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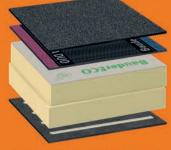
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Opened last summer, the new Radisson Blu hotel in the heart of Sheffield is a union of old and new, a project which saw HLM restoring and retaining a Victorian facade, adding a major volume and maximising views over the adjacent public realm. James Parker reports for *ADF*.

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# FROM THE EDITOR



A tour most recent Building Insights LIVE round table, we were pleased to have both Barratt Redrow and Bellway Homes on board, to discuss the realities of delivering the Future Homes Standard, which is still thought to be emerging in its final iteration this year. We were joined by both housebuilders' technical innovation leads, in the form of Danielle Michalska of Barratt Redrow, and Bellway's Jamie Bursnell.

One of the main takeaways from the event was that there were rumours that the generally preferred Option 1 (of two) of the FHS (which includes solar PV as well as direct mechanical ventilation, slightly lower air-tightness, and waste water heat recovery) was the Government's preferred option too. However, they are only thought to be progressing Option 1 in an 'enhanced' 1.5-type version, which seeks further consultation around solar PV generation requirements. I can't see this coming in fully in 2025 as planned, and several delegates felt the same way – in fact Bellway's Bursnell reckoned it'd be more like the end of 2026 before the final standard appears.

We gathered a range of valuable insights and recommendations from the event, which will be available in a report that can be downloaded from our dedicated netMAG Insights site, found at www.insights. netmagmedia.co.uk

Of course, the real challenge for the domestic sector (not that the Future Homes Standard doesn't present challenges) is how we are going to tackle the retrofit of the 18 million existing homes to bring them up to scratch. Barratt Redrow and Saint-Gobain have for several years now been testing a new build home (Energy House 2.0) built to anticipated Future Homes Standard 'affordably' in controlled conditions at the University of Salford (also the venue for a similar Bellway project, Future Home).

Now, however, Saint-Gobain is revealing some of the findings of its original, but ongoing retrofit simulation of a hard-to-treat Victorian end terrace on the Salford site – eHome 1. Demonstrating realistic, repeatable retrofit measures including membranes, underfloor heating and insulation, was the founding focus of the Energy House project, demonstrating the overall importance of tackling retrofit as acknowledged by academia and industry.

Comprehensive results of performance in various weather conditions, including likely costs of installation and construction of different options are hard to find, but Salford has produced results with boiler manufacturer Nesta showing "massive" potential energy savings by running a boiler at a slightly lower flow temperature. Hopefully the learnings are being disseminated clearly to industry, 'behind the scenes.'

James Parker, Editor

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#### ON THE COVER...

Reporting on HLM's complex and careful retention of an existing facade to provide a flagship Radisson hotel in the heart of Sheffield.

For the full report on this project, go to page 28.



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#### **AWARD**

# Japanese practice SANAA receives RIBA Royal Gold Medal

On Thursday 1 May at a celebration at the Royal Institute of British Architects (RIBA) London headquarters, SANAA, the collaborative practice of Japanese architects Kazuyo Sejima and Ryue Nishizawa, were honoured as the winners of the 2025 Royal Gold Medal.

RIBA President, Muyiwa Oki, presented the ceremonial medal to Sejima and Nishizawa ahead of His Majesty, King Charles III officially presenting them with the medal at a private ceremony later this year.

For nearly three decades, SANAA's work has pioneered sustainable, user-centred design and was praised by the 2025 RIBA Honours Committee for shaping "a universal language of architecture that resonates with people everywhere."

Balancing boldness with sensitivity to the local environment, their works "demonstrate that architecture can be both functional and profoundly elegant, offering a sense of calm amidst an increasingly complex and chaotic world."

SANAA are the 46th recipient of the Royal Gold Medal for Architecture, which has been awarded since 1848.

Acknowledging the achievement, RIBA President, Muyiwa Oki, said: "Congratulations to SANAA, who have exemplified remarkable clarity and consistency over the decades. It was an honour to celebrate at our headquarters not only their achievements, but their shared vision – one where architecture prioritises the human experience and human interaction, alongside form and function. Their work has become a standard for creating meaningful, culturally insightful designs and will continue to raise the bar for future generations."

On receiving the award, SANAA said: "We are delighted to receive the Royal Gold Medal and honoured to be invited to receive the medal from His Majesty, King Charles III.

As architects, we find joy in many forms. It's not about the scale or level of the project, sometimes those moments come from working on grand buildings, other

times from small, intimate ones. What matters most to us is creating architecture that brings us joy."

Sejima and Nishizawa and Associates (the combined names making up the SANAA acronym) spans nearly three decades, and their designs have become famous for creating meaningful, culturally insightful, and elegant architectural results.

Their work, RIBA said, has "reshaped the global design landscape, producing works that bring simplicity, light and elegance to the fore, establishing themselves as leaders in architecture's global discourse. The projects bring spaces to life with a simplicity that resonates deeply across cultures and generations."

RIBA added: "SANAA's extraordinary talent comes from the unusual nature of their practice – which oscillates between the two partners as individual practitioners, but whose many collaborations always produce interesting and remarkable results."

Balancing subtlety with strength, SANAA's landmark works speak for themselves. Ranging from the 21st Century Museum of Contemporary Art in Kanazawa to the Rolex Learning Centre in Lausanne, these projects "blend transparency with solidity, uniting public and private spaces." With simple, elegant materials and graceful lines, their designs invite interaction, creating a seamless flow of natural light - a hallmark of their approach. Their work at the New Museum in New York and the Louvre-Lens in France "reflects the innovative spirit and technical skill, bringing warmth and life to every space." Bold yet respectful of the local environment, SANAA has, since its founding, "shaped a universal language of architecture that resonates with people everywhere," said RIBA.

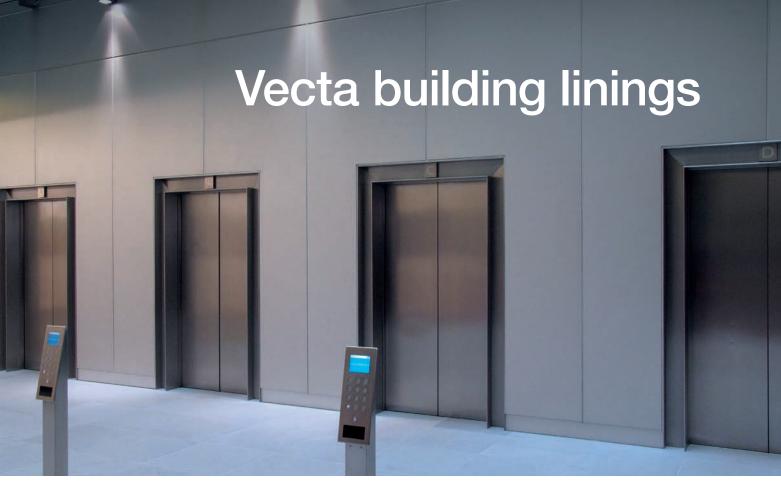
As pioneers in sustainable, usercentred design, SANAA exemplifies an unassuming yet impactful leadership in the evolving practice and theory of architecture. Their "lasting commitment to minimalist, human-focused space speaks to a deep understanding of architecture's power to shape society." In an era where



Left to Right: Ryue Nishizawa and Kazuyo Sejima © Morley von Sternberg

sustainability and accessibility are increasingly essential, SANAA's work "continues to set a thoughtful, inspiring standard."

This medal recognises a practice that has exemplified "remarkable clarity and consistency over the decades." It is a testament to their contribution to architecture - "intellectually rigorous vet playfully engaging." Their legacy is rooted in a shared vision where architecture prioritises the human experience and human interaction, alongside form and function. As pioneers, they demonstrate that architecture can be both functional and profoundly elegant, bringing a sense of calm to our increasingly complex and chaotic world. Their designs, said RIBA, "prove that good architecture is approachable, easy to use, and compelling, as it embodies a global language of design understood across culture and generations."









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### **ADAPTIVE REUSE**

## Consent secured for transformation of Aberdeen's Kirk of St Nicholas

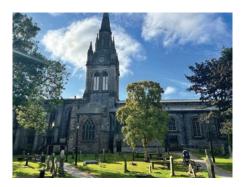
Aberdeen City Council has granted listed building consent to proceed with the ambitious renovation of the historic Kirk of St Nicholas in the city.

The project includes turning the West Kirk, Drum Aisle and Tower into a "vibrant cultural and community hub, marking an exciting new chapter for the heart of Aberdeen, said arts body ScotArt.

The project represents a major investment of £1.5m million and is expected to create a number of construction jobs during the renovation phase, as well as further employment opportunities once the venue opens as an arts and heritage space.

With roots stretching back to 1151, the Kirk is a cornerstone of Aberdeen's history. Throughout the planning process, ScotArt has been working closely with key stakeholders to ensure the building remains central to the life of the city, and a meaningful space for future events and celebrations. This includes ongoing collaboration with local colleges and universities, and industry associations.

The transformation will involve sensitive alterations plus the introduction of modern, adaptable features to support its new role. Conservation-accredited architects, led by Jo Parry-Geddes, director at Mill Architects, will oversee the work to "ensure every



intervention is respectful of the building's historic character."

A highlight of the project is the collaboration between the architectural team and the Scott Sutherland School of Architecture and Built Environment at Robert Gordon University. Backed by Scottish Government funding, the project has employed 3D imaging technology to develop detailed CAD drawings and models. These tools enable the design team to plan with precision, ensuring that key heritage features are retained and celebrated, including the Italianate West Church by 18th-century architect James Gibbs, which will remain untouched. The much-loved stained-glass window in St John's Chapel, commemorating the North Sea oil industry, will also be protected.

The original layout and atmosphere of the Kirk will be respected throughout, maintaining its role as a space for quiet reflection and heritage appreciation.

The Kirk will also become part of a new public heritage exhibition trail, showcasing more than 100 artefacts in the building.

Iain Sneddon, chief operating officer of ScotArt said: "This decision not only affirms the importance of preserving this historic gem, but also enables us to reimagine it as a space where history meets innovation." He added: "It will be a place for creativity, education and community, and therefore a vital part of Aberdeen's regeneration."

Architect Jo Parry-Geddes added: "Securing listed building consent marks the start of a careful and considered restoration. Our design will respect the Kirk's historic character while ensuring it is a functional and welcoming space for the future. The project is not only about conservation, but about creating meaningful new opportunities for the community to connect with this extraordinary site."

Once completed, the renewed Kirk of St Nicholas will host art exhibitions, performances, educational workshops and community events.

### **APPOINTMENTS**

### ReardonSmith Architects announces trio of directors

ReardonSmith Architects has appointed three new directors, all of whom have been promoted from within the senior team; Bradley Fowler, Irek Pasek and Elizabeth Walton.

Bradley Fowler joined ReardonSmith 24 years ago, and has contributed to many of the firm's most significant projects over the years, latterly earning his spurs as head of the ReardonSmith team delivering the multi-award-winning hotel, At Sloane, in Chelsea.

Irek Pasek joined the practice in 2009, initially working as project architect on hotel restorations and newbuild projects. More recently, he has been central to the design and delivery of one of RSA's most complex projects, the soon to be completed Chancery Rosewood in the former American Embassy in Grosvenor Square.

A relative newcomer to ReardonSmith, Elizabeth Walton has played key roles since joining the practice two years ago, successfully managing the firm's phased refurbishment of The Dorchester in London's Park Lane as well as establishing herself as a natural ambassador for the practice and a keen mentor of women in architecture.

Also recently promoted is Jasvir Mehat has become ReardonSmith's newest associate in recognition of his significant contributions to two overseas projects, in addition to internal work in the studio's BIM group.











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### PRACTICE PROFILE



Left to Right: Helen Groves and Victoria Hutchinson of AtkinsRéalis

### **AtkinsRéalis**

AtkinsRéalis is a firm that has redefined architectural practice, blending engineering precision with people-centred design, with sustainability and collaboration to the fore. Kim Neville reports.

tkinsRéalis' journey began with an unorthodox move, establishing an architecture arm within what was formerly global engineering-led practice WS Atkins & Partners.

Practice director Victoria Hutchinson explains, "The architecture practice was founded due to our desire to develop a unique position in the marketplace."

This reversal of the conventional model, where most multidisciplinary firms are architecture-led, has become a defining strength of what is now the UK's fifth-largest architectural practice. It enables it to tackle schemes from the largest infrastructure projects like Hinkley Point C to community-focused projects like a new SEND school.

While rooted in engineering, and "technologically driven" the firm is also "research-led," says head of architecture, Helen Groves. "We have the capability to do the thinking that leads our design."

### **Ethos**

Using the human experience to inform the firm's design ethos, AtkinsRéalis houses teams with 'Human Factors' and Wayfinding specialisms that might seem niche but are, as Groves puts it, "highly relevant to how human beings interact with the world." The firm's ethos continues to evolve however, with a dual focus – local presence and global capability. "We are deliberately not in an ivory tower," Groves says, "we're in the communities we serve." With 10 building design teams across the UK, the practice brings national expertise to regional contexts.

Its new Manchester 'hub' unites over 1,000 staff across disciplines under one roof. "Opening our office in the heart of Manchester really enabled us to bring together those teams and face our regional clients more strongly," says Hutchinson – those clients ranging from the TransPennine Route Upgrade to Lancashire County Council and the Government Property Agency.

The firm's interior designers planned the office to enable collaboration, says Groves: "It's about those passing conversations – bumping into someone in the corridor." She adds: "We want it to be a catalyst for growth, supporting education projects that give young people the best start in life." Hutchinson adds that scaling while maintaining quality is key: "We want to deliver local focus and



The Elizabeth Line project, designed in collaboration with Grimshaw, Maynard and Equation, picked up the Stirling Prize in 2024



The Sky Innovation Centre was an AtkinsRéalis project that was a great example of "early-stage collaboration"

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# "Our role is to align all disciplines, architecture, structures, services, landscape and ensure we bring the best offer to every market"

Victoria Hutchinson, practice director for building design at AtkinsRéalis

national excellence with career development, project variety, and consistent client delivery."

