There is also a handy window seat built-in below from which to enjoy the precious new perspective on their garden. "We didn't want patio doors," says Patricia, "but that acer is beautiful all year round."

Gwen and Patricia were particularly impressed with their architect's attention to detail in the design, such as shadow gaps at the entrance to the loft bathroom, the kitchen island and the ceramic wall that wraps around from the entrance hall into the sitting room. "There are a lot of special details that not everyone will notice, but we love," says Patricia. "We were willing to spend the money and be brave."

There's just one job left for Gwen and Patricia to tackle, and that is the window in the front sitting room. "We didn't replace the original

sash in the bay window," says Patricia. "But we are planning on having it done this year. The front room is the coldest in the house; we really notice the difference."

Now their project is (almost) complete, Gwen and Patricia have the opportunity to reflect on a project that didn't just secure the building for another 200 years, but finally turned it into a space that genuinely reflects their tastes and their lives. "We have our storage, the middle room is integrated and it is easy to keep looking nice. It's a very beautiful place to live," says Patricia. "When people visit for the first time, they take a step back," laughs Gwen. "From the outside, it looks like a standard Victorian terrace, but inside it's like the Tardis. It brings me joy and we love living here." ■



CASE STUDY

A STONE'S THROW

Glen Bacon and Jane Healy have built an annexe suitable for elderly parents in the garden of their listed house, choosing a varied palette of cladding materials which includes limestone and flint.

TEXT DEBBIE JEFFERY IMAGES SOPHIE BATES ARCHITECTS / GLEN BACON





Building in the grounds of a 16th century Grade II listed house was always going to bring its challenges, but Glen Bacon and his wife, Jane Healy, were determined to overcome these obstacles to create an annexe in their garden.

"As Jane's parents grew older it seemed an ideal solution to build a bungalow for them close by," explains Glen, who planned to tackle as much of the work as possible after a lifetime spent renovating houses in both the UK and Australia.

Glen and Jane have lived in their listed home for the past 23 years and had already converted a barn on the site in 2013, creating a guest room above a garage and store. At first, the couple considered building an annexe on another part of the garden, but a planning consultant and their chosen architect, Sophie Bates, believed that replacing a dilapidated greenhouse beside the converted barn would prove more acceptable to the planners.

Nestling the annexe in one corner of the generous garden, tucked behind the two storey black weatherboard-clad barn, would enable garden views from the new property while minimising its presence onsite and providing privacy. The location also allows living spaces to open onto the shared garden and maintains views from the living room of the main house.

"Working with the family proved a true

collaboration," explains architect Sophie Bates, whose practice is based in Surrey. "They asked for a bungalow, with two bedrooms and two bathrooms, but gave me a free hand on the overall design. Glen's building experience meant that he already understood the process, and we all got along extremely well."

Pre-application advice from the local council was sought by Sophie, and feedback was positive regarding the proposed location and scale of the new annexe. The response stated: 'there is no objection to the general massing of the proposal or its siting within the grounds.'

The planners also stressed the importance of attention to detail when it came to the choice of materials. 'If a more contemporary approach is favoured by the applicants, then a slate roof is most likely to be acceptable. It is considered that local stone/brick or wood walling would be acceptable for the annexe.'

Sophie prepared a small selection of proposals, and the chosen single storey design is made up of three distinct forms which echo the appearance of the neighbouring barn. One pitch-roofed wing contains bedrooms and bathrooms, the other an open plan vaulted living/dining/kitchen, with the two elements connected by a flat-roofed link accommodating the entrance hall, utility and plant room, which require less natural light.

The main house stands on an acre of land, backing onto a railway line in an urban and

HIGH POINT

"Working hands-on to bring our architect Sophie's design to life."



LOW POINT

"Bad weather, and the amount of mud on site when we were using a dumper and digger."

largely residential area. Tile-hung to the first floor, with brick and flint to the ground floor, the building is timber-framed with plain roof tiles. Extended in around 1600, and again in the 18th century, further additions were built in 1920 and 2003.

