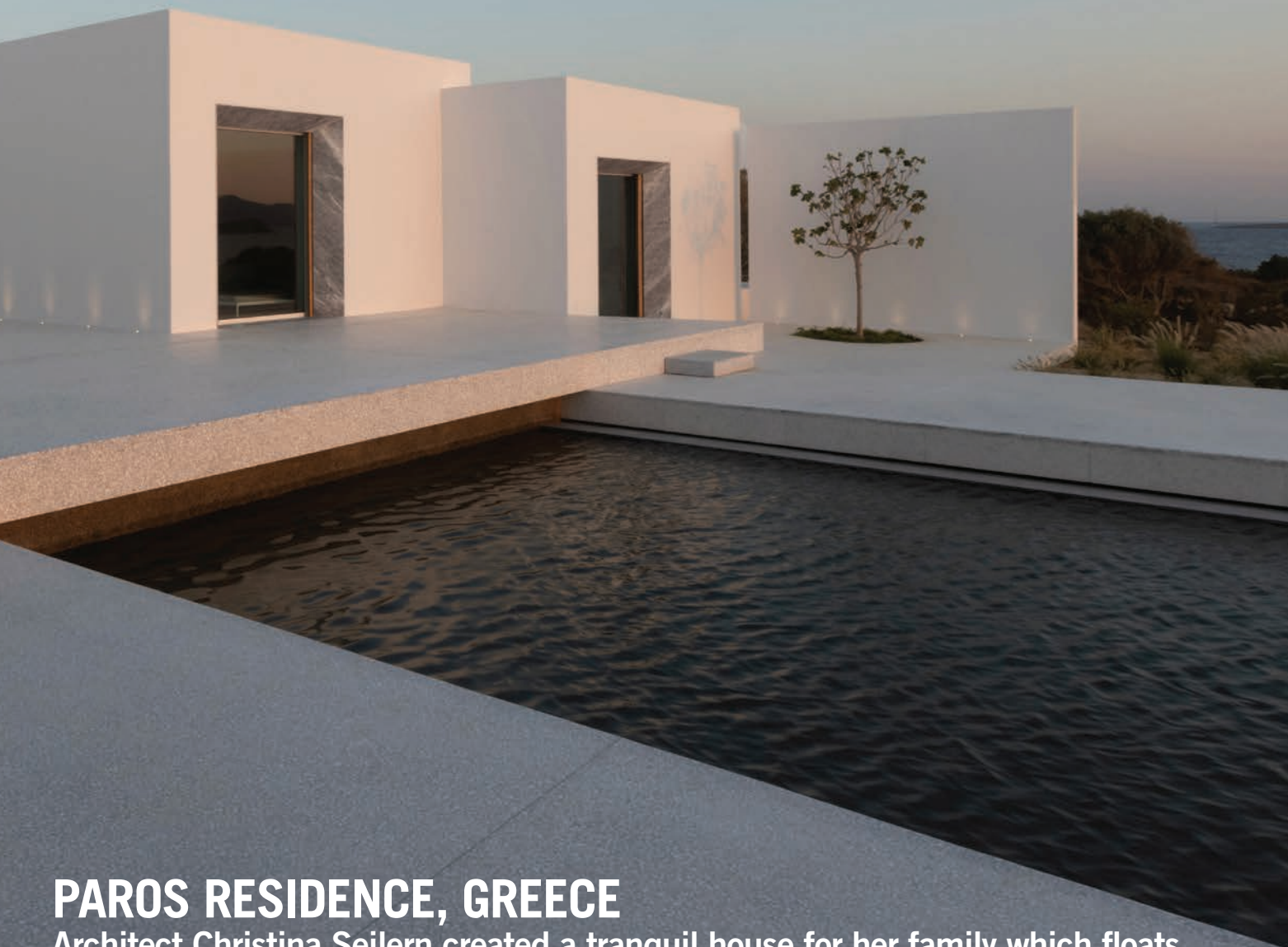


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PAROS RESIDENCE, GREECE

Architect Christina Seilern created a tranquil house for her family which floats above an olive grove, and celebrates the materiality of marble, stucco and terrazo

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Managing Editor
James Parker
jparker@netmagmedia.co.uk

Publisher
Anthony Parker
aparker@netmagmedia.co.uk

Editorial Co-ordinator
Shelley Collyer

Editorial Assistant
Laura Shadwell

Editorial Contributor
Roseanne Field
Tom Boddy

Studio Manager
Mikey Pooley

Production Assistants
Georgia Musson
Kim Musson

Account Manager
Sheehan Edmonds

Sales Executive
Steve Smith

PR Executives
Suzanne Easter
Kim Neville

Managing Director
Simon Reed

Advertising & Administration
t 01435 863500
info@netmagmedia.co.uk
www.architectsdatafile.co.uk

Press Releases
editorial@netmagmedia.co.uk

Subscription & Circulation enquiries
info@netmagmedia.co.uk

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



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FROM THE EDITOR



It is hard to know where to start. Liz Truss' 44-day premiership was an embarrassing debacle, prompting a flurry of online wags posting lists of things that have lasted longer (from lettuces to comedian Harry Hill's doomed X-Factor musical), we now have an ostensibly more sensible leader in post.

Another thing to cheer us at this very worrying time for the country is that despite being unelected, Sunak is not only potentially a means to unify his Government under a more centrist, less regulation-burning and tax-allergic, but is in himself a symbol of our diverse nation. He's not only the first British Asian to be Prime Minister (with around 8% of the country's population now classed as that ethnicity), he also represents a younger mindset which puts the environment among our top priorities, despite the economic and geopolitical challenges.

Truss was terrifyingly blunt in her keenness to tear up green ambitions in her pursuit of mythical 'growth,' from an instant attack on business' 'green levies' to making noises that sounded like the whole zero carbon project was up for debate. She also wanted to go full-bore for fracking, and throw out most of the Tories 2019 manifesto green aims, but that blinkered approach, exemplified by her predecessor Cameron and the right wing of the party, now seems like it might become an anachronism.

This year looks set to be one of the 10 warmest on record, and the last eight years have been the warmest since NASA began recording global average temperatures. It may have long been a priority for architects to increase the sustainability of projects (and avoid 'greenwash'), but increasingly it's becoming an issue across all sectors and demographics.

Sunak has been unequivocal in saying he believes in net zero, and reportedly has specific ideas on a nationwide retrofit insulation programme. When will he unveil these? Currently we are legally obliged to hit net zero carbon in 2050 – will he recommit to action on this soon, and perhaps funding? Arguably, he has to if he wants to see serious on 'action' rather than words, as he has said. He also needs to be clear on issues like protecting farmland from solar generation, and whether he'll accept more onshore wind power.

With Kier Starmer having put the environment at the centre of his headline agenda statements recently, this will be a major battleground come the General Election. I predict that it will be around whether, and how, big business should foot the bill for driving towards zero carbon, or cash-strapped individuals, and Sunak's challenge is to not shy away from the former.

We will see how much Michael Gove, back at Levelling Up and Housing, and new Environment Secretary Thérèse Coffey (who worked with Gove at Defra), will be able to translate renewed green ambition into reality.

James Parker, Editor



ON THE COVER...

Designing a home for her family on the Greek isle of Paros which combined the 'white box' vernacular with a feeling of lightness in the landscape has produced a tranquil, minimalist result for architect Christina Seilern.

Cover image © Louisa Nikolaidou

For the full report on this project, go to page 46

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STIRLING PRIZE

Níall McLaughlin Architects' Magdalene College Library wins the 2022 Stirling Prize

Designed by Níall McLaughlin Architects, The New Library at Magdalene College, Cambridge, has been crowned the winner of the 26th RIBA Stirling Prize, the first time a college has been given the award.

RIBA described it as an “exquisitely detailed new building,” which provides students at the historic college with a 24-hour library, incorporating an archive and an art gallery.

The new library replaces the adjacent 17th century Grade I listed Pepys Library and extends the quadrangular arrangement of buildings and courts. Níall McLaughlin Architects combined load-bearing brick, gabled pitched roofs, windows with tracery and brick chimneys that “animate the skyline with contemporary sustainable design elements to create a building that will stand the test of time,” said RIBA.

“It contrasts openness with intimacy; and deftly achieves the architects’ vision for a structure that gradually rises up towards the light.”

The “elegant” brickwork facade and “enticing” large wooden doors were praised by judges, as was the tiered, timber interior.

A triple-height entrance hall leads into a central double-height reading room. A regular grid of brick chimneys supports the timber floors and bookshelves and provides stack ventilation. Between each set of four chimneys, there is a large, vaulted lantern skylight. A connecting passageway above, along the building’s eastern end, provides views across the college and gardens and towards the river.

“The grid structure delineates an attractive array of spaces: wide zones for reading rooms and group study, and narrow zones for staircases and bookcases.” The layout also creates a range of spaces for independent study.

“This is a modern building that employs simple but highly effective passive ventilation and natural lighting strategies to minimise energy in use, and materials such as engineered timber structure to reduce carbon embodied in its construction.”

Commenting on the building for the jury, RIBA president Simon Allford said: “The New Library is sophisticated, generous, architecture that has been built to last. Níall McLaughlin Architects has risen

to the challenge with the utmost skill, care and responsibility.”

He added: “Well-designed environments hugely improve student success and wellbeing. They should be the rule for all students and teachers in all places of learning, not the exception.”

Winning architect, Níall McLaughlin said: “This is a work of many hands and many minds. The college created the possibility for success in the way that they initiated and managed the project. The appointment of designers, consultants, builders, and craftsmen was treated with care. Throughout the development process, our team was supported and robustly questioned. We knew we were building for a client who was motivated to achieve the best outcome.”

College librarian at Magdalene College, Dr Marcus Waithe, added: “The New Library fulfils an unusually challenging brief: to erect a building at the edge of one of Cambridge’s most historically sensitive sites, and to do so without committing an intrusion. The college wanted to avoid mere pastiche, or a passive ‘blending in.’



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SPORT & LEISURE

KKA designed Ashton Gate development plans get green light

Liverpool architecture firm KKA has received approval from Bristol City Council for its design for the 3,626-seater Sports and Convention Centre to be constructed next door to Ashton Gate Stadium.

The Sporting Quarter – developed by Bristol Sport – will provide a new home for basketball team the Bristol Flyers, as well as a hotel, conferencing facilities, multi-storey car park, and retail space alongside commercial and residential space.

Detailed work will start immediately on the next stage of this project. The first phase of the development will be the Sports and Convention Centre alongside the hotel, which is hoped to be on site in late summer 2023. The Sporting Quarter was given permission with a ‘twinned’ residential scheme at Longmoor Village for 510 homes.

The Sporting Quarter represents KKA’s latest sports architecture for Bristol, having previously designed the redevelopment of Ashton Gate Stadium and the Robins High Performance Centre.



Chris Long, director, KKA, said: “This is a really exciting moment for our practice and for the city. The Sporting Quarter needs to thrive 365 days a year, so we designed it to act like a ‘mini-city’ in itself, a kind of ‘campus,’

that embodies all of the characteristics which make such places a success. We focused on creating an environment that is well-connected, diverse, and alive with activity where people would choose to spend time.”

FINANCIAL RESULTS

AHR reports strong earnings despite economic challenges

Architecture and building consultancy AHR have reported “robust earnings in turnover and profit through 2021,” according to the company’s latest financial results.

The practice’s figures for the year to 31 December 2021 show that turnover increased by 8% to £30.2m (2020: £28.0m), and profit before tax increased to £3.5m (2020: £2.9m). The firm said the increase in turnover was principally due to “recovery in both the micro and macro-economic climate in 2021 following the initial market shock caused by the Covid-19 pandemic.”

The practice also sold its Polish subsidiary following Russia’s invasion

of Ukraine. Anthony Langan, managing director of architecture at AHR commented: “With the geopolitical situation in Eastern Europe exacerbating the ongoing economic challenges, we took the decision to dispose of our Polish subsidiary to local management and focus on what has always been our core market, the UK.”

The combined UK architecture business saw turnover increase by 15% to £17.2m (2020: £14.9m), and operating profit remaining consistent at £1.5m (2020: £1.5m).

Langan added: “Our experience across multiple sectors has given us the ability to realise a diversity of opportunities.

We have continued to build upon our sustainability aspirations, and in 2021 became Passivhaus Trust patron members and have trained Passivhaus designers in all our offices across the country.”

Sustainability-focused projects delivered and ongoing from the practice include a net zero carbon SEND school in North Wiltshire, two Passivhaus residential schemes for Midlothian Council, and a new school in Dunfermline which is designed to be of the UK’s largest Passivhaus education buildings.

“I am exceptionally proud of the practice and enthusiastic about our future. I do anticipate another challenging 12 months ahead, however, we remain confident and enthusiastic as we continue to seize opportunities through our diverse multi-sector expertise and balance of projects across the public and private sectors.”

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COMMERCIAL BUILDINGS

Race Cottam Associates to design Smith+Nephew facility

Sheffield-based architectural practice Race Cottam Associates (RCA) have been appointed as “full project architect” by Smith+Nephew to design the firm’s brand new R&D and manufacturing facility for Advanced Wound Management near Hull.

A global medical technology business, Smith+Nephew announced it would relocate to a 25-acre site at Melton West Business Park, approximately eight miles from their current site. The firm will invest more than £80m building the new facility, to create a “world class R&D, manufacturing and flexible office environment.”

RCA’s director Laurie Cottam commented: “Manufacturing facilities of this scale and complexity require extensive collaboration and specialist technical knowledge, which we’re proud to have established on facilities across the UK for similar blue-chip clients including further along the East coast in Hull for Siemens. We’re excited to work with Smith+Nephew and design a facility that will further cement their legacy in the region.”

The vision for the circa 30,000 m² new



building is to create a working environment capable of delivering “next generation products that will improve the standard of care for the NHS and customers across the globe,” said the architects. It will encourage innovation and collaboration, accommodate key manufacturing spaces

and advanced laboratories, and be “future proof in terms of flexibility of space.”

Cottam continued: “There is an intention for the building to meet ambitious sustainability standards, including LEED silver certification.”

The new site is expected to open in 2024.

APPOINTMENTS

HLM appoint Katie Parfitt to lead London studio

HLM Architects has hired Katie Parfitt as studio director in London. Katie joins the practice from TODD Architects and will be responsible for leading the studio’s team and a portfolio of clients that include Royal Mail Group, Thameside West and Northfleet Harbourside.

Katie is an experienced project leader with extensive cross-sector experience in residential, commercial, education, and pharmaceutical. A specialist in distribution and logistics, her most recent project was a 677,000 ft² distribution unit for a major retailer where she was central in leading the planning application process, obtaining planning permission, procuring the contractor, and overseeing



construction phases on the project.

An active member of several professional forums, Katie is “passionate about mentoring the next generation of architects,” said the practice, and works closely with the University of Reading

on its Thrive Mentoring programme, a scheme designed for undergraduate students who would like to gain career advice and experience.

Katie said: “HLM is a leading voice on some of the industry’s defining topics like sustainability, social value, MMC, and digital innovation, which adds considerable weight to its reputation as one of the country’s most innovative architectural practices.”

“I’m excited to join a collective of people who share my passion, commitment and enthusiasm for architecture, and who will support me as I forge my own path leading the London Studio.”



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AWARDS

CaSA's domestic refurb wins South West RIBA award

Architects CaSA have been announced as winners of the 2022 RIBA South West Building of the Year, for the refurbishment of a 1960s family home in Bristol which focused on affordable and “future-proofed” solutions.

RIBA believes that with renovation of poor quality housing a priority, the project offers a model for innovative refurbishment, calling it a “masterstroke of affordable, sustainable, retrofit design thinking.”

The owner of Great Bockeridge, Simon Coulson, said the project was achieved against the odds, with incentives pushing for new build rather than refurbishment: “I was aggrieved that you could knock the house down and start again, and not pay VAT; but if you wanted to go to all the effort and compromise that comes with retrofitting, you have to pay 20% more for the privilege.” He added: “If the Government is



truly looking to push a low-carbon future, we can't just be knocking down buildings every time we are unhappy with the aesthetics of them.”

RIBA judge Fergus Feilden commented: “Great Bockeridge is an intelligent, exemplary refurbishment demonstrating how existing building stock may be retained, renewed, and upgraded through intelligent design.”

CaSA director Adam Dennes explained the design approach: “Our initial proposal aimed to retain as much of the existing building as possible, therefore limiting the embodied carbon of the redevelopment. Though constrained by a modest budget, we used opportunities to externally insulate and reclad to create a striking contemporary exterior.”

The practice has over 16 years experience in creating contemporary and sustainable architecture, merging contemporary design with sustainable construction.

AWARDS

Northumbria Uni architectural students win again at RIBA awards

Architecture students at Northumbria University have triumphed for the second year running in the region's Student Awards run by the North East branch of the RIBA.

Evelina Somoglou and Laura McClorey were announced the winners of this year's awards following what RIBA said was a “rigorous process” judged by designers from Ryder Architecture and ALT Studios.

The entries, which were “segmented into RIBA's Part 1 and Part 2-level

classifications,” comprised the students' main end of year projects. These were a design that would encourage recycling in the community, plus one that “re-imagined a disused space to encourage tourism and give it a new identity.”

Architecture BA (Hons) graduate Evelina, originally from Greece, won for her Part 1-level project, The Battery Hub, which “conceived of a very different future for a former garage and car park that now demolished as part of Newcastle's Pilgrim Street redevelopment.” The design included a centre for reprocessing used batteries, and an recreation area that would harness the movement of users to make “kinetic electricity.”

The judges commented: “The project confidently addresses its complex, urban site constraints, art deco-style facades and existing structures. This is an impressive understanding of context proposing a sensitive and fun implementation of

future technologies.”

Architecture Degree Apprentice Laura McClorey's project ‘Belfast Stories’ (which won the Part 2-level prize) envisioned the building as a hub that would “not only reach out to a number of different potential visitors to the city by telling its story, but would also attract people from different parts of Belfast and connect them.”

Laura is now also in the running for the RIBA President's Medal, and is due to begin her Part 3 studies, which will result in her becoming a fully-qualified architect next year.

The judges said: “Belfast Stories’ acknowledges and celebrates Belfast's heritage, carrying itself with grace from masterplan strategies to building details. The architectural response is well considered, with new build elements complementing the revitalised 1930s art deco building in a sensitive and well executed manner.”

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VIEW POINT

Professor James Glockling of the Fire Protection Association and RISCAuthority looks at the insurance challenges that must be tackled for mass timber to remain viable for architects as a specification option



An inevitable consequence of the net zero 2050 ambition will be the increased use of wood as a structural building component of large buildings. Architects are keen to specify timber for a range of sustainability and design benefits, and the Government is committed to the goals, but a lack of insurance capacity within the market is stifling progress.

In a number of recent cases, specified 'mass timber' designs have had to revert to more traditional materials in order to be built. For some, this is viewed as a knee-jerk reaction by insurers against an unknown set of risks, but it demonstrates a lack of understanding of how insurance is conducted, which in turn leads to indifference to insurers' legitimate concerns, leaving them unaddressed.

White paper news

In February 2022 RISCAuthority (A scheme to fund research for UK insurers backed by 24 major insurers and administered by the Fire Protection Association), released a white paper detailing the challenges of insuring high-rise mass timber buildings. What made this paper noteworthy was that it provided insight into insurance methods and succinctly demonstrated the legitimacy of the concerns. The challenges and concerns are often associated with the Grenfell catastrophe, but that is misguided; there are few, if any, similarities, except perhaps showing how badly things can go wrong in a high-rise context.

It's not only fire

Key to understanding the challenge is that this is not just about the use of wood as the

key structural element of large buildings, and it is also not just about fire. It is less well known that 'escape of water' events in domestic and residential settings exceed the combined contribution of both fire and security insured losses, and this is amplified further still in the multi-storey setting.

Any move away from fire and water tolerant structural materials such as concrete and steel to any other – such as composite timber products which might be less resilient to these perils – is always going to be a challenge if local regulations fail to develop in line with these changes. In the UK, our Building Regulations seek only to assure that successful evacuation of the building occurs in advance of structural collapse, and they do this very well.

However, for those that might want a higher level of performance that includes



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extinguishment of the fire, limitation of damage, and there being enough left of the building to recover and 'make good,' all of these features are outside the scope of what is mandated, and must be specifically designed for. The fact that we have grown used to buildings being 'recoverable' is an incidental consequence of historically using fire-resistant materials to support the 'life safety' solution.

It is evident that strong adaptation of the International Building Code in the US specifically for mass timber construction provides great comfort to insurers, allowing them to treat these buildings in many cases on a near equitable basis as more traditional constructions (combustible voids will be protected or filled, internal surfaces will be lined with gypsum board, the building will have sprinklers, etc.)

Estimating maximum loss

The key parameter used by insurers for the initial estimation of potential loss is the Estimated Maximum Loss or EML. To insure every building as though every fire event would lead to a total loss (EML: 100%), would usually be both expensive and unreasonable. A crude example for the multi-storey environment might conclude that the fire floor would be lost, two floors above would experience smoke damage, and a floor below would experience water damage. For a 20-storey building, the EML would be four floors of 20, or 20%. However, this calculation makes some important assumptions, the most important one being that the fire is constrained to the single floor, and that is a hard-earned privilege.

It is less well known that 'escape of water' events in domestic and residential settings exceed the combined cost of both fire and security insured losses

The MMC revolution not only introduces combustible materials where once non-combustible versions were used, but the assembly methods can introduce many more voids in which fire can spread out of sight and reach, and in all directions. This one feature, if allowed or left unprotected, can prevent the insurer from assigning an EML of anything but 100%. The exclusive 'life safety' goals of our Building Regulations are time-based, and this is reflected in every calculation of travel distance and product performance. But in time, the insurer can only assume that fire will break into these voids which raises the most difficult question: 'What ultimately puts the fire out?'