Social value in design, for AtkinsRéalis, is democratic: "Everybody deserves great design," says Groves. "That doesn't mean it costs more; it's asking what does this community need?" Projects such as Cardiff's Child-friendly City programme exemplify this approach, with inclusivity, sustainability, and community growth inherently linked.

Sustainability embraces social and economical factors for the firm, and its Decarbonomics programme helps clients reduce carbon across entire property portfolios. Hutchinson says: "It's about making something amazing through retrofit, minimising footprint while maximising value." Architecture and the other disciplines offered are also viewed holistically: "We don't have a separate architectural vision, it's One Building Design," Groves explains, "that's what we celebrate."

This integrated approach is supported by global collaboration, including via a Global Technology Centre in India. "Our role is to align all disciplines, architecture, structures, services, landscape and ensure we bring the best offer to every market," adds Hutchinson, with the goal to exceed standards in each territory.

### Design approach

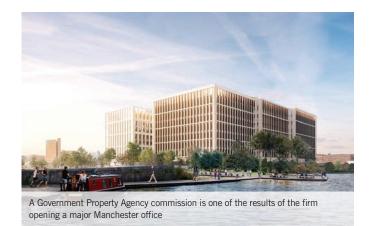
AtkinsRéalis is not a "signature" practice, explains Groves, "We don't have a figurehead whose design style we imbue in our projects; we do have a shared vision that great design has the power to transform people's lives." The practice's multidisciplinary approach values technical excellence and design equally. Groves' priorities are around fostering that shared vision across disciplines and harnessing a vast knowledge base. "Knowledge-sharing keeps our people motivated, keeps projects fresh, and allows teams to constantly learn."

Credibility around sustainability claims is paramount, says Groves: "We can't just say these things; they need to be proven." The practice developed its own toolkit, called Azolla, to embed sustainability thinking holistically from the start. "It's not just about carbon; we're also looking at biophilia, ecology, circular economy, and human impacts, to consider every angle, and at every stage."

Innovation comes not just from internal tools, but from cross-sector partnerships. "Our work with the University of Cambridge on low-carbon concrete is a great example," she adds. "It's led by our engineers, but the whole building design team is involved. That's the power of our interdisciplinary model."

One area where the firm is leading particularly meaningful work is in human-centred design, especially for neurodivergent users. "We realised that we needed better ways to engage with young people with special and additional needs," says Groves. "So we developed tools to capture that feedback, not just from teachers or support staff, but from the young people themselves."

Working closely with the National Autistic Society and others, the team created a design framework that values empathy. "We



ensured that our language, our techniques, even the format of our consultations, were inclusive and accessible. That work is now a core part of our Azolla methodology."

On AI, Groves is pragmatic but optimistic. "The potential is vast, but it should be used to empower people, not replace them. It can take away time-consuming tasks, allowing us to make better decisions." The company is exploring strategic use cases where AI can have measurable value, from performance analysis to regulatory compliance. "Where it will come into its own is in binary tasks like checking fire regs compliance. We're not quite there yet, but it's coming." She sounds a note of caution: "AI is only as good as the information you feed it. If it becomes self-referential, you'll never move forward. It's a tool, but creativity, imagination, and orchestration still belong to humans."

Several recent projects exemplify AtkinsRéalis's approach. The Manchester Digital Campus, approved for planning, brings civic presence to the heart of Ancoats with a bold and carefully detailed form that respects industrial heritage. "It's a beautiful, bespoke workplace designed to elevate everyday experience," says Groves.

The Elizabeth Line, a project in collaboration with Grimshaw, Maynard and Equation, which won the RIBA Stirling Prize, was "a great example of how engineering and architecture can achieve harmony," says Groves. "It showed that architectural quality can shine even in highly technical environments." Other recent highlights include the Sky Innovation Centre, where early-stage collaboration was key, in a project that was "about how a workplace can shape an organisation's future," says Groves.

Leading a team at a national scale isn't without its challenges: "Aligning behind a shared vision is the real work," says Hutchinson. Groves agrees: "It's about keeping people motivated and engaged. Our teams might be working on a local care home one week and a nuclear fusion project the next." Hutchison says that post-pandemic, they've "put effort into purposeful reconnection," says Hutchinson. "Whether it's around operational excellence, winning work, or client relationships, it's about creating meaningful links."

While Groves says the Stirling Prize win was "a stamp of excellence," she says she is "just as proud that we're a Times Top 50 Employer for Gender Equality."

Looking ahead, the firm sees further growth in sectors like defence, energy, and housing, says Groves, as well as leading the way on research. "We want to continue rewriting the rulebook, whether in housing or inclusive office design. It's about leading the conversation with clients through research, not being reactive."

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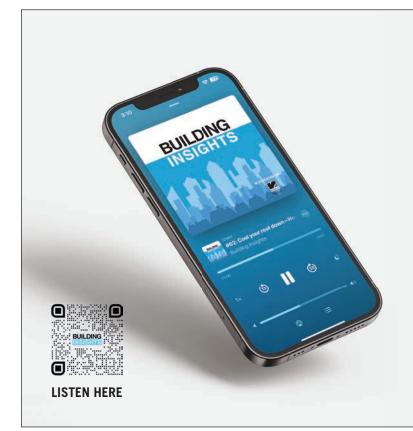
### BOSCO DELLO SPORT STADIUM, VENICE POPULOUS

Plans for a new stadium have been unveiled and presented to the Municipality of Venice, designed by specialist firm Populous.

Maffeis Engineering and Populous have been commissioned for the design and engineering work by the consortium of companies composed of Costruzioni Bordignon, Fincantieri Infrastrutture and Ranzato Impianti, which was awarded the contract for the project in March 2024. The new Serie A stadium will have 18,500 seats. It will be part of a major sports masterplan built in Tessera in the new Bosco dello Sport, a multifunctional, 116-hectare hub in the northern part of the city, designed to integrate sport, social life, education and wellbeing.

The stadium's design is inspired by the surrounding landscape, with curved lines that follow the wider masterplan, interacting with the nearby arena and sports centre. The facade features a composition of vertical elements that rise upward in a regular pattern, creating a visible backdrop to the upper section of the seating bowl. This makes the stadium structure light and airy, allowing a view above the top of the stadium bowl.

The crescent-shaped podium 'embraces' the stadium, "becoming a strategic part of the structure," said the architects, housing parking areas and other services. The seating 'bowl' is a semi-continuous section on the south, east, and north sides. Populous' specialist designers formed it to offer optimal sightlines during matches, with a "compact and monumental" configuration for maximum fan experience while enhancing the atmosphere. The new stadium will be able to transform to host Serie A rugby matches and live events such as concerts.



# **BUILDING INSIGHTS**

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### **NEWS FEATURE**



### Large format tiles offer aesthetic freedom

Nick Bratt, national technical sales manager for tile adhesive manufacturer Palace Chemicals, outlines some of the issues around specifying the new generation of large format tiles.

arge format porcelain panels are now increasingly seen in both commercial and residential installations. With modern digital printing techniques, they offer exciting new design opportunities for architects. They feature a no-nonsense, sleek and unfussy aesthetic, due to the reduced number of grout lines, allowing a clean and uninterrupted finish. When used in hygienesensitive environments, they also offer easier cleaning, along with health and wellbeing benefits. According to British Standard BS 5385 Part 1:2018, a ceramic panel is a tile with a surface area >1 m², with any tile edge >1,200 mm, whereas a large format ceramic tile is defined as a ceramic tile with a surface area greater than 3,600 cm², but no tile edge greater than 1,200 mm.

There are specific requirements relating to the installation of large format tiles and panels, due to their size and weight. What happens 'behind the tile' is a very important part of the specification process, so designers need to look beyond the aesthetic aspects. The main requirements are included in the British Standard BS 5385 Part 3:2024. This states: "Thin ceramic panels should be handled with specially designed equipment for supporting them in order to prevent possible fracture during and after removal from the manufacturer's original packaging, as well as for the actual installation of the panels." It will be noted that handling issues can be particularly challenging in refurbishment projects or where it is required to negotiate stairways.

The British Standard also states: "Depending upon the size of the panel, sufficient bedding adhesive should be spread to install one panel at a time to avoid possible 'skinning' of the adhesive which could have a detrimental effect upon the performance of the adhesive bond."

In accordance with BS 5385 Part 1:2018: "Where tiles greater than 0.1 m² face area are required to be fixed to walls above 3 m above floor level they should be secured by mechanical fixings."

For tiles that are being fitted at heights below 3 m, the choice of adhesive is important to ensure that a solid bed is achieved. This will require applying adhesive to the substrate and also back-buttering the tiles. Particular attention should be paid to the application of adhesive to the backs of thin ceramic tiles and panels so that the edges and corners are properly covered with adhesive. We would also advise that the type of adhesive should be specified at the design stage. A lightweight thixotropic adhesive should be considered. It is also important that the substrate should comprise a bespoke tile backerboard to support the additional weight.

Supplied by Nick Bratt, national technical sales manager for Palace Chemicals





# Solutions for Water & Energy Saving in Commercial Environments

ith global water supply struggling against climate and population change, and changes in usage, water is in the spotlight. Buildings account for around 15% of drinking water, so exploring ways to leverage water saving in new and existing projects, is fundamental. Smarter solutions and appliances can achieve results for clients, including in the commercial sector, but what are the direct 'carrots' and 'sticks' for them to engage?

The need to reduce water use in appliances and fixtures in commercial environments is becoming increasingly acute, and is partly about minimising leaks. Our round table agreed that the issue was seen as secondary to carbon savings, when it should be linked. Tackling leaks in existing premises is being homed in on by Government: Defra has set a goal for a 9% reduction by 2038, and 15% by 2050. Despite these seeming modest targets, they are in fact challenging in the absence of strong supply-side drivers.

Delegates said Government was keen to link such initiatives to its growth agenda, and highlighted savings that can be made on the billions of losses due to water wastage. As well as an 80 litres per person per day target it is proposing water reuse strategies, but while the domestic sector has specific levers such as Part G, there is little direct regulation for workplaces, retail and other settings, to drive specification of water recycling, and reduced flow showers for example. Our round table brought the water industry face to face with construction specifiers, industry bodies and product manufacturers to dive into the issues, and explore realistic bottom-up as well as top-down solutions.

The industry-led 'unified water label' that was introduced for appliances morphed into an independently-run commercial service to assist specifiers seeking specific water reduction measures. As a result, the industry lacks a national, mandatory water label to help to force change by raising the bar on efficiency. However, our delegate from Thames Water, Andrew Tucker, revealed that Government is planning a mandatory label in coming months – the previous administration promised such a label would arrive in 2025, but its future was previously in doubt.

### The debate: Who is responsible for water regulation?

The round table, chaired by editor of *ADF*, James Parker, focused on solutions but also quickly addressed the glaring lack of standards or regulation on commercial premises. The chair asked the group: "What is driving commercial sector clients to invest in water efficiency savings currently?" Andrew Tucker said there was a "near complete absence of big policy and regulation drivers and targets in this space," despite the potential levers.

Consultant Naomi Sadler asked: "We have a problem with scarcity, why are we not limiting flow rates on products in regulation?" Tucker said the answer was down to a gap in

### **ROUND TABLE ATTENDEES**

- Dr Christine Pout, Water & Energy Development Lead, BREEAM
- Tom Reynolds, Chief Executive, Bathroom Manufacturers Association (BMA)
- George Warren, Integrated Water Manager, Anglian Water
- Beth Robinson, Principal Consultant, Turner & Townsend
- Chris Brooks, Head of Water Reduction, Save Money Cut Carbon (SMCC)
- Edward Barnes, Managing Director, Magna Consulting
- Andrew Tucker, Water Demand Reduction Manager, Thames Water
- Naomi Sadler, Director, Sadler Energy & Environmental Services

### FROM THE EVENT SPONSORS

- Richard Braid, Managing Director, Cistermiser
- David Davis, Technical Director, eco-cistem
- **Sponsor:** Delabie UK







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#### WATERTIGHT CREDENTIALS

The round table featured a strong lineup of water companies, consultants, and product manufacturers to provide real-world ideas for improving commercial water efficiency

accountability; effectively no-one was in charge of driving the agenda: "I have no idea who leads water in the UK – everywhere else in the world, it is properly owned by someone."

Tucker also touched on the lack of incentives, where mandatory water efficiency measures were needed to drive change, from the seemingly mundane like fixing leaky toilets and urinals to linking water saving to carbon saving targets. Alongside rigorous standards, practical case studies were needed to bring widespread adoption

Currently, said George Warren from Anglian Water, the biggest driver he was seeing was in fact commercial clients such as manufacturing operations requesting increased water supply to their sites. However, this was in turn making them look at consumption in other areas of sites to offset the increase: "when they are increasing their demand and there is no other water, we help them to look at reducing their consumption to free up capacity."

Warren said that despite water companies not having a legal obligation to guarantee supply to commercial sites in the way they do for domestic properties, commercial clients with their own boreholes are falling foul of the Environment Agency's "massive clampdown" on abstraction licenses, and they are "turning to water companies for help."

Consultant Edward Barnes gave the example of water constraints in Sussex North region, which was seeing requirements for "water neutrality" on new domestic and non-domestic developments, meaning that authorities "have no option but to drive an aggressive programme of water efficiency." The resulting 'water credits' which enable developers to progress schemes have led to something of a "Wild West around the value; they are selling for incredible sums of money," said Barnes.

Tucker vociferously dismissed the water credits scheme, saying that Thames Water's advice to Government was to "scrap it now, it will never work properly." He asserted; "we are delivering water neutrality now, it's so simple if you just put things in place properly." George Warren made the point that the 'missing link' in the discussion was potentially the water 'retailers' who hold

a disproportionate amount of influence, as brokers between the water companies and customers. He warned they weren't directly incentivised to save because of the 'block tariff' system.

### The water label – a missed opportunity

Andrew Tucker asked what 'sticks' existed for industry to produce and install water saving solutions, in the absence of Government regulations in this area, and delegates said that the promised national mandatory label would be a crucial driver. "It will be the same as the energy label from the Energy Saving Trust" (which was given to the top 5% performing products in every energy category.