"Our house dates back to around 1550, and has been added to over the centuries, but we wanted the annexe to be simple and contemporary," says Glen. "Fortunately, the planners were very happy with Sophie's design, and she put a great deal of work into preparing a heritage statement to illustrate how the annexe would have minimal impact on its setting."

Architect Sophie's thorough approach also involved inviting a local planning consultant to draw up a statement to accompany the planning application for the challenging site. "It sounds obvious, but providing detailed, clear, contextual drawings, along with a design statement and photos of the site, help to give the best possible chance of a positive outcome," she explains.

A single storey design was always favoured for the annexe, partly for ease of construction and also to make the building fully accessible for the elderly occupants, eliminating the need for a lift or stairlift. The impact on its sensitive setting in the grounds of a listed building is also reduced, with only the top of the single storey roof pitch visible from the road.

"Its position responds to existing outbuildings along the western site boundary," continues

Sophie. "Bedrooms face east behind a corridor to maintain privacy, and living areas look south towards the main house, maximising natural light."

The annexe is accessed from the main driveway to the property, with ample parking already onsite, and mains water and gas extended from the existing house. A new three-phase electrical supply was also introduced, as the building is heated by an air source heat pump connected to water underfloor heating, and upgrading to three-phase power ensures that the home can efficiently run multiple appliances at the same time.

Once planning permission had been granted, Sophie was able to complete the drawings for building control, including all glazing details. Glen and a retired carpenter friend undertook most of the build between them, bringing in specialists for electrical work, plastering, flintwork, and the tiling.

"The planners wanted us to show them samples of the roofing and cladding materials, and we commissioned a separate tree report as part of Sophie's application, because we back onto a railway line with large oaks, but other than that there were no real restrictions," says Glen. "We ended up putting foundations down 2.2 metres near the trees, with 1.2 metre trenches to the front of the house."

The new 148m² annexe has been constructed

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with a highly insulated timber frame, chosen by Glen who had prior experience of this system, and the added benefit of a carpenter working alongside him. Glen's son also helped during his holidays, and the frame was stick built onsite and erected in under a week.

"There are four different cladding materials externally, and even after 50 years in the building business I hadn't worked with any of them before, which made for a steep learning curve," says Glen. "We chose limestone and flint as traditional, natural materials found widely in the area, but Sophie also suggested thin-coat silicone-based render, and fibre-cement cladding panels called Equitone."

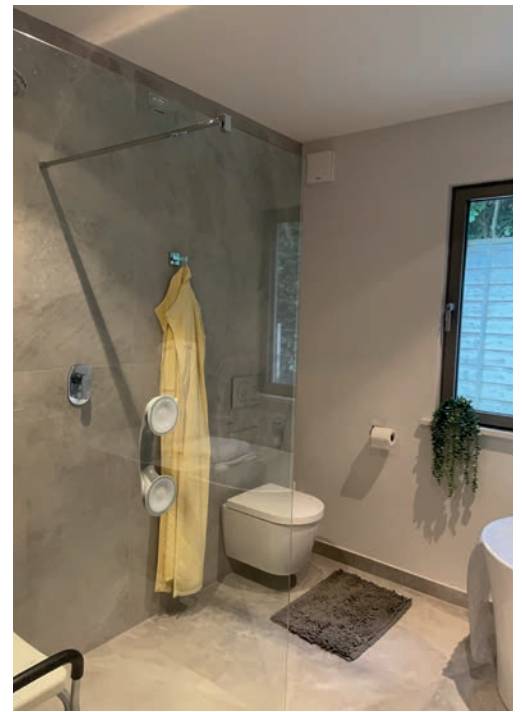
The surrounding buildings feature a range of materials, including flint, stone, slate, tiles and white render, and the main house has flint to the front elevation. In response to this, Sophie proposed that knapped flint could be used to the south and east elevations of the annexe, with a slate tiled roof to match the neighbouring barn, and limestone cladding the dining room

externally. "Varying the materials defines the elements of the building and breaks up its mass to visually reduce the overall impact," Sophie explains.

