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FROM THE EDITOR...

According to figures recently released by the Passivhaus Trust, approximately 1% of new homes under construction in the UK are being built to Passivhaus standard. This is due in part to policy and funding changes, as well as the increasing awareness generally of the need to build more efficient homes and achieve net zero. The Trust has even loftier ambitions, hoping to see that figure increase to 10% by 2035.

Building to Passivhaus standard means hitting a series of strict targets relating to elements such as insulation, ventilation, airtightness, windows and solar gain. Aside from the wider benefits to the planet, there are of course benefits for homeowners in the form of cheaper energy bills, thanks to the improved indoor thermal comfort and reduced heat loss.

With energy costs only going one way at the moment, it's an enticing concept. That being said, achieving Passivhaus standard is no easy feat and doesn't come cheap. It has to be factored into a project from day one, as self-builders Jane and Paul discovered in Jess Unwin's case study on page 20. Even details like the orientation of the house can have an impact, but Jane and Paul both being qualified architects gave them a considerable advantage.

While for some achieving Passivhaus might be too ambitious, sustainable features are on the menu for many self-builders. Heat pumps are becoming increasingly popular, with recent figures showing 52% more were installed in the UK in 2024 than in 2023. This is in part due to the Government grants available, but some believe they need to do more. 2024's total sales of under 100,000 heat pumps are way off the Government's target of 600,000 a year by 2028.

Another example of self-builders opting for green approaches in this issue is Suzanne and Mark's spectacular Scottish build, where they included not only a heat pump but a host of other eco-friendly features (page 44).

As always, I hope you enjoy the issue!

ROSEANNE FIELD

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ON THE COVER...
© CHARLES EMERSON (PAGE 30)

Taking a chance

James and Amy Savage's project in Wiltshire saw them put their faith in an unusual property

Ticking all the boxes

Charlton & Jenrick's Peter Mintoft explains why secondary heating is the perfect addition for your home

The next chapter

We catch up with Olly and Veronika Stothert whose build has seen them overcome a myriad of challenges

REGULARS

PRODUCT FEATURES

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Light-Filled Contemporary Retreat

SCAN ME

Overlooking the rolling valley towards Hemploe Hill, near the Leicestershire-Northamptonshire border, this home has been a delight to live in, according to Alec. He describes how "even on dull days, the house floods with light, lifting your mood." With its stunning views and carefully designed features, the home showcases a perfect blend of contemporary style and energy efficiency.

PROJECT INFORMATION

Sector: New Build
Architect: Roderick James
Homeowners: Alec and Stephanie Wilson
Specified for:
Slim Profile
Uniform Sightlines
Large Sizes
Thermal Performance
Photographer: Simon Maxwell

CHOOSING VELFAC FOR A SECOND TIME

For retired builder Alec, this is the second home he has built for his family, and just like the first, he opted for VELFAC windows.

"I'd used VELUX rooflights in many building projects over the years, but I hadn't used VELFAC vertical glazing until I built my first self-build in 2000. Back then, the windows were made entirely of wood, both internally and externally. They were great, but when I discovered that the newer versions feature a composite construction with an aluminium external frame, I didn't hesitate for a moment in choosing VELFAC again."

The Wilsons had lived in their previous self-build family home for a decade. It was a large, oak-framed house featuring extensive glazing at the rear to maximise the views. However, retirement prompted Alec and Stephanie to take on another self-build project. This time, they wanted a smaller, more contemporary home that would be highly energy-efficient and cost-effective to maintain.

MAXIMISING LIGHT AND VIEWS

Wanting to stay in Leicestershire, they found a plot that already had a 1960s bungalow on site. While the location was ideal, the bungalow itself was surrounded by tall Leylandii trees, and its positioning did not make the most of the sweeping countryside views. Fortunately, they obtained planning permission to demolish the existing structure and start fresh. This gave them the opportunity to design a new home that was perfectly positioned to maximise both natural light and the surrounding landscape.

The Douglas fir-framed home consists of two sections—one single-storey and one two-storey—angled strategically to create privacy. A fully glazed, single-storey entrance connects the two parts, creating a bright and welcoming space.

The two-storey section houses the bedrooms. The primary bedroom suite, located on the first floor, includes a spacious living area that opens onto a balcony via a huge 3.5m VELFAC sliding door with fixed lights on either side. This setup offers uninterrupted views across the valley and floods the space with natural light.

Meanwhile, the main living, dining, and kitchen area is situated within the single-storey part of the home. A large, electrically operated roof lantern above the dining table ensures an abundance of daylight while also providing ventilation in the summer months. The entire south-facing wall is glazed to take full advantage of the garden and the picturesque countryside beyond.

MANAGING SOLAR GAIN

To manage solar gain effectively, a verandah spans the full length of the building. Four VELFAC sliding doors

open onto the verandah, with fixed lights positioned between each door. This configuration provides the ideal balance between easy outdoor access and protection from strong winds that could send papers flying inside.

Alec describes this as his favourite part of the house: "There are no windowsills or blinds to obstruct the view. I love it when the weather outside is wild, and we're sitting indoors, all cosy, watching it unfold."

TRIPLE GLAZING FOR THE PERFECTIONIST

Energy efficiency and low-maintenance living were top priorities for Alec and Stephanie. In addition to the high thermal performance of VELFAC 200 double-glazed windows and doors, the house benefits from a range of sustainable features, including a ground source heat pump, solar thermal panels, and a rainwater harvesting system.

However, Alec has one minor regret: "I wish I had opted for triple glazing instead of double glazing. Don't get me wrong—the VELFAC double glazing performs beautifully, but there's a part of me that wishes I had gone the extra mile in terms of energy efficiency. Triple glazing would have truly satisfied the perfectionist in me."

Despite this, the home is everything Alec and Stephanie envisioned—a contemporary, light-filled, and energy-efficient retreat that blends seamlessly into its beautiful surroundings. By incorporating VELFAC windows and doors, they have created a home that not only maximises natural light and stunning views but is also designed for long-term sustainability and comfort.

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THE ART OF WINDOW DRESSING

Debbie Leigh of ILIV shares expert insights into selecting the perfect curtains and blinds for every home, with the right window dressing able to transform a room.

When it comes to interior design, window dressings are often an overlooked yet essential component in shaping the feel of a space. The right window dressing can transform a room, adding warmth, elegance and functionality. From selecting fabrics to understanding linings and achieving the perfect drape, every detail matters when dressing your windows.

CHOOSING THE RIGHT FABRIC

The fabric you choose will influence the overall look and feel of a room. For a subtle and harmonious effect, opt for curtains in a shade slightly lighter or darker than your walls. If you prefer contrast, select an accent colour from other elements in the room, such as a cushion, rug or piece of artwork. Consider textures too, velvet and heavy weaves offer a luxurious and cosy feel, while linens and light cottons create a relaxed and airy ambiance.

THE IMPORTANCE OF LINING

Lining plays a pivotal role in determining both the appearance and functionality of curtains. Blackout linings, for instance, enhance the richness of bold colours by blocking external light, making them ideal for bedrooms or spaces where complete privacy is desired.

For a softer, more diffused light, sheer linings create a delicate and airy effect, allowing natural light to filter through while maintaining privacy. Standard linings can also add weight and structure to curtains, helping them drape beautifully and last longer.

TEMPERATURE CONTROL THROUGH WINDOW DRESSINGS

Well-chosen window dressings contribute significantly to energy efficiency. High-quality, lined curtains act as a barrier against heat loss in winter while blocking out excessive sunlight during warmer months. Blackout and thermal linings, in particular, are excellent for enhancing insulation.

Curtains also play a key role in regulating indoor temperature. In winter, thick, lined curtains provide insulation by trapping warmth inside, reducing energy costs. In summer, sheer curtains or voiles help diffuse harsh sunlight, keeping rooms cool while maintaining privacy. Thermal linings or interlined curtains offer an extra layer of insulation, making them a great investment for year-round comfort. For maximum flexibility, layering sheer curtains with heavier drapes allows for adjustable light control throughout the day.

HOW TO HANG CURTAINS FOR THE BEST EFFECT

The way curtains are hung significantly influences the overall visual impact of a room. As a general rule, curtains should either "kiss" the floor for a tailored look or puddle slightly for a more romantic, traditional feel.

However, avoid curtains that stop short of the floor, as this can make ceilings appear lower and disrupt the room's proportions. Positioning curtain poles or tracks higher than the window frame can also create the illusion of height, adding grandeur to the space.

ACHIEVING THE PERFECT FULLNESS

Curtain fullness refers to the amount of fabric used in relation to the window's width. For eyelet (grommet) curtains, a minimum of double the width of the track is recommended to achieve a rich, luxurious drape. Those seeking an even more dramatic effect can opt for triple fullness. This principle also applies to pleated styles such as pinch pleats and goblet pleats, which benefit from extra fabric to create elegant, structured folds.

CURTAINS VS. BLINDS: WHICH TO CHOOSE?

Ultimately, the decision between curtains and blinds comes down to the atmosphere you want to create, the practical needs of the space, and the level of flexibility required for light and privacy control.

Generally speaking, curtains suit cosy spaces like bedrooms and living rooms, bringing comfort and warmth. Their flowing fabric can enhance a room's proportions, adding a sense of height and grandeur when hung correctly. Additionally, curtains offer excellent insulation, helping to retain heat in winter and block out harsh sunlight in summer.

Blinds, on the other hand, provide a sleek and structured alternative. Roman blinds in particular, strike a balance between elegance and practicality, offering the softness of fabric with a more tailored and space-saving look. They are an excellent choice for smaller rooms, bay windows, or spaces where floor-length curtains might be impractical, such as kitchens and bathrooms.

For a more dynamic approach, layering both curtains and blinds can create depth and add versatility to a room's design.