He added that this EU's mandatory energy label led to a situation where "everything became more efficient," to the extent that the "whole market was now in that top 5% category." He said that this needed to happen with water and showers: "we may not need to set minimum or maximum standards; the label might just be the thing that you will be specifying in Building Regs." Tucker concluded: "Then you can focus on the re-use stuff which is much more difficult and needs work."

Despite some controversy around the flow limits set for the original unified water label, Tom Reynolds said that he believed that the Government was "overcomplicating the issue, because a water label already exists." He asserted that the industry "could just hit the ground running, if it was made mandatory," but Tucker said "that ship has sailed," calling it a "missed opportunity."

Reynolds also cautioned that capping performance on showers was risky, because while "all the major brands will comply, players on Temu, Amazon and own branded labels won't necessarily comply." Other delegates also alluded to shower head products coming into the UK from the far east which had not been CE Marked. However, Andrew Tucker pushed back saying that in a wider review of failed products and parts by Thames Water, only 8% of problem products recorded were "in that category," but he also accepted qualifications from others that the failures were more of a problem in shower heads.









SMART IDEAS

Andrew Tucker (far left) revealed that Thames Water's rollout of smart meters was throwing up challenging facts, such as 25% of commercial water usage was from leaks

### Smart meters & leaky loos

According to Andrew Tucker, the prevalence of what is labelled 'continuous flow' across commercial sites (reflecting the smart meter data they are gathering, and avoiding the term 'leak') is one of the most biting issues for water efficiency. However, the increasing use of smart meters, a particularly well-used weapon in Thames Water, is revealing the losses to clients. He said: "Everyone's been making smart meter data available, but we need to collectively use that data, and attack and eliminate continuous flow."

Tucker said that Thames Water's major rollout of 60,000 smart meters to businesses had already revealed that 25% of commercial water usage is 'continuous flow,' meaning significant leakage from appliances. He said that based on the company's data gathered so far, "over 15% of UK businesses' consumption can be engineered out by fixing losses."

Warren posed the question of whether the regulation should require that "if there is continuous flow, there is an ability to enter those properties, to be able to address them?" Other delegates discussed the likelihood of cutting off water to commercial clients persistently failing to address recorded leaks, and Edward Barnes gave the example of some water-constrained US states, where there are "quite heavy penalties, so actually fixing that \$20 flapper valve becomes something which they're motivated to do."

Barnes added that in the UK the issue for regions around leaks was not so much continuous flow, but that the key peaks of flow: "It's not the overall demand, it's the windows of demand over two or three weeks."

#### **Solutions**

While the group discussed some of the key innovations and strategies available on the market in order to reduce water use in domestic properties, there was more conversation around the existent stigmas and misconceptions around certain aspects of systems, which could be 'blockers.'

These ranged from George Warren of Anglian Water strongly

advocating greywater recycling, saying that 'the majority of people would be happy for WC flushing water not to be drinking water," to less positive responses. David Davis of eco-cistem (who sell a system which recycles condensate from air conditioning into WC flushes), said that on some commercial schemes, "you get to a level where people don't want to adopt these technologies, that is a bit of a blocker." Warren accepted there was also a risk that "we convince those that are responsible to be driving down flush volumes to the point where actually you end up flushing two or three times."

Davis said there were challenges to installing greywater systems, post-Building Safety Act: "We're putting sprinkler tanks in, wet riser tanks, we've got nowhere to put waste water and greywater storage tanks." He said that his M&E firm had put "no central greywater systems" into buildings in the past four years," as there was "no space for them, you also have to have secondary drainage."

Tom Reynolds of the BMA said that his organisation was speaking to regulators about the "prospect of recirculating shower water," but was experiencing "risk averseness." He added: "It can achieve fantastic water savings, but there's just a real reticence because leaping immediately to the worst case scenario, never mind all the safeguards that are involved in the technology."

Edward Barnes described how in Canada, improvements in this area came about due to customer demand: "People found showers were really weak, and quickly, manufacturers got on board and created partial loop showers, and that was customer driven." Andrew Tucker said that in terms of achieving tolerable performance plus low water use, Thames water had "found a sweet spot," and that electric showers were "even lower flow rates of around six litres." the BMA's Tom Reynolds agreed that there was a "curve" around user acceptance, and there was some evidence from Surrey University that showed a risk that people would spend longer in the shower if flow rates were reduced beyond acceptable levels, undermining the reduction goals.

Naomi Sadler and others said that while WCs and basins represented most commercial clients' biggest financial leaks,



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products such as showers were also key. She cited an innovative shower developed by Southampton University to provide 4.5 litres per minute, without performance compromise due to a cleverly formed head. Sadler asserted that while many 15 litre-plus shower heads were sold, "I don't think you should be able to sell them." Tom Reynolds confirmed that manufacturers are currently working on an "appropriate" test of required shower efficiency which will become a standard. He added that when it comes to reducing flow rates, manufacturers were on board – "you'd be surprised at the positive response from the biggest brands."

### Bringing water into carbon calculations

One of the key pointers from our round table was the need to look at ways to better integrate water efficiency considerations into sustainability frameworks like BREEAM. Naomi Sadler gave just one example of how this was already being done, with BREEAM rewarding project designs which included showers, but also advocated using a system like EPCs to drive energy saving alongside water saving in commercial properties.

A 'carrot' of an aspirational label like an EPC was required, with water was playing second fiddle to energy savings, she said. Unless there is such a driver, commercial clients were not going to invest "if there's nothing they're saying to them, oh, you should be considering your water usage as well as your PV panels." Christine Pout of BREEAM agreed: "Putting it all under the umbrella of carbon is probably the key. If you start telling people how much carbon is coming from their water usage, and you have the carbon impacts on the bill, that's the thing that people are focusing on." She confirmed that water use has been included in the Net Zero Carbon Building Standard, which she has been involved in developing.

### A long way to go

For the commercial sector, there is a long way to go to develop both the 'sticks' and 'carrots' end of the Government's strategy if it is serious about making the water savings that it wants to happen a reality. With the discussion still largely revolving around carbon savings, and schemes like BREEAM and LETI which focus on carbon and not water saving, there is a mountain to climb to ensure that water is given a higher priority.

Andrew Tucker believed that seeing the improvements needed in terms of strategy meant a more bottom-up approach that would "embed water efficiency and performance for building facility managers or building owners, so that it's core business." He added: "Sometimes they don't even think about water. How do you get them to embed in their targets, in their hierarchy, their SLAs, their KPIs, how does water become business as usual like carbon or energy efficiency already is."

Beth Robinson of Turner and Townsend pointed to potential improvements in the status quo, saying that changing water use was "all about people's behaviour; the human element is the big change. What is great to see is the collaboration between water companies to bring products to the market." While Andrew Tucker pushed back against questions of whether the water companies should or are doing this, he said that the "policy and regulatory landscape has put all the responsibility and financial accountability onto us."

Edward Barnes added however that given the negative perception of water companies that had built up over the last few years, driven by media coverage over the past few yeas, asking "are we comfortable that water companies are the right companies to be

fronting this – it's unlikely they are going to suddenly become the trusted voice. The challenge is who is going to lead."

This round table aired key problems around engaging commercial clients in driving water efficiency; such as clients will only make such investments if there is either a mandatory requirement, or a business benefit, and the former at least is sorely lacking. Showing them the financial benefits of bringing in better products is key to success, and the delegates clearly outlined the untapped potential.

As Richard from co-sponsor Cistermiser said, manufacturers and waiting to respond when a more robust set of requirements does appear. "If there's a mandate that we know clients or M&Es consultants have to adhere to, manufacturers will innovate."

In the absence of solid regulation, we await to find out what the Cunliffe Review of the water sector has to say on mandating more water efficient products, and the rumoured mandatory water label. As several attendees reiterated, there is still the perception that only when water prices rise steeply are we likely to see significant change. Thank you to our sponsors Delabie, Cistermiser and eco-cistem for supporting the event.

### **RECOMMENDATIONS FOR INDUSTRY & GOVERNMENT**

- **Tom Reynolds:** The sandbox idea for tech overlaps with the Government's 'growth triangle,' and is something we should really push for collectively.
- Edward Barnes: Tax levers are a simple thing you can do immediately; paying VAT on all of these things is crazy. Could there be an intervention to offset against corporation tax?
- Christine Pout: Companies need to report their water use and the carbon impacts; it will point to this as something to keep an eye on and do something about.
- Naomi Sadler: I would like it simply to be reported; basically anything that regularly monitors water use so it's brought to the forefront of people's minds, similar to how EPC has become the mechanism on which people now lend money.
- George Warren: Mandate the use of rainwater just
  make the most of it; it lands on your building, it is
  free. If you mandate it, suddenly the issue of cost and
  space is removed quite quickly.
- **Beth Robinson:** Incentivise people to not see potable water as their own resource, whatever you use it for. Source and use have to be matched.
- Chris Brooks: Someone in government needs to take ownership and drive it from the top down. Reporting water consumption annually is really good; once clients see what's going on, and measure it, they start to do the interventions, it becomes a virtuous circle.
- Andrew Tucker: A mandatory label take behaviours out of the equation, and mandate the 9% reduction into the levers and documents that the commercial sector will pick up, and get it built into their sustainability targets. And we need to engineer the leaky urinals problem out of existence.



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### DELABIE puts design centre stage at Clerkenwell Design week

s DELABIE approaches its hundredth year, and following an incredibly successful 2024, the company's centenary is not their only focus. Now an EcoVadis gold medal holder for sustainability, the group is delighted to announce they will be exhibiting at Clerkenwell Design Week from 20 – 22 May 2025.

On their stand, the family-owned business will be displaying their new Black Magic range, showcasing a new look for all the sanitary ware and accessories needed within a modern commercial setting but with the same incredible water savings (up to 80%). As well as offering unique aesthetic appeal, the matte black Teflon withstands intensive wear and the regular use of cleaning products, assuring it maintains its appearance long-term. Like all DELABIE products, the range boasts a 30-year warranty, offering specifiers peace of mind that the washroom will be fully functional for decades to come.



At the centre is their mirror cabinet, a multi-use over-basin unit with built-in LED lights allowing users in any setting to feel like a Hollywood star. Available as 3 or 4 function units offering the choice between a paper towel dispenser or built-in hand dryer, customers have the freedom to tailor make a cabinet which fits their unique needs.





The sleek minimalist design allows it to fit any interior effortlessly, meaning valued contractors and architects do not need to compromise on their designs in order to give users a memorable experience.

At its side, the team will be showcasing several of their more-established fixtures which have risen to high regard in the



bathroom industry. As a pioneer in accessible washroom design for the non-domestic sector, the display will be devoted in part to the accessories within the Be-Line range. In today's world, all bathroom users deserve to make use of public facilities without the need to sacrifice style. To meet this demand, DELABIE's accessibility range offers a variety of supports for the disabled community, with accessories offered in three different finishes that can fit any colour scheme.

#### Dedicated technical team

For the three-day event, the team will have several Sales team members available to answer any questions visitors may have and to discuss how DELABIE can help to bring your visions to life. With products already installed in well-known venues such as the London Eurostar, Manchester City Training Ground and Leeds Trinity University, their products can be adapted to any sector.

If you have a work in progress or you're looking stylish designs to furbish your commercial bathrooms, book a visit to Clerkenwell Design Week (20 – 22 May) and visit the DELABIE stand to see the incredible range of products they have to offer!

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CLERKENWELL DESIGN WEEK ST JAMES'S CHURCH GARDEN, EC1R OEA

### 20-22 May Clerkenwell, London



### Clerkenwell Design Week 2025

lerkenwell is home to more creative businesses and architects per square mile than anywhere else in the world. It's no surprise, then, that Clerkenwell Design Week (CDW) has become a globally recognised platform for the design community to come together in a dynamic celebration of architecture, interiors, and innovation. Now in its 14th edition, CDW 2025 promises an expanded programme of events, installations, and exhibitions, cementing its reputation as the UK's leading independent design festival.

Taking place from 20-22 May, CDW will once again transform Clerkenwell's historic streets, repurposing its unique architectural space, from subterranean vaults to Victorian warehouses, into immersive design destinations. With over 600 showroom events, 15 curated exhibitions, and a vibrant fringe programme, the festival offers unparalleled opportunities for discovery and dialogue across the design spectrum.

Visitors can expect to explore the latest in furniture, lighting, textiles, surfaces, and product design from both established global brands and up-and-coming talents. This year's curated exhibitions will span iconic venues such as the House of Detention, Spa Fields, and The Goldsmiths' Centre, each reimagined to host cutting-edge displays and thought-provoking installations.

A core feature of CDW's appeal is its rich programme of talks and debates. Conversations at Clerkenwell, curated by PR and Brand Consultant Katie Richardson, returns with a compelling series of panels and interviews that reflect the evolving design landscape. The 2025 programme opens with a headline conversation between celebrated Dutch artist and designer Sabine Marcelis and



design writer Alice Morby, promising insights into Marcelis' distinctive approach to materiality, form, and artistic expression.

Another highlight of this year's event is the exclusive artwork created by Kapitza Studio, the London-based artist duo known for their bold use of colour and pattern. Their work will feature in the festival's central auditorium space, providing a vibrant visual anchor to the programme and a symbol of CDW's commitment to creativity across disciplines.

For professionals in architecture and design, CDW is more than an exhibition, it's a chance to engage with peers, clients, and collaborators in a uniquely inspiring

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environment. The Design Meets programme brings together industry associations, thought leaders, and innovators to tackle key themes, from sustainability and material innovation to inclusivity and the future of urban design.

Alongside the professional programming, CDW also celebrates the social side of design. Visitors can enjoy pop-up food and drink experiences, street installations, live music, and after-hours events throughout the three-day festival. Whether attending a product launch, networking over cocktails, or simply exploring Clerkenwell's cobbled alleys, there's something to engage every kind of design enthusiast.