What's the solution?

A proposed solution demands the hybridisation of building methods and materials: the light use of low carbon concrete in areas of significant risk, and the extensive use of timber for majority floor plate applications. A first floor of concrete can protect against flood risks and accidental and deliberate fire raising during the construction phase, concrete cores can provide non-combustible conduits for vertical services routing and increase building stability that might support a greater level of effectiveness from attending fire services. Taking these thoughts further, perhaps the wet risks of bathrooms and kitchens could also be located in the core to further reduce potential loss.

Whatever the solution presented, it is essential that the designer or architect has an appreciation of EML, and a requirement to specifically design in measures that will enable the insurer to assign a value that is less than 100%. Compliance with Building Regulations alone has never been less meaningful to the insurability of a building.

The white paper can be downloaded from the FPA website (www.thefpa.co.uk).

Professor James Glockling is a consultant and former technical director of the Fire Protection Association and RISCAuthority

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PRACTICE PROFILE

MorenoMasey

El Salvador-born Rodrigo Moreno Masey saw an opportunity to set up his own London practice 12 years ago, and hasn't looked back. He tells *ADF's* Laura Shadwell why keeping it simple is the key to success

MorenoMasey was created on the back of one of life's "too good to pass up" opportunities, says founder and studio principal, Rodrigo Moreno Masey. He was working at architects Michaelis Boyd when he was introduced to a developer, via one of his wife's friends. Rod was offered the chance to work on his own project comprising four apartments and a duplex penthouse in Trafalgar Square.

Rod was given time by the partners to work on the development, and on the back of this high-profile project, he launched MorenoMasey. Within a short space of time, the firm had grown to a size that was significantly larger than he had imagined.

Simplifying the structure

At its peak, four years ago, the practice boasted 22 members of staff. In a move unrelated to Covid, although accelerated by the pandemic, they began to adopt a different strategy in terms of how the business was structured.

Rodrigo soon found that in order to deliver the projects at the rate required, more and more layers of management were being introduced. However, the outcome was that each layer took the most talented and trusted people one step further away from designing projects. "So in the end," says Rod, "the people doing the work on the ground were the least experienced and the least embedded within the culture of our practice." The new structure was essentially to turn the business setup on its head, so that the architects are as close as possible to the projects.

The practice is now organised around the idea of a 'pool' of specialists which the practice can dip into, according to the project involved. They regularly work with outside consultants – including for heritage, planning and visualisation, on a semi-retainer basis. "Having such a big pool can really accelerate the initial advice given at the briefing stage, as the information is based on proper knowledge, rather than speculation," says Rod.

The practice has adopted an open and collaborative way of designing the projects, and aims to involve everyone that wants to attend, from junior to senior architect level. Bringing the whole creative team to the table early, and agreeing goals and roles, means that clarity is achieved.



HIGH-END IN HOLLAND PARK

The studio was given a brief to create an "extraordinary" home in west London
© Julian Abrahams

Commissions currently divide roughly into 30% in hospitality and 70% in the residential sector. The studio has and continues to work with a range of restaurant brands, Nando's being one. Residential sector work ranges from one-off bespoke houses to multi unit, mixed use or regeneration schemes.

Flexible problem solvers

The practice's ethos is also simple. Rather than specialising in a certain type of project or having a fixed aesthetic, MorenoMasey position themselves as "problem solvers," and "curators of the client's vision." The designers instead focus on "extracting and distilling" each project's unique set of opportunities and challenges from the client, in order to inform designs, says Rod. They aim to

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The Holland Park residence is connected by a sculptural stone staircase
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design “beautifully and sustainably, with efficiency of materials and space,” while avoiding “imposing our vision on clients.”

Like many practices, the pandemic taught MorenoMasey that being flexible and adaptable is the only way to survive in challenging global circumstances. As well as implementing cloud services, flexible working and centralised information sharing, culturally, they have changed a lot, says Rod. “We are more agile, more responsive and more open to new ways of collaborating and designing.” However, the value of face to face contact has not been forgotten, with both clients and colleagues. Rod recognises they need to maintain this into the future: “We are ultimately a studio built around understanding people deeply, and spaces physically, and this does not happen from behind a screen.”

However, Rod believes the practice has gained a reputation for adaptability, especially to projects that might be unusual or challenging in how they’re structured. In solving the client’s problem, the practice is always keen to provide an architectural solution. “Can you be adaptable, and can you solve problems beautifully, elegantly and simply? Those are our goals,” says the practice’s founder.

Not vertically challenged

When working with clients wanting to reconfigure a house that isn’t working spatially, Rod’s maxim is that if you make the horizontal and vertical circulation work simply for users, the rest of the house tends to ‘design itself.’ He explains: “Whenever you are given a complicated plan where the client is trying to reinvent the house, we will always start with the vertical circulation, as the one defining thing that will fix the spaces.”

Aesthetically, the practice takes a proactive approach in order to try and circumvent the risk of a ‘tennis match’ between clients and architects or clients and consultants; “batting ideas back and forth with no-one really understanding what they’re actually getting.”

MorenoMasey tries to aim for clarity and consensus through “peeling back layers of communication so that you have absolute clarity in briefing, in design stages and in the sign-off process,” says Rod. He states this will “ensure everyone is delighted with the end result, and not surprised.”

He asserts that the user and how they will use the space is at the heart of everything, rather than purely aesthetic goals: “Rather than trying to design a beautiful house, you design a house that functions, and is beautiful,” says Moreno Masey. “The starting point is always to ask the client how they will use the space, so that you end up with a house that is designed for living in but is also in itself beautiful.”

Sustainability as a default

Rod admits that the business wasn’t founded explicitly around the idea of sustainability as the main goal, and many clients haven’t typically prioritised ‘eco’ aspects as yet. He says this remains a challenge in their residential work, whereas many hospitality clients are fully aligned to carbon neutral and sustainability aims.

The practice however instils in their team the idea that sustainability is not an optional extra, and is fundamental to what they do. This results in a situation where clients “have to take sustainability out of a project rather than add it in – they may try to steer us away, but we definitely start from that position,” comments Rod. He believes that to positively influence clients on sustainability, “framing the question to make sustainability sound like a requirement rather than an option is key.” With the practice being, by his own admission, “refurbishment specialists,” he believes it’s their job to “ensure as many of these sustainability aims are met as possible.”

MorenoMasey is investing behind a strategy of growing its sustainability credentials; they have pledged that all designers will be Passivhaus and EnerPHit (Passivhaus retrofit) trained over the next 12 months, and two are already fully trained in both.

Achievements

Rod believes that the most difficult question for his firm to answer is whether its greatest achievement is a building, or its progress as a business. “I don’t know whether the biggest wins would be architectural. We’ve done some beautiful signature projects, and I think I probably take that for granted. I think our greatest achievement is having got where we have with the business. It’s been harder than any building you can imagine,” answers Rod.

One key project Rod pinpoints is a two-level basement in Holland Park, west London. “Our brief was simply to make this an extraordinary home, without compromise and without wasting opportunities,” says Rod. Once establishing what was acceptable for this detached Victorian villa in a conservation area, the client’s brief was brought to fruition, in 13,000 ft² of seamless luxury living with three floors above ground and two floors below. They are all connected by a sweeping, sculptural stone staircase.

Future

MorenoMasey is very much a collaborative enterprise. They are turning the focus onto teaching as well as design; to create brilliant architects as well as great buildings, as “working in a mid size practice as a general practitioner doing amazing architectural work is just not taught.” By focusing on training in practice, the idea is that Rod will become a supporter of that system rather than a leader, forming the agenda.

“If I only shared examples of how I would do it, I would only get versions of what I would do,” he concludes. “If I teach people the things that I have learned, then they will take that experience and potentially take the business to places that perhaps I couldn’t; that surely is a much more interesting future than whatever I could have imagined.” ■

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DJI SKY CITY, SHENZHEN FOSTER + PARTNERS

Foster + Partners has completed the new headquarters for DJI, “a leader in civilian drones and creative camera technology,” in the Nanshan District in southwest Shenzhen, China. The two towers (44 and 40 storeys respectively) contain office and research spaces arranged in “floating” volumes cantilevered from central cores by “mega trusses” and circular profiled steel suspension rods. The “asymmetrical suspension” steel structure reduces the need for columns, creating uninterrupted office and research spaces. It also allows for quadruple-height drone flight testing labs – visible externally through V-shaped trusses that give the towers their distinctive identity. At 105 metres, the towers are linked by a 90-metre-long suspension sky-bridge, with sky gardens at the top of the floating volumes. At ground level, there is a sloping green podium garden and public facilities such as a community healthcare centre.



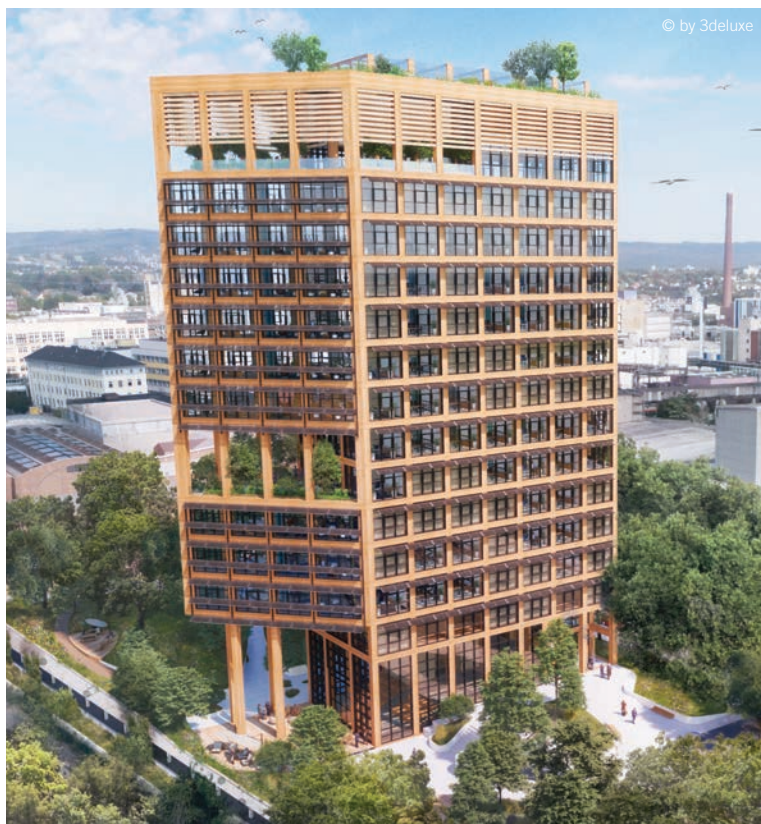
ASCENSION PAYSAGÈRE MVRDV

MVRDV, along with co-architects ALL for real estate developer Groupe Giboire, has completed Ascension Paysagère – a residential complex at the confluence of two rivers in the western suburbs of Rennes, France. The 12-storey, 8,200 m² complex provides 138 homes, each with a terrace or loggia, in a variety of sizes and price ranges – including 37 units of social housing – as well as commercial spaces and public spaces. The project comprises two curving buildings, one large and one small, with “gradually receding slopes.” The elevations are lower where they are closest to the river and neighbouring buildings; elsewhere, the design “gradually steps up into three peaks,” reaching the full height in the centre of the composition. The facade features both matte and glossy ceramic panels in five different tones of grey, arranged into “stratified layers” said MVRDV, dark and mostly matte near to ground level, and lighter and glossier at the top levels. At ground level, the curves “define a series of public spaces, with a green pedestrian street between the two blocks and a plaza at the water’s edge that leads to Le Bacchus, a restaurant and theatre.” The project uses a variety of approaches to ensure sustainability and social responsibility, with 34 apartments within the smaller building being completed to Passivhaus standards.

INLONG NARADA RESORT, SHANGHAI CPMG ARCHITECTS

CPMG Architects has been appointed to the latest stage of work at a major leisure resort scheme located to the west of Shanghai. The practice – which is headquartered in Nottingham – has an international base in Hangzhou, and has been working on the Inlong Narada Resort scheme since the masterplan stage in April 2022, having been brought in by the site's hotel operator Narada. The redevelopment of a large, former quarry site – which spans 530 acres – includes the construction of a hotel, reception building, hilltop villas, and cliff top bar, all centred around a 'blue water' lake, and already well underway.

CPMG will design and deliver the resort's spa complex, which will include what's thought to be the longest infinity pool in China, as well as 37 luxury lakeside villas. Materials will be used from the landform left from the former quarry to reduce waste and the impact of the supply chain. The spa centre villas and spa centre itself utilise the natural stone found in the immediate vicinity, "creating a design that is completely cohesive with the setting – enhanced by timber elements to introduce warmth into the space," said CPMG managing director Ricard Flisher. Progress on the Inlong Narada Resort scheme is "expected to progress at pace," said the architects, with a view to opening in May 2023.



H2-OFFICE-TOWER, WIESBADEN, GERMANY STUDIO 3DELUXE

German architects Studio 3deluxe were commissioned by Wiesbaden-based urban development company SEG to come up with design options for a site between the industrial park and the Rhine. The construction of a timber-hybrid high-rise building, along with a refurbished, listed "classic high-rise" from the 1960s – forms the core of the project. It is part of a redevelopment along the Rhine riverfront that "serves as a model for sustainable, smart and future-oriented urban development," said the architects. The sun-facing facades of the 15-storey high-rise building are partially covered with PV modules, which also serve as shading elements. The facade facing the river has been "twisted diagonally" to achieve maximum efficiency from the large-scale PV installation.

Large floor-to-ceiling window areas with black frames lend the building its "modern warehouse" appearance, and reference the industrial neighbourhood. A circular economy approach includes the use of sustainable and renewable raw materials, a modular construction (with a "high degree of prefabrication" as well as recyclable building components). The building will largely generate its own energy; in addition to the PV array, geothermal energy and use of the river water as a heat exchanger "maximise low-emission operation." The public realm has reduced car spaces, and is primarily dominated by open, green recreational areas right on the waterfront. The building has several green terraces including a rooftop vegetable garden, an outdoor gym, recreation pavilion, and areas to encourage wildlife. The neighbouring 1960s high-rise building – the H2O-Tower – has been reconfigured to offer open plan office space.

Eventim Apollo's stage refurbishment by Harlequin Floors



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JACKON UK and JABLITE combine after corporate merger of JACKON and BEWI

JABLITE and JACKON UK are set to form a new, united force in the UK insulation and construction products sector. The two brands combined will become the first UK manufacturer to offer both EPS (expanded polystyrene) and imported XPS (extruded polystyrene) solutions.

This follows the completion of the merger between JACKON and BEWI on 12th October 2022.

BEWI is the owner of JABLITE, one of the UK's largest producers of EPS products for the construction industry. It is a leading manufacturer of insulation and civils products, which include the JABLITE thermal floor system, JABLITE ground heave protection and the leading brands Fillmaster, Claymaster and Jabfloor.

Meanwhile JACKON owns the JACKOBOARD® brand of backerboards, as well as THERMOMUR® ICF and JACKODUR® ATLAS building systems.

These brands are amongst the market leaders in the UK.

Both businesses are excited about the improvements and the innovations they will be able to deliver together. As well as shared customers and new routes to market, JABLITE's manufacturing sites provide new opportunities for JACKON UK in terms of production and warehousing with the potential of transport synergies.

Colin Higham, managing director, JACKON UK, says: "This development is very exciting for us. It provides increased scale and resource in the UK market to underpin future growth, as well as the ability to serve customers better right across the group."

John Cooper, managing director of JABLITE, adds: "There are many opportunities for collaboration. JACKON has some great products that our customers have already expressed an interest in buying from the new BEWI UK business that we will become."

JACKON
by BEWI

Jablite
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"Our product portfolios are complementary, and we look forward to working with the JACKON team to identify opportunities for new product development," he says.

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NEW MOY CPD “ACHIEVING ZERO LEAKS”



MOY are pleased to announce the new RIBA approved CPD entitled “Achieving Zero Leaks.” This CPD presentation aims to support specifiers and designers on achieving long lasting, compliant and sustainable roofs, with problem free, zero leak solutions. Achieving Zero Leaks CPD covers the following topics:

- Flat roof design principles – building standards & legislation compliance

- Flat roofing systems – roof waterproofing technology types and typical applications, accessories and components
- Achieving Zero Leaks – outlining the importance of ‘quality system supplier’ selection to help ensure successful development & delivery of the correct specification.

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GRAF UK LAUNCHES RAINWATER HARVESTING CPD



A CPD that explains the issues around rainwater harvesting and advises on the options available has been launched by Graf UK. The 55-minute presentation delivers a range of “Rainwater research”, extending from the fundamentals to key regulations and issues, via a mix of “live” presentation and videos. It advises on what rainwater can and cannot be used for and how harvesting systems can be combined with storage for SUDS and stormwater management. A guide to sizing rainwater harvesting systems is also featured.

www.grafuk.co.uk bit.ly/GRAFRWHCPD

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Built to last

London Build will return to Olympia London's Grand Hall from 16–17 November with “more content, networking and entertainment than ever before”

This year London Build will welcome over 35,000 visitors, 350 exhibitors and 500 speakers from contractors, developers, architects, specifiers, housebuilders, housing associations, civil engineers, government, suppliers and construction professionals.

Visitors will be able to learn the “latest insights and updates on major upcoming construction projects and opportunities from across the UK,” say the organisers, with eight conference stages exploring the future of construction, architecture, sustainability, diversity and inclusion, as well as fire safety, BIM and digital construction, and skills. Visitors have the opportunity to build their training and education with over 200 hours of CPD-accredited sessions.

Locations for learning

The ‘Architecture Stage’ will host speakers from the leading architectural firms, including Foster + Partners, BDP, Zaha Hadid Architects and more. Held in partnership with Architecture Social, panelists will discuss topics ranging from inclusive design to the role of architecture in overcoming the housing crisis.

London Build will also be launching its Skills Hub, where visitors can learn about the latest insights and tools the industry has to offer. There will be numerous workshops held over the two days, including creating the ‘ultimate marketing plan,’ developing inclusive employment strategies, BRE and BIM, the world of TikTok marketing and more.

London Build 2022 will also see the return of the ‘Architect’s Hub,’ where visitors will have the chance to see projects from top practices including Scott



Brownrigg, SOM, and PLP Architecture. They will come face to face with a wide range of 3D models and designs of the most exciting projects in London and across the UK. The Architect’s Hub will also host the inaugural Architecture Social awards, hosted by founder Stephen Drew.

The popular ‘Meet the Buyer’ area will showcase the latest opportunities and tenders from procurement teams at Skanska, Costain, Balfour Beatty, SMP Alliance, BAM UK, and more. Don’t miss out on the opportunity to increase your profile to potential new clients.

Festival of construction

London Build is home to the UK’s biggest ‘Festival of Construction’ and this year it is bigger than ever! There are DJs, musicians, live performances, prize giveaways, and



Titon be exhibiting at London Build Expo 2022 in November. Showcasing new product ranges as well as exhibiting the compact Mechanical Ventilation with Heat Recovery units, Titon welcomes visitors along to the stand

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celebrity guests including England football legend Kevin Keegan. There's also the 'London Build Food and Drink trail,' where visitors can taste and try artisan food and drink products from around the UK.

Make sure to check out the Built Environment Networking Hub where you can take to the stage at the BIM open mic, learn how the LCEC is driving change over complimentary breakfast and connect with sustainability professionals from across the UK, all under one roof. Your ticket gives you access to all of the networking parties taking place over the two days, co-hosted with Urbano Build, London Constructing Excellence Club, Forum for the Built Environment, The CIOB, Building People, Let's Build, Building Equality, to name just some of the co-hosts.

Driving change

The Built Environment Networking Hub is also home to the UK's largest annual networking events for Women in Construction and Diversity in Construction, where visitors can learn from an inspiring

panel of industry leaders as they celebrate the successes and discuss the challenges facing design, engineering and construction professionals. As well as networking, visitors can be inspired by the diverse stories that make up one of the most exciting industries.

The organisers say: "London Build works with an incredible team of gender and diversity in construction ambassadors, who are furthering equality in the built environment." This year's ambassador programme also includes the launch of the London Build Mental Health Ambassadors.

Working in partnership with Construction Sport and mental health charity Mates in Mind, the London Build mental health ambassadors are working to get the sector talking, to help challenge the perceptions around mental health. Join the 'Mental Health in Construction' networking event on 17 November, where you can network with the London Build Ambassadors and help challenge the stigma surrounding mental health in the UK's built environment.

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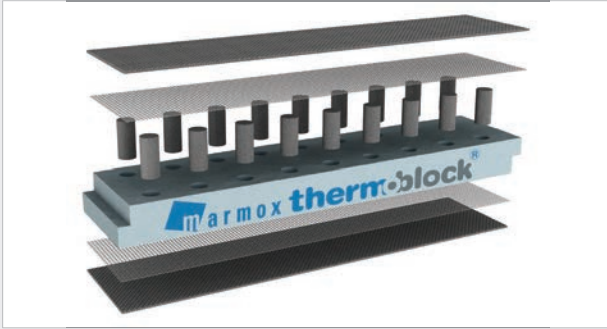
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LONDON BUILD STAND H52



Advanced offers Fire Safety Guidance

Advanced, a world leader in intelligent fire, evacuation and emergency lighting systems, will be exhibiting on stand E64 at London Build 2022. The company will be offering visitors guidance on how Advanced's systems fit into the recent amendments to Part B (Fire Safety) of the Building Regulations which come into effect on 1st December 2022. The company will also be showcasing its latest evacuation alert and fire safety solutions. The amended Approved Document B of the Building Regulations was published in June 2022 and offers improvements to fire safety guidance to ensure tall buildings are made safer in England. This includes the 'significant' addition to the document of the mandatory requirement for new residential developments over 18 m to incorporate a BS 8629 evacuation alert system. Advanced welcomes these improvements and will be on hand at London Build to help those involved in the design or construction of residential developments to explain the changes relating to evacuation alert systems and to give guidance on how to comply.