FINAL TOUCHES FOR A POLISHED LOOK

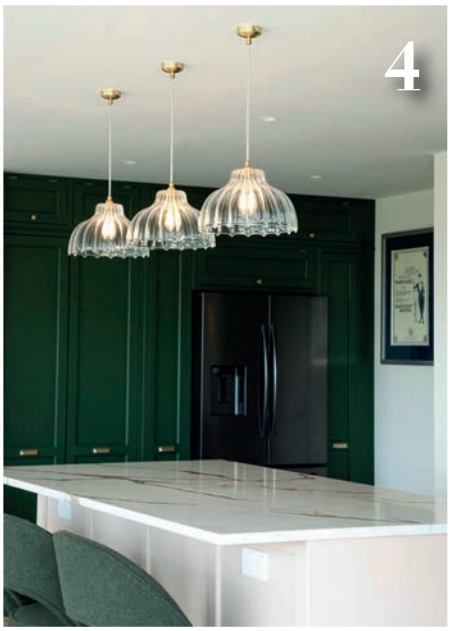
Finishing touches can elevate the impact of your window dressing. Consider adding decorative tiebacks, trims, or contrasting borders to frame your windows beautifully. Layering sheer curtains behind heavier drapes adds adaptability, while coordinating fabrics across different soft furnishings creates a cohesive, inviting space. Tie the look together by matching curtain fabrics with upholstery and cushions for a polished finish.

Debbie Leigh is design manager at ILIV

INTERIOR INSPIRATION: LIGHTING

Lighting is arguably one of the most important considerations for your home, given its ability to impact wellbeing and alter the mood of the room. Find inspiration with our selection of products, from table lamps and outdoor lighting to statement pendants and floor lights.

1. Handcrafted in sustainably sourced solid oak, the **Stem's** steam bent curve arches from its roots to showcase **Tom Raffield**'s sculptural **Skipper Small lampshade**, creating a unique display of light and shadow. Use the steam bent light to bring ambience to your living space or accentuate your reading nook. Radiating a soft glow of light, this statement wooden floor light is the ultimate balance between form and function. Price: £585 **www.tomraffield.com**



2. Nothing shows off the natural beauty of a stone better than real alabaster, as used in the **Alba** pendants from **lightsandlamps.com**. Honed conical shades light up from within to illuminate every layer and add depth of diffusion and texture. The Alba pendants are available in a single version, seven light, 13 light and a statement 19 light cluster. Detailed with a dark bronze ceiling plate and ring detail, each pendant is fully height adjustable from 20cm to 3.2 meters so you can stagger each light or group them together. Price: £2330
www.lightsandlamps.com

3. The **Salcombe Solar Wall Light** from **Solar Centre** is at the forefront of design and technology. Featuring a super sleek design, complete with a fully integrated solar panel and automated on/off, this solar powered wall light is an ultra-modern and energy efficient solution to its mains-powered counterparts. Price: £39.99
www.thesolarcentre.co.uk

4. The **Mary clear ribbed, glass pendant light** from **Glow Lighting** merges industrial vibes with timeless design. Whether you are revamping your workspace, infusing character into your kitchen, or creating a focal point in your living area, these pendant lights effortlessly complement traditional or contemporary interiors. You can also tailor your light to your taste by choosing the perfect metal finish and cable colour for your interior. Price: £360
www.glowlighting.co.uk

5. Featuring mouth-blown, sandblasted opal glass shade, chosen for its porcelain-like texture and soft ethereal glow, the **Nova Table Light** from **J. Adams & Co** appears to be pierced through its core by a lustrous bronze stepped finial. Balanced on a cast solid bronze plinth, the sleek arched base subtly mirrors the curved form of the glass shade. Price: £1026
jadamsandco.com

6. This pair of **Rattan Natural Spiral Shell light shades** from **The Den & Now** are as much a beautiful art installation as they are a practical lighting solution. Handwoven, the large natural rattan light shades are part of a sustainable production. Scandinavian in design, the natural coloured light shades have an oriental feel to them and are sculptured into organic spiral shell-shaped designs. They are available as a pair, featuring one larger shell and one smaller shell. Price: £450
thedenandnow.co.uk

selfbuilder Diaries ...the next chapter

We catch up with Olly and Veronika Stothert who are building their family home and overcoming challenges like clay soil, financial hurdles, and self-building logistics, while balancing professional expertise and hands-on work for a sustainable, personalised space.

"And... Action!" The words that have long defined my career as a film editor now take on a new meaning as my wife, Veronika, and I take on the challenge of building our family home, Skippings. This project is more than just a house – it's a space for our children, Arabella and Albert, to grow up in and for us to shape into something truly our own. Work onsite finally began in November 2024 after five years of planning, setbacks, and learning curves. The start of groundwork brought a mix of excitement and apprehension, but seeing our vision take form has made all the challenges worthwhile.

We had actually knocked down the original bungalow a year earlier to keep the planning permission valid, a necessary step to ensure we didn't have to start the process again from scratch. The empty plot stood dormant for about a year as we navigated the complex preparations and financial arrangements for the build.

Securing the self-build mortgage was another milestone that came with its own plot twists. As a self-employed film editor, I've grown accustomed to navigating financial complexities, but the mortgage process was a production of its own. After months of paperwork and patience, the Ecology Building Society came to our rescue, offering a product that aligned with our values of sustainability and efficiency.

To simplify inspections and warranty logistics, we opted to combine these elements through Protek and Stroma, a decision we would strongly advise to fellow self-builders. Keeping inspections under one roof has streamlined the process considerably, reducing both administrative headaches and potential delays. With the financial and regulatory elements in place, we were finally ready to break ground.

The first phase was site preparation, with all vegetation and grass cleared to make way for the foundations. Weaver Plant took the lead on the groundworks – a team we cannot recommend highly enough. Charlie Meacham and Adam Weaver ran the site with remarkable expertise, offering invaluable advice and insights that made a world of difference to us, given that we are project managing the build ourselves. Their adaptability was tested when the multi-level design of the house presented some tricky challenges, but with skill and determination, they worked alongside the excellent Harry Sparks, whose

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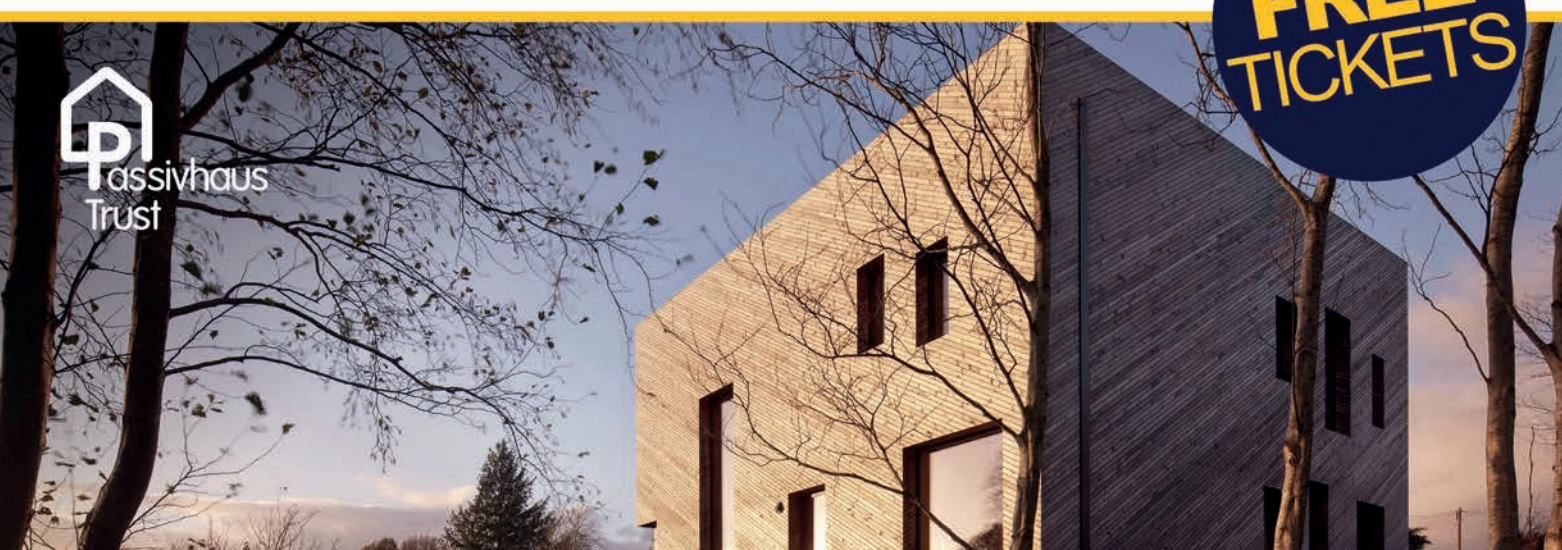

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precision and craftsmanship with the blockwork were second to none.

Despite meticulous planning, the groundworks came with their fair share of surprises. Our site, sitting atop clay-based soil, proved highly susceptible to waterlogging. The relentless rain and storms of late autumn transformed the neatly prepared trenches into muddy ponds. This involved installing unforeseen land drains to help manage surface water and prevent future waterlogging. It was a stark reminder that, no matter how precise the calculations, construction retains an organic element, requiring onsite problem-solving and close collaboration with all parties involved in the build, groundworks, structural engineers, and architects.

But through the mud, progress emerged. Weavers completed the block-and-beam floor, supplied by Litecast, installed alongside our foul water and top water drainage. It now stands proudly up to DPC level, ready for the timber frame installation. We opted for this type of floor due to its excellent load-bearing capacity and suitability for our clay-based soil. This type of floor also offers better resistance to ground movement compared to a traditional slab, providing a solid, long-lasting foundation for our timber frame structure. Seeing this stage completed was a pivotal moment, as it transformed the site from abstract plans into something tangible.

One strategic decision we made early on was to subcontract key trades for specific skilled tasks. By doing this, we can work directly with experienced professionals for key elements like electrics, plumbing, and plastering while taking on certain jobs ourselves to help save money. Tasks such as painting, landscaping, and some internal carpentry are well within our capabilities and should provide some breathing room in our budget. While this approach requires more coordination, the potential savings make it worthwhile. It also helps us feel more connected to the build, learning along the way.

In parallel with the groundworks, we have also been laying down deposits for big-ticket items, including windows, doors and the roof. This proactive step is intended to help keep the build on track and aligned with our project timeline. By securing these essentials early, we hope to avoid delays further down the line and maintain some sense of order amidst the inevitable chaos of a self-build.

Looking back, the biggest challenges have often led to the most rewarding moments. Adapting to the clay soil, managing the water drainage, and juggling the many moving parts of project management have all tested our resolve. Yet, each challenge overcome has given us greater confidence to tackle the next phase. It was a memorable moment when the block-and-beam floor was completed; after weeks of muddy chaos, seeing the solid floor in place gave us a huge boost. We've also been fortunate to have supportive neighbours throughout this process. We made an effort early on to keep them informed of our plans and to address any concerns they had. The positive relationship we've built has helped smooth the inevitable disruptions caused by deliveries and construction noise.