As the design world converges on Clerkenwell this May, CDW 2025 offers an essential snapshot of where the industry is heading, driven by innovation, informed by dialogue, and rooted in one of London's most architecturally rich neighbourhoods.

Register for Clerkenwell Design Week 2025 by scanning the QR code.

Article submitted by Clerkenwell Design Week



### Creative colour and texture at Clerkenwell



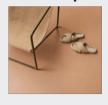
Visit Altro's showroom during Clerkenwell Design Week and you'll find it transformed into a creative colour and texture lab to showcase Human Centric Design, bringing creativity, colour and design innovation to the forefront. The leading surfaces specialist is collaborating with Laura Perryman, an accomplished colour designer and forecaster, with over 18 years of expertise in

CMF (Colour, Material, and Finish) design across diverse industries, who has developed the 'Colour-sense' Colour and Texture Lab.

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CLERKENWELL DESIGN WEEK 15 CLERKENWELL GRN, EC1R ODP

### **Forbo to partner with Crown Paints**



With the emphasis on colour, Forbo Flooring Systems is delighted to be partnering with Crown Paints at this year's Clerkenwell Design Week (CDW), with its EC1 showroom set to showcase how beautiful, integrated interior design schemes can be created with colour at their core. Forbo will once again be opening the doors of its EC1

showroom, located on St John Street, for the annual Clerkenwell Design Week. For 2025, Forbo's focus is all around colour, including an exciting colour and design collaboration with Crown Paints.

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## Gilberts helps "The Best Spa Hotel in UK" expansion

he Crow Wood Hotel & Spa Resort – winner of the Best UK Hotel spa award 2024 – is taking its visitor experiences to the next level, with contribution from Gilberts Blackpool.

The globally renowned venue has invested £16m in a new thermal experience – the Woodland Spa – set within the facility's 100-acre grounds in the heart of Lancashire. The three-storey building includes a gymnasium, bar, restaurant, treatment rooms, relaxation rooms, indoor swimming pool plus jacuzzi, salt steam room and serenity pool.

To confidently create the perfect atmosphere in each area, addressing the specific ambient conditions required, building services consultants Petit Singleton Associates utilised the expertise of Gilberts Blackpool to supply the air movement supply and extract.

For ventilation within the internal spaces, Gilberts worked closely with PSA to develop a scheme that predominantly uses a combination of Gilberts' contemporary-

styled louvre faced ceiling diffusers (DGA, four-way blow configuration), linear slot diffusers (GSLS) and high-capacity slot diffusers (HSLS), with separate units for supply and extract. To compliment the clean, modern decor, all were finished in either pure white with a 20% gloss finish or matt traffic white. And to ensure the air handling equipment with heat recovery connected to air source heat pumps all functions at optimum efficiency, constantly, Gilberts' plant ventilation louvres in anthracite grey have been incorporated into the first- and second-floor facades.

Anthony Fitchie, principal building services engineer at PSA, explained: "The challenge was to deliver green technologies, whilst ensuring clients visiting the facilities had the perfect experience. That meant careful consideration of the ventilation supply and extraction to ensure the potentially aggressive atmosphere and high levels of humidity in certain areas such as the pools were correctly



addressed. We know from past experience that Gilberts would provide the technical expertise and product quality to support us in delivery of that challenge."

All Gilberts' products – standard lines and bespoke solutions – are designed and developed in accordance with BS EN ISO 9001:2015 quality standard in the company's state of the art 140,000 ft² facility in Blackpool. The company has its own state-of-the-art test facility, including an air movement laboratory and specialist CFD and BIM software suites, giving customers unrivalled technical support and specification validation.

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### P C Henderson's Husky 120 Pro Sliding Door system specified for luxury hotel renovation



Drench Showers has recently specified P C Henderson's Husky 120 Pro for a luxury hotel renovation project in London. The project brief demanded sophistication and luxury throughout their 181 guest bedrooms. This included the inclusion of bi-parting sliding doors in the Skyline bedroom suites to separate the bedroom and bathroom to not only maximise floor space but also allow for flexible privacy options and an open-plan layout if required. The brief also required slimline framed aluminium doors with integrated glass to enhance the flow of natural light in the suite but to also provide an element of privacy when the doors are closed. Drench Showers did not hesitate to contact P C Henderson for a suitable sliding door hardware solution. Catering for wooden and metal doors weighing up to 120 kg each, Husky 120 Pro was identified as the best system for the project. Designed with an anodised aluminium track and nylon rollers, Husky 120 Pro offers a quiet system which allows the doors to effortlessly glide along the track with minimal friction. The system has also been tested to BS EN 1527 standards to achieve in excess of 100,000 cycles to ensure product longevity and durability.

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### **London Leonardo Hotel upgrades meeting room flexibility**



Situated alongside St Paul's Cathedral, the Leonardo Royal Hotel London St Paul's recently added flexibility to two of their high-spec meeting rooms. Working with architects, Cunningham McLean, and Edgewater Contracts, partitioning expert Style was contracted to install three glazed Stylefold 960 sliding folding walls. Effortless to move in and out of position, the walls can quickly divide the meeting areas to create smaller rooms, as required. With a 42 dB acoustic rating an excellent level of privacy is created between divided areas, whilst the glazed finish maximises light and visibility throughout the space. Finished with contemporary RAL 9005 Black Frames, these folding walls are not just a practical solution, but a stylish one too – complementing the interior design of the rooms. In the Barbican meeting room, two glazed Stylefold sliding folding walls can be used to divide the room into either three individual meeting rooms, one large and one small room, or the area can be opened up into one larger space. In the Temple meeting room, a single Stylefold wall was installed along the side of the room, enabling the room to either be closed off or opened up into the breakout area.

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BUILDING

RADISSON BLU SHEFFIELD

# **Union City Blu**

The new Radisson Blu hotel in the heart of Sheffield is a union of old and new, with HLM restoring and retaining a Victorian facade plus adding a major volume and maximising views over the adjacent public realm. James Parker reports for *ADF*.



Radisson Blu has opened its first hotel in Sheffield, in a prime spot facing a key piece of public realm in the centre of the city. Designed by HLM Architects, it provides a new function for an underperforming site with a mix of uses – sitting behind and above retained historic Victorian facades of two prominent buildings. The project is a key part of the wider Heart of the City masterplan, a significant regeneration project led by client Sheffield City Council with its strategic development partner, Queensberry.

The part new build, part restoration hotel scheme is a complex and locally important project for HLM Architects, who have their largest studio in the city. The practice was determined to win this project, sitting in its

prominent position, backing onto City Hall. It will not only provide 154 bedrooms, but mixed use elements including significant retail and restaurant space on the ground floor, plus a rooftop bar and restaurant with a terrace overlooking the adjacent Peace Gardens.

HLM was part of a successful bid for the 'Block A' portion of the masterplan, together with contractor McLaughlin & Harvey, who also worked on a recent major commercial renovation of the Moor shopping centre in the city. 'Block A' is seen as the gateway to the new 'Heart of the City II' district from the east within the overall masterplan, and is located within the central conservation area close to historically significant buildings and public spaces.

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A former 1970s office building to the rear of the site, Barkers Pool House, was demolished to make way for the main portion of the two-volume hotel

HLM comment that the project was notable for a "commitment to preserving Sheffield's Victorian heritage," and this ran throughout, having been "integral to the development of the proposals." By contrast, a former 1970s office building to the rear of the site, Barkers Pool House, was demolished to make way for the main portion of the two-volume hotel, a new addition containing the majority of the 154 bedrooms.

The Heart of the City plan spans different uses in sites across the city, including new Grade A office space, residential developments, restaurants and cafes, leisure destinations, as well as retail and public realm. The arrival of the hotel is a key piece of this puzzle, helping attract new business opportunities to the city, and generally raising its profile as a destination for business and travel.

#### Site context

Project lead at HLM Ben Carrack comments that, having "lived and worked in the city," HLM were "acutely aware of the opportunity and also the challenges of the site, the responsibility that we had as architects to do this project justice."

The block sits to the west of the Peace Gardens, on Pinstone Street, to the rear is Burgess Street, and to the north is Barker's Pool is a historic street opening up to public realm to the north west, across which is the City Hall.

The 'Block A' site, like many longestablished central urban blocks, saw significant changes during the 20th century, but in the past contained some major civic buildings. Peace Gardens (originally St Paul's Gardens commemorating St Paul's Church which was demolished in 1938). A concert hall originally stood on the west corner of the site, on Burgess Street, but this was destroyed by fire in 1937, replaced by a department store in the 1960s. There had been piecemeal development of the adjacent block, next to what was the Gaumont Theatre facing the City Hall, particularly during the 1970s, including a garage. The theatre was demolished in 1985 and replaced by shops, offices and an Odeon cinema, which in turn closed in 1994, becoming a nightclub.

### Design response

Bearing in mind the somewhat ad hoc nature of recent development on the

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site, the architects' proposal highlighted the "significant opportunity to provide a new, high quality, sustainable development that will revitalise and celebrate the rich heritage of Pinstone Street." Ben Carrack explains that the practice was involved very early on in the scheme, before a hotel provider was selected: "At the earliest stage we worked with Sheffield City Council and Queensbury; they later appointed Radisson."

The designers assert that as well as having "a considerable amount of regional knowledge," the practice having worked with both Sheffield City Council and Queensbury previously facilitated "open dialogue at all times." Carrack explains further that there was genuine collaboration on this highly visible scheme: "This was a project close to everybody's heart and so we worked together to get the best outcome."

The key addition to the front of the site was a new rooftop extension replacing the existing mansard roof above the retained facade, behind which the various rooms were refurbished. At street level, 570 m<sup>2</sup> of commercial space would be added, along with the principal pedestrian hotel entrance, plus conference & banqueting

facilities which lead out into a new courtyard to the rear, the 'heart of the scheme," say the architects. There is a second hotel lobby leading from Burgess Street on the next level, and the third floor level contains the bar and restaurant.

To the west (rear) of the site, a seven-storey block has been constructed for the majority of the bedrooms.

The practice commented on the importance of the project to HLM, including how it marks a step into new build hotel design. "We have a passion for regeneration and bringing new life into existing buildings. Tendering for the hotel provided an opportunity to increase our portfolio and expertise into new build hotels. Up to this point we'd just done hotel refurb, so to have the opportunity to build a new one in our city was just a great opportunity."

The project, despite its many benefits for both HLM and the city, presented some major tests for the practice and wider project team. From the need to carefully demolish the existing building fabric on this prominent site, and retain and restore the historic Pinstone Street facade, these challenges also extended to ground

### **RESTORING A ROLE**

By addressing the whole urban block, the scheme restores the important role of the existing buildings







#### **PEACEFUL VIEWS**

The original retained facade looks out over the Peace Gardens, a key part of Sheffield's public realm works needing to occur over existing basements, and retention works to party walls with the building's neighbours. Ben Carrack accepts that: "technically, this was an extremely complex project with many aspects to navigate."

This is a busy, diverse city centre site, with a near one-storey level change between Pinstone Street and Burgess Street, posing perhaps the greatest challenge to the architect, as they sought to maintain access to the rear of the Gaumont building whilst offering the potential for an external courtyard. Pinstone Street is a major route, so deliveries would be difficult, and needed to be primarily from the upper level of Burgess Street, causing future challenges for the developing Transport Strategy.

There were a couple of related design challenges in erecting a new hotel to maximise the investment for the client on this tight site. Retaining the existing facade on Pinstone Street in particular (which once housed Palatine Chambers and City Mews) meant a prescribed window pattern on that elevation, which constrained the dimensions

of rooms that could be provided, versus what could have been done with a more pragmatic modern hotel plan. In turn, this also impacted on the window arrangement that was possible on the new elevations.

In addition, the new seven-storey block on the west flank that replaced Barkers Pool House needed to respect its neighbours. As a result, this steps down to five stories to blend with existing buildings on Pinstone Street. Retaining the facade "presented challenges through the design stages but the end result was worth it," says Ben Carrack.

### A 'subservient' facade

HLM created a 'manifesto' early on in the project to "anchor the key design drivers for the project" and ensure everyone was on board. This principally "looked to draw upon and amplify the rich social and architectural history of the site, responding sympathetically to the existing material palette of the wider historic context in a contemporary reinterpretation for the Sheffield of today." The practice asserts that while the design developed,

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#### MIRRORING

Materials have been chosen internally such as timber, mirror and stone to "highlight the diversity of Sheffield's modern character, and offer tactile and visual richness" this manifesto aim was "preserved in the submitted proposal."

The concept for the new facades, including the rooftop extension on Pinstone Street was "conceived as a contemporary reinterpretation of Sheffield's local Victorian building typologies," after an extensive study of the existing Pinstone Street facade to understand its "order, layering and detailing." Therefore to an extent, they reflect the existing facade but offer a modern take on the "distinctive thrusting bays and vertical proportions" of the original buildings on the site, whose facade remains.

The final design solution was subservient to the original forms, "retaining and celebrating" these features by incorporating turret forms and gables that echoed the original French Gothicinspired roofline, particularly over Palatine Chambers. The process of arriving at this was aided by the "extensive pre-application engagement with Sheffield City Council" which the architects say was a key factor in this project's success.

While the rooftop extensions align with the "rhythm, order, and historical

character" of the facades below, the difference between the two original buildings has been "reinstated," say the architects, ultimately leading to a contemporary mansard solution over Palatine Chambers and a "distinct but complementary form" over City Mews. The detailing on the new forms also reinstates a sense of "historic verticality and solidity." At the same time, reducing and reconfiguring massing through successive design iterations protects key views from the Peace Gardens and "responds more sympathetically to the nearby Salvation Army Citadel."

As well as cleaning and repointing brickwork and stonework, existing elements to the facades were replaced and upgraded to bring the building up to modern performance standards. New timber elements have been included in colourmatched hues, and the existing cast iron balustrade was fully refurbished and repainted to match the existing colour. Also, new powder coated aluminium windows, were frame colour matched to the facade cladding, including heads and reveals in a similar material.