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LONDON BUILD STAND E64

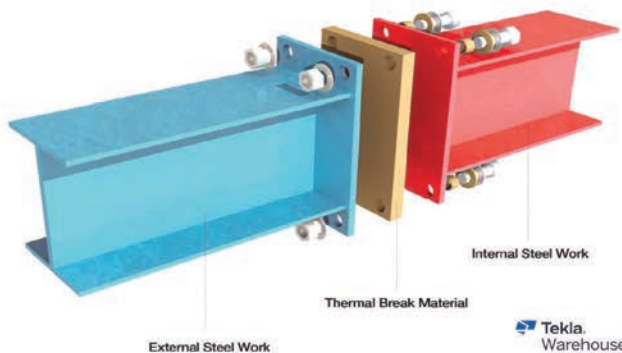


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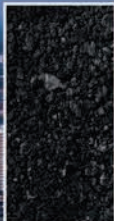
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INDUSTRY VIEWFINDER

The Road to Zero Carbon (2030-2050)

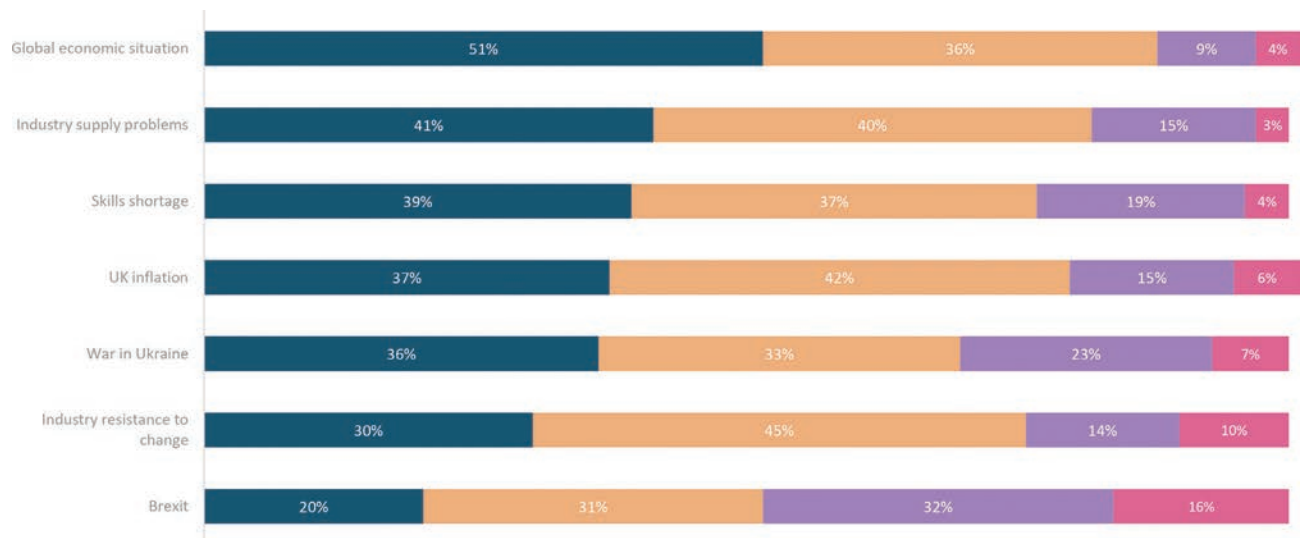
Executive summary

According to the World Green Building Council, buildings are globally responsible for half of the world's total CO₂ emissions and resource consumption, and 36% of global energy consumption. The WGBC stated earlier this year that the sector must take action now in order to "operate at net zero carbon by 2050, if global warming is to remain under 2°C, the limit enshrined in the Paris Agreement."

Buildings are responsible for 40% of the 'energy related' carbon emissions made in the UK, and worldwide are expected to double in total footprint by 2060, thereby drastically increasing our global emissions unless something potentially equally drastic is done to counteract them.

The UK architecture sector has taken the initiative, aligned with counterparts across the world, and set a voluntary 2030 target to help architects lead the way. In 2019 RIBA joined the international Architects Declare movement to put practical steps in place to reduce emissions in projects, and issued its 2030 Climate Challenge in the run-up to COP26 in Glasgow, covering a range of targets across different sectors, and a focus on user wellbeing.

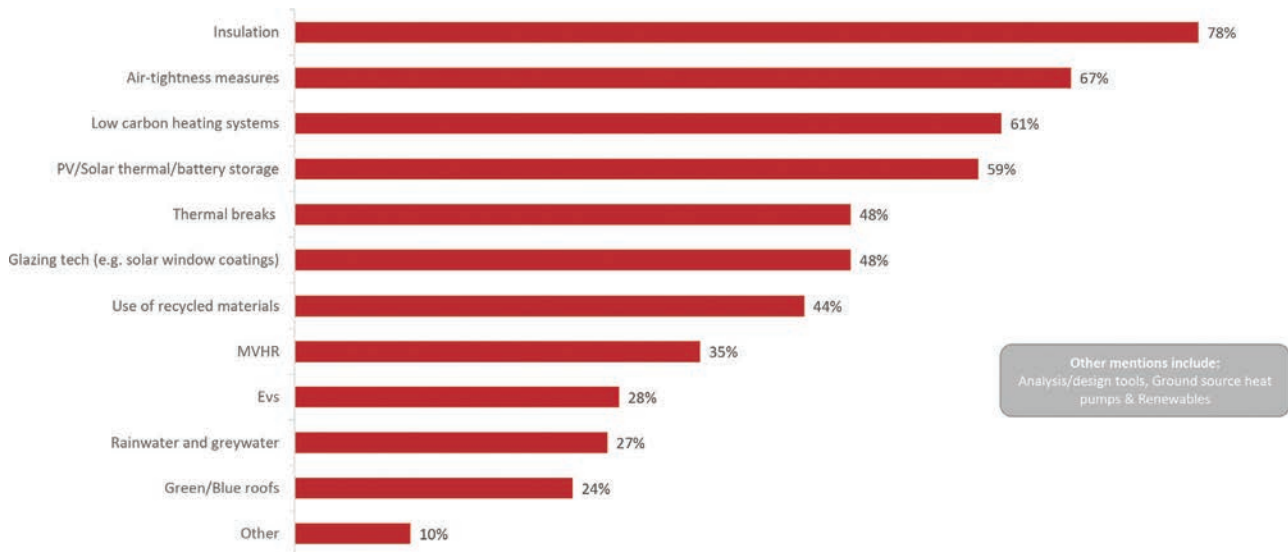
We canvassed our architect readership on their current opinions of progress on the zero carbon agenda, their views on the RIBA's ongoing initiative, and their progress on zero carbon such as compliance with the Future Homes Standard 2025, which forms a key part of the Government's plan to achieve its legally binding net



"Which of the following factors are more likely to impact on zero carbon targets being achieved in construction?"

Very likely Quite likely Not very likely Unlikely





"Which are the most critical areas to focus on in achieving low carbon designs?"

zero 2050 target. This will require all new homes to have 75-80% less carbon emissions than ones built to 2013 Part L of the Building Regulations.

The 'real world' insights we gained from practitioners show they are acutely aware of the challenges, and of their role in delivering on them. They are not unanimous in their views on the best solutions.

The UK response

The UK construction industry needs a step change in buildings' emissions. We have had a Net Zero Carbon Buildings Standard in the works for several years, however a chairman was only appointed to lead its Governance Board in September 2022. The industry is fragmented, but needs to collaborate; Sarah Ratcliffe, CEO at Better Buildings Partnership comments: "The Standard is going to require radical collaboration across the whole of the built environment sector."

The last decade (2011-2020) was the warmest on record, and the urgency of reducing emissions, following a reprieve caused by Covid, cannot be overstated. The RIBA wants new builds and retrofits to deliver "zero whole life carbon" in advance of the 2050 deadline; it's possible and has been achieved – the challenge is extending it to all building projects.

The Government has recommitted to its 2030 target set in the Paris Agreement in 2016, which requires a daunting 68% reduction in greenhouse gas emissions across all industries in just over seven years, when of course the current administration is unlikely to still be in power. The construction industry is finding the answers.

We looked at architects' current involvement (or otherwise) in zero carbon projects, and their awareness of – and views on – the RIBA's various Climate Challenge targets. What global factors, and

those closer to home, were impacting current progress, and how were practices going about assessing and reducing carbon in projects?

We asked readers about their clients' attitudes, and their views on the priorities to focus on in designs when it comes to very low carbon emissions. We also got insights on the potential compromises on aesthetics and 'liveability' that might be needed, and how the architect's role might be critical as we drive towards zero carbon.

Introduction

Architects are at the centre of the national agenda for driving forward zero carbon, being the fulcrum between client and contractor, translating clients' 'green goals' aims into practical built solutions. However, with the multiplicity of components within the supply chain, it's arguable that architects can only do so much to ensure quality of construction matches rigour of design for the lowest emissions possible in each case. And are they upskilling in all the areas required to know 'what zero looks like'?

The race to zero

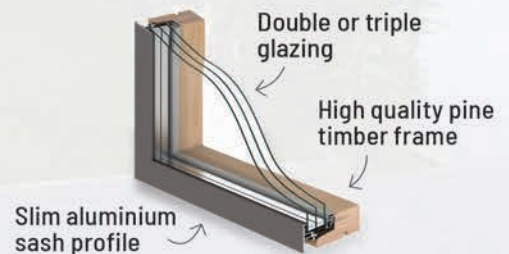
'Net zero' effectively means not emitting more greenhouse gases (principally CO₂) than are being absorbed, hitting a balance between the two, but also often requiring measures to enable emissions to be 'offset.' Following the announcement of the UK's 2050 legal obligation by PM Theresa May in 2019, Peter Tse of the Sustainable Construction Group, BSRIA commented: "The task ahead is truly challenging given the UK is currently significantly behind the targets set out in both the fourth and fifth carbon budgets. However, it is encouraging to see many businesses already leading the way."

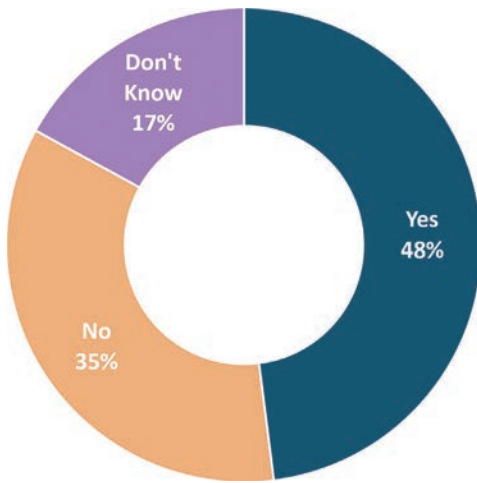


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"Is carbon offsetting a necessity for clients given the timeframe to 2050?"

Many commentators have said how expensive and challenging achieving zero carbon across the board would be, but added that the cost of inaction would be higher, long term. The chief executive of the UK Green Building Council (who remains so until 2023 following an influential tenure), Julie Hirigoyen commented that the UK had to "accelerate action in all areas including improving the efficiency of our ageing building stock, and overcoming the challenge of decarbonising heat."

Of our 120 respondents, only 20% said they were actually working on a zero carbon project. A third were currently tackling the 31% reduction in emissions required within the updated Part L, as part of the 2022 interim Future Homes Standard provisions (which becomes enforceable from June 2023). However, 65% said they were not working to the new Part L for projects.

Assessing the challenge

In 2019 RIBA signed up to the UN Global Compact, as part of the COP21 outcomes. RIBA's 2030 Climate Challenge, developed in consultation with other UK construction bodies, is a series of targets which provides a "stepped approach towards reaching net zero." It's based on voluntary performance targets for reducing operational energy, embodied carbon and potable water in designs.

RIBA believes the targets provide a "challenging but achievable trajectory to realise the significant reductions necessary," thereby supporting a "realistic prospect of achieving net zero carbon for the whole UK building stock by 2050." While the organisation isn't enforcing compliance, there is an expectation that RIBA Chartered practices will consider adopting the aims.

The Version 2 of the Challenge emerged in 2021, editing down the 17 wide-ranging goals within the UN Global Compact to a set of nine "core goals which all buildings contribute to," according to the RIBA's head of technical practice, Alex Tait.

These Sustainable Outcomes are as follows:

- Good Health and Wellbeing
- Sustainable Water Cycle
- Net Zero Operational Carbon Emissions
- Sustainable Life Cycle Cost
- Sustainable Connectivity and Transport
- Net Zero Embodied Carbon Emissions
- Whole Life Carbon Emissions
- Sustainable Land use and ecology

The guidance framework is built around three key metrics: operational energy, embodied carbon and (potable) water use, and the Climate Challenge guidance presents targets across these comparing 'business as usual' with 2025 targets, and 2030 targets. It also produced 'Best Practice Health Metrics' to be applied to all buildings.

A reasonable proportion of respondents (69%) were aware of the RIBA's Climate Challenge, this however showed that the organisation still has a job to do in communicating the initiative. Despite this, 74% of respondents believed that the RIBA targets were an essential step towards the industry's hitting net zero 2050.



EXPERT VIEW

Louisa Bowles, partner and sustainability lead, Hawkins\Brown, comments on the practice's approach to the RIBA's Climate Challenge: "We set targets for each project based on the RIBA metrics.

These are stepping stones to eliminating carbon emissions to zero by 2050, so are an important step in getting clients and design teams to start changing behaviours and design practices."

Respondents saw the global economic situation' as being the factor most likely to impact the sector's ongoing efforts to implement zero carbon by the deadlines. Other factors cited were 'industry supply problems' (41%), skills shortages (39%), and war in Ukraine (36%). UK inflation was singled out as a key factor by 37%, but resistance to change within the construction sector was not far behind, chosen by 30% of survey respondents. Brexit was only picked by 20% as a key factor in itself.

We asked architects whether they believed there would be compromises on aesthetics, and a reassuring two-thirds believed that there wouldn't, however 27% did believe there would be an impact of some sort on aesthetic aims. Achieving a low 'Heat Loss Form Factor' (the ratio of the total 'heat loss area' to the habitable floor area) for optimum energy efficiency is increasingly the aim for many low energy designers, particularly in Passivhaus projects. This can mean the overall building form is dictated more by practical outcomes than aesthetic conventions.





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EXPERT VIEW

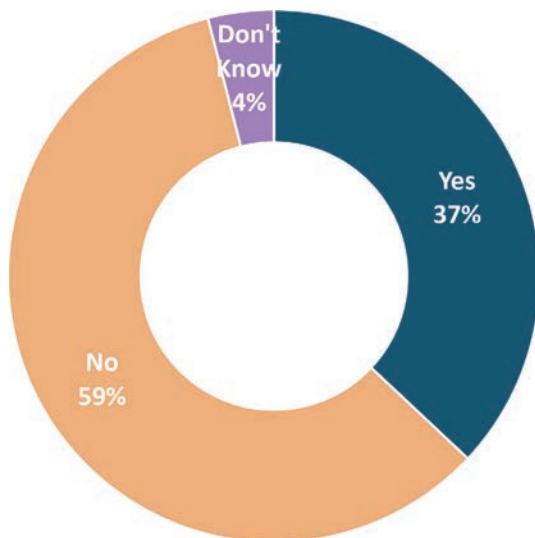
Louisa Bowles comments on the effect of cost pressures: "Cost pressures are a driving force in the majority of projects, no matter the original aspirations.

We see evidence of value engineering affecting scope and lack of willingness to pay for additional consultancy for analysis to prove and track design decisions against targets. There is also a lack of capacity in the skill set required across designers, contractors and suppliers."

When it comes to practicality for people living in 'affordable' residential projects, we wanted to discover architects' views on the impacts on 'liveability' of low energy, highly insulated designs with potentially smaller floorplates. Again the results were reassuring, with 59% of respondents saying that they did not think that it would be impacted, and 37% saying they believed it would.

Solutions

The RIBA Climate Challenge has specific energy targets for different sectors (residential, new build offices, and new build schools), which are roughly half of the emissions of a notional 'business as usual' energy consumption figure. For domestic properties, as opposed to a 'business as usual' operational energy figure of 120 kWh/m²/year, RIBA posits a 2025 target of <60 kWh/m²/y, and below 35 kWh by 2030. For non-domestic sectors, there are different targets – operational energy of <75 kWh/m²/y by 2025 and <55 kWh/m²/y by 2030 (as opposed to 'business as usual' 130 kWh/m²/y) in new build offices. And in new build schools, the



"Will affordable low carbon designs impact liveability for occupants (e.g. in terms of floor area?)"

RIBA is calling for <70 kWh/m²/y by 2025, and <60 kWh/m²/y by 2030 (as opposed to 130 kWh/m²/y for 'business as usual').

Respondents said the RIBA 2025 energy targets were most likely to be achieved in the residential sector (59%), then education (45%). However when it came to commercial buildings, our respondents were less emphatic on whether the targets would be achieved by 2025, with 38% thinking they would, but 32% saying they weren't realistic, and 31% being on the fence.



EXPERT VIEW

Louisa Bowles says the RIBA targets represent best practice: "The 2030 Challenge contains energy targets for three typologies, from which it might be possible to derive targets for others. The 2025 targets

are realistic but in our experience represent the best practice energy in-use possible with current technology, design and modelling. They are not achievable by the 'average' project in any typology."

Rodrigo Moreno Masey, director, MorenoMasey says that project team dynamics are critical: "It's down to who's pulling strings, and the scale of the projects; three/four years simply isn't long enough for a large infrastructure project to get its house in order. In restaurants, for example, there is a huge disconnect between landlord, brand and operator."

A healthy result

Generally speaking, our survey respondents gave a positive response to the 'Best Practice Health Metrics' based around wellbeing aims within the RIBA Climate Challenge, in terms of their achievability by the 2030 deadline at least. Daylighting would be required to be above 2% average daylight factor, with 0.4 uniformity, and 60% said this was realistically possible across all sectors. Overheating would be controlled within a 25-28°C parameter for 1% of occupied hours – and this was seen as achievable by 58% of respondents. Total VOCs should be under 0.3 mg/m³, and 47% accepted this figure as achievable. 44% said it was achievable to have formaldehyde levels below 0.1 mg/m³, and the target indoor CO₂ level of below 900 ppm was seen as achievable by 40%.



EXPERT VIEW

Louisa Bowles says the overheating challenge is hard to fix in the mainstream: "To achieve this level of compliance requires upfront passive design integration and design stage modelling, and solutions

that are locked in onsite. It is not possible to deliver without these processes in place."

Rodrigo Moreno Masey comments on addressing overheating in refurb projects: "For refurbishments, overheating targets aren't possible within the average scope."





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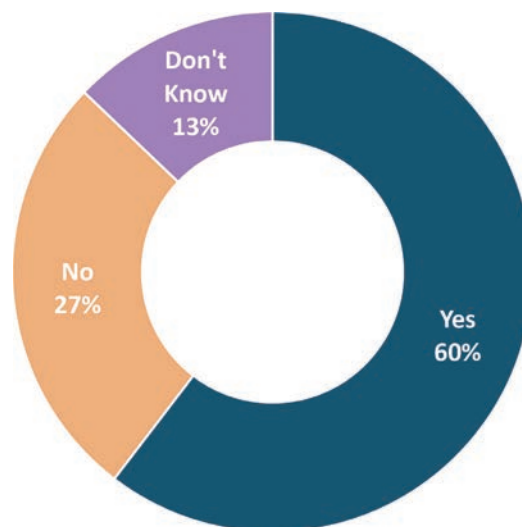
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Design priorities & calculations

When it came to the most popular practical building element for achieving low carbon for our respondents, insulation was out in front for survey respondents, with 76% picking it as a 'critical area to focus on.' Next in line was 'air-tightness measures' (67%), followed by low carbon heating systems such as heat pumps (61%), and PV/solar thermal/battery storage (59%).

Lagging slightly behind were thermal breaks, picked by 48% as a critical area of focus, as was glazing, including solar control coatings. Then came the use of recycled materials (44%), MVHR (35%), followed by electric vehicles (28%) rainwater/greywater (27%), and green and blue roofs at 24%.



"Is greenwash from suppliers still a major issue?"

of the good.' From our sample, 95% said that 'any efforts towards reducing carbon were worthwhile.'



EXPERT VIEW

Rodrigo Moreno Masey: "Be lean, the rest is a bonus, you can't run out of energy if you don't use any."

Louisa Bowles: "Some sustainable measures which are certainly good for many reasons are often

confused with those that are effective at reducing carbon emissions. For example, green roofs are great at increasing biodiversity, but they increase the embodied carbon of the roof build up. Water usage is not a huge emitter at the moment, but could be in the future if supply is reduced and treatment methods change as a result. The most effective way of reducing emissions is low energy passive design, fabric first approaches, retrofit, re-use and recycling."

Calculating carbon emissions in projects is complex, and requires specific expertise. 66% of respondents were relying on outsourced consultants, while 42% were using info from manufacturers. 'Internal data from previous projects' was chosen by 29%, just ahead of using inhouse architect expertise, and upskilling staff (27%). Other architectural practices' resources on embodied carbon were also being used, by 12% of respondents. 12% picked 'Other' methods, including LETI, RIBA and UKGBC information.

In focusing on operational and embodied energy in its targets for 2030, the RIBA has avoided explicitly targeting 'whole life carbon,' with its rationale being reducing occupants' energy demand is "necessary regardless of the use of renewable energy." Respondents agreed with this approach, however commenters added caveats such as that reducing energy demand "will only be partly achievable unless people agree to reducing their standard of living," while being vital to alleviate the effect of rapidly increasing fuel costs. One commenter added: "Not every site is able to accommodate renewable energy and more often than not clients need convincing (although recent energy costs have made convincing them a little easier)."