Here are a few tips we've learned along the way:

- Plan finances early: Start the mortgage application process as soon as possible, especially if you are self-employed.
- Expect the unexpected: No matter how detailed your plan, unforeseen costs will arise – from extra drainage solutions to soil-related surprises.
- Keep it flexible: Allow room in your schedule and budget to accommodate last-minute changes.
- Use trusted tradespeople: Personal recommendations and positive reviews made a significant difference in the reliability of our team.
- Stay involved: The more we engaged with the process, the more informed our decisions became. Don't be afraid to ask questions – there are so many technical terms and situations that you cannot be expected to understand it all, so if something is unclear, just ask.

As we look ahead to the timber frame delivery, which will be supplied by PYC, we feel the weight of each decision and the sense of steady progress. Scaffolding is being installed ahead of the timber frame by Spartan Scaffolding, led by Charlie Miller, ensuring a safe and efficient setup for the next stage of the build. Our home, Skippings, named after the historic Chilterns threshing barn that inspired its design, is slowly taking shape. We are immensely grateful to the teams who have helped us reach this stage and to the friends and family who continue to cheer us on from the sidelines.

This next stage will mark a significant milestone for Skippings, and we eagerly anticipate stepping inside for the first time, seeing the architectural vision take shape. Standing on a freshly laid foundation, with a little more mud on our boots, braced for the next stage of the build, we reflect on how far we have come and look forward to the moment we can call this place our home.

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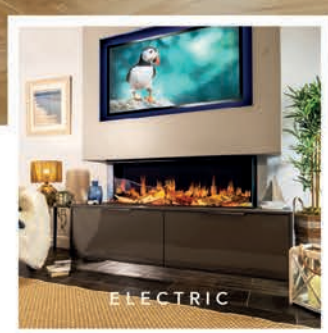

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Stylish, sustainable & functional

Charlton & Jenrick managing director Peter Mintoft speaks to *The Selfbuilder*'s James Parker about all things secondary heating including sustainability, trends, and what the future holds.

WHAT EXACTLY IS SECONDARY HEATING?

Secondary heating is very complementary to primary heating systems. We focus very carefully on secondary heating, which sits in the middle of primary systems and temporary/plug-in systems, i.e. installed fireplaces, stoves, and electric and gas fires.

If you listen to government advice they often focus on primary heating systems, but if you get the right appliance a secondary system can give you a very good enhancement to your living space and provide heat in an economical way as well. Secondary heating makes your living space more enjoyable, with many self-builders desiring the focal point of a fireplace.

WHAT DO I NEED TO CONSIDER BEFORE CHOOSING AN APPLIANCE & WHERE CAN I GET ADVICE?

Things like gas supplies, electricity supplies, or flue systems which is a very complex area. Secondary heating utilises regulated energy supplies – electricity has to fit with national regulation, and gas is highly regulated. Flues and chimneys are very specialist as well, there are specific regulations applying to chimneys.

We deal mostly with the independent retail network – local businesses who can provide a really good service to an end user, advise them from the very beginning right through to actually switching it on and using it. They can help you navigate the minefield that can be secondary heating!

HOW ARE MANUFACTURERS FUTUREPROOFING & ALIGNING PRODUCTS WITH SUSTAINABILITY TRENDS?

It's different per fuel type. Although gas is understandably frowned upon a little now, it is a very cost effective heat source compared with electricity and other solid fuels. We're moving over to hydrogen in line with government initiatives – you can get hydrogen-gas boilers and we now produce hydrogen-gas fires as well. We're also hoping to see a transition on gas where 20% hydrogen will be injected into the natural gas line, reducing the carbon intensity – which our gas fires are prepared for. We've improved the efficiency of our appliances on all fronts – gas, electric and solid fuel and that is to get more heat for customers into the property. The electricity supply is also becoming greener, and we utilise things like LED technology to make them look fantastic.

Sustainable primary heating systems such as heat pumps are under huge loads and we've learned from Scandinavia that wood burning stoves, for example, are complementary to that system – they don't compete with each other.

I'VE HEARD WOOD BURNING STOVES ARE POLLUTING – IS THAT TRUE?

There's a lot of misinformation around about pollution from wood burning. The industry as a whole has been developing

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stoves over the past few years which produce about 90% less emissions than open fires. There's concern people will opt for open fires because they hear wood burners are polluting, but actually an open fire is the worst thing. A modern wood burning stove will produce more heat so it's more efficient, cost less to run, and produce less smoke and emissions. We regard wood burning as traditional, but there's nothing traditional about the appliances we're producing now, from the materials used and the way they inject air into the firebox, to the way the controls and flue systems operate.

The wood carbon cycle is also very short. With coal and gas you're talking hundreds of millions of years in the ground, but wood is not a static resource. Trees are constantly growing, and firewood isn't chopping down big mature trees, it utilises arisings and trees blown down in strong winds, so it's complimentary to forestry. This is a tens of years carbon cycle rather than hundreds of millions, so sustainability on wood burning is actually very strong. Technology is also constantly moving forward and improving on emissions even further.

WHAT ARE THE CURRENT TRENDS IN THE HOME HEATING MARKET & HOW ARE MANUFACTURERS ADAPTING TO THEM?

Media walls with built-in electric fires beneath a television are very popular additions. With electric fires we've got LCD screens and reflective systems which make fuel beds look very real. We also have beds made from real wood with LCD flame effects which are incredibly realistic, easy to control and very low energy.

There's also still a tendency for self-builders to want a real flame, and free standing wood burners with metal flue systems are very popular options and easy to incorporate into projects. We've just introduced a double sided stove with glass doors on both sides that can sit in the middle of a living space which is another approach.

We're constantly working on firebox development to produce plenty of heat and minimise emissions. We're working on air systems that introduce air into the firebox that combust secondary gases. We also have a catalytic stove which contains a catalytic converter that can reduce emissions even further, and are looking at systems that can capture particulates in the exhaust of the stove.

WHAT ARE THE BIGGEST CHALLENGES FOR THE SECONDARY HEATING INDUSTRY & HOW ARE MANUFACTURERS ADDRESSING THEM?

At the top is the government perhaps not recognising secondary heating, there's a challenge there and we try to educate them on how secondary heating is a really good solution and can actually reduce carbon emissions overall by reducing reliance on primary heating systems. Trade associations like Stove Industry Association (SIA) and Heating and Hot Water Industry Council (HHIC) are constantly engaging with them.

Also the misinformation about pollution from wood burners is greatly exaggerated. There are two areas we see developing on wood burning – emissions reduction and control systems which will operate the stove in a more efficient and less polluting way. If you look at the bigger picture, secondary heating has a very positive role to play.

IF I'M BUILDING A PASSIVE HOUSE, COULD I USE A STOVE AS MY ONLY HEATING SOURCE?

Absolutely – passive houses and wood burners are quite complimentary. Our appliances take their air supply from outside so you don't have to suck air out the room. A modern closed stove that can take air from outside creates a sealed system. It's often overlooked because it's specialist, but speak to manufacturers or retailers – we're not daunted by passive design.

WHAT ADVICE WOULD YOU GIVE SELF-BUILDERS WHEN SELECTING A SECONDARY HEATING SYSTEM?

It depends on priorities. If you want a higher heat output, look no further than a wood burner, but they do have a degree of maintenance – you need a wood supply, for example. For appearance, if you don't need a huge boost of heat, electric is the way to go. LED fuel consumption is pennies a day, and actually electric can be entirely self-sufficient if you've got enough solar and storage.

To listen to the full podcast and hear more of what Peter has to say, visit ***insights.netmagmedia.co.uk***

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DISCOVER PRODUCTS & SERVICES IN A LIFESTYLE ENVIRONMENT
The Grand House is designed as an immersive experience that allows visitors to engage with home products and services in a realistic, lifestyle setting.

Showcasing cutting-edge design, sustainable materials and the latest concepts, visitors can see, touch and experience how various products and services would work in their own grand design. All brands featured in the house will be available to speak to and all products can be purchased at the show.

KEVIN'S GREEN HEROES
Each year, Kevin McCloud's Green Heroes spotlights the most innovative and sustainable construction ideas. Kevin personally handpicks his top heroes for each show, showcasing a diverse range of the latest eco-friendly concepts, from small-scale start-ups to big businesses setting a green example for the rest of the industry.

BEHIND-THE-SCENES ACCESS TO GRAND DESIGNS
For fans of the hit TV show Grand Designs, attending Grand Designs Live gives you a unique opportunity to get a sneak peek behind the camera. Meet the grand designers behind the amazing home transformations seen on the show as they discuss the highs and lows of their self-build journey.

Plus, to celebrate 25 years of the TV show, there will be an installation where previous suppliers from the TV houses will have the opportunity to showcase their products and services to those embarking on their own home project.

EMERGING BRANDS
Grand Designs Live will feature a range of emerging brands that are bringing fresh, creative solutions to the market. This area gives up-and-coming brands a chance to show off their unique ideas, from creative materials to inspired design concepts that could soon be making a big impact.

Article supplied by Grand Designs Live

WHEN & WHERE

Grand Designs Live will take place at **London's ExCeL** from **2-5 May**. To book your tickets visit **granddesignslive.com** and enter the code **NETM** for two complimentary tickets.

CASE STUDY

CONVERTS TO THE PASSIVHAUS WAY

The completion of one couple's project has brought joy and a sense of achievement, delivering more living space, greater energy efficiency and a comfortable environment to suit their needs.

TEXT JESS UNWIN **IMAGES** JANE SIMPSON

Where once stood a tired and draughty stonewall bungalow, Jane Simpson and husband Paul Niven have created an eye-catching Passivhaus home that provides perfectly for their particular needs now and is also futureproofed for their retirement.

The modern look of this self-build, located close to the Sheepridge area of Huddersfield in West Yorkshire, would undoubtedly attract more admiring glances than it already does but for the fact it's tucked away a short distance along a leafy unadopted road.

Jane, 62, and Paul, 69, are now enjoying the benefits of their new home, which fulfils their ambitions for more living space, greater energy efficiency and an environment that's comfortable for Paul, who is partially disabled.