### External space

In order to maximise the benefits for hotel guests, shoppers, diners and locals across this tight site, the internal courtyard has been landscaped to "integrate a range of environmental and wellness considerations to create a calming and inviting outdoor space that connects people with nature," say the architects. The design "harnesses the site's microclimate, taking advantage of the shady conditions to support a lush and vibrant planting scheme," including shade-tolerant species such as ferns, hostas, and perennials, plus a semi-mature which "serves as a key biophilic feature."

To address the limited daylight in the overshadowed courtyard, a thoughtful lighting strategy has been employed such as feature lighting to keep the space "warm, welcoming, and usable" throughout the day and into the evening. Textured natural materials like granite setts and timber have been used to "support sensory engagement and comfort."

The courtyard is designed to be a versatile social space for dining, gathering, and relaxation, with benefits for users ranging from social interaction to a

place offering retreat from a busy urban environment. The inclusion of comfortable, adaptable seating encourages dwell time.

The rooftop bar and restaurant is the crowning glory, the restaurant's design "displaying a decadent palette of timber and stone, enriched with burgundy and forest tones." The artwork on show has a mix of "curious characters and abstract Indian heritage," says Ben from HLM Architects.

### 'Complementary colours'

The interior design of the hotel celebrates a clean, minimalist Scandinavian-inspired design as much as the local area. Many rooms offer views of the Town Hall and the Peace Gardens. However, materials and colours have been chosen to complement the city's "strong historic identity," says HLM.

The internal design of the hotel "merges Sheffield's industrial heritage with the natural beauty of its surroundings, creating a distinctive and engaging environment throughout," says HLM. Corridors and circulation spaces feature carpet designs inspired by natural forms, such as

The rooftop bar and restaurant has a terrace overlooking the adjacent Peace Gardens

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cloudscapes and rock formations, for a "tranquil and inspiring transition between rooms," whereas guestrooms feature artwork showing the surrounding area to reinforce a sense of connection.

Steel structures within the furniture design reference Sheffield's industrial past, while rugs depict the Peak District's topography. Other materials, including timber, mirror, and stone "highlight the diversity of Sheffield's modern character, offering a tactile and visual richness across the interiors."

#### Conclusion

This new hotel is a major achievement for HLM, as its first new build hospitality project on this scale, and is also locally important as the final part of the jigsaw in the Steel City's current masterplan, and its 'gateway.' With not only its modern hotel offering but also a range of desirable retail and F&B additions, the project is sitting in a good position to help Sheffield's credentials as a real destination.

The project architect comments: "You can't underestimate the significance that

a new hotel brings to the city within a regeneration project. New hotels and business bring new people into the heart of the city and that is significant in itself; a hotel can be a key driver in a regeneration project and that's why it was part of the wider masterplan." On a sunny day, this really is a perfect spot!"

The project embodies placemaking, "layering of people, places, spaces, and multiple activities all coming together." It also shows how a hotel can indeed be something that is "greater than the sum of its parts in our city, by being woven into the fabric."

Studio director at HLM Delia Harmston concluded at the scheme's outset: "As the economy restarts, our city centres will play a more important role than ever in ensuring the vitality and prosperity of communities throughout the UK. Pivotal to this is making sure that schemes are centred around people and focused on sustainability and wellbeing." By celebrating and preserving the city's heritage as well as bringing a new leading hotel group to its centre, the project has success built-in.

#### **DWELLING**

The project contains several external spaces which encourage dwell time

#### PROJECT FACTFILE

**Client:** Sheffield City Council/ Queensberry

Architect, interior design & landscape architect: HLM Architects

Project manager, cost consultant &

**Principal Designer:** Turner & Townsend **Planning & heritage consultant:** 

Montagu Evans

**Building control:** Assent Building Control

Structural/MEP fire engineer, fire engineer: ARUP

Acoustician, resource and waste management consultant: ARUP BREEAM assessor and ecologist: HLM

## Marmox: The first 25 years

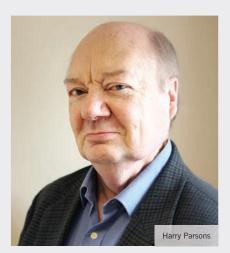


Born just a couple of years after The Battle of Britain, when Harry Parsons left school at the age of 16 to begin a course for aspiring site managers at the Brixton School of Building in South London, the country's priorities were still focused on replacing the housing and infrastructure destroyed during the war and although he has always been a very practical person, the maths and science he learnt in the late fifties made this young man's mind very receptive to new technologies, while he also harboured ambitions for adventure and foreign travel.

I was with Costain when a story in their house magazine about the projects overseas took my interest: which he chose to accept.

That unexpected opportunity, led to him spending the next 14 years in Nigeria, initially running the 'small contracts department' though the euphemistic title covered anything which could be supervised by one Ex-Pat. Harry reflected: "It was the broadest and best education I could have had. I realised I wasn't equipped for UK building sites but

he then spotted a vacancy being advertised by a coatings company for a Middle East manager. My patch, covered during a series of three-week jaunts, stretched from Turkey in the North down to Yemen and as far east



as Bangladesh this gave me the confidence to start my own business. That step came when I flew into Cairo one night and was asked by my local agent to meet one Dr. Kamal the next morning. It turned out the learned doctor owned multiple businesses and showed me a number of products including a polyester resin and the coated XPS insulation which has come to be known as Multiboard"

Harry started Marmox from his garage in the spring of 2000. 2005 saw him move from the first small Rochester office into the 4,000 sq. ft. Laker Road premises before, in 2010, the company took over its current Caxton House HQ offering quadruple the storage for pallets and now accommodating 16 staff. The early years saw Showerlay and Soundboard added to the range, then Thermoblock proved a landmark in 2010 by tackling cold-bridging. Innovation continues apace with the A1 rated Fireboard introduced two years ago and a fireproof version of the floor-wall Thermoblock now awaiting BBA approval.

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Managing Director Sarah Viney, reflects on the manufacturer's future within the construction industry:

#### Marmox maintains a positive outlook

As an innovator, Marmox is continuing to develop new products which meet the requirements of both industry regulators and our growing client base, though we have come to accept that it can take time for markets to understand the full benefits of what are novel solutions.

It was a decade ago that we introduced Thermoblock to tackle cold-bridging at places like the floor/wall junction, with their concrete mini-columns ensuring structural continuity. It took a long time for specifiers to realise the advantages under SAP etc., but now we are seeing sales into housebuilding booming. Not just in the social housing sector, but also private development and for extensions and now the range is ready to welcome a fire rated version; only awaiting final award of its BBA certification.

The uptake of our recently developed Fireboards has been most encouraging, there has been plenty of visitors on the stand at exhibitions keen to hear about what is a unique Class 1 non-combustible product. It's about communicating the potential

applications: there clearly being a need for a fireproof tile-backer and also a substrate which is perfect for taking render finishes in EWI build-ups. Crucially Fireboard offers ways of satisfying the new Building Safety Act as well as addressing the concerns of building insurers.

Staying on the subject of fire safety, we are in the process of introducing another product with the same core and coating as Fireboard. It is a special brick slip panel we've developed with a slip manufacturer, that is basically a Fireboard 'receiver' with a recess sculpted to take the slips and likely to be a game changer: easy to handle and fix in place and, of course, our original launch product -Multiboard - sustains excellent market share in tiling and wet room applications: along with a diverse range of shower trays, drains and related products.

Looking beyond our domestic progress, Marmox has not had any problems with the international supply chain, despite the headlines about global conflicts and disruption to shipping in the Red Sea. We ship direct from Alexandria and our lead times as well as our costs have remained stable. So, as well as maintaining our stock levels in Kent, lead times on new orders continue to be three to four days maximum while most are met next day. Beyond this the company also still prides itself on having excellent customer relations including support from our technical team and trade training section

While Marmox is a family business, most important is the fact that across the company, we have the right people in the right jobs and we've been so fortunate we have enjoyed very good retention: the majority of our staff having been with us from the very early days in one role or another: Our current finance director, for instance, worked with our accountants when the business was first set up.

Overall, I'm really excited about the future, we're going from strength to strength, with a good team who really enjoy their work within a stable company. Parts of the construction industry are growing strongly again and, in time, we expect a greater shift towards off-site fabrication, which our boards are absolutely ideally suited to.

You will be able to discuss our range of products including a new and exciting range of Multiboard Showerlays, at the Installer Show at the NEC 24-26 June on Stand 4D27.

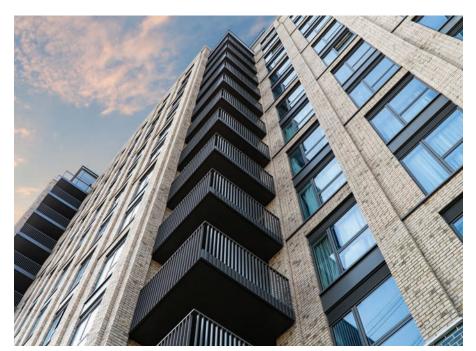
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## Going greener with British bricks

Robert Flello of the Brick Development Association (BDA) explores how locally sourced clay bricks offer a lower-carbon, resilient solution for sustainable construction, blending heritage with environmental responsibility in modern building.



Clay brick is a superb example of a homegrown product that brings sustainability and resilience to the housing industry

Prom residential to commercial buildings, the UK's built environment is responsible for 25% of the country's greenhouse gas emissions. A dramatic reduction in this figure is therefore essential to meeting the deadline for net zero. But the onus on CO<sub>2</sub> reduction doesn't rest solely on innovating improved sustainable building practices and products but rather with a material that's been part of Britain's heritage for centuries, clay brick.

Clay brick is a superb example of a homegrown product that brings sustainability and resilience to the housing industry. Of the 2.5 billion clay bricks deployed in the UK's built environment, around 85% were manufactured in the UK. This makes clay brick one of the most widely used and locally sourced building materials. By selecting a close-to-home building solution such as clay brick, which for centuries has been a trusted, reliable

material capable of fulfilling styles and trends throughout the ages, specifiers can ensure a more cost-effective and environmentally-responsible build.

#### Locally sourced

Clay brick is produced in ample quantities in the UK with natural elements including raw clay and water. This local sourcing dispenses with significant transportation costs and high carbon emissions that imported materials carry, many of which may have travelled thousands of miles before being put to use on UK building sites. In addition to reducing its environmental impact, shorter supply chains bring resilience, cost effectiveness and reliability, all of which ensures building projects remain on track.

Another distinct advantage of local sourced clay bricks is its ability to reflect the unique character of the area where it is produced. Clay brick manufacturers generally use clay from nearby quarries with the resulting bricks naturally matching the tones and textures of the local geology. This not only reduces the need for artificial additives or surface treatments, but also ensures that new buildings complement their surroundings, both visually and historically. In this way, the local sourcing supports not only environmental goals but also helps to preserve the identity of communities while building for the future.

#### **Built to last**

The benefits of clay brick go beyond their local production and use, with their value increasing over time. This is not only in terms of aesthetics and buildability but in environmental performance as well.

While modern materials lose their integrity over time, clay bricks have demonstrated durability spanning millennia. Archaeological evidence has revealed fired bricks still intact after more than 6,000 years, eclipsing conventional building

materials' lifespans on a huge scale. This extensive longevity translates directly into superior environmental performance, with each brick's carbon footprint distributed across centuries rather than decades in well maintained buildings.

This whole-life approach to sustainability will result in a low carbon footprint for every year of use. Rather than simply using materials with lower upfront carbon, a whole life approach considers environmental impact across a product's entire lifecycle, from production to use, maintenance and recycling.

## A broader definition of sustainability

True sustainability demands consideration of a building material's complete environmental impact – from extraction through manufacturing, construction, use, and end of life. Clay brick excels at each stage: locally sourced raw materials minimise transport emissions as we have referenced, natural composition ensures low operational carbon, minimal maintenance requirements reduce lifetime impact, and its ability to be reused and recycled supports circular economy principles.

#### Next generation brickmaking

While the UK brick industry is rooted in tradition, it continues to pioneer revolutionary manufacturing processes to reduce energy consumption and carbon emissions during manufacturing. Michelmersh's HyBrick project achieved a world first in 2022, demonstrating an 80-84% reduction in carbon emissions through hydrogen-fired production. Meanwhile, Atlas Ibstock's new pathfinder factory is a state-of-the-art facility producing durable, lower carbon and CarbonNeutral certified bricks, approximately 50% less embodied carbon than before.

As the construction industry charts a course towards net zero, clay brick emerges not merely as a traditional choice. It offers a rare combination of local sourcing, low emissions in transport, visual compatibility with an area's architectural heritage and extraordinary longevity. In an industry searching for low-carbon solutions that don't compromise on reliability or design, locally sourced clay brick stands out as both a modern and time-honoured solution.

Robert Flello is CEO of the Brick Development Association (BDA)



#### **DOWNLOAD REPORT**

For more information about clay brick's sustainability credentials, download the latest sustainability report by scanning the QR Code.



### **BAL** and **ARDEX** achieve gold standard for carbon reduction



ARDEX UK and Building Adhesives Ltd – part of the ARDEX Group UK – have both achieved gold certification for five years of continuous  $\mathrm{CO}_2$  reduction. The ARDEX Group UK first achieved ISO 14064:1 (otherwise known as CEMARS) for the quantifying and reporting of Greenhouse Gas (GHG) emissions and removals in 2019. Building Adhesives Ltd and ARDEX UK were the first companies in the global ARDEX Group to achieve this standard and were the first companies in the tiling and flooring sectors to be reporting their GHG emissions through this internationally recognized standard. BAL and ARDEX UK worked with Achilles (an independent consultancy) to accurately measure their GHG emissions and create positive strategies to manage and continually reduce impacts. Achilles' Carbon Reduce (powered by Toitu) scheme highlights the necessary data required which is then measured, monitored and calculated under the ISO 14064:1 scheme. Following successful completion and assessment, executive reports are produced for independent verification. Annual audits are carried out by Achilles.