Given the short timeframe to 2030, there was the greatest consensus on one particular question, namely whether a purist approach to zero carbon 'or else' was not helpful, and whether essentially the profession should not 'let the perfect be the enemy



EXPERT VIEW

Louisa Bowles believes that idealism isn't appropriate in the pursuit of net zero carbon design: "Low carbon and sustainable design is not an all or nothing.

Anything that can be done to reduce emissions, even if one specific element, should be explored."

Embodied carbon expertise

Embodied carbon is raised up the agenda for zero carbon by the RIBA Climate Challenge. For domestic properties it is asking for <800 kgCO₂e/m² by 2025, as opposed to a 'business as usual' figure of 1200 kgCO₂e/m², and <625 kgCO₂e/m² by 2030. For new build offices, the target (versus business as usual 1400 kgCO₂e/m²) is <970 kgCO₂e/m², and for new build schools, <675 kgCO₂e/m² (versus 'business as usual' 1000 kgCO₂e/m²).

However when it came to whether they were tackling embodied carbon in their projects currently (which isn't mandated in the Future Homes Standard), our respondents gave a fairly lukewarm response; 63% said they were not tackling the issue. However, for the 30% who were, we asked them how, and several said they were using external consultants and software, for example a respondent from Hawkins\Brown mentioned they were using their inhouse-developed tool H/B:ERT, as well as OneClick LCA (life cycle assessment) software. Another mentioned they were using BRME U-value calculations to counteract embodied carbon,



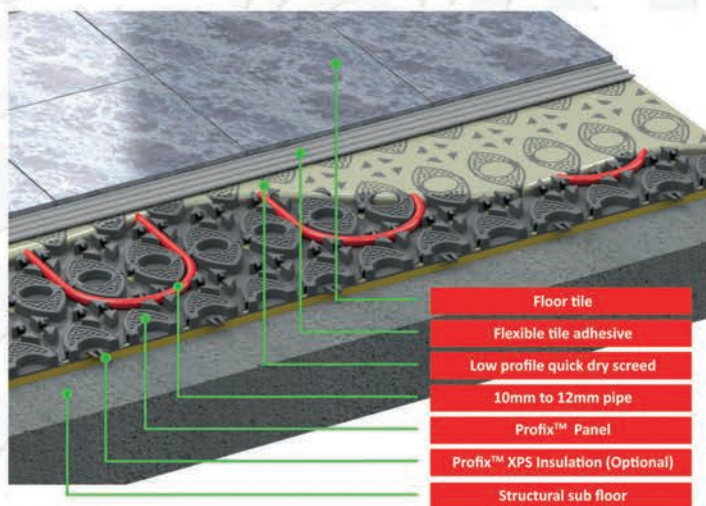
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but another complained that being a “small practice” they “could not afford the time and resources to do this in detail on the fees we have.” They said that despite this, they were using the BRE Green Guide as “a useful base” alongside their own research, in order to inform specification choices.

Materials & information

We asked our survey sample whether such ‘greenwash’ remained a big problem, for example suppliers with various ranges promoting ‘me-too’ products with ‘eco’ claims) for achieving clarity when specifying, and identifying the best solution for a project. Unfortunately, 60% said this was the case, meaning that the onus is on manufacturers to try and work harder with specifiers to identify the kind of clarity that they require and avoid complicating the picture further.



EXPERT VIEW

Rodrigo Moreno Masey said ‘greenwash’ was hard to calibrate: “There is no standard for what ‘green’ is – a bit green is still green.”

Louisa Bowles added: “A lot of companies are claiming carbon neutral or zero products when they are relying on offsets rather than improving their manufacturing methods.”

Despite timber’s extremely good credentials for embodied carbon as well as a host of other sustainability factors, its specification has been knocked back in the UK following the government’s knee-jerk ban on combustible materials in high-rises, post-Grenfell. Cost of materials was however the biggest obstacle to timber currently for our respondents (63%), followed by supply chain delays (36%), before we get to ‘assumptions on fire safety’ in terms of how timber actually performs in a fire (30% saying it was a challenge to specification). ‘Post-Grenfell measures on combustible materials’ came in at fourth with 24% picking it as a factor, a fairly moderate though still significant placing. However, the supply shortage and inflationary issues have emerged as an even bigger disincentive for timber currently, which must be addressed, probably via government incentive, if zero carbon (and offsite construction) aims are going to be achieved.

Offsetting

Many major companies who are pursuing zero carbon goals have been employing offsetting due to the vast challenge of reducing their energy output, meaning that they can achieve the arithmetic of reduced carbon emissions by investing in certain technologies, for example offshore wind. Our survey respondents were somewhat split on the question of whether, for their clients, carbon offsetting was a necessity. While half (48%) believed that it was, a substantial number (35%) said it wasn’t.

According to RIBA, “net zero whole life carbon” should “be prioritised in lower density areas” via the use of onsite renewables. However, in urban areas, achieving net zero will “likely require additional offsite renewable energy generation, with certified woodland offsetting in the UK as a last resort.”



EXPERT VIEW

Louisa Bowles says that offsetting is a fact of life: “It is possible to meet net zero for embodied carbon without an offset, but rarely onsite for large, dense inner city projects.”

Design compromises

Our respondents didn’t believe that a compromise on expected aesthetics was a ‘given’ in zero carbon schemes, with a resounding two-thirds (66%) saying that aesthetics weren’t ‘likely to be compromised,’ although some acknowledged that buildings’ look may change. And in terms of whether floor area would impact on ‘liveability’ in affordable residential schemes, a similar number (59%) said this wasn’t the case. However, commenters did caution that effort was needed to avoid overly ‘boxy’ schemes.



EXPERT VIEW

Louisa Bowles says that she doesn’t believe low carbon leads to aesthetic or functional compromises. “Internal environments should be more comfortable and controllable in a fabric first, well oriented and ventilated home with smart technology.”

Rodrigo Moreno Masey singles out aesthetic assumptions: “The issue is that education and media is pointed at a stylistic, intellectual elitism that defines notions of beauty based around the idea of excess. Until we start reframing ‘beauty,’ it will always be seen as a compromise.”

Challenges in certain sectors such as heritage were highlighted, for example: “Adding enough insulation to reach Building Regulation compliance will require changing the character and therefore architectural importance of buildings.” Another respondent said that creating larger floorplates “will raise the cost of already overpriced buildings as either more land will be required, reducing density and developer feasibility or the room sizes will reduce to accommodate the budget.” Another mentioned that although the capital cost for homes is likely to increase, the client will benefit long-term from much lower bills, and also on the liveability question, the opinion was given that low energy use homes tend to offer better comfort.



Our expert commentator, architect Rodrigo Moreno Masey, cautioned that clients “all want zero carbon, until it’s costed,” so they need to be made to see the longer-term advantages.

The availability of certain building materials will partly dictate how much design compromises could be avoided, but one commenter added that rather than very thick walls, more important was to tackle “linear thermal bridging, and design less corners, which means simpler buildings.” Another commenter advocated “a simplification in the building’s form factor and glazing design and location in a building. The challenge is to make designs look less ‘boxy’.” In urban areas there may be greater challenges on size, with project viability being affected if minimum space standards are to be maintained: “Thicker walls and other measures might have to result in less restrictive planning.”

Another respondent concurred with the idea that buildings will become simpler in form, saying that solar PV “requires simpler roofs, which therefore means simpler shapes; energy efficient envelopes work best as simple shapes.” They added that larger windows might be a rarer sight in new builds: “Overheating requirements will reduce the amount of glazing allowed and which will affect the ability to use large windows as features.”

Passivhaus & other standards

We asked our survey cohort whether Passivhaus was the only guaranteed way to achieve ‘accredited’ net zero’ on projects. One commenter said: “All new buildings be built to as close to Passivhaus standards as possible,” adding however that “more clarity on embodied carbon calculations is required.”



EXPERT VIEW

Louisa Bowles of Hawkins\Brown says that Passivhaus isn’t the only show in town for zero carbon: “Passivhaus is the most robust and tested way of minimising energy use, but with good operational energy analysis processes there are other ways of achieving the targets. For residential, it is great, for other typologies it is not as straightforward to implement, and there are other options.”

The Passivhaus Trust believes that it is the “only realistic way to achieve zero carbon without massive renewable energy expansion coupled with a significant investment in grid capacity.” Two-thirds of our respondents however believed there were other methods.

The Association for Environment Conscious Building’s AECB Building Standard is potentially a less intensive option than Passivhaus, claimed to reduce carbon emissions by 70% compared with the UK average for buildings in each typology. It’s also claimed to combine “relative ease with low cost,” and is suitable for projects from individual self-builds to large-scale residential and non-residential.

LETI (originally the London Energy Transformation Initiative)

has produced its own standard to help designers to move towards zero carbon buildings. Also a reportedly lower cost option, its Climate Emergency Design Guide provides building fabric and services, and covers operational energy and embodied carbon, as well as “the future of heat,” “demand response” and “data disclosure,” and sets requirements for both small and larger houses.

Conclusion: The role of design

There is much uncertainty around energy prices, and the feasibility of many design solutions, in the current economic and political turmoil. However, one way forward for designers, said a commenter to our survey, is to make measurement of carbon “as simple and clear as possible,” and to relate back to the building fabric, technology, and behaviour as critical for success.

Many of the building fabric improvements needed, even to Passivhaus levels, are believed to not of necessity require a huge uplift in investment. Leaner, less product-intensive constructions can enable architects to still create attractive, liveable and workable low carbon buildings, but require less of the ‘all bells and whistles’ approach the industry has previously taken, for affordable results across the board. This might be the industry’s biggest challenge, among many inherent to zero carbon.

How will architects’ role and importance change as we enter a very demanding phase, and the industry begins to attempt to make zero carbon a reality a mainstream proposition? Our survey respondents’ thoughts ranged from the prosaic (“a lot more paperwork,” “be practical, not hyper theoretical,” and “we need to gain new skills” – to better understand carbon impacts), to the more controversial: “What has to change is the self-righteous indulgence in promoting ‘high carbon’ solutions.” Clients needed to be educated, our survey said, but this will be largely down to their architects, who often don’t have the leverage in projects that they require to drive this. And there is little time to begin this proactive work of managing client expectations.

Finally, despite our survey’s finding that aesthetics need not be a stumbling block, one commenter addressed the potential elephant in the room – that low carbon needs to come before aesthetics in designs. They commented: “There is still too much emphasis on aesthetic considerations.”



EXPERT VIEW

Rodrigo Moreno Masey says sustainability is a fundamental part of good design: “It needs to stop being an optional extra. When we talk about ‘good’ architecture, sustainability has to be built in.”

However, Louisa Bowles believes that architects must upskill to include sustainability expertise: “Architects need to have this knowledge inbuilt within their training, and not rely on specialists who they only see in a meeting every two weeks. Low carbon design needs to be the first consideration on a site, not an after-thought once the concept is developed.”



Has the construction industry got it wrong about spray foam insulation?

A new generation of breathable, spray foam insulation that lets buildings breathe and doesn't trap moisture, could keep buildings warm and reduce energy bills drastically.

With energy costs going through the roof, high performance spray foam insulation solutions should be at the forefront of the battle against climate change, so why has it taken so long to win the hearts and minds of construction industry specifiers?

For years the industry has been reluctant to accept spray applied insulation as spray foam is usually associated with poor installation practices under the roof. Situations such as encased roofing timbers, dry rot and, in some cases, complete roof collapse. As a consequence, many builders and architects have avoided it and some surveyors and mortgage lenders have blacklisted this type of insulation.

Unfortunately, a combination of bad practice, inappropriate use and rogue installers has given a good product a bad name. Paddy Leighton, who was the original UK distributor of spray foam insulation, Icynene, now manufactured by Huntsman Building Solutions (HBS) under the name of H2 Foam Lite, explains.

"H2 Foam Lite was first developed in the mid-1980s in Canada, where they endure famously long and harsh winters. It came over to Europe in the 2000s and has been used in the UK since 2008. It is BBA certified so that when used correctly, it is building regulations-compliant and it compares very well with more familiar insulation products."

Open cell spray foam is applied as a two-component mixture forming a foam that expands 100 times its original size within seconds of application, adhering to almost all substrates and sealing gaps, service holes and hard to reach spaces, virtually eliminating cold bridging and air leakage.

Unlike the polyurethane foams of 20 years ago, modern spray foams such as H2 Foam Lite use water as the blowing agent. This means that the reaction between the two components produces CO₂ which causes the foam to expand. As H2 Foam Lite expands, the cells of the foam burst and the CO₂ is replaced by air.

Flexible and breathable composition

Throughout its working life, the foam remains soft and elastic, retaining its air tightness characteristics and accommodating any slight movements in the roof structure.

The breathability of the foam helps dissipate air-borne moisture, so condensation and any risk of decay or damage to timber joists is prevented.

This flexibility and breathability is particularly advantageous in historic buildings, where the building fabric often has a tendency to move. Furthermore, the fact that spray foam can be injected means that inaccessible voids can be filled without removing large areas of wall or ceiling coverings. Authorised installers simply make a small hole and, once the foam has been installed, they can check it with infra-red tools to ensure that all areas have adequate coverage.

From an environmental perspective, HBS H2 Foam Lite has a Global Warming Potential of 1 and an Ozone Depletion Potential of Zero. Nor does H2 Foam Lite or any other HBS spray foam insulation emit harmful gases once cured.

Real world performance

Although there is often a discrepancy between manufacturer performance-claims and actual results in real-life building environments, in Aberdeenshire, conservationists working with Robert Gordon University on a historic



Spray foam insulation contributed to a conservation project on this historic farmhouse in Aberdeenshire



Heat loss was reduced by 56% after installing only very thin layers of injected foam behind lath and plaster wall facings

A report from the official advisors the Climate Change Committee says the UK government must drive down energy bills and reduce climate-warming emissions by insulating more homes. They say that the government's current insulation programme is "shocking".

farm-house restoration, found that heat loss was reduced by 56% after installing only very thin layers of injected foam.

According to Leighton, "The effect of the soft and elastic, open-cell spray foam insulation on a draughty roof is similar to a person wearing a down-filled jacket. The jacket is light and relatively thin but the feathers inside trap tiny particles of warm air and protect the body from cold".

In Liverpool, Stephen Finnegan, director of the Zero Carbon Research Initiative and associate professor in sustainable architecture at the University of Liverpool's School of Architecture, was similarly nervous about spray foam insulation when he embarked on a major refurbishment of a large and run-down Victorian house.

Like many people who live in period houses, he didn't want to spoil its appearance inside and out with insulation panels, but he knew that he had to insulate the property to make it liveable. He investigated a number of interventions including spray foam insulation for the cellar and attic ceilings.



In Liverpool, Stephen Finnegan, Director of the Zero Carbon Research Initiative turned to spray foam insulation for the refurbishment of this large Victorian house

Although the results of installation of the foam insulation have yet to be finely assessed, Finnegan says that the effect of using it in the cellar ceiling and roof space has been remarkable. "The house has kept a really comfortable temperature during winter. We installed a wet underfloor heating system downstairs and conventional radiators upstairs. We're running the boiler at a low temperature and it's working well. I can sit in the attic rooms in a t-shirt with the heating



"The effect of using spray foam insulation in the cellar ceiling and roof space has been remarkable" Cellar under-floor area shown

off and it's not a problem," he says. "There's no way that I could have done that before."

According to Finnegan, performance of the house will be monitored over a 12-month period. He then aims to convert to a 100% electrically powered home by installing an air source heat pump (ASHP). "If we can run the boiler at 55°C then we know that it could potentially be replaced by an ASHP. We will then support this using solar PV panels and battery storage to minimise the amount of electricity purchased from the grid." Said Finnegan.



Under eaves area prior to spraying



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Cost competitive system

Paddy Leighton estimates that the cost of installing HBS H2 Foam Lite averages out at about £25/m² (for 100 mm thick insulation) and is far quicker and less intrusive to fit than conventional insulation methods – a 100 m² roof could be covered in a morning.

As heating costs and concerns about carbon emissions soar, any product that can mitigate these problems has to be considered. "I've overseen more than 40,000 successful domestic, commercial and industrial installations" Leighton says. "There are hundreds of thousands of houses in this country that could be retrofitted. We just need to convince the industry."

For more information about HBS H2Foam Lite products please visit: huntsmanbuildingsolutions.com/en-GB/products/open-cell-insulation

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**BUILDING
PRACTICES**

PRIVATE RESIDENCE PAROS, GREECE

Floating south

Christina Seilern designed a cluster of white forms sitting lightly on an olive grove on the small island of Paros in the South Aegean, as a villa for her family. Tom Boddy spoke to the architect

Sitting in a tranquil olive grove on the quiet west side of the isle of Paros, Greece, is a strikingly modern but site-sensitive residence, designed by Christina Seilern, founder of London practice Studio Seilern. It's composed of a cluster of disaggregated, dynamically linear white forms, aligned with the passage of the sun.

Grouped around a stunning, cantilevering infinity pool which reaches out westwards and blends the view of the pool with the Aegean, the home's forms are oriented to take the full benefit of the sunset, particularly in the summer months.

The building, which was completed in 2021, is not only a significant new residential project for the practice, it's also a second home to Christina Seilern and her family. The architect's carefully-detailed design displays the deceptive simplicity and elegance which characterise many of her practice's works. Recent examples of similarly highly crafted residential schemes by Studio Seilern including a clutch of other high-end, horizontally-planned homes on the neighbouring island of Antiparos.

Despite having nine bedrooms, the building contains no corridors or hallways, instead circulation flows via the exterior spaces and various courtyards. It's built across three levels, but largely single storey – there's a small second level containing the master bedroom, and a lower ground housing two bedrooms and a bathroom. Its horizontal form combines 'floating' slabs and materials commonly used locally, forming an intricate composition which celebrates materiality.

When Christina Seilern and her Greek husband acquired the site, which had

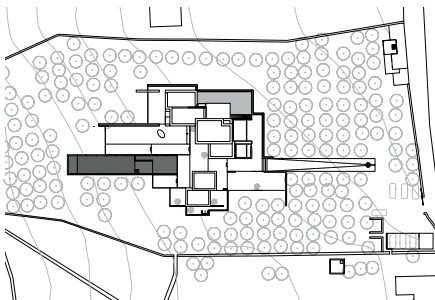
planning permission to build a home, it was a fully functioning olive grove, and is still harvested. "We knew we had inherited something quite strong," says Seilern. Greek laws have changed with regards to the setback requirements from the sea, however fortunately the granted permission allowed her to build within the old 'setback,' thereby in a preferable spot.

The site is a "very windy place" although benefitting from being right next to the sea, and boasting fantastic views of the surrounding islands and the Aegean itself. The initial design response was all about "dealing with the elements of the site," says the architect, adding that she "didn't want to create a "radical architectural masterpiece" because that would "feel out of context" in terms of the unspoilt surroundings.

While there were some set functional and programme requirements, Seilern approached the project without having a pre-established aesthetic. She affirms that the project is representative of the highly context-sensitive approach that her practice prides itself on in its commissions. "We try to react to the places we build in. The architecture is informed by the culture of the site." She describes how, once that context is firmly embedded, "the design process is like "writing a book, the story can take you to places that you haven't imagined."

Form

The building's assemblage of forms is not only determined by the Greek islands' familiar vernacular architecture of thick-walled "white boxes," designed to keep



A 'LITTLE VILLAGE'

Enabled by replacing corridors with external circulation, the architect created the house as a series of separate elements



interiors cool in hot sun, but also by the site's existing landscape. The olive grove was planted in a grid formation, and therefore when deciding on the orientation, Seilern explains that it was a "natural step to align ourselves to this grid," as well as following the sun.

The building's strongly linear volume and deliberate orientation is centred around an east-west "solar axis." The home's key components have all been designed to maximise enjoyment of the sunset, and frame views through glazing and open apertures. "A lot of the design was really about capturing the beauty of the sunset," which included creating seating areas that would "maximise the long views of the sea."

Another key design imperative was to create a home that "felt like it barely touched the ground" – a structure that "lightly floats," says Seilern. As a response to this, the villa is assembled of overlapping terrazzo slabs and platforms, with different areas and courtyards varying in level while overhanging from each other. These compositional elements "dematerialise things, and make the building appear weightless," says Seilern.

While the freestanding, asymmetrical exterior walls appear somewhat randomly

placed (although aligned with the 'solar axis,' they have a vital purpose. The exposed, flat location at the edge of the island is vulnerable to the strong prevailing winds of the Meltemi – the name the Greeks and Turks use for the dry Etesian wind blowing from north to northwest across the Aegean Sea. Therefore the geometry of the walls but also the courtyards have been carefully planned to break up the wind, resulting in sheltered outside areas.

Pool & pergola

The project's centrepiece is the striking 'negative-edge' pool, extending over the olive grove, and being the most eye-catching example of the 'floating' theme. Seilern explains how the home's "long, linear architecture" was designed around the pool, and with it presenting "six different edge conditions," she says, "it was probably the most difficult thing to design in the house."

Despite being a massive structure, it appears light, sitting above the landscape. Mirror-clad to reflect the Mediterranean sky, the pool blends into its surroundings, giving the effect of a further, 'floating' slab. "This allows the landscape to take precedence and occupy the whole site visually," says Seilern.



© Louisa Nikolaidou

In the evening, the pool “becomes like a mirror itself,” says Seilern. It turns orange at sunset, and “bounces light onto the rest of the villa.” Ensuring its pristine, minimalist lines remain uninterrupted, the technical aspects in the pool such as the water jets and returns have all been concealed.