Finishing this self-build project is the conclusion of a tale that began in 2003 when the couple bought the bungalow, built in 1911, and land for £63,000. Jane remembers: "We rented out our property and moved into the bungalow straight away – it wasn't ideal, but we coped."

The couple's phased masterplan was to construct office and temporary living space above the bungalow's existing garage (phase one), which they would occupy only until the bungalow itself was transformed into their new home (phase two).

In 2010, they spent £140,000 on the first part of that plan, which was completed using structural insulated panels (SIPs) and included a standout 'catslide' roof. However, phase two was to be significantly delayed. Jane says: "We were hit by the after-effects of the 2008 recession and it just didn't happen, so we ended up living in the bungalow for another decade or so."

During the years that followed, the couple made important changes to their plans. They decided to demolish the bungalow rather than build on top of it so they could have more freedom with the new building's design, and they reduced the size of the new house after their son left home.

Health considerations also influenced their thinking. Jane explains: "Paul was operated on for cancer and is now partially disabled because of nerve damage down his lefthand side and has arthritis."

Jane, who is by coincidence an architect specialising in inclusive design, says her husband's mobility issues were "key" to their thinking on what they wanted from their new home. "However, overall, we just asked ourselves: how do we want to live, what do we need, how do we make it work for us as individuals?

"We wanted a beautiful place to live but we also wanted space with big enough rooms for more comfortable living. We knew that we wanted an energy-efficient property and a home that is future-proofed."

Another really big change to the couple's plans for their new home was the decision to choose a timber-framed Passivhaus construction approach instead of working with SIPs again. Jane says: "We weren't initially going to take the Passivhaus route, but we realised the potential that a Passivhaus self-build had for us and our needs."

Passivhaus is a voluntary standard for energy efficiency that reduces a building's carbon footprint. Developed in Germany in the 1990s, essential components include specialist

HIGH POINT

"Seeing the timber frame go up was obviously a high point because we could begin to see the building take shape in the setting for the first time, but I think we were excited, stage by stage, by all the significant changes that we witnessed during the development of the building work, both inside and outside."

– Jane Simpson

LOW POINT

"Things mostly went well but there was some frustration around how long it took to complete the overall construction. It should have taken nine to 10 months, but it took a few months longer because we had some minor electrical glitches to fix, and also administrative issues caused a delay in the building regulations being signed off."

– Jane Simpson

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Another component is mechanical ventilation with heat recovery (MVHR) systems that continuously extract stale air from a building, replacing it with fresh outdoor air while simultaneously recovering heat from the outgoing air to pre-heat the incoming fresh air. Building design that optimises passive solar heat gain while also avoiding solar overheating is also important in Passivhaus homes.

To achieve these targets, the couple relied on their Passivhaus contractor and the expertise of other professionals they brought in to work on their self-build. Jane says: "Expert input was important – for example, the technical detail needed around keeping everything airtight meant taking our standard planning drawing and turning it into a Passivhaus drawing, two things that are miles apart."

Maintaining the airtight seal at a Passivhaus has a big impact. "You've got to consider early on, before the plaster board goes up, where you're putting anything that's going to puncture your walls," says Jane. "That's everything from wall mountings to the TV aerial and utilities like water, drainage, electricity and even cabling for the internet. This is to ensure that all these points are sealed."

The couple chose a timber frame and a closed panel system that was prefabricated offsite. The panels can be customised to fit various architectural designs and floorplans, be assembled very quickly onsite and provide excellent insulation.

Construction of Jane and Paul's new home finally began in 2023, with Jane taking on the role of project manager. She says: "I enjoyed project management but inevitably I sometimes found it frustrating – what you think you're telling somebody and what they think they're hearing are not necessarily the same thing! So, it's important to be onsite as much as possible to monitor what's happening."

"We realised the potential that a Passivhaus self-build had for us and our needs."

Fast forward around 18 months to the summer of 2024 and the couple were able to fully move into their new abode (following the completion of a bespoke kitchen). On the ground floor, the entrance lobby area gives access to a lavatory and a utility room, but a third door takes you into an impressive L-shaped open space that comprises the kitchen and dining area, plus a lounge with south-facing sliding patio doors that lead to a veranda.

Through another door in the lounge you find the staircase and a generous-sized snug, which also has south-facing windows. The stairs feature a deep half landing midway up that can accommodate seats, and the stairway also has space, top and bottom, for the installation of a stair lift, should one be needed.

JANE'S TOP TIPS

* Design the house for how you want to live
* To futureproof your home, design should allow for changes in personal circumstances, such as the challenges that come with age and health issues
* If something doesn't seem quite right with your drawings or design at the planning stage, revise your plans – you could really regret it later if you don't
* As project manager, whenever the build team wanted a decision on something I could tell them what was needed or we could talk it through because I've got that background in construction. However, if you're not construction-savvy it's worth considering employing someone who knows how to oversee a self-build project
* Use a quality contractor. Get recommendations and perhaps even look at examples of their work

CONTACTS/ SUPPLIERS

ACCESS CONSULTANT
Jane Simpson Access
www.janesimpsonaccess.com

ARCHITECT
Stead and Co
www.steadandco.co.uk

TIMBER FRAME
Buildakit
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TECHNICAL DRAWINGS
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ENERGY CONSULTANT
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"The design of the stairs is just one of the things I wanted to build into the house to futureproof it for us," says Jane. "The height of the step rises at 150mm, the half landing with seats to rest in, and room to install a stair lift are all details that help people if they want to live somewhere as they get older."

Upstairs, the master bedroom has an ensuite toilet and wetroom, and a walk-in dressing room too. There's a second bedroom, a study, a bathroom and a plant room for MVHR equipment and storage of solar panel-generated electricity.

The finished two-storey building has overall floorspace upstairs and downstairs of 150m². Jane says: "Some people look at the house and ask if it's four bedrooms. When I tell them it's two and a study they say, is that all? Well, there's only two of us and all the rooms are big enough to give us the space we really wanted."

Outside, the exterior finish of the couple's new home is an attractive mix of render and wood cladding, but it is the zinc catslide roof that is the real stroke of genius, matching the style and gradient of the 2010-built roof that sits atop the garage/office building. It also has a practical Passivhaus function in managing sunshine as its lower side extends down to cover the south-facing veranda, providing protection against summer overheating (as well as shelter from rain).

"Using the orientation of the house is real Passivhaus principle," says Jane. "During the summer we don't overheat but in the winter the sun's low enough to get right into the house so that we do gain heat through windows, which is what you want."

Jane and Paul are particularly delighted with their veranda, which was "absolutely essential" according to Jane. She says: "It was actually incredibly costly, but we wanted to be able to sit outside even when it rains. We both enjoy being out there every day for a sense of wellbeing, whether birdwatching or enjoying our morning cup of tea."

The couple decided against underfloor heating but do have radiators. These can be heated by an air source heat pump or by an element in the water cylinder, with electricity generated by roof-mounted solar panels or drawn from the National Grid when needed. Monthly electricity bills have been reduced to a fraction of the £500 they used to pay before moving into their new home.

In the end, construction costs were between £450,000 and £500,000, around £150,000 more than the original budget, says Jane. "The overspend is partly the general increase in construction costs and our choice in going for quality or extras. Just a few examples include the veranda, the zinc roofing, thermally treated timber on the exterior to improve weather proofing, batteries to store the solar panel electricity and LED lighting throughout. It all adds up."

"I also wanted a decent kitchen – my husband's a chef, I love cooking too and we love feeding people. I think that the joy of having a decent kitchen and space to entertain friends was absolutely massive for us. The house is actually very bespoke – everything we've gone for has been quality because our aim was that at our age we don't want to have to do anything again, except to possibly redecorate at some stage."

Saving hard for the past 15 years, the sale of their former property and a small mortgage have all helped to fund Jane and Paul's new home. "Our son thinks we're sad because we've not had lots of holidays like

everybody else, but we do have the house we wanted." Jane estimates the value of their new home, together with the neighbouring building they put up in 2010, is now £750,000 or more.

The couple have completed their self-build challenge, but Jane says she and her husband are still "basking in the sense of achievement". She says: "I don't think there's a day that goes by when we don't appreciate how much we love this house."

Passivhaus living has delivered the comfortable environment the couple wanted – but it's particularly beneficial for Paul. "Living in an airtight house like this we can keep the temperature indoors at about 21-22° and means a much more comfortable environment for my husband," says Jane. "In the bungalow we'd have to have the heating at a higher level because of the draughts and the impact that would have on Paul. There are no draughts now."

Jane says she has no hesitation in urging people to consider taking on a self-build if they get the opportunity. "Of course, we have to give credit and thanks to everyone who helped. The level of detail in the work done by our contractor, for example, and the care taken in doing it was amazing – the quality of the build is just fantastic."

She adds: "We think the house is beautiful, but we're biased, so when we have people, complete strangers, walk by and tell us they like the house too, it's great to hear!" ■

Investment sees ISO Chemie boost support for self-builders

ISO Chemie has invested further in supporting self-builders and retrofit designers with a new initiative at the NSBRC in Swindon.

The move will see a permanent static showroom established, enabling the company to showcase its thermal insulating and load bearing bracket support system WINFRAMER Type 1 and Hybratec multi-functional joint sealing tapes and the easy-to-use and energy efficiency saving benefits these systems provide.

A key feature of ISO Chemie's investment will be to provide advice on effective fenestration installation techniques - displaying WINFRAMER will show how it allows windows to be installed in the insulation area, overcoming thermal bridges.

A large amount of heat is lost from a building through the gap between

the windows and the surrounding wall, as thermal imagery clearly shows. This gap is necessary to allow for the natural expansion of the window frame throughout the year, what isn't necessary, however, is the loss of heat.

Both doors and windows account for almost a quarter (21%) of the total air loss of the average house, and adding the joints between walls, floors and ceilings brings the figure up to 50%. Many argue that airflow is desirable, however Andy Swift explained that you can eliminate 50% of heat loss while still retaining some natural air flow.

The statistics illustrate that in most residential properties, heat losses are overwhelmingly replaced by artificial heating rather than through solar energy or internal warmth. This means that reducing heat losses in the home is paramount in the battle to lower energy consumption.