Traditionally, panels of flintwork are joined by brickwork quoins, but for the annexe Sophie devised a more contemporary solution, using vertical aluminium angles to edge and connect the external flint walls. "They're an unusual architectural feature and needed to be specially fabricated with brackets, which tie into both the flint and the timber frame," explains Glen, who prepared the flints ready for a stonemason to lay.

"Usually, flint has a blockwork backing wall, but we used a cavity wall spacer product called SureCav," Glen continues. "It's ideal for building with flint, as it sits in the cavity and allows the flint outer skin to be built without the need for an additional blockwork leaf."

Glen also fixed the limestone external cladding, devising a system incorporating an air gap by using tile backer-board and adhesive. The through-coloured Equitone fibre cement



panels around the bedroom wing glass doors were screwed in place, with a 10mm recessed gap between each sheet and a black liner behind creating a rebate. Screws were left visible for an industrial look.

Aluminium-framed glazing in a mid-grey colour complements the Spanish slate roof tiles and grey walling flints. "We chose to have integrated Venetian blinds as a neater option which won't gather dust," says Glen. "Unfortunately, the little solar panel units don't charge the batteries that efficiently, so we sometimes need to charge these separately, but the concept still works well."

The house is nestled into the northwest corner of the generous gardens, resulting in morning sun entering into the corridor linking the bedrooms and a south facing living room. "We wanted to make sure the house benefitted from solar gain in the winter to help keep it warm and add light into the vaulted ceilings," notes Sophie. "As part of the landscaping design, we looked at including a covered walkway over the ramped entrance path to provide shading and privacy, and a brise soleil to shade the main living area in summer."

Bringing natural light into the house from different angles was key, and Sophie designed both wings of the building with garden-facing glazed doors, incorporating high level triangular windows in the gable end of the vaulted living room to let in the afternoon sun.

The ceiling is lower to the dining area within the open plan space. "I wanted to define the open plan dining space, and this area has been extended out with a flat roof to form a large bay," says Sophie, who was also commissioned to design the lighting scheme both inside and outside the house, with the family then choosing the fittings.

Jane, who is now retired after running her own graphic design business, was keen to install full height internal doors, and a company was found to custom make these in oak. "We created shadow gaps around the doors and skirtings, so that they're flush," says Glen. "It was quite complicated, and everything needed to be extremely accurate before the plasterers could begin work."

Engineered oak flooring was laid over underfloor heating in the open plan kitchen, and Sophie designed the cabinet layout for Glen to install, while Jane and her mother worked together to choose colours and other finishes. The underfloor heating is zoned, so that every room in the annexe can be controlled independently for comfort and energy efficiency.

Futureproofing for Jane's parents, Pat and Rose, involved creating enough circulation space to accommodate a wheelchair user, and installing a separate WC near the main entrance. Their parking area in front of the barn is connected to the annexe by a path suitable for wheelchairs, which was designed to be covered by an overhang supported on columns to provide shelter to the entrance, shading to the corridor, and for planting to grow on.

Sadly, Pat died just one year after the couple moved into the annexe, but Rose still enjoys living there in close proximity to her family. "We thoroughly enjoyed the build, despite some muddy weather during the winter months," says Glen.

"We're tremendously pleased with the result, and the finished building is really special, thanks to Sophie's design. It's also far more energy efficient than our own home – light, warm and contemporary – but if it gets cold in our old house then we can always head down to the annexe to warm up!" ■

GLEN'S TOP TIP

Consider your material choices in all weathers, as our pale patio tiling gets dirty and is more high maintenance than we'd imagined



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