With the site’s exposed location, the architects knew the wind would churn up the water’s surface, however they had to build in a contingency to tackle this once it became clear exactly how it would perform. The solution was a system that enables the level of the water to be raised or lowered depending on wind speed and direction. “These are the things that you can’t design on paper,” says Seilern; “you have to figure it out at the later stages.”

Continuing the linearity of the project, adjacent to the pool is a long bamboo-roofed pergola, a “big element” of the scheme, says Seilern. Working alongside a specialist fabricator, the team looked to reimagine regular Greek pergolas, which are “usually a wooden or steel structure,”

to again give a lightweight feel. Constructed using gumtree, the panels were fabricated and then “hung underneath the structure, rather than above it. The whole thing feels like it’s floating.”

This long, naturally covered shape is punctured by a single oculus which brings light into the poolside lounge (which made from chiselled marble), and “acts a bit like a sundial,” says Seilern. She adds: “It’s fun, because it illuminates the space in a different way, every hour of the day.”

A ‘little village’

Rather than being ‘one building,’ the various parts – facilitated by avoiding corridors in place of external circulation – are designed as stand-alone rooms, each with their own entrance. “We wanted functions to flow between each other. Removing corridors means removing boundaries and barriers,” says Seilern. “It’s like a little village!”

With its main purpose a summer beach house, blurring outdoor and indoor was



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© Christina Seilern

a key requirement. This extends to the various functions: “The living room is the kitchen. The office is an extension of that.”

The largest volume, sitting behind the pergola, occupies two levels, containing a living space on the ground floor and a bedroom above, which has a terrace accessed via sliding doors. The other bedrooms all have their own courtyard as well as a view of the sea, and every courtyard has its own tree. Carrying on an old tradition, Seilern put a Cypress in one of the courtyards. “The Greek landscape architect we worked with told me that when a boy is born (on the island of Andros) where my husband is originally from, a Cypress tree would be planted.”

Integrating “moments” of nature within the project was crucial to the project’s success in helping the building blend thoroughly with its surroundings. “We wanted to feel as if the natural landscape was seeded within the house itself.” The concrete-formed outdoor levels are continually interrupted by planters or trees, thereby “softening everything up wonderfully.” In the morning the family has

breakfast by the fig tree, providing them with fresh figs.

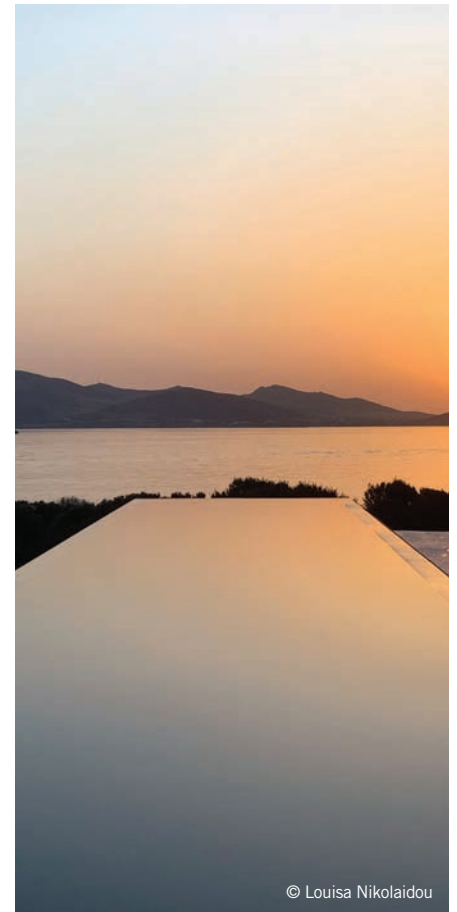
Materials

A large focus of the project was to use sustainable and local materials, to this end Seilern specified an aerated Eaton concrete block reported to use “about 30% less carbon than what you would usually use for a house.” As well as acting as an insulator, it avoids the typical cavity requirements of residential designs. According to Seilern the project achieved a very low embodied carbon score due to the material choices. The terrazzo, marble, and other materials were all supplied through local suppliers and artisans. “We tried as much as possible to go local to reduce the shipping.” For example the cladding and stone used in the courtyards are all from the island’s quarry.

Seilern spent considerable time “looking for clues” in the history of the architecture of the island to inspire her design. “What I discovered was that the many churches on the island use stone surrounds around the windows and entrances, making them feel a



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© Louisa Nikolaidou

bit more special,” explains the architect. The apertures within the structure are framed by a densely hammered Aliveri marble, which creates the illusion that the whole slab is carved out of the material. It was “bush hammered” to turn it a “butterlike, soft whitish grey.”

She said that she wanted to try and emulate some of these historic architectural techniques to try and embed the project in its locality, with a strict focus on avoiding pastiche. Instead it would be “a reinterpretation of something that has existed for thousands of years,” says Seilern.

A restrained palette

The project’s minimalist design ethos and simple arrangement carries on inside. The interior uses a very limited palette of high quality materials: white oiled oak, terrazzo, stone, and white render. Says Seilern, “If you work with great materials you don’t need to overdesign everything.”

Counters and benches feature sandblasted and chiselled stone. These details, or “careful adjustments,” say the architects, “provide complexity without

overloading the site, allowing the magic of the landscape to imbue the house with the unique energy which is the reason we build by the seaside.”

Much like the dexterous hiding of services in the exterior, internally the technical aspects such as the air conditioning slots have been discreetly covered. “I didn’t want to see anything – it was all about keeping it simple.”

In the bedrooms, the beds sit centrally rather than against a wall, allowing space for a desk behind them. “There’s something very nice about being able to circulate around it,” says Seilern. The large, unadorned square windows “appear like paintings,” offering panoramic views of the local scenery.

Seilern is justifiably proud of the stunning holiday home she has created on this small island, one which enhances and respects its landscape. Responsible for some renowned concert hall designs, she finds the house similarly inspiring now, despite having spent a lot of time and effort on realising it: “When you arrive, it’s like a symphonic moment.” ■

The project’s centrepiece is the striking ‘negative-edge’ pool, extending over the olive grove, and the most eye-catching example of the ‘floating’ theme

Nordic Royal in Nova Scotia



Photos: AMAC Photography

Nordic Royal golden copper alloy detailing accentuates the art-deco inspired, subtle opulence of a new, award-winning luxury development in Halifax, Nova Scotia.

Designed by Dexel Architecture in collaboration with Fathom Studios and built by Dexel Developments, for developer Lawen Group, the George Residence combines commercial and residential uses including 164 suites and seven townhouses. The sleek, contemporary design utilises a restrained palette of high-quality materials in neutral

colours – accentuated by elegant, crisply detailed and executed Nordic Royal golden copper alloy highlights.

External copper alloy details include impressive portals announcing individual entrances, full height margins inset within the dark brickwork, oversailing soffits to the cantilevered corner tower and reveals to openings around the roof terrace. Thematically, Nordic Royal elements continue internally including elevator doors and surrounds, panels accentuating glazed lobby doors and even the smallest details

– such as wall corner guards and curved skirtings to columns.

Nordic Royal is an innovative alloy of copper with aluminium and zinc, giving a rich golden through-colour that is very stable. The surface retains its golden colour and simply loses some of its sheen as the oxide layer thickens with exposure to the atmosphere, resulting in a protective matt finish.

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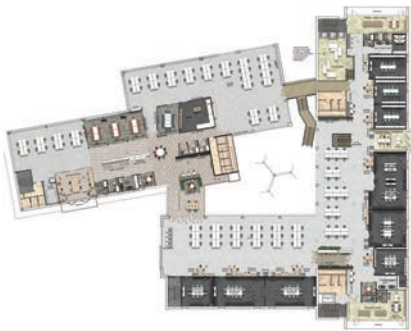
**JOULES HEAD OFFICE
MARKET HARBOROUGH**

A flexible fit

When clothing brand Joules gave architects Edge the brief to bring its five offices together under one roof in Leicestershire, designing for new hybrid working patterns was high on the agenda, with open, collaborative spaces which echoed brand heritage. Roseanne Field reports



It was important to Joules that the outside spaces were viewed by staff as an extension of the workspace



Founded in 1977 selling colourful ‘country’ clothes, Joules eventually established its own successful clothing line in 1999 and opened a network of shops in the 2000s. Reflecting its rapid growth, the firm’s disparate office bases had also expanded in an ad hoc way, but with some negative outcomes.

Architecture and design firm Edge’s managing director Mark O’Neill says the growth had “created silos and inefficient work processes,” and head office Joules’ founder Tom Joule had a vision to house everyone in one place, a greatly expanded version of the current HQ in the firm’s home of Market Harborough. This led to the purchase of adjacent land, a partial demolition and refurbishment of existing structures, and a new, 60,000 ft² building which would enable all of the admin teams to work under the same roof for the first time.

Flexibility brief

Following a ‘creative competition,’ Edge was appointed to design a new building with the “brand architecture” that would make it the “physical manifestation of the Joules brand values to inspire and provide the springboard for the brand’s continued growth,” as O’Neill puts it.

As well as placing an emphasis on a new workspace that would represent the brand’s

heritage, the other key brief elements were making best use of the semi-rural setting, and future-proofing so that the building would adapt to modern hybrid working patterns. This evolved dramatically throughout the design and construction process, with the arrival of Covid in 2019.

Edge’s detailed plan allowed for expansion and increases in the number of employees. The building was originally designed to begin with ‘1:1’ desking, before gradually evolving in an organic way to agile working practices by year five.

With this approach planned from the outset, “the framework was easily adjusted to accommodate post-pandemic hybrid working,” explains O’Neill. “Changes to work layouts and plans were accommodated even while the building was under construction, with little or no change to the design,” he says. The only change was that the ‘year five’ strategy was implemented immediately, to allow for agile working as soon as the building opened in 2021.

The key motivations for bringing the teams together under one roof were “improving efficiency, collaboration, and creating a unified team spirit,” says O’Neill. This was alongside the creation of the “physical embodiment of the brand in the town it was established in. “It was an opportunity to create a space that lives and



breathes the brand values.” In this way, it would also provide a draw for attracting new, high-quality staff.

Challenges

Although experienced in workplace design, Edge was challenged by the project. The semi-rural location meant being particularly sympathetic to the natural surroundings. They were also integrating the new design with an existing building, Compass House, and accommodating a wide range of other activities, such as storage, workshops, and office space.

Addressing how to put the brand values centre stage, the architects “delved deep into Joules and its culture,” says O’Neill. He says this enabled them to “put people, and Joules’ unique processes at the heart of the design.” This was manifested in “creating a unified, cohesive space and integrating the interior and exterior design.”

This ethos influenced design decisions in many ways. The building’s reception is a central hub; an important design decision for several reasons. It was part of the futureproofing strategy, allowing for the potential subletting of space later down the line, and the nature of Joules’ work developing new clothing lines also includes an element of confidentiality, meaning the central reception also acts as a “security point.”

Wellbeing

The overall aim was promote staff health and wellbeing, including wayfinding signs encouraging staff to use stairs to reach common areas. These were designed to be “pleasant, comfortable spaces that facilitate and promote movement within the building, and encourage staff interactions,” O’Neill says. They contain “broad passageways” to also allow for the movement of goods and products around the site. Exercise is encouraged further by inclusion of shower facilities, as part of Joules’ cycle to work scheme, along with bicycle parking areas. A boot storage room is located off the reception, encouraging staff to take walks through the adjoining fields.

Further wellbeing factors include providing staff with freedom of choice when it where they want to work day to day. “The layouts are spacious, including the landscaped exterior, quiet space, collaborative space and social space,” explains O’Neill. The more open working areas utilise “sound absorptive materials, and biophilic design principles create a calm and relaxing workspace, including office-wide planting and greenery.”

The client’s sustainability goals tied to the wellbeing aims, with supply chains and materials carefully considered. They also enabled Edge to design for plenty of natural daylight, to reduce the need for



HEALTHY SPACES

The onsite cafe is run by a local business and features locally-sourced products
External images © Baileys Construction
Internal images © Tim Crocker



artificial lighting.

It was important to Joules that the outside spaces were viewed by staff as an extension of the workspace, and O'Neill says this is made feasible by "easy accessibility" of the areas. As well as maximising natural light and taking advantage of the views, the design "creates physical inside/outside connectivity," he adds, achieved through the use of large glazed gables and full height glazing.

The onsite cafe, which is run by a local business, offers healthy food options, utilising locally-sourced products and, in the future, onsite allotments. Purification systems are in place for potable water, and HVAC specifications reportedly "meet or exceed" British Council for Office (BCO) guidelines and environmental certification schemes. "Zonal temperature, humidity, and air quality is monitored for the highest possible comfort conditions," adds O'Neill. Office area ventilation is demand-controlled to regulate rates and reduce CO₂ levels, as is ventilation (and VOC levels) in the workshops and print department.

'Sit/stand' desks have been included throughout, and there's a fully equipped and private room for parents to express or feed their babies while at work.

Location & brand values

The existing Compass House has been repurposed and incorporated into the new design, which O'Neill describes as a

"series of new interlocking barn structures revolving around a central atrium."

The external envelope of Compass House was upgraded, and a two-storey feature screen added to the south and west facades, providing a structure for climbing plants which continues to the interior. The building also underwent an internal refit.

The barn structures were inspired by the British countryside. The tallest structure on the site – the east barn – was designed to serve as a landmark 'signature' building. "Using the local farmstead vernacular as a starting point for the visual aesthetic maximises appreciation of the surrounding countryside and creates a strong visual presence in Market Harborough," O'Neill says.

The east barn also serves as a gateway into the campus, with the other buildings reduced in mass and scale. "We wanted to create a sense of gradual discovery on the journey from public highway to front door."

Each component 'barn' has its own character, created via individual scale, massing, materials, and finishes. "The individual treatment of each component building is an important device in breaking down the scale of the campus to a human scale and reflects the farmstead typology."

The central atrium was designed to "provide the feeling of being in the yard of a farmstead, enclosed and protected by the surrounding barns and other buildings," O'Neill explains. "It connects to everyone



and at its centre is a structural tree supporting the roof, symbolising a tree of growth.”

Key to creating the barn feel was the choice of materials and colours. “They correspond to the language and palette of materials often used in farmsteads, and the detailing aims to be traditional with a contemporary twist,” O’Neill says.

The southern face of the site — a small barn — is clad in timber rainscreen boarding, and features a west-facing gable with elements to encourage wildlife to nest. It also has a sedum roof, and a large glazed opening on the south facade’s ground floor appears as a barn door.

The large east barn’s external ground floor wall is finished in Leicestershire ironstone, with the upper storeys and roof clad in metal. “In tune with the way traditional farmsteads tend to present a closed facade to the public highway, this barn offers a relatively closed face with a series of punch-hole windows forming a regular pattern,” explains O’Neill. “Large openings on the north and south gables offer glimpses to the inside and a double height project window creates a ‘special event’ on the east facade.” The use of these materials also aids in providing a feeling the site has ‘evolved over time’, while the central atrium visually connects everything.

The ‘barn-style’ design naturally ties into the other key part of the brief, representing the Joules brand and countryside heritage. It

was therefore continued internally, exposing the structure in the main workspace, “maintaining the honesty and simplicity,” says O’Neill. Signature Joules yellow barn doors feature in the artists’ watercolour room, and enclosed meeting spaces have barn-inspired treatments. “The Joules brand values are omnipresent through key moments externally and internally,” he adds. “Everything from the reception, meeting spaces and communal areas, to wayfinding, textures, and finishes have been designed to inspire and engage visitors and users in the Joules way of life.”

Layout

The internal layout of the fully accessible buildings has been carefully considered to allow teams to better connect and collaborate, through “visual and virtual connectivity of spaces, inside and outside,” says O’Neill. The layout of pathways and connectivity was considered in both specification and fitout, which involved looking at the time staff were using certain facilities, and testing different desk arrangements. The open plan areas also feature screens which display company updates and social media.

The working areas have been divided into ‘neighbourhoods’, with each tailored to the individual department’s needs. These neighbourhoods contain “local activity-based settings and communal areas,” O’Neill explains. “The spaces

The internal layout of the fully accessible buildings has been carefully considered to allow teams to better connect and collaborate, through “visual and virtual connectivity of spaces”





PROJECT FACTFILE

Client: Joules

Architects: Edge architecture + design

Structural engineers: Cundalls

M&E engineers: Watermans (mechanical); Electract (electrical)

Project manager: John Lester Partnership

Main contractor: Baileys

have been designed and set up to create flexibility in ways of working from extensive collaborative work spaces to easy connectivity with team zones and a desk booking system.”

The areas also include the appropriate technology to support agile working, and the communal areas include a cafe and ‘town hall’, as well as outdoor spaces. There are also meeting rooms, ‘refresh’ spaces and significant storage.

Planning storage was one of the bigger challenges for Edge; the company would have to adjust to less storage than they previously enjoyed. However, this in turn has advantages: “controlling storage capacity and retrieval induces natural selectivity about retention and reuse of goods,” he says.

The overall internal layout was designed with the year five levels of occupation in mind. “The internal layout provides for flexibility, interaction, and easily reconfigurable dispositions of furniture groupings.” Furniture placement and screens also assist with acoustic regulation.

Facilities & sustainability

The open plan nature of the building meant Edge had to work closely with fire engineers Salus to ensure any potential fire risks were addressed and that it would be compliant with BS 9999. “This approach enabled the team to provide engineered solutions and not have to rely on Approved Document B alone,” says O’Neill. “The careful placement of stair cores, establishment of clear exit routes, and detection and alarm system performance all contributed.”

Other necessary environmental factors were also well thought out — plant areas have been futureproofed for possible expansion, and energy usage monitoring utilises the latest technology. All services can be controlled and monitored via a building management system.

Artificial lighting in production areas was required to be almost at daylight quality, but automatic PIR lighting provides reduced energy usage at weekends and evenings. Individual lighting control is only provided in certain areas.

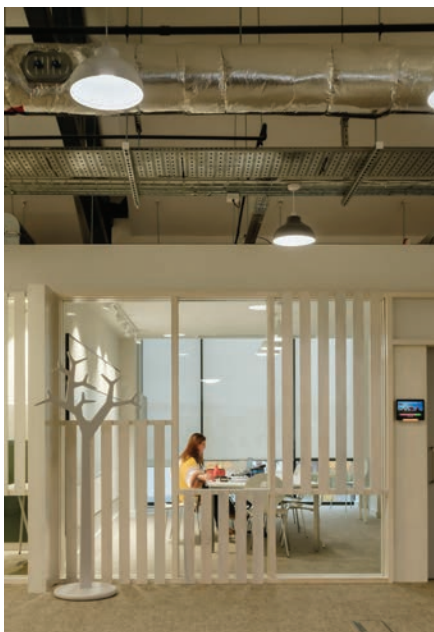
Energy saving strategies implemented include high performance insulation and glazing, airtightness, appropriate shading, and optimal window sizing. “New technologies and equipment reduce running and maintenance costs and the waste and reuse/recycle system is easy and cost effective to maintain,” O’Neill adds. Local contractors and



suppliers were also used wherever possible, and additions such as a ‘bug hotel’ are “not merely add-ons, but reflect a philosophy of countryside, environment and sustainability.”

Since the office’s opening in 2021, benefits have “accrued at all levels,” says O’Neill. “From operational, in terms of savings and productivity, to the long-term preservation of the brand and its unique values.” Teams are able to work together in a way they couldn’t previously, and the way the building has been designed means everyone can always see the ‘end product’. “Additionally, bringing the creative workshops into this unified space amplifies the spirit of creativity across the business.”

As well as giving Joules the presence in Market Harborough it wanted and creating a workspace to attract new talent, the brand has seen improvements in staff efficiency and a reduction in operation and maintenance costs. “The feedback following occupation has been phenomenally positive,” says O’Neill – best summarised by Tom Joule himself: “I can’t believe it’s so faithful to the concept. It’s taken Joules back to our roots and given us a platform for the future.” ■



Skyfold launches ground-breaking new moveable wall



Skyfold has launched a pioneering, fully automatic, moveable wall solution into the UK. The Skyfold Prisma, which is exclusively available from leading moveable wall specialists, Style, is a new and streamlined glass vertical partition which not only allows light to shine in but does so without the use of any wall or floor tracks, rendering it completely invisible when stored in the ceiling. Skyfold Prisma's glass panels combine with a minimalist frame to allow light penetration into otherwise dark rooms and corridors, creating an open plan feel to any area, positively impacting both mood and productivity. With an impressive 52 Rw dB acoustic rating, Prisma also delivers privacy between divided spaces, allowing confidential meetings, classes, and collaborations to occur simultaneously. With space always at a premium, the panels of this innovative new partitioning wall cleverly 'taper' down into position, making it suitable for restricted areas or where there is potential for obstructions. Further maximising space, when not required, the partition can be quickly retracted into the ceiling cavity where it is neatly stored, completely out of sight. Prisma is available in a variety of materials.

www.style-partitions.co.uk

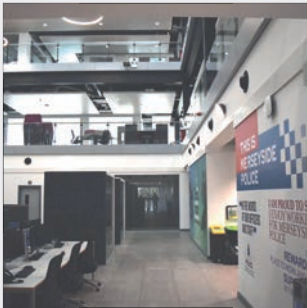
Contemporary access for York flexible workspace



Completed to a high standard throughout, Independence House offers multi-purpose office space on the outskirts of York. Delivering an impressive frontage, TORMAX was contracted by Frostree Ltd to install a 3-wing revolving door to the main entrance. Manually operated, the door reflects a focus of the development to maintain a low carbon footprint, while still ensuring smooth and unhindered pedestrian access. A revolving door has the added advantage of reducing heat-loss from the building, with one door leaf creating a barrier between the reception and the outdoors, at all times. "A revolving door delivers timeless sophistication to any facade," comments Simon Roberts, MD for TORMAX UK Ltd. For busier locations, where an automatic entrance may be required to ensure unhindered foot traffic flow, TORMAX offers a complete range of options including automatic revolving, sliding, swing and folding doors. In-house designed iMotion door operators deliver exceptional longevity and reliability whilst also being one of the most energy efficient solutions on the market today.

www.tormax.co.uk

Gilberts' background role in improving police estate efficiency



Capital investment in a new £48m headquarters building is predicted to save Merseyside Police approximately £250,000 a year in estate operating costs by delivering improved energy efficiency. A key component of the enhanced energy efficiency is the ventilation – delivered by Gilberts Blackpool. Peter Wright, design engineer at A & B Engineering, explained: "Merseyside Police appreciates that a light, well-ventilated working office environment is beneficial: achieving that was a fundamental design principle in the project. We needed to balance how to achieve a flexible system that would deliver now, and over the years as use of the spaces changes. "The technical expertise Gilberts brings enables us to provide an effective design and accurate costing to the client. Even if a design changes during the contract, as often happens, we know Gilberts is great at supporting us with selection, quotes, delivery, even if non-standard solutions." Gilberts is one of Britain's leading independent air movement specialist, and is unique in its ability to develop components, 'mainstream' or bespoke – entirely in-house, from initial design through tooling, production, testing and supply, at its 85,000 ft² manufacturing facility.