Visitors to ISO Chemie at NSBRC will be able to advance their understanding of airtightness and related issues.

info@iso-chemie.co.uk
www.iso-chemie.eu/en-GB/home

CASE STUDY

AN AUSPICIOUS DECISION

When James and Amy Savage moved from Hong Kong to Wiltshire, they took a chance on a poorly converted byre, transforming it into a unique, futureproofed home.

TEXT ALEXANDRA PRATT **IMAGES** CHARLES EMERSON

Relocating between continents isn't an easy thing to do and when James and Amy Savage decided to return permanently to England in 2019, they started the search for their new home by looking at a map.

"We didn't want to swap Hong Kong for London," says Amy, an accountant who grew up in the capital. "James' sister lives four miles away and we had visited Wiltshire, so we knew it."

Tucked down a private drive among a range of former farm buildings converted in the early 2000s, they found an unusual property. Two single-storey byres were linked by a simple glazed corridor to form a 'U' shape, with a courtyard in the middle, entered via a gate. The building was functional, but uninspiring and their reactions were mixed.

"I loved it," admits James, who, as a venture capitalist, clearly enjoys finding the potential in proposals. "But Amy hated it at first. The planting in the courtyard made it feel closed in, with a little farm gate and an oil tank by the entrance."

Four years later, those buildings have become a single cohesive space that retains the 'U' shape, but the two original stone byres have had a comprehensive renovation, upgrade and changes to layout, while the simple glazed corridor has been replaced by a cutting-edge glass and timber extension housing an exceptional open-plan kitchen and dining room. There are also four bedrooms, two sitting rooms and a beautifully landscaped courtyard garden that is integral to the design.

The journey to this point was characterised by risks and delays, but the couple have been able to navigate it so successfully thanks to their own financial and management expertise and finding the right architect in Rob Elkins, of architect-led design and build practice, Artel31. Rob's innovative and sustainable approach to design chimed with that of James and Amy.

"We called Rob before we bought it to consider adding skylights [in the stone byres]," says James. The couple then threw the dice and bought the property without planning permission for the extension or other works. "It was high risk," concedes James. "But we could have lived with it as it was, provided we got skylights."

James and Amy's inspiration for the project was their experience of living overseas. "We've spent a lot of time in Hong Kong and also in Australia, where that inside/outside living is normal and it influenced what we did here," says James. "I'm the son of an architect and I love 'glass box' designs."

Rob adds: "When we first visited the barns, they felt very disconnected, which although beneficial from an energy usage point of view, meant that children and guests felt as if they were staying in a separate house. The new kitchen and dining area opens to the garden and forms a wonderful gathering point."

Yet making that vision come to life took four

long years, in part thanks to Covid-related delays. The couple spent two frustrating years living in a rental property nearby before planning was approved. Rob recalls the challenges they faced: "Being a listed heritage property, a very careful design and negotiation process was needed with the local authority's conservation and planning team. We used rustic pole barn/tin-roofed canopies in many farmyards as justification to allow the additional space. A contrasting modern aesthetic ensured it clearly delineates the old and new elements."

Yet the deadline for the installation of renewable energy systems with a government grant arrived sooner than the planning permission and the couple found themselves installing the heating system before other works began. James and Amy opted for a ground source heat pump that involved drilling three 100m deep boreholes in the courtyard before the system was commissioned and certified.

When planning permission for the extension arrived three months later, the couple faced another significant delay if they wanted to follow a traditional tender route. Fortunately, Artel31 had their own construction team, which was available at short notice. "We had already

James and Amy's inspiration for the project was their experience of living overseas

worked with them and were happy," says Amy. "I'm a feeling person and you need to have someone you can trust."

Covid didn't just cause delays, it also drove up costs, which in turn impacted the couple's choice of materials. As a result, there is very little steel in the glazed kitchen and dining extension. Glulam beams form the main structure, which features a 6.6m glazed frontage to the courtyard, and this is divided into three sliding panes. Support beams inside are 'flitched'; compound beams in which thin pieces of steel are sandwiched between timber and the three layers held together with bolts. Aside from keeping steel costs down, the feel is less industrial.

Nevertheless, the interior style in this

CONTACTS/ SUPPLIERS

ARCHITECTURE & BUILD
Artel 31
www.artel31.co.uk

GARDEN DESIGN
Hither Garden Design
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KITCHEN
Kitchen Flair
www.kitchenflairuk.com

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extension is 'raw', with exposed beams in the ceiling, and a stone wall in the kitchen, formerly the field boundary. Above the ceiling beam is the decking that forms the basis of the sedum roof, so with no space for cabling, James and Amy's builders routed ducts into the beams and dropped in LED strips from above, before fixing the decking board. "I've always liked beauty in function," says James. "I like the Pompidou Centre."

Another good example of this is the extractor fan above the couple's two Everhot hobs. As Amy does a lot of Asian cooking, this produces smoke and James was quoted £30,000 for a professional extractor. Unwilling to find this in the budget, James was lucky that Rob Elkins offered to design a similar product and have it engineered bespoke, for a fraction of the cost.

The kitchen itself posed another challenge for the couple. While the mellow Cotswold stone brings warmth, texture and character to the home, using an existing wall meant tanking to the height of the countertop. In addition, the floor in the extension needed to be dug out by a minimum of 300mm to get a good ceiling height and also stay within the existing height of the wall. This, however, revealed an electrical cable that turned out to be the undocumented main feed for their and their neighbour's properties.

"It ran right through our kitchen," recalls James. "All work stopped while the electrical company ran three new mains off a pole in our paddock at an absolutely extraordinary cost. It took four months and involved switching off the power to our neighbours. It was quite fraught."

The sedum roof and the ground source heat pump are just two parts of the package of sustainable measures the couple chose to futureproof their home. Solar panels installed on a shed in the paddock provide power, which feeds into a battery. This in turn powers both the home and charges the couple's two electric cars. In the summer, it is sufficient for their needs. In the winter, the battery draws power from the grid at times of cheaper energy. The entire system is integrated into one control, which can be operated via a phone app. "As a venture capitalist, I'm a futurist," says James. "If I have to rebuild a house, I say let's do it once. The software may be bleeding edge, but energy-wise, it's fine and someone has to be the 'early adopter.'"

The extensive glazing also offers rather more 'low-tech' passive solar gain, particularly as the extension is south-facing. To prevent overheating, Rob designed a roof overhang of 1.5m on the extension, which works beautifully. Around the two 'wings' of the home, there is new glazing throughout. Although glazed during the original conversion, the framing was reaching the end of its life and James and Amy's new aluminium double-glazed units are both attractive and energy-efficient. Now, every part of their home has a view of the courtyard garden.

"When I come through the gate, I think 'I'm here. I'm safe'," says Amy. The courtyard is effectively an internal space and the clever garden design brings visitors directly to the front door, using raised beds and careful planting. "We lived in a flat and we had no idea, so we hired a garden designer," says Amy. "There's also lighting in the courtyard and at night this integrates the courtyard into the house (even if it's too cold to go outside) as it changes the perception of the space."

Perhaps the most distinctive feature of the

The courtyard is effectively an internal space and the clever garden design brings visitors directly to the front door, using raised beds and careful planting

home's exterior is the round red "Moongate", set into a newly built stone entrance. The design was Amy's idea, and she found her inspiration in the traditional courtyard homes of rural China. "Red is an auspicious colour," says Amy. "And the circular shape symbolises peacefulness and harmony." Amy also took on much of the interior design of their new home and the Asian influence can be found here, too.

"It's eclectic," says Amy. "We had a few choice pieces throughout the house that are Oriental, such as the coat cupboard, which is also painted red, with a Chinese plate on it. The rest just came together. Some pieces we bought 30 years ago, others I bought because they feel comfortable. It's evolved." Amy was also involved, making all the curtains by hand for the bedrooms, two of which had colour schemes chosen by their adult daughters, who visit frequently. "The children want to come home to relax," laughs Amy. "We've built our retreat."

The kitchen, as in many families, is the heart of their home. This too was designed by Amy and based on an image she found in a magazine. The huge island has a Dekton worktop which looks like natural stone but doesn't stain. The cabinetry is almost entirely below countertop level, creating an uncluttered, streamlined feel. Yet the storage is impressive.

"Amy had a map of the kitchen layout," says James, "We have both eastern and western cookware, so we have almost twice as much stuff as most people."

Although the couple wouldn't choose to do another project of this size anyway, they also don't need to. "The process was stressful and difficult," says James, "but in the end, it's a place where I feel 100% comfortable. It's built exactly to our needs. We have what we aimed for and it's better than we hoped. We both love the openness and wherever you stand there's space. I don't want to go anywhere else; I enjoy just sitting in the garden, listening to our fountain. It's very peaceful." ■

National Ventilation supplies ventilation for home

National Ventilation has designed and supplied a whole-house ventilation system to an architect-built five-bedroom eco home in Carbis Bay, St Ives, Cornwall. Throughout the ventilation design and installation, the company worked closely with developer Evo Homes, who also benefitted from National Ventilation's pre-install site visit, site support service, training, and technical support from start to finish. National Ventilation worked with Evo Homes to design a system that would provide the right levels of ventilation and would physically work within the structure. Being able to work with the architect and plan from the start made the ventilation design stage far easier and more efficient.

01823 690 290 www.nationalventilation.co.uk

The Selfbuilder website

The **The Selfbuilder** website is an online provider of past and present products and news items for all those involved in and working on a self-build project. www.sbhonline.co.uk is a one-stop source for all the latest press releases, providing visitors with access to information about products and services that they may require. From the website, you can find links to digital issues that have live links to advertisers' sites, as well as daily email alerts to keep you as informed as possible. You can also subcribe to receive regular copies of the printed and digital versions of the magazine, or sign up to the monthly The Selfbuilder newsletter.

www.sbhonline.co.uk

Take the first step

A staircase can be far more than a way of connecting storeys. Tom Blakeman of Winthill Engineering explains what makes a successful staircase and considers practical and aesthetic factors.

Investing in a custom-designed staircase which suits your needs and your home's architecture can really transform a space. With planning and consideration, it can influence the overall style of the property and how you move through it on a daily basis.

Traditionally, a staircase is often the first thing visitors see when walking through the front door, more so in modern open plan homes as they're often a focal point within the floorplan. While serving a practical purpose, a staircase can also be an impressive design feature.