01782 591100 www.bal-adhesives.com

### The design talent of tomorrow



Dulux is proud to announce its support for the visionary GREEN GRADS initiative, a unique UK platform dedicated to promoting the next generation of sustainably focused talent in design, art and engineering. With shared goals to foster innovation and champion sustainability, this collaboration will pave the way for sustainable advancements within the

design industry. Dulux is committed to transforming the way people paint by prioritising sustainability in everything it does. Dulux aims to make a positive difference to both the planet and people.

www.dulux.co.uk/en/sustainability www.greengrads.co.uk

## Retrofit 2025 at the Building Centre



Saniflo is delighted to announce a six-month collaboration with the Building Centre as a Principal Partner for 'Retrofit 2025 – What's Stopping Us'. As well as a static exhibition in the organisation's central London location, there is a full programme of in-person and online events

for the duration of the campaign, which is designed to help navigate the barriers and opportunities in the retrofit sector of the built environment. Retrofit 2025 aims to show that tools and solutions to transform existing buildings already exist and to encourage architects, Government and local authorities to take the next steps.

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## **Euroform's WeatherClad® meets** brief for Ilfracombe Homes

uroform's WeatherClad® wood effect shiplap planks have been selected for Devonshire Homes' new Ilfracombe development, Mariner's Haven. Euroform is supplying the low maintenance, fibre cement planks, which are manufactured according to BS EN 12467: 2012+A2:2018 and have BDA Agrément certification, in six bespoke colours.

Devonshire Homes has designed the Mariner's Haven homes in sympathy with the landscape. A number of the house types will feature half shiplaped exteriors to reflect the character of the development's coastal location in an elevated position overlooking Ilfracombe.

Performance and look were key criteria for product selection for Devonshire Homes. Initially, Euroform provided samples of eight bespoke colours from which the housebuilder chose six to depict sand, grass, sea and sky. WeatherClad® is also available in 21 standard colours, plus RAL and NCS

colours on request, and Euroform provides a comprehensive range of colour matched profiles and trims.

The natural timber effect of WeatherClad®, with its random embossed grain, and the width of the board will both add to the pleasing look. WeatherClad® boards are 230 mm wide, wider than most similar boards on the market.

WeatherClad® carries third party BDA Agrément certification from KIWA, a certification recognised by architects, specifiers, engineers and building control personnel. Certification confirms the product's suitability and fitness for purpose in terms of performance and durability. WeatherClad® has a European Classification of A2-s1,d0 for Reaction to Fire in accordance with BS EN 13501-1.

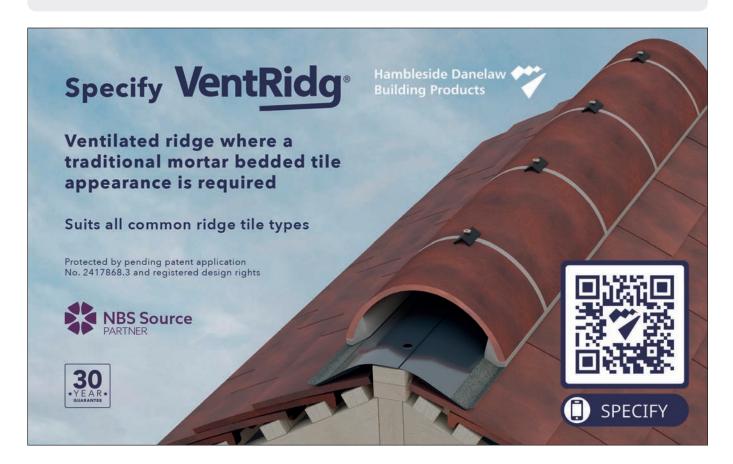
Weatherclad® is part of the range of Euroform's Code for Construction Product Information (CCPI) assessed products. WeatherClad® can be purchased



from Euroform in split pallets, helping customers to avoid waste. Euroform has an easy-to-use online tool for calculating the number of boards required for projects. To find out more please visit: www.euroform.co.uk/weatherclad-calculator.

Angus Cook of Devonshire Homes: "One of our top priorities is to ensure properties are sympathetic to the local environment. This is why we chose Euroform's WeatherClad® as the colours complimented the countryside and ocean scenery surrounding Mariner's Haven. We always use high-quality products that will stand the test of time, and WeatherClad® promises to do just that with its strong durability and water vapour resistance."

www.euroform.co.uk www.devonshirehomes.co.uk





#### Berkeley's Oval Village Technical Team:

Berkeley

Designed for life "The MAX FRANK non-combustible thermal break was specified at the Oval Village in direct response to the ban of combustible materials on HRB buildings 18m and over in height. There are still products on the market with combustible thermal breaks and the unique product from MAX FRANK addresses this by use of a non-combustible A1 rated Rockwool core. This was integrated into the design as Berkeley's strict direction with the designer to specify products regardless if excluded under Reg 7(3) to be non-combustible. The MAX FRANK product has been used on all current phases of the Oval Village on concrete balconies where the structural engineers have worked closely with the MAX FRANK team to structurally input their product as part of the frame design." Scan for the NEW











BBA Certificate Reissue

## Out of this world innovation from Senior helps shape Nottinghamshire's new science centre

The new Planetarium & Science Discovery Centre at Sherwood Observatory in Sutton-in-Ashfield is bringing the universe a little closer to home, thanks to a stellar combination of innovative architecture and high-performance glazing solutions from Senior Architectural Systems.

Designed by Anotherkind Architects and delivered by GF Tomlinson, the state-of-the-art facility is set to become a beacon for science education in the UK. Constructed on the site of a disused Victorian underground reservoir dating back to 1886, the facility honours its rich heritage by retaining original features such as intricate brick arches and vaulted ceilings. These preserved elements provide a unique and atmospheric backdrop to the centre's underground exhibition space and modern amenities, which include a cafe, education centre, classrooms and meeting areas.

The stunning facade has been designed to maximise natural light while providing



efficient thermal performance, with Senior's supply chain partner Optimus Architectural Ltd installing a trio of the manufacturer's most popular products. This includes Senior's patented PURe® aluminium commercial doors, SPW600 automatic opening ventilation (AOV) aluminium windows, and its slimline SF52 aluminium curtain wall system. Combining slim sightlines with strength and durability, Senior's SF52 curtain wall system has been used to frame

the expansive glazing panels that enhance the building's contemporary aesthetic and provide stunning views of the surrounding landscape. The system has been specified with feature caps, which add further interest to the facade design. Senior's robust PURe® commercial doors, which offer marketleading thermal efficiency, also help create a comfortable environment and provide safe and secure access for visitors and staff alike. The manufacturer's SPW600 AOV windows, designed to aid natural ventilation and smoke control, further contribute to the building's sustainability credentials.

The new planetarium is seamlessly integrated within the Sherwood Observatory Science Discovery Centre, forming the heart of the facility.

For more information, please search for Senior Architectural Systems on LinkedIn and Facebook.

01709 772600 www.seniorarchitectural.co.uk

### Are you ready to enrol in the Siderise Academy?



Siderise Academy has launched a new, online learning platform designed to help the industry build its understanding of passive fire protection and acoustics in the built environment. Featuring RIBA-certified CPDs and modules developed under the ASFP recognised provider scheme, it can support the creation of safe, comfortable and compliant buildings designed to last. Created by technical experts at the global manufacturer of high-performance passive fire protection, acoustic and insulation solutions, the Siderise Academy online platform offers a range of on-demand courses, webinars and CPD modules that are accessible on any device with an internet connection. These are supported with reading materials and interactive assessments designed to test your knowledge and reinforce your learning. The content aligns with high industry standards and can be used as part of a competency pathway. Once a course or webinar is completed, users can download a certificate of completion, enabling them to document their learning and provide evidence that they are taking steps to maintain their competence through continuous learning and development.

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### **Maximise performance with Don & Low**



With homes and buildings accounting for 30% of UK emissions, thermal efficiency is more critical than ever. Made in the UK, Don & Low's Reflectashield® and VapourTX® Thermo offer high-performance, foil-laminated solutions for timber, steel, and modular structures. Reflectashield® protects the cold side;

VapourTX® Thermo acts as an airtight barrier on the warm side – both optimising U-values and aiding compliance with BS5250, Part L and the Future Homes Standard (FHS). Durable, certified, and easy to install, these membranes deliver outstanding performance.

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## Reclaimed Brick Tiles see surge in demand



With the ever-growing focus on sustainable building practices, heritage design, and character-rich interiors, the demand for brick tiles is soaring. Reclaimed Brick Company have seen a sharp rise in orders for their handmade brick tiles, crafted from genuine reclaimed

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

info@reclaimedbrickcompany.co.uk reclaimedbrickcompany.co.uk

#### Rising demand for Yorkshire stone paving



Whether it's a classic English country garden, a high-end restoration project, or a contemporary property seeking a grounding, natural aesthetic, Yorkshire stone continues to prove why it has been the material of choice for centuries. Combining natural beauty,

unbeatable durability, and local provenance, it is the ultimate in sustainable, timeless construction and landscaping. Britannia Stone are seeing increasing demand for their Yorkshire paving slabs and walling stone, not just from across the UK, but internationally too.

info@britanniastone.co.uk www.britanniastone.co.uk

#### Clubhouse with natural insulation materials



Natural building materials from Ecological Building Systems have been specified for the refurbishment of the clubhouse at the historic five-star Matfen Hall hotel, golf club and spa in Northumberland. The architects had a vision to create a sustainable design for the

refurbished clubhouse, which would bring it up to modern energy efficiency standards using natural materials. Gutex Multitherm woodfibre from Ecological Building Systems was specified for insulating the roof and walls of the clubhouse. Gutex Multitherm is a breathable insulated sarking board made from recycled wood chips.

info@ecologicalbuildingsystems.com ecologicalbuildingsystems.com



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## From concept to comfort: how stone wool insulation makes the difference

hen it comes to designing buildings, your choice of materials matters. It goes beyond simply meeting regulatory requirements – it's about selecting solutions that improve health and safety, support long-term building performance, and increase occupant comfort. ROCKWOOL stone wool insulation can help in achieving these objectives. Here's how:

#### Thermal performance for yearround comfort

Meet and exceed your thermal targets with an insulation specification that supports year-round comfort. By specifying thermally-efficient ROCKWOOL stone wool insulation, your selection slows the transfer of heat between the inside and outside of a building, helping to create more comfortable and healthier indoor spaces which can help reduce heating and cooling costs.

## Improved acoustics for a quieter, healthier environment

Think further than thermal comfort – use your specification to improve acoustics and enhance wellbeing. Evidence shows that reducing unwanted noise can support patient recovery in healthcare environments, improve concentration in schools, and improve people's overall health and wellbeing.<sup>1</sup>

You can harness this benefit by specifying ROCKWOOL stone wool insulation, which comprises thousands of tiny air pockets to trap and absorb sound waves – reducing noise levels within rooms or minimising sound transfer through walls and floors.

#### **Built-in fire resilience**

You play an essential role in designing buildings that inspire confidence and feel safe. One way you can build fire resilience in at design level, and clearly communicate these safety benefits to clients and occupants, is to select non-combustible construction materials





throughout the fabric of the building. When it comes to insulation, ROCKWOOL stone wool offers clear performance benefits towards fire resilience.

Non-combustible by nature, ROCKWOOL stone wool provides built-in fire resilience that is not dependent on chemical flame retardants. It can withstand temperatures in excess of 1,000°C and, if exposed to flames, will not fuel or spread a fire nor contribute significant amounts of toxic smoke.

#### Moisture control for healthier spaces

Moisture is another serious specification consideration. In the wake of Awaab's Law and the renewed scrutiny of damp and mould in residential settings, you may consider taking a fabric-first approach to improve moisture management for health and wellbeing.<sup>2</sup>

ROCKWOOL stone wool is non-hygroscopic and moisture-repellent, meaning it doesn't attract or absorb moisture from the surrounding environment. It's also vapour-resistant, which helps prevent the build-up of mould, mildew and rot – contributing to a healthier indoor environment over time.

#### Performance that lasts

You're designing for the future – schools, homes, and workplaces that must perform for generations. To give you the long-lasting capabilities you need, ROCKWOOL stone wool insulation has been proven to retain its thermal insulation properties for up

to 65 years, providing continued thermal performance for decades into the future.<sup>3</sup>

#### Show your sustainability credentials

Finally, you can be confident you're working with a manufacturer that is helping to overcome complex global sustainability challenges with products that are inspired by nature. ROCKWOOL stone wool is made primarily from volcanic stone, one of the world's most abundant raw materials. It's also endlessly recyclable with no loss in its performance properties, contributing to a circular construction economy.

ROCKWOOL stone wool insulation helps you enrich modern living by harnessing the natural power of stone. It's why your specification is about more than just materials – it's about creating safe and enjoyable environments that meet today's needs, and tomorrow's goals.

It's a serious commitment we'll help you to achieve. To learn more about the capabilities of our stone wool insulation, contact Technical Solutions using the number below or visit: rockwool.link/adf-may25

#### 01656 868 490 www.rockwool.com/uk

- <sup>1</sup> For more information on the health impacts of excess noise, visit www.rockwool.com/uk/acoustic
- <sup>2</sup> www.gov.uk/government/news/awaabs-law-to-forcelandlords-to-fix-dangerous-homes
- <sup>3</sup> Testing conducted at the Danish Technological Institute in 2023, using ROCKWOOL products taken from an external wall system

# Ventilation: the key to solving the Part O overheating challenge

New-build homes are more energy efficient, as a result are prone to overheat. Steve Pearce of Vent-Axia explores how architects can use smart ventilation strategies to combat this, and support the 2050 net zero goal.

raditionally, UK homes did not struggle with overheating. Older buildings, often constructed from heavyweight materials, benefited from high thermal mass, as well as featuring relatively high air leakage rates, and low levels of thermal insulation, while large openable windows provided natural ventilation, which all helped to lower temperatures.

However, today's new build homes are far more airtight with high levels of insulation, larger areas of glazing, low-emissivity glazing, and minimal solar shading, which all contribute to overheating risks. Additionally, there are often only a limited number of openable windows, whether due to noise, air pollution, or security considerations. Meanwhile, opportunities for overnight cooling, through either natural or mechanical night-time purge ventilation, are frequently insufficient.