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EAAA Headquarters wins Project of the Year



© Sarah Toon Photography

Breathing Buildings is delighted that East Anglian Air Ambulance (EAAA) charity headquarters, Helimed House, has won Project of the Year at this year's CIBSE East Anglia Awards. This follows hot on the heels of Breathing Buildings celebrating

winning the Collaboration of the Year category at the HVR Awards for the same project a week earlier. At the CIBSE East Anglia Awards Helimed House was recognised once again for its merit with the project team presented the award at the Region's Annual Dinner held at the University Arms, Cambridge on 7th October.

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Pendock Linea building linings – The perfect finish

The origin of Pendock Linea building linings began more than 20 years ago, when the name was first applied to the company's perimeter casings, which were being widely specified to conceal HVAC systems, as well as electrical and other interior building services.

Today, the expanded Linea range includes nine separate building lining and architectural

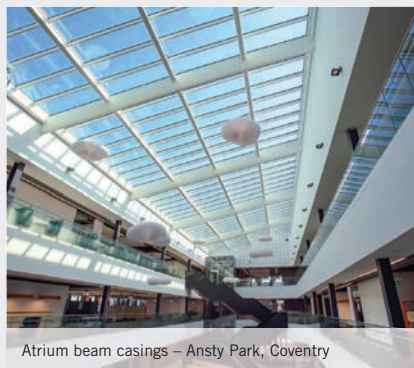


Pendock Linea parapet capping – London

finishing products that now encompasses wall linings, ceiling rafts, lift reveals and soffit linings, as well as bulkheads & fascias, parapet capping and pilasters. Specialised rooflight linings & atrium beam casings complete the range.

Each provides a practical and aesthetic solution for specific applications, while also retaining a high degree of versatility, as every Linea product is bespoke manufactured to the dimensions and specifications of individual projects.

The wall linings range perfectly illustrates this point, as they can be used for both interior and exterior applications where decorative or protective solutions are required. They are particularly effective in areas of high pedestrian traffic and are widely used in a diverse range of sectors to resist scuffing and damage to walls, such as airports, schools, public transport, retail and commercial buildings. Stainless steel and aluminium are commonly specified materials, although



Atrium beam casings – Ansty Park, Coventry

they can also be manufactured from a wide choice of materials including plywood; MDF or compact laminate, as well as textured metallics and a range of other finishes.

A recent project at Avanti Fields School in Leicester made excellent use of this versatility, where 10 external wall linings incorporate a unique design, which was digitally printed durable compact laminate panels. They were then installed to the architect's specification by Pendock's specialist installation team.

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Opening doors for GEZE UK



GEZE UK has demonstrated its commitment to supporting customers with technical advice and product guidance with the recent appointment of Ian Prince, who joins the renowned manufacturer of door and window control systems as Area Sales Manager for supply and fit of automatic doors covering the East Midlands and East of England. Ian will be focusing on building strong business relationships with customers supporting them by analysing their requirements and proposing technical solutions from the company's extensive range of automatic operators. With a strong track record of B2B sales and over 20 years' experience in account management and business development across 5 different industries Ian brings with him a wealth of knowledge to assist customers make the right choices for their projects. Ian has a BA (Hons) Degree in Marketing, is ADSA accredited and has won the Yellow Pages award for performance several times. Ian said: "I am delighted to join GEZE UK, they are an industry-leading company that offer a complete service of design, supply and fit of automatic doors."

01543 443000 www.geze.co.uk

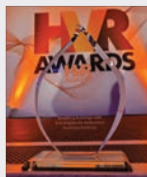
Aquarea A2W K and L Generation Heat Pumps



Panasonic is expanding its Aquarea range of air source heat pumps. The Aquarea K and L generations are the latest innovations to emerge from Panasonic's R&D centres and reflect the company's values through innovation and are in keeping with its vision of creating technologies for a low-carbon society. The new models are focused on improving energy performance and offering a series with natural refrigerant. The K generation utilises R32 refrigeration, making it an excellent solution for new homes. Meanwhile, the L generation uses the natural refrigerant R290, which has a Global Warming Potential (GWP) of only 3.

08082 082 115 www.aircon.panasonic.eu

Breathing Buildings Wins at HVR Awards



Breathing Buildings, a leading provider of controlled hybrid ventilation systems, is celebrating winning the Collaboration of the Year category at the prestigious HVR Awards. The company scooped the award for its collaboration with the East Anglian Air Ambulance (EAAA) charity and the project team to improve indoor air quality (IAQ) and the working environment at

the EAAA's new headquarters, Helimed House. Breathing Buildings received the accolade at a glittering awards ceremony held at The Chelsea Harbour Hotel, London on the 29th September.

01223 450 060 www.breathingbuildings.com



A fresh approach to green infrastructure

Louise Page of GreenBlue Urban details how successful collaboration and implementation of multi-functional SuDS interventions can enable specifiers to maximise the benefits of public space in projects

We are all aware of the benefits well-designed green and blue infrastructure can bring, for example in enabling wellbeing by encouraging active travel, bringing communities together, and reducing loneliness, and also improving academic skills, concentration, and behaviour. The need for diverse public green space also needs to be considered, addressing any perceived physical, social, or cultural barriers early on.

The pressure on land for both new developments and in built-up areas is such that reducing the footprint of a scheme is a major factor in the design and delivery of Sustainable Urban Drainage Systems (SuDS) – assemblies of components that intercept stormwater and slow its flow, before it

reaches a final attenuation or infiltration point – without reducing the amount of land required for the scheme.

For specifiers, there are both legal, corporate, and economic reasons for finding better and more sustainable ways to manage surface water drainage on new developments. Therefore, the return on the developer's investment in the land and, given that well-designed SuDS offer additional benefits of amenity and biodiversity, properties protected by SuDS can attract a higher premium. Indeed, some housebuilders have advertised the use of SuDS as a selling point.

Biodiversity Net Gain – by law

The new legislation regarding Biodiversity Net Gain requires developers of new



Some housebuilders have advertised the use of SuDS as a selling point

schemes to show that they have increased biodiversity by a minimum of 10%. Coming into effect in 2023, it has helped focus attention on the need for planning for long-term biodiversity. Currently quite a blunt tool – with potentially very ‘biodiverse’ features not given the weighting we think they deserve – it will doubtless result in an improvement in the quality of the landscape. The emphasis on hedgerows and habitat creation gives the opportunity for supporting a wide range of insect and mammal life, and the resulting food chain increase.

Deciding which SuDS interventions to employ and how to combine them to create an effective solution is where collaborative working is key. Developers, local authorities, architects, landscape architects, drainage engineers and utility companies can complement one another by providing problem-solving skills, policy knowledge, creative flair, and site assessment.

SuDS systems can work on practically any scale; from ‘plot-level’ components like rainwater harvesting and green roofs to very large schemes that include several SuDS systems working together. The impressive regeneration scheme in the Grangetown area of Cardiff is an excellent example, and one that we are proud to have played a part in.

A nature-led approach

What options are available? Not all SuDS interventions have to be major. Small-scale features are possible with systems such as bioretention rain gardens, that capture and cleanse stormwater providing amenity and biodiversity to new and existing spaces. Modular systems can be used on a

single plot, for example, as a ‘MicroSuDS’ solution, or combined to provide effective flood mitigation on highways or retrofitted into urban environments.

Often the ‘pipe to pond’ approach is used, however the pond could be disproportionately sized, or take up valuable developable land. As a method of intercepting runoff, using trees in ‘Tree Pit’ systems uses the soil they grow in to take up a lot of the strain. They significantly reduce the volume and velocity of water making its way through a SuDS ‘treatment train,’ so any attenuation point at the end of the train can be smaller, or take a different form from the typical pond or swale.

Using good quality tree planting, specifiers can honour their obligations to mitigate developments’ impact, planting into optimal underground environments to offset damage to the environment. Working with bespoke software tools such as i-Tree and CAVAT, specifiers can also assess the limits to which new planting can achieve the specific amount of net gain they require.

Putting nature at the core of a drainage design strategy is key to adding value to development projects. It is possible and cost-effective to combine green and blue infrastructure, at the same time as getting additional biodiversity and saving money on drainage.

The solutions shouldn’t be restricted to holes in the ground. Trees and green infrastructure play an important role in addressing flood risk. All it takes is a bit of fresh, creative thinking and planning.

Louise Page is marketing manager at GreenBlue Urban



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Pumping station selection

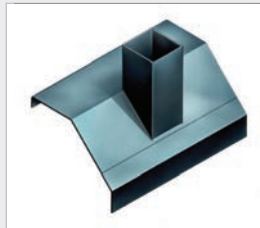


The provision of a pumping system is becoming more common in many developments as gravity cannot always be deployed and a pumped solution would be critical to the success of the scheme. Pumping stations fall into three main categories: Package Pumping Stations for small to medium applications; Adoptable Pumping Stations for medium to large housing estates; Larger bespoke pumping systems for drainage, flood control and foul schemes.

Strong consideration to the environmental performance of pumping stations is key, with emphasis on energy consumption, repairability, life expectancy and recyclability. Contact **TT Pumps** for more information.

01630 647200 www.ttpumps.com

Windpost advantage



Cavity Trays Ltd has increased its range of windposts, and now offers styles in sizes to suit most requirements. Manufactured from solid DPC, the windposts are supplied in one or two connecting pieces, and are shaped to ensure water entry is prevented from gravitating and soaking into areas that must be kept dry. Windpost design includes self-supporting models, that build into one skin only so structural continuity is maintained.

enquiries@cavitytrays.co.uk www.cavitytrays.com

Newton Waterproofing delivers nationwide



Newton Waterproofing, the UK's leading independent designers and suppliers of guaranteed waterproofing systems, has expanded its tracked delivery service on its own fleet of vehicles across the country, providing its customers with an advanced nationwide delivery system and vehicle tracking. The expansion follows the successful opening of the company's new Northern Distribution Centre in Leeds, giving customers in the north of the UK quicker and easier access to the company's extensive range of waterproofing products, technical services and delivery options. Newton's new fleet of vans is accredited by the Fleet Operator Recognition Scheme.

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Thermoblocks maintain continuity to 'wrap' for bespoke Bristol house build



Already well accepted across the UK construction industry as a quick and effective means of addressing cold-bridging around the perimeter of building oversites, or beneath parapet walls, Bristol based architects Marshall & Kendon have sought technical advice from manufacturer **Marmox**, regarding the integration of its Thermoblocks into the exterior insulation 'wrap' of a bespoke, near-to-zero timber frame construction. The founding partner of Marshall & Kendon, Jeremy Marshall, confirmed: "It is our habit as a practice to always run insulation across the outside of the structure, wrapping them rather than putting it within the timber frame. In this instance, Thermoblock enables us to make the layer of insulation continuous as it passes through the loadbearing structure, while the airtightness membrane is continued up the outside of the sheathing boards. Our structural engineers were satisfied that Thermoblock offers more than adequate compressive strength and our main contractor, who is very innovative in their approach to timber frame construction, agreed to trial them."

sales@marmox.co.uk www.marmox.co.uk

South London loft conversion specialist finds multiple uses for West Fraser's SterlingOSB Zero



A family-run firm from Surrey, which specialises in loft conversions and the creation of bespoke garden rooms, is making extensive use of SterlingOSB Zero from panel product manufacturer, **West Fraser**, based on the board's value, performance and ease of installation. MB Loft Conversions, based in Caterham, was established eight years ago by Mark Bell. Typically, the company completes up to a dozen loft conversions and other projects each year. Mark purchases his SterlingOSB Zero from Selhurst Timber and other builders merchants' local to clients' properties. While he mainly prefers to use 18 mm tongue and groove boards for their strength and excellent alignment when laid, some of MB Loft Conversions' builds also use quantities of 11 mm (square edge) SterlingOSB Zero. Mark Bell commented: "There is a number of reasons why we prefer to use both West Fraser's 8x4 and 8x2 T&G Sterling OSB Zero, apart from it being a product I'm very familiar with. We know we can rely on the quality, while the 18 mm T&G boards are like gold when it comes to doing flat roofs and make a really good deck."

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The SWIFIX fixing solution has been designed and developed specifically for refitting and installing both lightweight and heavy items through External Wall Insulation (ETICS) systems.

The fixings can be used during or after the EWI system installation, providing the most cost effective and maintenance-free solution for the market, whilst also ensuring the integrity and protection of the EWI system, protecting guarantees and warranties.



The solution is suitable for all system finishes from brick slip, textured and rough-cast/dashing and through all types of insulation types and thicknesses of 50 mm to 300 mm.

Tested by the BRE for strength, compression, wind, load and thermal loss the fixings ensure the thermal efficiency of the building is maintained and provide an aesthetically pleasing appearance to enhance newly installed external wall insulation. The fixings are approved by the NHBC and Sky (for satellite dishes), as well as being recommended by numerous EWI system designers and installers across the UK for securing any item from bird netting, external lights and rainwater goods to air source heat pumps and canopies.

Considering the environmental impact, all products are manufactured in the UK using recycled materials and are available in black and white as standard; however bespoke colours are available to compliment



the finished render if required. Fixings are available direct from SWIFIX Ltd via their on-line store and from various distributors and builders' merchants throughout the UK, with design and technical guidance available.

For more information about specifying Swifix fixings, please visit the website.

01884 560477
www.swifix.co.uk

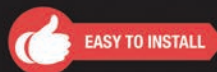
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Insight Magazine

Insight Magazine is a residential construction magazine bringing you industry news, focused features, and on-site spotlights every quarter. Edited and published by Resibuild, our aim for Insight is to keep you informed of the latest industry trends in an educational, entertaining way with a stylistic flourish.

Focused features

Every issue of Insight Magazine has a new quarterly focal point. In the past, it has focused on fire safety across residential construction, sustainability and environmental, social and governance strategies for your projects and even on innovation in the technological sphere. Insight features several articles in each issue from key partnered authors that concern the issue's focal topic. In the most recent Q3 2022 issue, global residential construction was focused and featured articles on the global housing crisis, how concrete balconies have been beneficial in the Dutch market and on simplicity in your residential project. You can find a copy of the Q3 2022 issue at: www.resi.build/post/insight-magazine-q3-2022

Ask the Expert

One of the defining features for every issue is the 'Ask the Expert' column. Every quarter, Resibuild gets in touch with an industry expert to ask them questions about their field of expertise in the hopes that it gives you a better understanding of the topic being discussed. Most recently, Lee Goodenough, sales & commercial director at Sapphire Balconies, spoke candidly about depending on your supply chain and whether supply chains are ready for an influx of mass regulation. Staying in touch with these experts is crucial to keeping our industry informed, so keep an eye out for which topics are covered every quarter.

On-site Spotlight

Insight isn't just articles and interviews – it takes the opportunity every issue to highlight some interesting residential construction projects from both the UK and globally. Insight has featured fascinating balcony projects, astounding facade details and even large-scale projects such as the upmarket Southbank Place. Insight features case studies



of prominent projects too, explaining some of the challenges each one faced, and the solutions created to overcome them.

Insight Magazine is an informative, involving, and insightful quarterly publication that endeavours to keep you up to date on the latest industry trends. From focused features to expert analysis to on-site spotlights, Insight is the residential construction journal that helps you to learn at every opportunity.

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The Thames and transformation



The Greater London population is approximately nine million and more people are moving into the city every year. But building land remains scarce, despite the Docklands regeneration project which provided a great deal of inner-city space for redevelopment many years ago. Where men with calloused fingers used to load wood and bulk cargos, more and more residential and office towers have been built over the last thirty years or so, and with them property prices have soared. These properties compete for the best, unobstructed view of the River Thames. Offering river views was also crucial for the architects of New Pier Wharf. They have staggered and tiered the building in such a way that all residents in the slender tower either have an unobstructed view of the river

or look out over the city centre skyline and can see treetops in the local park. Most of the flats even offer a vista of both. This is thanks to the unusual, step-like and staggered format of the volume, which ensures well-lit, very functional floor plans and makes the absolute most of the space and views. The architects chose a slender, yellow-brown, brick for the facade, typical in London and similar to the material used in neighbouring buildings and numerous workers' homes on the outskirts of the city. They opted for brass-look ALUCOBOND® tray panels cladding for the window parapets and the sides of the balconies to add a sophisticated shine and to contrast with the rough brickwork. The architects' façade design has touched on the essence of the Docklands transformation: new, chic



and gentrified properties in areas of London which were once rough and dirty. They have fused the myth of the down-to-earth, rough and ready working class city with the capital which is simultaneously traditional and class conscious yet hip. Anyone who takes the kilometre-long river promenade following every loop of the Thames, inevitably passes this building. Visitors can take a break on the ground floor terrace of the Tower, look across the Thames to Canary Wharf on the opposite bank and marvel at how London has grown and reinvented itself within a mere three decades.

Paul Herbert, Sales Manager
07584 680262
www.alucobond.com



PROJECT DATA

Project: New Pier Wharf, London | United Kingdom

Architect: Burwell Deakins Architects, London, United Kingdom

Fabricator: RCM Roofing and Cladding Materials Ltd, Newcastle under Lyme, United Kingdom

Installer: Dmitro Facades Ltd, London, United Kingdom

Façade System: Tray panels screwed

Year of Construction: 2018

Product: ALUCOBOND® A2 naturAL Copper & anodized look C32

Photos: Clive Sherlock

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Downer offers a new 'digital' HELPING HAND® with a dedicated website

Rainscreen systems manufacturer aims to get architects framing with a new website – www.downerframing.com



Image: TAC Projects

Leading UK rainscreen framing systems manufacturer Downer is giving architects a digital HELPING HAND® with the launch of a new website.

Designed to give super-easy access to technical guides, case studies and brochures, and even an online appointment booking system, the new website also enables specifiers and designers to get static and thermal calculations, including guidance and cost advice online, in real-time.

In addition, architects can book CPDs and a personalised tour of the Downer framing factory in Hastings, East Sussex which qualifies it for Made in Britain membership. The first 50 visitors to the new site will also get a special gift.

Downer's new website explains how the ever-evolving face of architecture demands a supporting cast of rainscreen framing systems that can deliver on energy, versatility, building protection and budgetary requirements, without inhibiting design.

It details how Downer's portfolio of fully engineered and BBA-certified aluminium rainscreen framing solutions delivers on these challenges and meets the differing needs

of the most diverse range of projects, from residential, healthcare and education, to transportation, leisure and retail.

This solutions portfolio includes the original Downer DCS031 HELPING HAND® bracket framing system which is designed to provide vertical support to most rainscreen panels using the principle of a ventilated facade. HELPING HAND® brackets, combined with extruded aluminium L and T profiles, provide the installer with an adjustable system that allows for thermal and structural movement and variation in cavity depth to suit project specific requirements.

As part of the Architectural Panel Solution family, Downer has provided comprehensive, non-combustible rainscreen solutions for more than 50 years. Working both directly and via a respected and robust distribution network, the manufacturer offers a reliable and highly cost-effective portfolio of facade products which can be used in conjunction with APS' rainscreen panels, or independently with an architect's chosen facade.

As well as the original DCS031 HELPING HAND® system, the website also provides information on Downer's

other framing systems – DCS041 floor to floor framing system, DCS004 secret-fix cladding system and DCS021 Omega and Zed rainscreen framing system, as well as fixings and accessories. Downer framing's extensive UK stocks of standard items are typically available for despatch within one to two days.

Additionally, the new website offers 10 reasons why architects should specify Downer rainscreen framing systems:

1. As they are engineered to perform and manufactured from extruded 6000 series aluminium (Grade 6005A and 6063), Downer systems deliver on all fronts - energy efficiency, versatility, strength, durability and protection
2. BBA approved for complete assurance, Downer systems have been tested to extremes
3. As Made in Britain members, Downer delivers strong lead times, with systems manufactured in their UK factory
4. Easy to install and maintain, Downer framing systems are also cost effective
5. Value engineered from the moment

go, Downer solutions are project specific and can be combined with a strong portfolio of rainscreen panels. The Downer team supports customers throughout the lifespan of their project, maximising value at every stage with high-performance products that feature as strong a focus on safety as they do aesthetics

6. Fixings are specified, and stocked, for each system
7. In-house static and thermal calculations are available
8. Anodising and powder coating are available
9. Cutting service is available
10. Extensive UK stocks of standard items are available for despatch in one to two days

In quick succession, following the release of the new website, Downer will shortly be launching Downer Designer – a next-generation, dedicated, free-to-use platform for the real-time development, creation and costing of Downer framing project designs. Watch this space!