STAIRCASE DESIGN

Straight, L-shaped and U-shaped are classic staircase designs which suit most spaces, often with the ability to add extra storage underneath. Cantilevered, helical, spiral and curved staircases meanwhile, add drama and work well in high-ceilinged spaces.

A staircase is an investment so should be designed for the long-term and not follow a trend. Stick to what you like. Style, materials and proportions are key – they should complement your home's architecture. Then, over time, and depending on the materials used, certain elements can be redecorated or upgraded to suit interior decor.

Ultimately though, a staircase should be easy to access and lead you into your home – guiding you through the ground floor, and to those above.

MATERIALS & FINISH

Timber, steel, glass, concrete, stone, and recycled materials are all popular choices for staircases. Each has its benefits – including longevity, texture, warmth, low maintenance, or eco-friendly. Steel, for example, is long-lasting and a great choice for those wanting an industrial or modern staircase design. It can also be combined with new or recycled timbers for warmth and texture, and glass for a distinctive contrast, making it suitable for most properties.

The right choice of material can also help maximise the potential of tight spaces and limited light. Use slimmer and smaller details in a tight space such as a smaller newel post – or lose it altogether, with thin spindles and a sleek handrail. Consider thin materials such as steel and glass which won't overpower a compact area. Glass and steel also work well in darker spaces, the latter can be laser cut or punched so light can filter through.

ENGAGE WITH YOUR SUPPLIER AS EARLY AS POSSIBLE

Early engagement is particularly important if you are planning a more complex staircase. Cantilevered, floating and open plan staircases all require structural support which, to achieve the look, must be hidden, usually in the wall and floor. This should be factored into the build programme from the outset, to allow for preparation and integration. This will help avoid any costly mistakes and delays. If you are considering underfloor heating for example, be aware that this cannot be drilled into once laid so it would not be possible to hide, or perhaps, fit the staircase support.

MAKE SURE YOUR STAIRCASE COMPLIES WITH PART K

Your new or improved staircase must comply with Part K so be sure to consult this before changing an existing staircase, or if it's new, make sure it meets these requirements.

The Approved Document K covers protection from falling, collision and impact and offers guidance on designing a staircase, such as steepness of stairs, minimum head room between levels, width and length of flights of stairs and landings for stairs. There are specific instructions for special stairs – alternating tread stairs, spiral and helical stairs, and tapered treads.

To maximise staircase design potential

while working within the confines of compliance, professional supervision is advised. Speak with your preferred staircase designer or manufacturer for expert advice.

CASE STUDY

Mr and Mrs Hatton had an idea for an airy yet statement staircase for their home in rural Herefordshire. As well as improving movement up and down the stairs, they wanted to create flow and a feeling of space in the entrance hallway. The couple worked with bespoke metalworkers to craft a custom staircase. "The team worked patiently and tirelessly with us through the design process," comments Mrs Hatton.

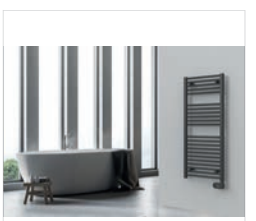
Winthill Engineering designed a sophisticated staircase with a hidden structural support which enhances the triangular space beneath the stairs – the spandrel – and increases circulation space.

"The result is a beautifully engineered and hand-crafted metal and oak staircase that fits like a glove and looks splendid. It is a joy to use, and we love it!"

The staircase is built from mild steel powder coated in a metallic finish chosen to complement the property's exposed timbers. This is offset by solid oak treads in a natural finish. A hand-forged handrail sits atop sleek round spindles and curves sinuously down, ending in a volute supported by a curtail block. This design adds elegance and creates a feature of the open staircase while easing movement up and down the stairs.

Tom Blakeman is engineering director at Winthill Engineering

Widest range of towel rail radiators



Stelrad Radiators offers the widest range of towel rail radiators for central heating systems and for homes where electric radiators are installed.

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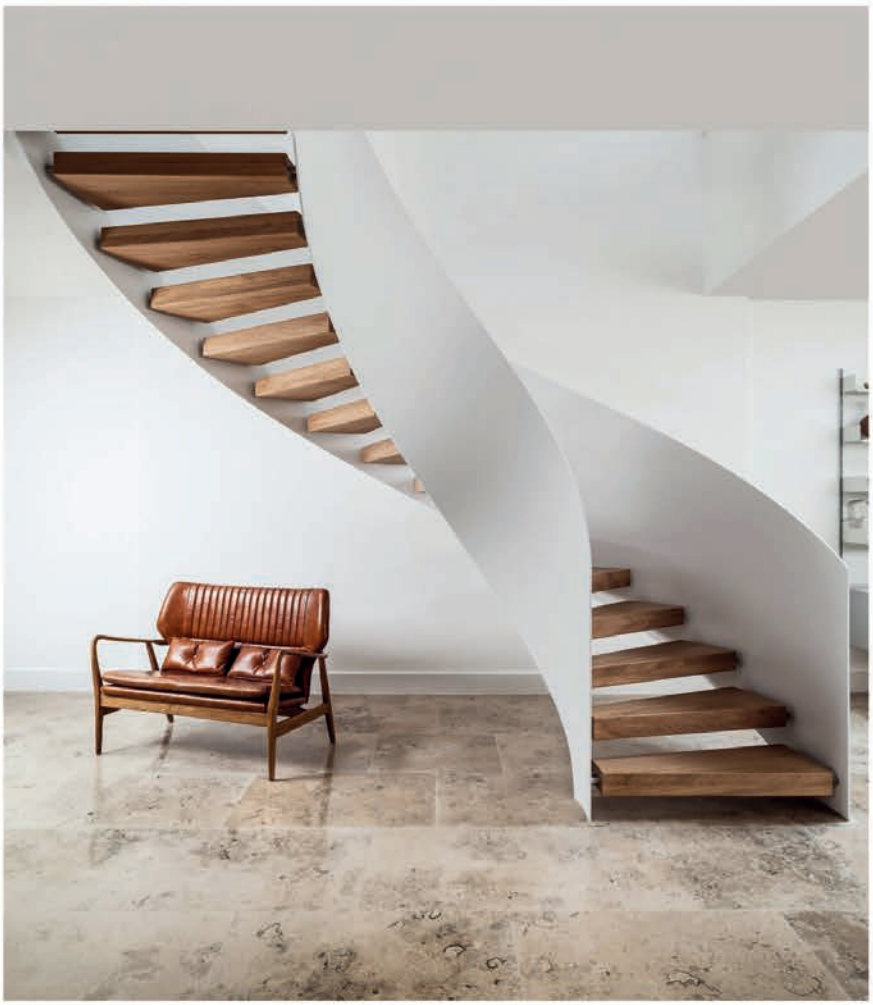

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The future of bathroom design

Complying to current and future legislation, making buildings future-proof and carbon-neutral is a key concern for clients today. Andrew Watkins, Technical Manager at wedi Systems (UK) Ltd, discusses how to comply with new and emerging legislations when it comes to bathroom design.

Protecting the fabric of the building with reliable waterproofing has always been vital, but now, **NHBC's Technical Guidance 9.2/06** reinforces this. In essence, any new building whose foundations begin on or after 1st January 2025 in the UK, must comply with this guidance if an NHBC warranty is to be provided. In short, in wet rooms or bathrooms with power shower, only building boards that hold technical approvals acceptable by NHBC can be used. Critically, whatever the subsurface, all tanking solutions must have appropriate 3rd party certificates and the tile, adhesive and grout should also be compatible with the selected waterproofing system.

There is an obvious advantage of using waterproof tile backer boards as opposed to non-waterproof or only water-resistant boards that need tanking with a liquid or membrane applied solution. – 'Time is usually of the essence. It is important to note that not only is research required to ensure compatibility with the chosen substrate and with everything else applied on top of the waterproofing layer, but due to several curing times, installation is considerably longer when compared to using waterproof building boards that are directly tileable' – explains Watkins. It is also important to consider that, when opting for liquid and membrane type waterproofing, it is the tanking solution and not the substrate itself that determines whether large-format, heavier tiles can be used.

PROVEN SOLUTIONS FOR NHBC COMPLIANCE

wedi building boards and Fundo shower elements hold all necessary certifications for full compliance with the new legislation. Together with clever accessories and interlocking XPS components they provide a floor-to-ceiling, systemised waterproofing solution that, when installed correctly, lasts the lifetime of the building.

Key advantages of the wedi system:

- **Interlocking XPS components** – including building boards, floor-level shower elements, benches, niches, and ready-to-install partition walls.
- **100% waterproof performance** - creating a seamless, integrated system that reduces installation steps while minimising the risk of failure and required interactions between different trades.
- **Load-bearing capability of 133kg/m²** – making them suitable for all tile formats, natural stone, and even heavier installations like floating washbasins and radiators.
- **Thermal insulation** – with a U-value of 0.036 W/mK, wedi boards contribute to energy efficiency by preventing heat loss, making them an ideal substrate for under-tile heating (UTH) systems of all kinds.
- **Single-source solution** - since joining the Ardex Group in 2021, wedi now offers a comprehensive 10-year product warranty when paired with Ardex/BAL adhesives & grouts and hence a complete manufacturer accountability.

AT THE FOREFRONT OF INNOVATION SINCE 1983

'With over 40 years of industry expertise, our aim remains to set the standard for waterproofing, insulation, and energy-efficient solutions in wet rooms and bathrooms' – says Watkins. **In 2025, compliance with the Future Homes Standard will also become mandatory;** all new homes built from this year are to be future-proofed with world-leading levels of energy efficiency. Low carbon heating encouraged to reduce carbon emissions to 75-80% less than previously accepted. – 'One example of our innovative power is the PreLine building board with factory-cut, precise grooves that make it ideal to use with heat pump operated water-heating systems under the floor or behind the wall' – advises Watkins.

The newest wedi innovation, the Fundo Flex system introduces an entirely new level of adaptability. - 'If the large assortment of different sizes and formats within the existing range don't fit, the Flex will. The components are designed to fit securely together in a layout that is best suited for the available space, just like Lego' – explains Watkins. The different pieces can be easily cut and arranged, including the channel element and the profile; it is entirely up to the client at which position to place the drainage. – 'As an entirely new concept to modern wetroom design, our new shower solution flexibly adapts to make anything possible' – Watkins concludes.