The risk of overheating is further intensified by climate change, which has led to warmer summers. Meanwhile, urbanisation has also raised temperatures, especially in city centres like London, where the urban heat island effect can elevate nighttime temperatures by 10°C compared to its surrounding rural areas. As a result, occupants in some new homes are now experiencing indoor temperatures that exceed comfort, and in some cases pose health risks.

#### **Architectural measures**

Ventilation can be an important part of the solution for overheating. However, there are a number of architectural measures that can be taken first to mitigate internal temperatures. A few proactive approaches

architects can take include altering a building's orientation to reduce solar gain; reducing glazed areas; and specifying low g-value windows that manage heat ingress, while maintaining SAP compliance. Meanwhile, maximising external shading, whether from balconies, overhangs or recessed windows have the ability to significantly cut solar gain.

Increasing wall and roof insulation to minimise conduction gains; managing the heat with exposed internal thermal mass and high ceilings; and using green roof systems, can all help regulate internal temperatures. In addition, to minimise the heat generated in a home, communal heating pipework can be rerouted or insulated, especially in corridors.

The next step for architects to consider is how excess heat can be removed by maximising natural ventilation through large windows; maximising cross-flow ventilation and adding ventilation louvres in walls, and employing purge ventilation at an elevated rate. However, architects can face some obstacles. For example, openable windows are not always viable, Park K (protection from falls), Part M (security), high levels of air pollution, and environmental noise can all restrict the use of windows for ventilation.

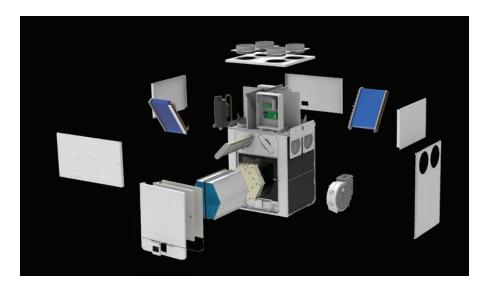
#### Guidance

Recognising the seriousness of the overheating problem, the Government introduced Approved Document O of the Building Regulations in 2021. Part O specifically addresses the challenge of overheating in new dwellings, care homes, and student accommodation.



Overheating is a serious health issue, but it is also an issue of comfort

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Its core objective is to protect occupant health and wellbeing, not to guarantee thermal comfort, with two overarching requirements: limiting unwanted solar gains and ensuring excess heat can be removed from the indoor environment.

Crucially, Part O prioritises passive measures first, reserving mechanical cooling only when necessary. There are two calculation methods: the Simplified Method focuses on limiting solar gains and ensuring adequate natural ventilation by providing prescriptive criteria for glazing areas, window openings, and building orientation. It is suitable for sites that are not constrained by noise or air pollution. The second is Dynamic Thermal Modelling (CIBSE TM59): this is a performance-based approach used when simplified compliance is not possible. This method requires professional input and modelling, especially when building in 'high-risk' zones like London. A noise and air quality assessment will help confirm if a Simplified or Dynamic model is needed to comply with Part O.

When it comes to removing excess heat, Part O lists acceptable methods in order of preference, starting with opening windows, followed by ventilation louvres, mechanical ventilation, and finally mechanical cooling. When natural ventilation options are restricted, mechanical ventilation provides a valuable solution with a number of different types of technology available.

#### **Extract ventilation**

Where windows cannot be relied upon for ventilation, modern extract systems, such as specially developed unitary fans with builtin temperature sensors and complete inline solutions, which can help remove excess heat. These systems are compact, low-noise, and suitable for installation in all habitable rooms. They offer on-demand operation or automatic switching, ensuring efficient performance aligned with occupant needs.

#### **MVHR & MVHR DX**

Now a core part of low-carbon building design, the latest Mechanical Ventilation with Heat Recovery (MVHR) units deliver coolth or heat recovery efficiencies of up to 93%, making them ideal for year-round performance. Crucially for overheating mitigation, modern MVHR systems can come with intelligent automatic 100% summer bypass capabilities, offering free cooling, allowing cool night-time air to flow through the home when conditions permit.

These systems also provide excellent indoor air quality through high-grade filtration – an increasingly important consideration in urban developments with high external pollution.

However, when free cooling via an MVHR summer bypass alone is insufficient to mitigate overheating throughout the year, architects can consider all the benefits of MVHR systems with integrated 'DX' cooling modules. Featuring intelligent controls that automatically switch between heat recovery, summer bypass, and active cooling via the DX cooling module, the units continuously measure internal and external temperatures to maintain comfort thresholds efficiently. This helps ensure homes remain cool, comfortable, and energy-efficient. The intelligent DX cooling module can activate on-demand or automatically to prevent overheating.

Another new mechanical cooling option available to architects is a combined MVHR unit plus air source heat pump. This offers renewable hot water with a 'free' cooling solution, monitoring comfort temperatures defined by the user and when cooler outdoor air is not sufficient to cool the space via the 100% summer bypass, the system automatically sends a signal to the heat pump to request cooling. This will then combine the air flow from the MVHR and the cool exhaust air of the heat pump via built-in dampers. This type of system offers the highest level of comfort and functionality all year round, while complying with Part O and TM59 while being extremely energy efficient.

Steve Pearce is Vent-Axia product manager

### Nuaire is first in UK to use low carbon-emissions recycled & renewably produced steel



Indoor air quality and ventilation manufacturing specialist Nuaire has announced that its Magnelis® steel based ventilations systems are now being made from XCarb® recycled and renewably produced steel. Leading the way in sustainability, Nuaire is the first UK ventilation manufacturer to switch to this innovative steel, which will result in a 64% reduction in CO, emissions on these products within the first year alone, compared with the same steel manufactured via the conventional steelmaking route. Products to benefit from the transition to XCarb® steel include Nuaire's industry leading BPS air handling units and XBOXER XBC packaged heat recovery systems. For customers, this transition to a lower carbon-emissions steel has only positive benefits; the quality of Nuaire's products will remain as before, with the additional benefit of helping to reduce embodied carbon within buildings. Embodied carbon – the carbon emissions associated with the material extraction and manufacture, construction, maintenance, refurbishment, and demolition of a building - makes up 20% of the UK built environment's emissions.

www.nuaire.co.uk/about/xcarb europe.arcelormittal.com/sustainability/xcarb/xcarb/introduction

### Stelrad 'Green Compact' radiator series



Stelrad Radiators continues to offer low carbonemissions steel radiators, with an excellent response so far to this new approach to the reduction of carbon emissions in the production of steel radiators. The steel utilised in the manufacture of these Green Compact radiators is

XCarb® recycled and renewably produced steel, which is made in an electric arc furnace with high recycled content and 100% renewable electricity. Using this low-emissions steel results in a 66% reduction in CO, emissions per tonne of steel, compared with using the same product made via the conventional steelmaking process.

0800 876 6813 www.stelrad.com/trade/green-series

## **Energy efficient Axial fan range expanded**



UK ventilation manufacturer Domus Ventilation has added new models to its intermittent axial fan range: the DBF100 100 mm (4") fan and the DKF150 150 mm (6") fan. Both fan types are available in versions with timer control, and combined humidistat and timer control which identifies and

reacts to a significant change in humidity. The DBF100 is also available with a pull cord control. The new Domus Ventilation axial fans have been designed for high performance and energy efficiency.

domusventilation.co.uk vent.info@domusventilation.co.uk

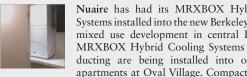
### Nuaire provides affordable cooling



Nuaire has had its MRXBOX Hybrid Cooling Systems installed into the new Berkeley Oval Village mixed use development in central London. 103 MRXBOX Hybrid Cooling Systems with Nuaire ducting are being installed into one bedroom apartments at Oval Village. Compact in size, they

are being installed within each apartment's utility cupboards. The MRXBOX Hybrid Cooling System, which is a cooling extension for the MRXBOX Mechanical Ventilation with Heat Recovery (MVHR) range, combines the heat-exchanger coolth recovery of an MVHR system with the cooling effect provided by a DX coil.

enquiries@nuaire.co.uk www.nuaire.co.uk



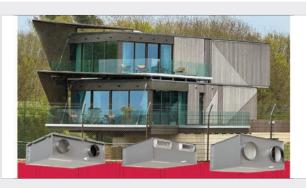
## Natural Harmony in the kitchen with Keller



Japandi (a blend of Japanese and Scandinavian design) became a trend buzzword after a leading Italian furniture show (Eurocucina) featured new schemes in this serene style. Now it is embedded in our aspirations for a clean, modern, ultra-stylish new kitchen space

which oozes coziness and minimalism; and Keller's latest kitchen Natural Harmony perfectly displays these qualities. Eye-catching features in this kitchen, which highlights both a Nottingham and an accent Ladera door with featured slatted styling in natural oak stain, include the and the cool Japandi natural oak handle.

www.kellerkitchens.com



#### **Vectaire at Silverstone**

All sizes (EVO220, EVO250 and EVO350) of Vectaire's EVO horizontal, in-line MVHRs have been installed in the prestigious Escapade accommodation at Silverstone - the UK's only Formula 1 Circuit. The EVOs provide optimum ventilation by continuously and quietly supplying fresh air in areas up to 200 m<sup>2</sup>. They comply with the latest building regulations and all units have energy efficient EC motors, providing an effective, low energy, low running cost solution to controlling condensation and pollution. They are up to 88% heat exchange efficient and have low specific fan powers. Their sophisticated control unit gives options for summer-bypass, frost-stat, over-run timer on boost setting, variable adjustment for trickle and boost speeds, and humidity control. They are SAP PCDB Listed and are manufactured in the UK to ISO 9001:2015 and ISO 14001:2015.

01494 522333 www.vectaire.co.uk

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## The benefits of hardened wood flooring – how it's made is the key

In a wood flooring market which is not known for innovation, the pioneering approach of Välinge Innovation, sister company of Bjelin, stands outs strongly. Darko Pervan, founder of Välinge, developed the world's first mechanical locking system which enabled wood and laminate flooring to be locked together for a secure and durable fixing. Indeed, the company has been primarily a technology and innovation company, rather than a manufacturer, for the following 30 years.

Patented Woodura® technology from Välinge is critical to the manufacture of hardened wood flooring, known as Woodura Planks. The unique manufacturing process involves fusing a thin sheet of real wood veneer with a Compositek<sup>TM</sup> wood fibre core through a powder mix layer. The powder mix completely fills the natural gaps within the wood, while also enhancing the wood's appearance. It eliminates the need for a woodfiller and creates a significantly stronger surface with a hardness three times greater than a traditional solid wood floor - more solid than a plank! Compared to traditional wood flooring, the durability of the wood wear layer is massively increased.

In addition to Woodura, to give outstanding durability and sustainability, the Bjelin range of hardened wood flooring includes 5G Dry® technology, also developed by Välinge. This is a water-resistant fold-down system unique among hard wood flooring products because



of its ease of installation. These are the next generation of highly innovative hardened wood floors.

In fact, the Välinge technology for locking floorboards mechanically has become the world standard. The company has pioneered a technological revolution for the flooring industry and led the transition from traditional glued tongue-and-grooved flooring to today's modern adhesive-free click technology.

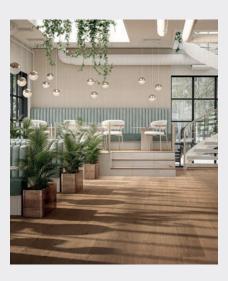
Bjelin has production facilities at Viken in Sweden and also several factories in Croatia, including the most modern Ogulin 2 factory near to the FSC®-certified Spačva forest, from where a lot of its timber is sourced. This facility will be the world's largest wood flooring factory. The Swedish and Croatian factories together will have a production of millions of square metres annually when completed in 2027.

Bjelin hardened wood floors are made with oak, ash and walnut from sustainable sources of timber with FSC certification. Woodura technology makes the manufacturing process much more efficient and environmentally friendly in terms of timber usage than traditional processes. Only a tenth of the material normally used in hardwood flooring is required for the timber used in Woodura planks.

The technique used by other companies to produce the surface layers for wooden floors is done by sawing about 4.5 mm thick layers which are then sanded to a top lamella. This technology is used by many manufacturers to produce parquet floors, and the process creates a lot of waste, mainly in the form of sawdust.

Bjelin on the other hand uses a knife cutting process instead of sawing when manufacturing hardened wood floors. The surface layers end up being approximately 0.6 mm thick, which is how it can manufacture ten times more flooring from a single log than traditional parquet flooring.

In this way hardened wood flooring meets the multiple objectives set by Bjelin for the technology – first and foremost to be highly sustainable and economical with resources, something which is increasingly demanded by clients and specifiers. Secondly it is highly durable, hard-wearing and long-lasting, while finally allowing for the creation



of a stunning aesthetic, where every plank is different and the beauty of the natural woodgrain is maximised.

Bjelin hardened wood flooring meets all the aspirations of specifiers, who want to use environmentally friendly wood flooring products. They can choose a wood-based click floor that can be reused, is locally produced and where the raw wood comes from FSC-certified forests. The hardwood surface layer of the floor is thin at 0.6 mm and reinforced, so that large amounts of flooring can be manufactured from one log, but it is also sure to be highly durable.

In order to test the durability of its new floors, the company operates the world's largest testing facility for wooden floors, containing advanced laboratories with large climate chambers and instruments to test floors for impact resistance, durability and noise levels.

Bjelin can be sure that its floors are durable and longlasting, which is a key factor in eliminating disposability and enhancing sustainability.

It can be seen that, by focusing on innovation, it is possible to develop products in the hardened wood flooring sector, which meet all the aesthetic requirements of a timber floor, as well as being much more durable and also meeting sustainability goals.

richard.banham@valinge.co.uk 07500 758364 www.bjelin.co.uk

## Sound support for schools

Holly Rivers of Heckmondwike FB discusses how noise in schools impacts learning and teaching, highlighting the need for better acoustic standards and the role of carpets in creating quieter environments that allow pupils better focus.