Awards. In the frame...

APS' Downer framing is also in the running in this year's Facade Awards 2022, in conjunction with premium quality facade solutions, including Swisspearl fibre-cement cladding panels and Petrarch reconstituted stone rainscreen facade.

The Filmworks actually features an APS trilogy – Petrarch and two of Downer's framing systems.

The Filmworks, in the London Borough of Ealing, which has been shortlisted in the Best Refurbishment Project category, features Downer's DCS031 HELPING HAND® framing system and DCS004 secret fix system, alongside parent company Architectural Panel Systems' Petrarch engineered stone rainscreen facade.



Set behind the retained historic art deco facade of Ealing's former Empire Cinema, the £100 million mixed-use regeneration scheme comprises more than 200 new homes overlooking a central square, lined with bars and restaurants, and featuring a double-height entrance foyer to the eight-screen Picturehouse Cinema, the biggest outside London's West End.

The Petrarch panels and Downer framing systems were specified by architects TP Bennett, predominantly for their recyclability, sustainability and high durability, and they were installed by specialist sub-contractor Richardson Roofing.

Richardson Roofing's contracts coordinator Krissy Dawson said: "The team really do know their products well and were very helpful. Despite this being a somewhat difficult site with delivery booking requirements, they worked with us to optimise logistics for just-in-time deliveries."

order through to customer support, offer a dependable and friendly service and are always a pleasure to deal with. As for the product, Downer framing itself is so easy to install and if we ever need any technical support or optimisation calculations, the team is on hand to advise."

Lee Staniland, Procurement Manager, Intex Facades

"We can't praise the team enough for their hassle-free, fast service in dealing with our orders and delivering the system to site. The system itself is easy to install and the team carry out all necessary structural calculations for us."

Ted Walker, Operations Director, KDD Construction

If anyone would like to know more about Downer, or to book a CPD:

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Attractive brick slip facade solution



Sto's ability to provide a bespoke package of external wall insulation, brick slips and render has been highlighted by a new £115 million mixed-use development in Kent. Some of the new buildings feature the BBA-certified StoCleyer B mineral brick slips in a multi-blend red colour, chosen to create a striking contrast with the various facade finishes used elsewhere on the commercial units. StoCleyer B brick slips are manufactured from tough synthetic render with 90% mineral content, and feature an attractive individual pattern and texture to give a natural brick appearance.

0141 892 8000 www.sto.co.uk

Door screen streams light into extension



A Steel Window Association member company has created a large and elegant screen which forms the entire end wall to a new kitchen-dining room for a private residence in the desirable London Borough of Wandsworth.

The 5.5 metre wide, 3.5 metre tall screen was fabricated using the timeless W20 steel sections, which closely match the appearance of earlier steel frames often seen in warehouses and other old properties. Finished in RAL 7009 Green Grey and glazed with Krypton-filled 20 mm IG units, the opening lights and three doorsets feature high performance weather-stripping.

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New Self-build farmhouse warms to external Wraptite® airtight solution



A new self-build farmhouse in the beautiful Scottish countryside has been fitted with the high-performing Wraptite air-barrier. The project is designed to Passivhaus standards by Architect Frances Strachan-Friar. From the outset, the aim was to achieve a more sustainable design and follow a different approach from the traditional timber kit. After undertaking significant research into different types of construction, the architect selected Xilonor CLT cross-laminated timber. Frances commented on how the selection of Wraptite has benefitted the development: "The specification of the correct type of airtightness barrier was critical in achieving thermal efficiency. Wraptite was chosen because it allows the airtightness layer to be fitted to the outside of the construction. In doing so, the external application of Wraptite provides essential protection in the form of waterproofing and weatherproofing for the CLT during the build. I have previously specified products from the A. Proctor Group, but this was the first time using Wraptite. Proctors provided a comprehensive Toolbox Talk and have been a great support throughout the project."

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Crittall T60 is a Camden Classic

Crittall Window's T60 Thermal Break System features as part of the £40 million renovation of the KOKO iconic music venue in Camden, London.

Known as Camden Palace from 1982 until its 2004 purchase and extensive restoration when its name changed to KOKO, it serves as one of the premier live music venues in London.

Severely damaged by fire in 2020 KOKO reopened in April of this year following a multimillion-pound refurbishment.

Style and performance

The decision to incorporate T60 into the Koko project reflects the system's ability to offer the same aesthetic as Crittall's well-known steel-framed windows but with an enhanced thermal performance.

Crittall's T60 is able to meet the most exacting thermal credentials. The window features an advanced high density glass fibre reinforced polyurethane isolator as a thermal barrier. This, together with housing high performance double or triple glazing up to 32mm wide, ensures the system surpasses the

requirements of current regulations while at the same time providing contemporary levels of comfort, particularly in harsher weather conditions where traditional steel windows may not have previously been sufficient. T60 can provide a thermal rating of U_w 0.8 W/m²/K or 0.14 BTU.

All this is achieved within the same slender profile for which Crittall steel windows are duly celebrated, ensuring the maximum amount of daylight entering the building, which in itself is a contributor to sustainability and reduces energy consumption. And steel, of course, is itself a 100% recyclable material.

"More and more people are considering the thermally broken T60 as their first choice when planning a new build or a refurbishment," says Crittall managing director Russell Ager. And if there is a heritage element to a development the window because it offers the same sightlines as traditional rolled steel products, is finding favour with planning authorities.

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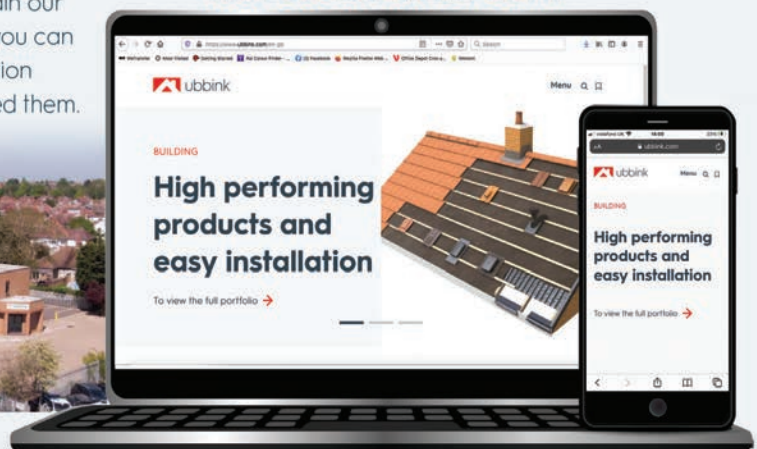
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Raising a glass

Darren Greenwell of Sto looks at some of the reasons why glazed exteriors remain incredibly popular, with architects continuing to create impressive modern facades in combination with other materials

Over 100 years ago, a group of prominent German architects exchanged a series of letters which eventually became known as The Glass Chain. Among other topics, the letters praised the many creative possibilities which this incredible material offered, but unfortunately the technology of the day prevented the architects from bringing those possibilities to life. Fortunately, those restrictions have now been overcome, and today's architects are free to develop buildings which incorporate the type of glass solutions that have never previously been possible.

Glass has typically been used to allow light into our buildings and keep the weather out. Although architects have recognised it as being a highly practical and designer-friendly material which could add new dimensions to a building, its use has always been restricted by the construction methods of the day, and much of its potential has been under-exploited.

Glass technology has advanced tremendously over recent years, and this has given architects and designers new freedom to explore it as a construction material. The barriers which previously limited the use of glass have been overcome, and it is now rapidly emerging as a versatile, practical and cost-effective material which offers a huge range of possibilities for today's buildings.

A colourful approach

One of the most significant attractions of today's glass systems is the tremendous range of colour choices that are available. In addition to the more traditional transparent glass options – of which there are many – there is also a huge range of single and multi-coloured choices now on offer. Both standard RAL colours and numerous variations are easily available, with some manufacturers also able to offer bespoke colours to suit individual project requirements. Modern screen and digital printing technologies also give architects





Glass is an excellent choice for a long-term construction material



and designers the opportunity to unleash their creativity by incorporating logos or bespoke patterns in their glass designs.

Surface levels

The creative opportunities of glass expand greatly when the wide variety of colour options is combined with the many different surface finishes that are now possible. These offer great possibilities to the architect looking to create a visually striking building that really stands out from the crowd. There are many different finishes to choose from, including matt, engraved, etched and sandblasted variations. As glass is actually perfect for use both internally and externally, the architect's design can flow seamlessly from outside to inside. In complete contrast, today's highly reflective finishes also enable a building to blend with its surroundings by reflecting them, and so becoming visually unobtrusive. This can be particularly beneficial when a new building is being designed for a location where it will be surrounded by older properties.

In design terms, glass also combines well with other materials such as brick slips, stone or render, and this can help add visual impact to a building. However, for the best results it's wise to check that your glass manufacturer can also provide a truly comprehensive solution which allows glass to be integrated with these other types of material in order to create a completely seamless facade solution.

Structural emphasis

Despite the fact that glass is an immensely practical construction material, it's important that architects and designers don't think of it merely as a way to clad building elevations, as it can be used as

a powerful design element in its own right. The expansive glass facades found on modern buildings are created from individual glass panels, and today those panels can be produced in a virtually unlimited range of sizes, colours and shapes, to suit the specific needs of each individual project.

For example, the glass panels can create a smooth, unbroken finish which can be used to unify different areas of a facade. By using a hidden mounting system for the panels, the joints between them will effectively disappear, thus creating large uninterrupted surfaces which allow the building to blend with its surroundings by reflecting large amounts of light and mirroring adjacent buildings.

In contrast, the architect may choose to create a glass surface where the joints between the panels are used as an important element of the overall design. Highlighting structural elements in this way can add considerable visual strength to a facade, and using visible joints between panels which run vertically, horizontally, or diagonally enables the architect to create a genuinely unique look for every project. Incorporating LED lighting into these joints is an increasingly popular way to create dramatic contrasts between light and shade which emphasise the structure of the building.

The safe choice

Safety is obviously a key requirement for any building material. As a rule, a glass cladding system must be able to withstand both daily wear and tear, and occasional impact damage. It must also satisfy the requirements of the A2-s1, d0 standard, and meet various requirements covering such things as toxicity, spread of flame, structural loading and waterproofing. Fortunately, a glass system which satisfies these requirements need not cost any more than a lesser alternative.

Glass has been used in our buildings for many centuries and is in fact an excellent choice for a long-term construction material. Today, it is also finding increasing popularity among facilities and estate managers, principally because of the ease with which it can be cleaned and maintained, and the fact that, unlike some other facade finishes, it is extremely resistant to weathering and the effects of the environment.

Darren Greenwell is business development manager at Sto

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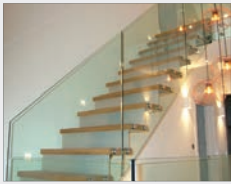
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High-quality wood ceilings and cladding



Charles De Gaulle Airport in Paris has transformed several of its halls, with **Hunter Douglas Architectural** delivering architectural ceilings and wooden wall cladding for two of the projects. After three years of renovation work, Hall L, Terminal 2E now has a new 8,000 m² of solid wood grid ceiling in matte white lacquer, which was designed and manufactured by Hunter Douglas. The wood wall is also testament to Hunter Douglas's commitment to quality, with 1,000 m² of white, delineated and nano-perforated walnut wood planks, finished in clear varnish. In Hall K, Hunter Douglas delivered 1,200 m² of slatted solid wood ceiling grid in white and brown.

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BerryAlloc Open House Studio for HIX



In the heart of London's creative community, **BerryAlloc's** studio is the perfect place to experience its floor and wall solutions for commercial interiors. And later this November, as one of the design businesses based at the Business Design Centre, it's also in the thick of the action at HIX, the hotel design exhibition. BerryAlloc will open its doors for visiting hotel designers and specifiers, giving a chance to find out how its floors and walls can help to build beautiful hotel experiences. With products such as the easy to install Wall&Water waterproof panels that bring a luxury spa look without the slow installation and cost of materials like tiles, and the world's strongest floors with the High Pressure Floors collection, it's a formidable line-up. HIX runs 17-18 November at the Business Design Centre, Islington. BerryAlloc's studio will be open throughout the show's two days with its team of dedicated wall and floor experts on hand to answer any questions about its solutions for today's hotels. Visit BerryAlloc during HIX at the Business Design Centre, Unit 232.

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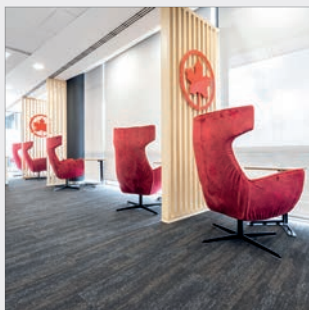
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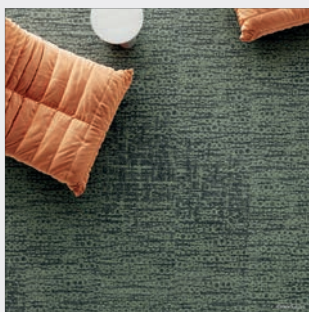
Rudiments Stands up at Air Canada



Air Canada's Heathrow office has a spectacular view of the airport's runways and is the working home of more than 60 colleagues. The airline called in design and fit-out specialist, 3-Space to create an interior that reflected its brand, and which could withstand constant use from staff and visitors. IVC Commercial's Rudiments carpet planks in the Clay Create design were presented to Air Canada during a finishes meeting as a solution for the main desking areas of the office space. Proposed by 3-Space in two colourways, after seeing full size samples of the striking pattern, Air Canada chose the grey and earth combination of Clay Create 987. Part of the Rudiments collection which celebrates flooring materials like clay, stone and wood, Clay Create is a playful random pattern with a shifting colour that can be used in transitions from one area to the next, or simply to add elegant detail. Made with 100% solution-dyed nylon, it answered Air Canada's need for a carpet plank that would stand up to heavy use and fight off stains and marks. A total of 560 m² of Rudiments Clay Create carpet planks were installed by 3-Space.

01332 851 500 www.ivic-commercial.com

Artcore sets the gold standard



Artcore, modulyss® latest consciously created carpet tile collection is rooted in the philosophy of biophilia and inspired upon the interaction between natural and man-made elements. Made from 100% ECONYL® regenerated nylon and standard equipped with a recyclable ecoBack® backing, it is entirely Cradle to Cradle Certified® Gold and tailored to the future of circular economy. Moreover, Artcore comes in a selection of nature inspired colours with optimal light reflectance values (LRV), lowering energy consumption. In combination with the optional comfortBackEco® backing it makes spaces quieter and calmer, mitigating the effects of noise disturbance. As such it contributes to the overall wellbeing and productivity inside office buildings. Both ecoBack® and comfortBackEco® are 100% PVC free and consist of at least 62% of recycled content. But thanks to its shock-absorbing and noise-reducing, comfortBackeco is modulyss' most innovative 'all-in-one' carpet tile backing so far. Artcore consists of 4 distinctive patterns: Core, Etch, Litho and Mezzo. Each style conjures up different emotions and fits together in several ways allowing for ambitiously unique floor collages.

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Flexing it with ARDEX uncoupling solutions

Two ARDEX Group uncoupling solutions have been launched to the market to provide contractors and architects with a full ARDEX floor tiling system.

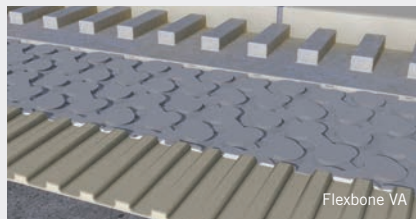
ARDEX IndorTec Flexbone VA and ARDEX IndorTec Flexbone 2E are two innovative uncoupling systems to ensure floor tiling projects are protected from lateral movements caused by expansion and contraction on substrates.

ARDEX IndorTec Flexbone VA is a high load-bearing cavity mat system – ideal for large format tiling in high traffic areas such as shopping malls, airports and office buildings.

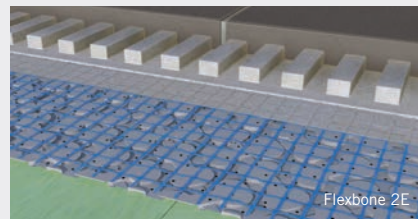
The unique bone-shaped pattern with GripLock technology delivers outstanding tensile bond strength – higher than comparative cavity mat systems.

Its unique bone-shaped cavities, mean you can prefill with just one pass – saving you time and money on your adhesives. What's more it is suitable for use as a waterproof membrane with appropriate waterproof taping.

ARDEX IndorTec Flexbone VA can be used with any porcelain, ceramic and



Flexbone VA



Flexbone 2E

natural stone tiles with a minimum edge length of 100 mm.

Also available on the ARDEX range is ARDEX IndorTec Flexbone 2E – a unique floating uncoupling mat for problematic substrates which can't be tiled using a bonded system. Protecting floors from lateral movement, ARDEX IndorTec Flexbone 2E is 100% uncoupled – meaning that substrates require minimal preparation. That means it can be used over substrates such as bitumen, adhesive residue, and laitance. Perforations in the mat ensure that rising moisture is dissipated through covering joints, meaning that ARDEX IndorTec Flexbone 2E can be laid over un-cured anhydrite screeds at 1.5% CM and walkable sand:cement screed, saving

project time and costs. Further time and cost saving can be made by cutting out the need to prime before laying the mat.

ARDEX IndorTec Flexbone 2E also includes GripLock technology, and the bone-shaped cavities make for 50% faster spreading.

Flexbone 2E is also ideal for frequently-changed floor coverings and sensitive heritage substrates.

ARDEX IndorTec Flexbone 2E can be used with porcelain (8 mm minimum), ceramic (10 mm minimum) and natural stone tiles (15mm minimum) with a minimum edge length of 200 mm.

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Winning at the panel game

With the market for wall panels growing, Lidia Cetrangolo at Multipanel explains how they are becoming the preferred option for architects in bathrooms

Wall panels have been around for decades, and have traditionally been used as an alternative to bathroom tiles. Thanks to modern innovation and design, today's high-performing wall panels offer huge benefits to architects, specifiers, and their customers, making them an ideal choice for bathroom designs.

Save time & money

For architects that are looking to meet tight schedules and strict budgets with their bathroom designs, wall panels are the optimum surface choice. Wall panels are quick to install and can be ready to use in just 24 hours.

There is also much less time required to prepare wall surfaces before the application of panels – they can be installed directly on top of almost any sound surface, including existing tiles. Using bathroom panels instead of tiles is thought to save, on average, 21 hours of installation time per bathroom. This means that they can be installed five times faster than tiles, accelerating home completion timescales.

One of the biggest benefits of using wall panels in a bathroom is that there is no need for grouting. In addition to being time consuming, grouting can also be a hotspot for mould and mildew, due to bathrooms being the most humid room in the home. With wall panels, you don't have to worry about the mess, mould or hassle of grout.

Opting for bathroom panels instead of tiles means common snagging issues often experienced in bathroom projects can be reduced. Many wall panels have an almost seamless watertight tongue and groove joint, which provides a waterproof solution.

Maintenance

Wall panels available for domestic projects are incredibly easy to maintain. Bathrooms with tiled walls attract mildew and require a lot of work to keep the grout mould-free and clean. Grout is also likely to lose its colour after a few years and will need to be replaced every 8-15 years.



Wall panels only need to be cleaned with a cloth and warm water. No harsh abrasive cleaning products are required, which is also a major environmental benefit.

Aesthetics

Bathroom trends come and go, but recent trends have seen clients begin to be more adventurous with the aesthetics of their bathrooms – an example being different textures, such as outdoor wood or feature walls. Consumers want their bathroom walls to reflect their personalities, and to be an area of their home that they can be proud of.

Bathroom wall panels come in a vast range of decors and aesthetics, meaning that it's always possible to bring a client's vision to life, no matter what their budget or taste. Decor options on offer in the market



Recent trends have seen clients begin to be more adventurous with the aesthetics of their bathrooms

include marble – for those who are after a more opulent finish – and for those who want to bring an element of the outdoors into their bathroom, there are wood effects and other natural finishes. There are even tile-effect wall panels, which provide the look and feel of tiles, without the hassle, and with all the benefits of wall panels.

Sustainability

Beyond performance and cost-saving benefits, wall panels are a sustainable option for bathroom design. Sustainability is an important consideration for any project, and customers are likely to want assurance that their home and/or bathroom is being designed in the most environmentally friendly way possible.

Many wall panels are made from sustainable materials, such as FSC (Forestry Stewardship Council) assured timber, MDF or plywood. Additionally, choosing a wall panel that is made in the UK will also increase the sustainability of the product – the wall panels have had a shorter journey

to get from the manufacturing site to their final destination.

In a time of such uncertainty within the global landscape, choosing products that have been made more locally will also provide additional security in terms of supply chain issues, and will often mean that completion time is further reduced with a fast turnaround.

Wall panels are designed for a long shelf-life – standing the test of time and lasting up to 30 years whilst maintaining their high-performing attributes. By choosing wall panels, architects can assure their customers that they are choosing a long-lasting material for their bathroom.

When no longer needed, most wall panels can be recycled, avoiding landfill. Many manufacturers will also recycle 99% of post-production waste into biomass fuel, contributing positively to the circular economy.