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Grid incl. hair trap
The grid is removeable for thorough and easy cleaning

Channel profile incl. adapter
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wedi Fundo Wave drain

Adapter
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Drain body
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Fundo Flex

Channel element
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Eccentric
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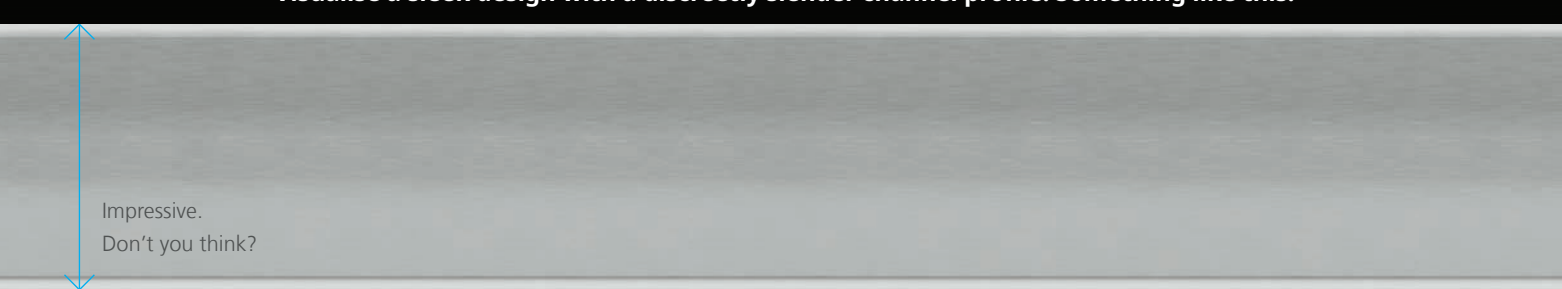
Visualise a sleek design with a discreetly slender channel profile. Something like this.



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The rise of seamless wall panels

Offering ease of installation and aesthetic flexibility Amanda Mills of SFA Saniflo UK (Kinedo) explains why seamless wall panels are emerging as an alternative to traditional tiling, painting or wallpaper.

Today's self-builders and renovators demand high-quality, efficient project solutions. This is particularly evident in bathroom design, where functionality and aesthetics must harmonise.

As labour costs rise and time pressures mount, self-builders and renovators increasingly seek alternatives to traditional tiling, wallpaper and paint – solutions that simplify installation while maintaining durability and style.

RETHINKING WALL COVERINGS: THE APPEAL OF SEAMLESS PANELS

Tiles have traditionally been the preferred choice for bathrooms, wetrooms, ensuites, cloakrooms, and utility rooms, but they present challenges. Installation is time-consuming, and even the best tilework can deteriorate over time. In response, seamless wall panels are gaining popularity among self-builders and renovators who prioritise ease of fitting and aesthetic flexibility.

Wall panels offer a grout-free, waterproof surface, significantly reducing the risk of leaks and water damage. This is especially crucial in timber-framed homes because if water reaches the timber, the property's integrity is compromised, and the homeowner faces complex construction challenges.

The lightweight yet durable construction of wall panels makes them easy to cut and fit, reducing installation time compared to tiling. This benefit is particularly appealing for self-builders and renovators managing their own projects and budgets. Additionally, because they can be installed directly onto existing tanked walls, they reduce the need for excessive preparation work, further accelerating project timelines.

DURABILITY AND LONG-TERM VALUE

One of the most significant advantages of seamless wall panels is their longevity. Unlike tiled walls, wallpaper and paint, which can require ongoing maintenance, panels provide a more resilient solution that maintain their appearance over time. Many self-builders and renovators appreciate that these panels do not fade, stain, or deteriorate as quickly as

other materials, ensuring the bathroom remains pristine.

Moreover, wall panels are designed to withstand daily wear and tear, making them particularly beneficial for busy households. Their scratch-resistant properties and ease of cleaning make them a long-term investment that reduces the need for costly repairs or time-consuming cleaning.

DESIGN FLEXIBILITY FOR PERSONALISED SPACES

Modern self-builders and renovators are no longer satisfied with one-size-fits-all bathroom solutions. Instead, they seek design versatility to create personalised spaces that reflect their unique style. Seamless wall panels offer an extensive range of colours, textures, and finishes, including natural stone, marble, wood, and bespoke designs.

This level of customisation allows homeowners to achieve high-end aesthetics without the cost and labour associated with traditional materials. Whether opting for a sleek, contemporary look or a more traditional feel, wall panels provide the flexibility to bring a vision to life.

SPEED & EASE OF INSTALLATION

A common challenge for self-builders and renovators is managing multiple tradespeople within a tight project timeline. Unlike tiling, for example, which requires skilled labour, drying times, and precise grout application, wall panels offer a straightforward installation process. They can be applied directly over existing surfaces, including old tiles, significantly reducing downtime and disruption.

This means less mess, minimal noise, and quicker turnaround time for renovations and new builds. With pre-cut or easily customisable panels, DIY-savvy homeowners can install them themselves, further reducing costs. Additionally, wall panels eliminate extensive surface preparation, as they can be fixed onto various surfaces, making them a practical choice for both new builds and refurbishments.

EXPANDING APPLICATIONS BEYOND BATHROOMS

While traditionally associated with bathrooms, seamless wall panels are now being used in various settings, from cloakrooms and utility rooms to wetrooms and ensuite spaces. They can also work well in kitchens. Their ability to provide a watertight barrier without the hassle of tiling makes them an excellent choice for self-builders and renovators who want consistency and efficiency throughout their homes.

Beyond residential projects, many self-builders involved in small-scale commercial developments, such as holiday lets or rental properties, also find these panels beneficial. Their quick installation and low maintenance make them an ideal solution for high-traffic environments where long-lasting performance is a priority.

LOOKING AHEAD: THE FUTURE OF BATHROOM WALL SOLUTIONS

As the self-build and renovation market grows, so does the demand for practical, durable, and visually appealing interior solutions. Seamless wall panels offer a compelling alternative to traditional tiling, particularly for those managing their own projects and seeking long-term benefits. With advancements in design and installation ease, they are poised to become a staple choice for self-builders and renovators alike.

For those embarking on a self-build or renovation journey, exploring innovative products such as wall panels can make all the difference in achieving a beautiful bathroom, ensuite, cloakroom or utility room bathroom built to last.

Amanda Mills is marketing manager at SFA Saniflo UK (Kinedo)

New from Hörmann – automated driveway bollards

Hörmann UK have announced that they are launching a new automated security bollard that has been designed and built specifically for domestic installations. Introduced to counter vehicle thefts, the bollards provide an effective way to increase security and prevent theft from unauthorised access to a property. They are suitable for driveways, entrances to private roads and installation in front of garages for added anti-theft protection. The Hörmann A114 automatic bollards are manufactured from brushed stainless steel and are sleek and elegant in design. Built to be durable and robust, they are available in two barrier heights – 600 mm or 800 mm and with a diameter of 114 mm. They are quick and easy to install being supplied as a ready-to-install 'plug and play' unit, with an integrated foundation box. Installation can typically be achieved within 1 hour. Fitted with an electromechanical drive, the bollards are designed for average use frequencies of approximately one hundred cycles per day and require minimal maintenance. Their low power consumption and operation without the need for hydraulic oil ensure that they meet strict environmental regulations. In the event of power failure, the bollards can be operated manually, and they are available with a remote control, LED lighting and remote access via the Hörmann Cloud Unit W5-B. For further information on Hörmann UK driveway bollards call or visit the website.

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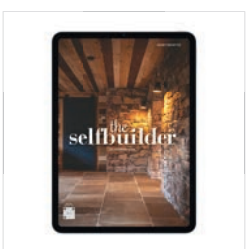

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A HIGHLAND HIDEAWAY

For many self-builders, the prospect of a steep sloping site surrounded by the inaccessible Scottish Highlands might feel overwhelming, but for Suzanne and Mark McPhillips, it was a chance to put their experience as architectural designers to good use.

TEXT CAROL BURNS **IMAGES** TONY HARDLEY PHOTOGRAPHY (SCOTPHOTO.COM)

When we think of forested areas of the Highlands of Scotland, we tend to think of the traditional simplicity of a two-roomed 'Butt and Ben' or the grandeur of a granite castle (turrets optional), but architectural design couple Suzanne and Mark McPhillips combined a design that encapsulates their tastes with a home that sits well within a challenging plot of land between woodland and coast.

Gaelic for 'green headland', the Scottish Highland hamlet of Arduaine is the setting for a modernist home where western architectural design meets eastern traditional style. The newly-built house sits perched on a hillside close to Oban in West Scotland. As you approach the house from the road below, there are tantalising glimpses of a half-hidden black box viewed through the foliage not unlike a bird hide. As you continue along the road, the building is gradually revealed. This, Mark says, is his favourite element of their new home which has been cut into a hill a short walk from the coastline.

"It remained a dream to build our own home and we came across the site in Arduaine by chance one day when driving past, giving us the opportunity to make the dream a reality," says Suzanne. "We found a site with a sea view and they are as rare as hen's teeth at a reasonable price. We've lived by the sea for about 20 years and it's become an essential thing for us for our wellbeing."

Sitting on a steep slope the land came with the challenge of designing a house they could afford. "We just thought: what can we do with the site?" Suzanne adds.

The couple trained as architects in the 1980s and met years later in Hong Kong. Having left mainstream architecture to set up their own design studio, it was only a matter of time before they would design and build their own home. The plot of land came with planning permission already in place for a traditional three bedroom house. But the couple had different ideas of what the house could look like.

"The design came from the topography of the site, because it's such a steep, sloping site it's quite restricting what we could do with it," says Mark. "We've come up with various house designs over the years for various different sites and they've all been quite different depending on the site."

Familiarity with the area meant they knew it was already home to several modern designed houses, so getting planning permission for their design was relatively simple. Despite this the couple were very aware of the surroundings and how a design might fit into it. "You have a very different set of priorities when you're building in a very heavily natured area," explains Mark. "The planners were supportive of designing something quite contemporary. A lot of planners wouldn't like what we did but the people we dealt with in Oban were very supportive."

The design makes maximum use of the width of the site, while also making the most of the views to the sea. The depth of the usable site was restricted by the desire to keep ground excavation to a minimum. The single storey height ensures that the building remains discreet

HIGH POINT

"For Mark it is the tantalising views of the house as we approach our drive and the house reveals itself. The views over the top of the trees towards the coast is Suzanne's favourite element. Because of the way the house has been built, the view cuts across the tops of trees towards the water."

LOW POINT

"A sudden rise in the price of building materials almost brought the project to a halt. The rising cost meant a fixed price contract had to be renegotiated to pay for time and materials which potentially meant an increase in cost."

within the landscape. The tight site, steep access drive and sloping land created challenges during construction, both for delivery of materials and limited use of plants. Consideration was given to the use of sustainable materials, predominantly timber, and renewable technology. A local contractor was used and contributed to the team effort to create a stunning home which is modest in scale and budget.

"Because the site was complicated, that added to the foundation cost," continues Mark. "So although we got the site at a reasonable price, the foundations cost a lot of money."

The ascent up the drive leads to a level parking area which is delineated by a long fin wall finished in split stone and a single storey rectangle, clad in black timber, is cantilevered above the stone wall. The finish is inspired by the Japanese charred timber technique of Shou Sugi Ban and reflects the history of charcoal-making in Argyll.

Steps of natural timber sleepers, concealed in a slot behind the stone wall, lead up in a series of terraces to the entrance level, where the rocky terrain forms a backdrop to the building. A small landscaped area of gravel and grasses surrounds the house which morphs into the wild landscape beyond.

"The cantilever was a big thing for me," says Mark of his favourite feature. "I had this quite dramatic image of a wall and a black box cantilevered over the edge that recedes into the landscape. I like when I approach up the drive and see the compositional elements of the building cantilevered over a slate wall. Nature's

The design makes maximum use of the width of the site, while also making the most of the views to the sea

quite a messy concept, shapes and forms and colours and textures. We wanted it to sit well in the landscape and not really draw too much attention to itself."

The house is entered from the side into a timber panelled hall, with the spine of a corridor running the full length of the building. A window at the far end provides a framed vista to the hillside beyond. The entrance area opens into a kitchen dining room, where the view to the sea is finally revealed through expansive sliding doors leading to a deck running the whole length of the house. The window wall continues through an opening into the sitting room where the focus is again on the view, taking in the islands of Jura, Shuna and Scarba.

"The whole front of the house opens up from each room onto a deck running the length so we can step outside from any of the rooms at the front," explains Suzanne. The 135m^2 house

"We wanted it to sit well in the landscape and not really draw too much attention to itself."

has been designed around the views. Rooms and furniture were decided based on what could be seen when sitting, standing, cooking – even lying in bed. "You're thinking all the time about what you can see from where you'd be sitting, standing and lying down. In the bedrooms, the view from the bed was considered and designed around it".

The main bedroom suite with dressing area and shower room opens out on to the front of the house and the incredible views from the deck outside. The back of the house is home to two bedrooms, a bathroom and a utility room.

The simplicity of the interiors and the colour palette allows their possessions to sing by having a very well made blank space for the couple to decorate with art and furniture. The interior is white and oak with a very high finish. The couple chose artworks and furniture to add personality to the inside, while recognising the vast majority of the colour, texture and tone comes from the world outside visible through the many triple-glazed windows that have been simply draped in white sheer fabric.

"We just like everything white and calm and classic," says Suzanne. "The material we've focused on is oak finishes and a reduced palette. It allows you to express yourself on the art on the walls and the objects."

The couple has a practical approach to avoid clutter in their simply designed home. "We have lots of storage and are disciplined to put things away," Suzanne says. "The fittings are deliberately simple and low-tech, making for calm, serene and low maintenance spaces."

The environmentally-friendly and modern technology that come with a sustainable house are all there. In this part of Scotland, where temperatures average 12 degrees and there are more than 200 days of rainfall in all seasons, homes need to be well-insulated. The house features an air source heat pump and the black exterior absorbs and retains heat. There's an overhang to create shade – and their water supply is naturally filtered Highland spring.

"We've lived in big drafty houses for the last 30 years," explains Mark. "And this is the first one which is not quite airtight, but it's pretty tight and you do overheat; you end up having to open a window or doors at night."

Things ran smoothly, but the Ukraine war created a shortage of concrete and block work and prices were rocketing just before they started the project in 2023. "We were terrified at one point as concrete went up 20% in two days," says Mark. It meant working with the contractor to change to a flexible agreement in which the couple would pay for time and materials instead of a fixed price. "He was able to bring it in about £6,000 over budget on a £360,000 project," says Mark.

"Timewise we did the whole thing in a year which was slightly longer than anticipated because the retaining wall was done over Christmas and New Year and the weather meant it took longer to dry and that put us back about a month."

So has designing and building – and paying – for their own home changed how they approach the day job? "I think we're more aware of certain design decisions and how they factor into the whole process," says Mark. "And that economies have to be made along the way as well, because very few people have an unlimited budget."

"We were very aware of the cost and every square metre we didn't really need we were paying for," says Suzanne. "We kept everything to a sensible size but factored in lots of storage so the rooms themselves can be modest. Though we have generous living spaces, we kept the bedrooms fairly minimal."

For Suzanne and Mark, their new home is helping them live the life they have always wanted. And as architectural designers, they are keen to spread the word. "We ask people how they live and how they want to live," says Suzanne.

And that's really the crux of the issue: whether the house is helping you to live how you want, or whether it's hindering it. ■

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Steven Ferguson at SF Structures
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CONTRACTOR
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Paving perfection

Trevor Knight, head of group technical operations at Marshalls, shares expert tips to help you make the right choice for your self-build project.

Creating an inviting outdoor space enhances your home, and the right paving slabs used for patios, paths or outdoor dining areas can transform your garden into a stylish, functional haven.

START WITH A PLAN

Before you start browsing different materials for your patio or paving, you need to start by thinking practically – it's essential to start with a clear plan. Visualising how the space will look can help you make the right choices. Consider what the primary purpose of the paved area will be. Is it a high-traffic patio, a decorative path, or a hard-wearing driveway?

Establishing your budget early on will also help narrow down choices, as paving costs can vary widely depending on the material, preparation work required, and any additional features and products required, like edging or drainage.

Another crucial factor is deciding whether you're installing the paving yourself or hiring a professional. Some materials are DIY-friendly, while others require specialist tools and skills. Finally, think about your garden style and how the paving will complement the overall aesthetic of your outdoor space and home.

UNDERSTANDING MATERIALS

With these factors in mind, it's time to explore the three main types of paving slabs – natural stone, porcelain, and concrete. Each has pros and cons, particularly if you're planning on installing it yourself.

Natural stone paving, like Indian sandstone, limestone and granite, brings character and durability to gardens. Each slab has unique colour variations and textures, creating a one-of-a-kind finish. If you're tackling installation yourself, opt for calibrated natural stone. These slabs have a uniform thickness, making them easier to lay evenly without constantly adjusting the bedding mortar.

It's also worth checking the water absorbency and flexural strength of the stone. For example, sandstone with water absorption below 1.7% resists moss and tends to be less slippery, while flexural strength above 12 MPa (megapascals) ensures the slabs withstand harsh winters and frost.

Porcelain paving has exploded in popularity recently due to its modern look, stain resistance and durability. It's perfect for outdoor kitchens, seating areas, and contemporary patios. While porcelain offers many benefits, it's not the easiest material for self-installers if you don't have much experience.

Cutting requires specialist cutting tools, and the slabs need to be laid on a uniform mortar bed. If you're set on porcelain, it might be worth hiring a professional to avoid costly mistakes. To ensure safety, especially around pools or shaded areas, choose porcelain with a high slip resistance rating of R11 or higher and pair it with a chemical resistant grout.

Concrete paving has undergone a transformation thanks to innovative printing technologies. Today's concrete slabs can mimic natural stone, wood, or even terrazzo, offering premium aesthetics at a more affordable price.

Concrete is arguably the most DIY-friendly paving option, especially the newer printed varieties. They can be cut with standard concrete blades and installed using traditional patio-laying techniques. When choosing concrete slabs, look for options with a protective surface layer. This not only boosts slip resistance but also protects against UV fading and frost damage.

DESIGN YOUR WAY

Once you've picked your material, it's time for the fun part – choosing colours, patterns, and layouts that elevate your outdoor space. Grey paving remains a popular choice for its versatility, seamlessly bridging indoor and outdoor spaces. Warm tones, inspired by Mediterranean designs, create a relaxed, holiday vibe.

If you want to add depth and interest, consider patterns like running bonds or herringbone. For modern flair, large-format tiles laid in a grid pattern can create a sleek finish. Combining different materials can also produce stunning visual effects. Contrasting borders, mixing smooth and textured slabs, or alternating colours can help to define different zones in your garden and create a striking look.

INSTALLATION TIPS

Preparation is key to a long-lasting, professional-looking patio or outdoor paving. Start by clearing the area,

removing any existing slabs, and digging to a depth of 150mm. Ensure the soil is evenly compacted before adding a 100mm sub-base. Rake it level and compact it until smooth and firm, making sure there is enough fall to direct water towards the borders. Most patios use a 1 in 80 fall longitudinally and a 1 in 40 fall across the surface.

Next, prepare your mortar mix using three parts sand to one part cement, adding water until it reaches a workable dough-like consistency. Test the mix by forming a ball in your hand, making sure you are wearing gloves; it should hold its shape without crumbling or leaking water. Spread the concrete evenly across the patio bed to a depth of around 40mm. Avoid the dot-and-dab method – using a full mortar bed is best practice.

Dampen each slab before laying to prevent moisture loss from the mortar and if you want to go belt and braces, slurry back the rear of your slab to ensure adhesion to your mortar bed. Place the first slab into position, tapping it down with a rubber mallet until it sits firmly. Continue laying, leaving a 10-15mm gap between slabs. Once finished, clean down and leave it to set for at least 24 hours before applying jointing material.

For the final touches, fill the joints with your preferred jointing material, whether a resin, cementitious, or a jointing compound to enhance the look and consider adding decorative edging, such as sea-washed aggregate or polished pebbles to frame your new patio or paving beautifully.

FROM BARE TO BEAUTIFUL

Choosing the right paving slabs for your DIY project comes down to balancing aesthetics with durability, budget, and of course ease of installation. By considering how you'll use your space once it's complete, choosing the right materials, and following best practices for installation, you can create an outdoor area that's both functional, beautiful and a true extension of your home that will last.

Trevor Knight is head of group technical operations at Marshalls

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