Lidia Cetrangolo is marketing manager at Multipanel

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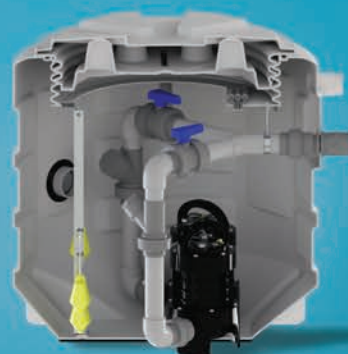
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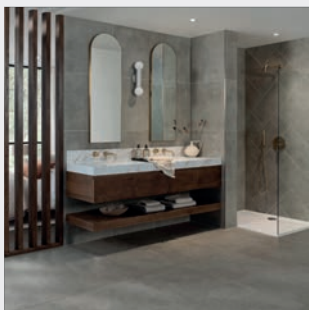
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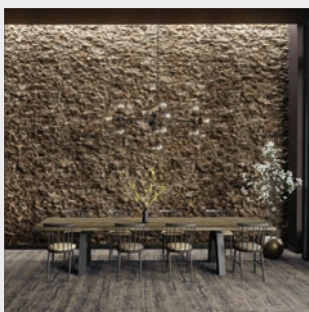
Concrete brings a modern and dynamic style to interiors and now with Boston, **Parkside** brings its look in a versatile and practical porcelain tile. Suitable for wall and floor use and in three true-to-life colours, Boston is now available from stock for fast delivery.

With its natural variation and matt finish, the tile is an authentic and original interpretation of concrete with the longevity and ease of maintenance of high-performance porcelain tiling. Frost and UV resistant, it can be used outside as well as indoors. Boston achieves 36+ PTV slip-resistance under wet use across all three sizes (30 x 60 cm, 60 x 60 cm, 60 x 120 cm).

Boston joins Parkside's portfolio of over 20,000 commercial tiles, covering every need. With design-led tiles to sustainable products made with high-levels of recycled content and specialist technical solutions through the Strata Technical Tiles product brand, as well as installation products and finishing accessories; Parkside can work with you to develop a tile specification that meets the needs of your project.

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Bedfordshire industrial building fire-lined with A1 Magply boards



A family owned fishing and holiday business in the heart of the Bedfordshire countryside is currently seeing a variety of new leisure and commercial facilities being created, with high performance **Magply** boards from the range of IPP Ltd. having been chosen for lining a large new caravan maintenance workshop. Dave Curson, whose drive and ideas have shaped Henlow Bridge Lakes, commented: "We decided to utilise the 12 mm Magply boards to line the structure on the recommendation of the main contractor, who has past experience of working with them where there is a fire protection requirement. All of the boards are being installed using self-tapping screws by just two men, working from a cherry picker and I think it is all going to look really quite good when it is finished." Magply boards offer a range of performance benefits relevant to the application. In fact Magply boards carry Euroclass A1 and other internationally recognised certifications, confirming their suitability as a fire mitigating sheathing for timber or steel frame systems, as well as in rainscreen cladding, SIPs and other modular/offsite constructions.

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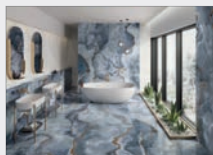


Customers can choose items from the BLANCO range to suit their kitchen style and budget. Drinking water systems – anything from the FONTAS-S II filter tap to the clever EVOL-S Pro 4-in-1 smart tap having this addition will prove not only eco-friendly but will add that extra high-tech element to the kitchen. Hygiene – everything is in one area. When chopping up chicken

or vegetables, the risk of spillage is removed when carrying the chopping board from A to B as the bin is right there. Multi-functional – with these clever combinations, everything above the work surface becomes a multi-functional sink area that works beautifully, is easy to use and keep clean.

blanco.co.uk/unit

CTD unveils latest tile collection



CTD Architectural Tiles has revealed its latest carefully curated tile collection, seamlessly combining style with substance. CTD Architectural Tiles' latest collection launch enhances its current offering of tiles suitable for a variety of applications and styles. The collection features both

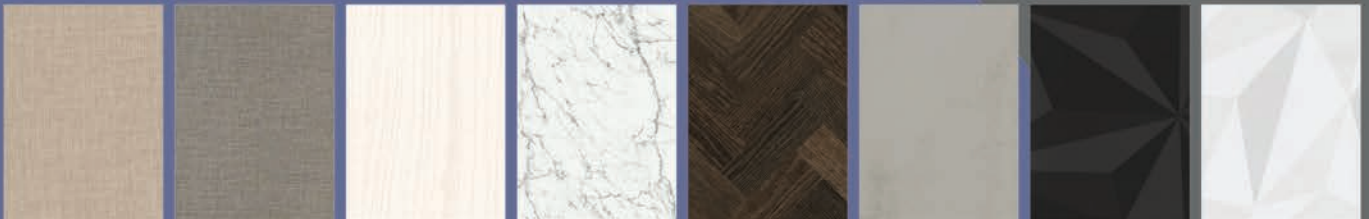
brand new tiles and updates to existing ranges, offering customers a variety of porcelain and ceramic tiles in a series of designs and sizes. Visit the CTD Architectural Tiles' website where it's easy to request free samples to discover the look and feel of each product.

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ROCKWOOL heating and ventilation pipe showcased in dramatic giant modular sculpture



An exciting new piece of artwork by artist, Lubna Chowdhary, has taken heating and ventilation pipe to the next level with an impressive 6.5 m by 5.5 m sculpture which embodies the growing trend for exposed pipework as an architectural design feature. The “Erratics” exhibition was commissioned by the Middlesbrough Institute of Modern Art (MIMA) and features a sculpture made possible by a ROCKWOOL donation of 320 metres of its RockLap H&V Pipe Sections, sized with a 140 mm inner diameter and wall thickness of 25 mm. The artist, Lubna, has previously created many commissioned architectural works and the ROCKWOOL piece, “Modular 4”, continues the tradition of her site-specific work, playing with scale, repetition, modularity and geometry to occupy the expansive gallery space at MIMA. The ROCKWOOL insulation used for the sculpture consists of pre-formed cylindrical sections of stone wool with a layer of factory-applied foil on the outer surface. Traditionally used for heating and ventilation pipes in a range of settings, RockLap H&V Pipe Sections are designed to maintain the optimum temperature of pipe services, thereby reducing energy consumption.

01656 862 621 www.rockwool.co.uk

Flexible Space achieves recognition in multiple disciplines



AET Flexible Space, has further enhanced its UK reputation by being shortlisted for three industry awards. Amplifying the achievement, the nominations cover diverse operational disciplines. For this years H&V News Awards, AET Flexible Space is one of just five companies short-listed for the HVAC Project of the Year (over £0.5m), for its work at Technique. The project involved a combination of refurbishment and new build to deliver five floors of flexible, agile use “best in class” modern workspace, offices and retail. AET Flexible Space has also been shortlisted for the Small Company Achievement of the Year, for its L&D ethos Learn to Win. The focus is to invest in a team that is inspired, engaged and supported. Although in its infancy, the programme is already yielding results. The team is motivated, winning new clients and relationships built for work beyond the initial contract. Projects on which the company has collaborated have been short-listed or won six industry awards during 2021/22. Completing the trilogy, AET Flexible Space is one of five companies shortlisted for the Training Initiative of the Year, for its learning and development strategy.

01342 310400 www.flexiblespace.com

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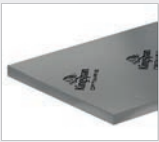
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Slimmest solution for inverted roofs



Kingspan Insulation has launched the OPTIM-R E Inverted Roofing System, the latest evolution in its innovative vacuum insulation panel (VIP) range, providing a thin solution for challenging applications. The VIPs feature a protective spray coating, providing a robust finish which allows easy handling around site.

With a declared thermal conductivity as low as 0.008 W/mK, and a design thermal conductivity as low as 0.009 W/mK, Kingspan OPTIM-R E offers an excellent solution on new and refurbishment projects where a lack of construction depth or space is an issue.

info@kingspaninsulation.co.uk kingspaninsulation.co.uk/optim-r-e

Resiblock return to Glasgow Airport



Resiblock have once again been specified as the paving sealer solution for Glasgow Airport. Having initially been applied to over 7,800 m² in 2015, Resiblock, and the Resiblock '22' product, are back again to seal an area of 1,400 m². Following initial installation in 2015, the Airport's passenger traffic had increased to a peak of 9.9 million passengers per year. Resiblock '22' will now continue to prevent paver destabilisation through jointing loss, from factors such as increased footfall traffic, rotary downwash from jet engines and vehicular traffic.

www.resiblock.co.uk

Shining a light on IWM North



Luceco has recently lit the exterior canopy of IWM North in Manchester. IWM North is part of Imperial War Museums and explores the conflicts from the First World War to the current day. The walls of the contemporary aluminium-clad building with jutting angles which has become part of Manchester's skyline since it was built in 2002, are now washed with light and the iconic canopy walkways lit with Guardian Pro from Luceco. Specified by CorEnergy Group based in Manchester and installed by S J Kavanagh Ltd in Altrincham in association with Atalian Servest facilities management services, 50 W Guardian Pro Floods were chosen as an energy efficient, environmentally friendly solution. Guardian Pro illuminates the exterior area, washing the building as well as providing suitable lighting levels for the walkways, with mounting locations under the canopy. Available in 50 - 245W, 6,800 to 30,000 Lumens achieving up to 136 Llm/cW, Guardian Pro produces asymmetric light distribution for reduced glare. Mounting was made easy utilising a fit and tilt bracket and tilt adjustment locks, also the luminaire is pre-wired with 1m of H05RN-F rubber cable.

01952 238 100 www.luceco.com

Making the most of the garden year round with CRL Glass Rooms



Providing shelter from inclement weather while affording uninterrupted views of the garden, CRL Glass Rooms are a popular way to extend a building's interior into the garden without the requirement for planning permission. Simple to construct, CRL Glass Rooms feature an intelligent modular design, with an aluminium structure that requires minimal supports, even over large areas. The innovative connectors give a high degree of flexibility with many variations possible, while optional extras including sliding doors, vertical blinds and ceiling blinds come together to create a unique space to be used all year. The system's modular design enables the Glass Room to be configured to suit any space, from simple rectangles to more complex L shape designs. The drainage is cleverly integrated into the post, with rainwater channelled through the gutter into the drain pipe. The front profile of the post can be easily removed using a clip system to allow easy access to the drain. All rafters come with integrated channels for fitting lighting and attaching motorised awnings. Available in white, grey and anthracite, CRL Glass Rooms have a maximum projection length of 6 m and can support spacing up to 6.8 m without a third support.

01706 863600 www.crlglassrooms.co.uk

Fire specialist using TBA FIREFLY™ range to treat Essex doctor's roofspace



Fully certified products from the range of TBA FIREFLY™ have been employed to protect a potentially vulnerable roof-space above a doctor's surgery in Chingford, Essex, ensuring any outbreak of fire could not spread to other parts of the building. The work on the property has been carried out by Wickford based T & R Fire Protection. In the case of the Chingford surgery, FIREFLY™ Apollo Lite 30:30 was specified along with the manufacturer's widely utilised Collaroll, High Temperature Adhesive and 12 mm stainless steel staples. In addition to protecting the sides of the 2.8 metre high pitched roof-space, creating fire barriers and wrapping multiple beam ends with the Collaroll, T & R also installed one of Firefly's Access Panel FR 120 units. These have been stringently tested against EN 1363-1 2020 and are third party certified by IFC, being shown to achieve an impressive two hours fire resistance from either side of a fire compartment. The Director for T & R Fire Protection, Tom, commented: "We've used Apollo Lite and other Firefly products on many hundreds of projects in the past, Firefly is our 'go to' manufacturer when it comes to fire compartmentation."

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Making a splash without noise – wedi Nonstep® ProS



Greener homes and a lower environmental impact is now sitting near the very top of our property priorities. A modern building now has to perform better than it ever has — reducing its environmental impact, being more energy efficient, looking the part and meeting the requirements of the ever-more critical end user. Sustainable building practices must be embedded into every aspect of the design process. The end user demands it and so does the planet.

With noise being one of the most common causes of dissent amongst neighbours, of bad hotel reviews and complaints in hospitals, it is an understatement to say that whether we speak of an apartment building, a hotel or

a hospital, sound insulation is an extremely important criteria.

The bathroom is one of the most complex rooms in buildings and even tiny errors in planning and execution can cause unwanted acoustic problems. Especially during showering, the impact of water on the floor causes high degrees of sound development (air & structure borne sound) which leads to noise transmission into neighbouring rooms. Additionally, particularly in the health care sector or in hotels and public buildings, bathrooms are often accessed by people wearing shoes which generate additional noise.

All disturbing sound transmission possibilities have to be taken into account during construction or renovation and appropriate sound insulation has to be provided. Answering the demand for an all-round system solution for bathrooms, as a complement to its waterproofing system, wedi has developed the perfect solution to guarantee soundproof showering.

The latest generation of wedi sound insulation, the wedi Nonstep ProS is a high-quality sound insulation fleece which complements wedi Fundo shower elements by significantly reducing water impact and footstep noises around the bathroom. The soft and flexible 9 mm thick material easily covers any unevenness in the floor, is tension reducing, moisture and rot-resistant, prevents mould growth and is fully recyclable.

When installed together as a system, wedi system solutions do not only comply with the minimum requirements on sound

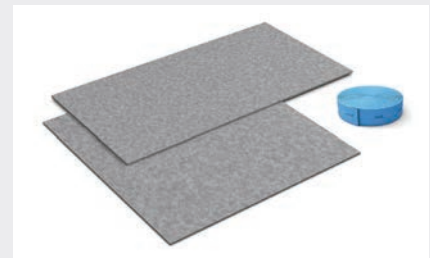
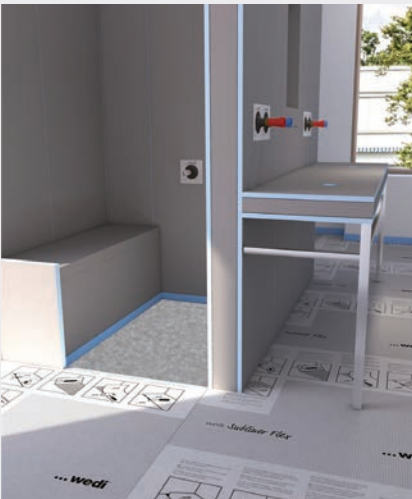


insulation for water impact noise (DIN 4109) but also with sound insulation levels I to III (according to VDI 4100) depending on the system components.

Construction heights (including a Fundo shower element with horizontal drainage and the Nonstep ProS acoustic solution) range from 74 mm to 138 mm to suit site requirements, providing 28dB sound reduction thus enhancing water impact sound measurements to as low as 13dB.

From manufacturing with renewable energy through using recycled materials to the comprehensive insulation its sealing systems offer – the foundation of the brand lies in innovation, technology and sustainability. Thanks to the excellent thermal properties of wedi subconstruction elements, the end-user is provided with significant savings on energy bills in the long term. For example, wedi is five times more energy efficient than plasterboard, improving underfloor heating systems' response time by up to 70%! Choose wedi to build for the future.

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The power of healing architecture

The Sct. Hans Hospital in the Danish city Roskilde is a psychiatric facility specifically designed to provide the healthiest of environments for staff and patients and which has just won the prestigious Danish 'Health Building of the year' award.

Forming a larger extension to the original hospital, the new 21,000 m² complex, designed by KHR Architects, includes a new 126-bed psychiatric ward and therapy facilities built into the side of a hill and nestled within carefully landscaped grounds to provide privacy while maximising the views. The use of nature and light along with modern and effective design and building materials makes for a calm, tranquil and light environment.

As part of the design, Troldekt wood wool acoustic panels in different colours have been used for the ceilings to link various zones in the communal areas and activity rooms. In the therapy baths, the panels are a muted grey colour to exude a sense of calm. This choice of materials plays a key role as materials like wood adds warmth and naturalness. The



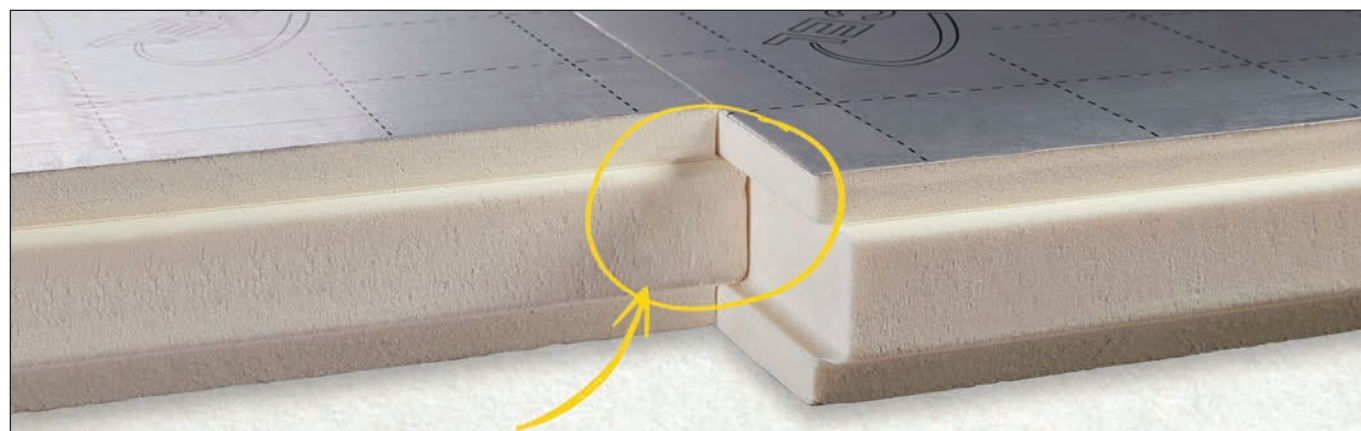
materials, together with the good acoustics, contribute positively to the healing process.

Research from the Swedish Chalmers University of Technology proves that the right interior design, including perfect acoustics, can reduce both the use of physical restraint on psychiatric wards as well as the number of sick days among employees.

Founded on the Cradle-to-Cradle design concept and recently attaining Gold certification, Troldekt's natural and inherently sustainable panels are available

in a variety of different surfaces and colours and contribute positively to a building's BREEAM, DGNB and LEED ratings. In addition to their high sound absorption and tactile surface, they offer high durability and low-cost lifecycle performance. Available in various sizes and in four grades, from extreme fine to coarse, the panels can be left untreated or painted in virtually any RAL colour.

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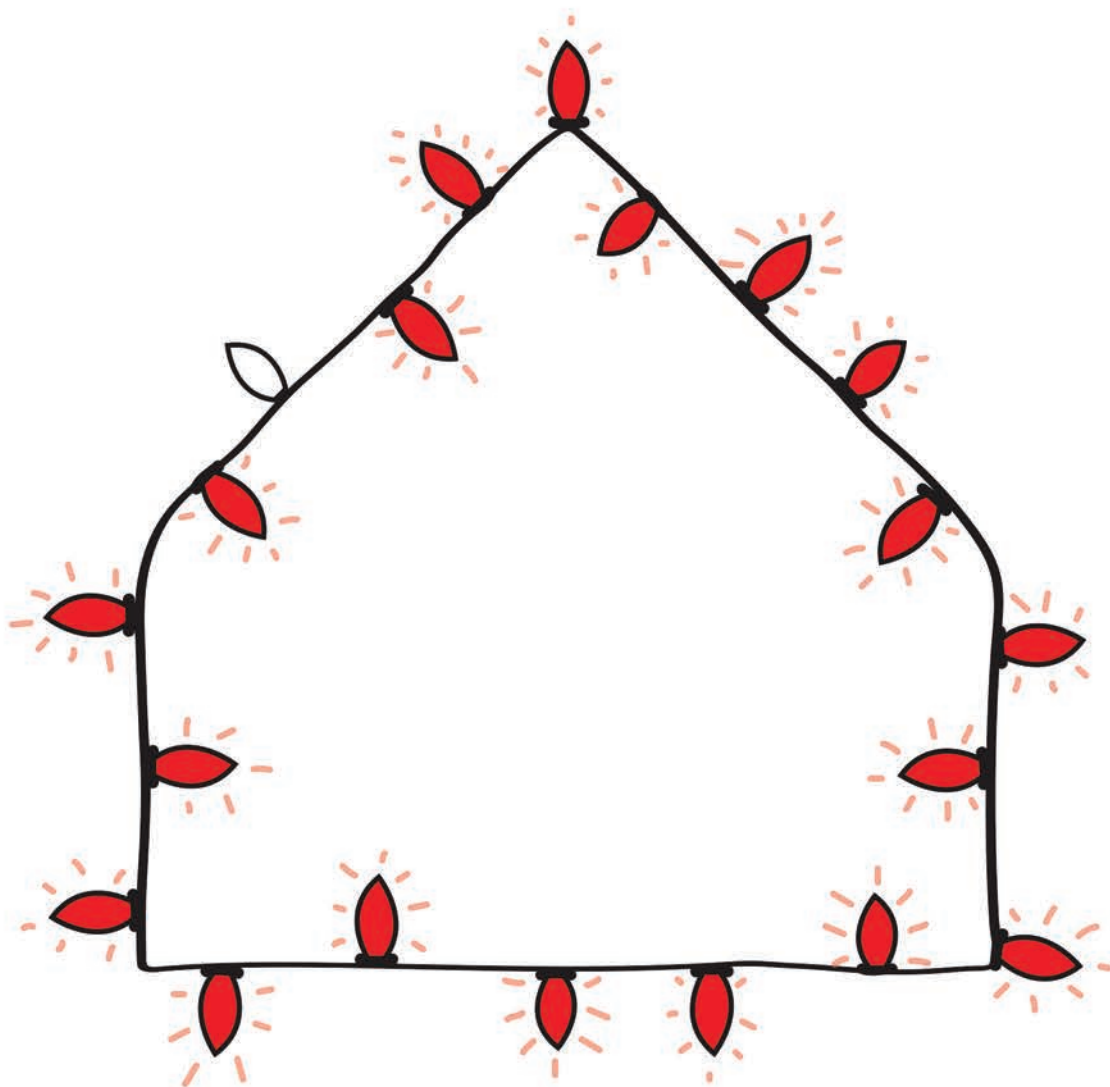
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