In recent years, research has increasingly highlighted the detrimental impact of classroom noise on children's cognitive and academic performance. Children, particularly those who are younger, have learning disabilities, or struggle with auditory processing, are more vulnerable to the disruptive effects of noise. Prolonged exposure to noise not only hinders academic performance but is also linked to higher stress levels, increased anxiety, and impaired emotional regulation.

## The need for acoustic standards in school design

Evidence reveals that the average daily noise exposure in UK schools reaches 72 dB, far exceeding the 35 dB threshold recommended by the World Health Organisation for an optimal learning environment. This stark contrast underscores the urgency for architects to prioritise acoustics when designing classrooms. Consequently, architects must adhere to the BB93 guidelines, established by the Department for Education, which outline the minimum standards for acoustic performance in schools.

The guidelines emphasise that speech clarity is essential to support effective communication. However, studies reveal that children can miss up to 25% of information when exposed to background noise. Even more concerning, over 80% of teachers experience vocal strain due to the difficulty of projecting their voices in noisy environments, which leads to increased absenteeism and stress-related health issues. Therefore, while BB93 provides a critical baseline, it often falls short in addressing the growing complexities of modern educational environments.

#### Key acoustic challenges in schools

Many of today's school buildings were designed using architectural features from the 19th and early 20th centuries, such



as high ceilings, hard floors, and poor insulation, which unintentionally hinder effective sound management. While these features may offer aesthetic or practical benefits, they often fail to meet the acoustic demands of modern education. For example, hard floors reflect sound waves, amplifying noise rather than absorbing it, which disrupts learning.

Additionally, the increasing popularity of open-plan layouts in educational design has exacerbated this issue. While these spaces encourage collaboration, they also lead to increased sound transmission between



Prolonged exposure to noise not only hinders academic performance but is also linked to higher stress levels

classrooms and noisy corridors, increasing background noise, and making it difficult for students to focus, especially during quiet tasks or exams.

## The role of carpets in enhancing acoustics

Among the solutions available for addressing noise challenges in schools, one of the most effective, yet often overlooked, approaches is the strategic use of soundabsorbing materials, like carpets. Carpets, due to their fibrous texture, offer a unique advantage in reducing noise from foot traffic, converting sound energy into heat and minimising reverberation throughout the room. Not only does this create a quieter, more focused learning environment but it also improves speech intelligibility. A study by the Acoustical Society of America demonstrated that carpets could improve word recognition by 20% in noisy classrooms. This benefit is particularly beneficial in flexible, open-plan classrooms, where communication is crucial.

For schools seeking enhanced sound insulation, adding an additional layer of material, such as felt, to the back of carpet tiles can boost acoustic performance. This added layer increases the carpet's ability to block sound transmission between spaces, making it especially useful in high-traffic areas such as corridors, classrooms, and multi-purpose rooms.

## Benefits of improving acoustics in schools

The benefits of better acoustics in schools go beyond just compliance with regulations.

By addressing acoustic challenges, schools can foster a learning environment that promotes greater student concentration, engagement, and ultimately, better academic outcomes. For students with special educational needs, particularly those with hearing impairments, reducing noise distractions and enhancing speech clarity can dramatically improve their ability to engage with lessons. The Equality Act 2010 mandates that schools provide accessible environments for all students, and acoustics play a vital role in creating inclusive learning spaces. Also, teachers are better able to project their voices, leading to less vocal strain and improved overall health. This results in lower absenteeism and greater job satisfaction.

## Combining acoustics & sustainability

As the global focus on sustainability grows, schools are increasingly looking to reduce their environmental impact. Incorporating sustainable materials that support both acoustic and environmental goals is a trend that's gaining momentum. High-quality carpets are not only effective at reducing noise but can also contribute to schools' sustainability goals. Many modern carpets are designed to meet environmental certification standards, like LEED certifications, while improving acoustics. This makes carpets a valuable choice for architects looking to achieve high standards of environmental performance in their design.

#### The future of school design

The way schools are designed is changing rapidly, driven by evolving educational needs and the growing importance of inclusivity, flexibility, and sustainability. As architects work to create modern educational environments, addressing the acoustic challenges of open-plan spaces, traditional architecture, and ensuring inclusivity for all, is a top priority. Ultimately, carpets provide a simple yet effective solution for improving school acoustics. By integrating them into the design of modern classrooms and learning spaces, architects can create environments that foster better communication, enhanced learning, and a healthier, more inclusive atmosphere for all students.

Holly Rivers is marketing assistant at Heckmondwike FB

## HMG Paint's step by step guide to flooring paints

If the prospect of painting the floor of a workshop, a warehouse or changing rooms is a daunting one then the new Floor Paints Guide from HMG is exactly what you need.

Manchester-based HMG Paints will take the building and decorating contractor through what you need to know and which



of the company's range of high performance, durable and versatile floor coatings you should select for the job in hand.

It's not just the potential size of the job, it's selecting the correct product according to the use to which that floor will be subjected: light, medium or heavy traffic; inside or outside; what is the existing substrate and how was it laid down in the first place?

The company offers three distinct coatings; HydroPro Floor Paint, Polyeurethane Floor Paint, and 2K Epoxy Floor Paint and the Guide provides a handy at-a-glance reference as to the properties of each.

It goes on to explain the importance of identifying the type of floor you will be working on. Is it new or old concrete, if new, is it power floated because this will have an effect on the adhesion of paint? If an existing floor, has it been painted previously?

According to the answers the Guide takes you through floor preparation techniques including washing and degreasing.





0161 205 7631

shop.hmgpaint.com/products/categories/floorpaint/?utm\_source=fmj&utm\_medium=mpu\_ ad&utm\_campaign=floor\_paint

### Luxury vinyl flooring from the Belgian master



Unilin Flooring designs and makes luxury vinyl floors in Belgium under the Quick-Step and Moduleo brands. Proven in the commercial market, these floors are known for their innovation, quality and design integrity. Covering all popular specifications including dryback, loose lay and click engineered vinyl in plank, tile and herringbone formats, as well as the multi-shaped dryback floors of Moduleo Moods, Unilin Flooring can support project specifiers in achieving a luxury vinyl floor that will exceed design expectations and prove durable and easy to maintain in use. All Quick-Step and Moduleo floors are also certified for pre-consumer recycled content (21% for dryback and 22% for engineered/loose lay) by third-party certification body SCG Global Services. Under the analysis, pre-consumer recycled content is defined as recycled materials from other industrial processes, including internal cutting waste, reprocessed into raw materials. Through the Quick-Step and Moduleo brands, Unilin Flooring is the master in performance luxury vinyl flooring for commercial interiors.

info.panels@unilin.com www.unilin.com

### **Havwoods launches FlameLESS**



Havwoods is proud to announce the official launch of FlameLESS – an innovative Bfl-s1 certified fire-rated engineered flooring solution. This latest launch sets a new benchmark in performance and specification compliance within the wood

flooring marketplace. Developed in response to growing demand from architects, designers, and specifiers, FlameLESS bridges the gap between aesthetic appeal and regulatory compliance. It's designed for projects where fire performance cannot be compromised, including commercial, hospitality, and multi-residential environments.

01524 737000 www.havwoods.com/uk

### **Luceco launches the new LED Tempus Extra**



Engineered for industrial environments such as warehouses and factories with high ceilings, Luceco's new LED Tempus Extra Bulkhead ensures emergency illumination for up to three hours, delivering 800 lumens to high-risk

areas where enhanced lux levels are essential. Due to its innovative interchangeable optics, the spacing between units can be increased, reducing the number of wiring points, leading to substantial time savings for installers. The LED Tempus Extra Bulkhead is self test as standard, ensuring consistent performance and reliability.

sales@luceco.co luceco.com/uk

## Quietly reflecting on the UK's first GenZero school

t Mary's Voluntary Catholic Academy in Derby is the first completed school In the UK to meet the Department for Education's new GenZero specification and biophilic brief. Here, architects Hawkins\ Brown have designed a beautiful combined nursery and primary school following passive design principles comprising five buildings along a central canopy for each age group coupled with amenity blocks for learning resources. They utilised natural materials wherever possible to complement the natural aesthetic and each classroom is open to the outdoors, allowing the children to connect with the natural landscape. The school is net zero carbon in operation and has won the AJ100 Award 2024 Sustainability Initiative of the Year.

As part of the design, Hawkins\Brown worked with acoustic consultants Mach Acoustics and specified Troldtekt's wood wool acoustic panels across many of the ceilings to help comply with 'BB93 Standard:

Acoustics in Schools' which sets out the minimum standards for school acoustics in terms of sound reverberation time and internal ambient noise levels. Procured in an unpainted finish, the panels complement the building's timber cladding and frame, contribute to the biophilic design and, importantly, control the acoustics in the building to provide a quiet environment for learning.

Troldtekt wood wool acoustic panels are frequently specified to help transform educational spaces. Available in a wide variety of different structures and colours, they combine optimal sound absorption with an award-winning design. The Troldtekt range has a minimum expected life cycle of 50 years coupled with excellent resistance to humidity and tested to meet ball impact standards. Panels can be supplied as natural wood, unpainted based on FUTURECEM™ offering a reduced carbon footprint or finished in almost any RAL or NCS colour.



info@troldtekt.co.uk www.troldtekt.com



## Specifying for infection control: Engineering confidence at the handwash station

rchitects specifying clinical/surgical handwash facilities are increasingly expected to consider infection control features. However, guidance is often vague, inconsistent or misinformed, especially where technical and engineering principles are concerned. That's where astute engineering design, such as Horne's award-winning Optitherm thermostatic tap, can make a real difference. The Optitherm combines distinctive, ergonomic form with precision-engineered functionality to support both compliant hand decontamination and long-term water quality management.

Designed specifically for healthcare environments, the Optitherm features a shared outlet for both thermostatically mixed and dedicated cold water, which allows for continued use during hot water supply failure, and promotes greater cold-water turnover – critical for Legionella control. The integrated thermostatic mixing valve (TMV) provides constant, accurate delivery of warm



water (left lever) at a safe and comfortable 41°C, while a combined flow regulator and conditioner fitting at the point of delivery ensures the water falls in a smooth, straight and laminar column, at an optimally governed flow rate. This facilitates a kinder handwashing experience.

For infection prevention teams and estates engineers alike, the Optitherm uniquely facilitates elevated-velocity flushing to shear excess biofilm from its supply pipework  vital for mitigating colonisation by Pseudomonads and other opportunistic pathogens. The removable outlet fitting further enables routine cleaning, disinfection, or easy substitution.

Architects will appreciate its elegant, easyto-clean form, with smooth, continuous surfaces and no tight angles. Maintenance is straightforward, with tile-side accessibility and a demountable body, designed to reduce downtime and disruption to clinical services.

To help architects appreciate the complexities of infection control in healthcare tap specification, Horne offers free CPD seminars: https://b.link/EngineeringHandHygiene and https://b.link/EngineeringVsPseudomonas, which explore safe water delivery, ergonomics, biofilm and cleaning vs disinfection – from a practical, and realistic engineering-led perspective.

01505 321455 www.horne.co.uk b.link/NBS\_Horne\_Optitherm

### **Pyroguard unveils the TechLibrary**



Pyroguard is pleased to announce the launch of the Pyroguard TechLibrary – an innovative digital platform designed to make it easier for architects, specifiers and contractors to access essential technical

data and test results. This online resource offers a comprehensive and regularly updated library of technical product information, test certifications and resources, tailored to the needs of fire safety glass professionals. With its modern and intuitive interface, the TechLibrary allows users to quickly find the necessary information, saving valuable time at every stage of the specification process.

01942 710 720 www.pyroguard.eu/resources/techlibrary

## Advanced provides fire protection to Eribé



Advanced has supplied an intelligent fire panel with wireless detection to iconic knitwear brand Eribé. Fire and security service providers, Safe Services, installed an Advanced MxPro 5 single-loop analogue addressable fire panel to replace the existing fire system, as it was old and could not be brought up to standard. MxPro 5 is one

of the fire industry's leading multiprotocol fire panels and is certified by FM Approvals to the EN 54 standard. Ease of installation and configuration, as well as its wide range of peripheral options, make MxPro 5 customisable to almost any application.

0345 894 7000 www.advancedco.com

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## Introducing Nullifire FZ400: The pioneering 'movement-tested' fire stopping solution



## FZ400 Movement Joint Filler Nullifire







fullifire, a leader in passive fire protection innovation, proudly unveils FZ400 - a cutting-edge fire stopping product designed to accommodate movement, while maintaining the integrity of compartmentation.

Powered by patented GXT Technology, FZ400 provides the necessary continual relief of fatigue on fire stopping seals under deflection stress and protects service penetration seals with outstanding fire performance and movement-resilience.

The FZ400 has been rigorously tested to EN 1366-3/4, achieving up to two hours fire rating after undergoing cyclic movement, proving its effectiveness in real-world scenarios where structural movement is inevitable.

Using Nullifire's pioneering 'Movement Test,' developed with the support of Warrington Fire, the FZ400 was subjected to a groundbreaking procedure that replicates ceiling deflection. A wall was moved up and down by 30 mm more than 50 times over a two-hour period, then placed in a furnace to assess performance post-movement.

FZ400 is a graphite impregnated open

cell foam with a highly expansive char when exposed to heat. The water resistant film provides a cold smoke seal. This provides both flexibility and excellent fire stopping properties.

The results were outstanding:

- No ripping, cracking, or fibre migration
- Maintained a secure, air-tight fire seal
- Up to 2 hours of fire resistance maintained

The FZ400 properties are:

- Tested to EN 1366-3/4 Up to 2 hours fire resistance post-movement
- Nullifire's Patented GXT Technology -Combines flexibility with superior fire protection



- Easy to install Dry fit, cut-to-size, compressible, and lightweight
- Zero fibre migration
- Retrospective fitting capability
- Creates a dynamic seal accommodates building movement
- Tested with mixed services
- Tested as a linear gap joint superseding FJ400

Hannah Eyres, technical manager at Nullifire, explained: "Our Movement Test provides a complete framework for testing how GXT Technology adapts to real-life building pressures. We're proud to share a test that reinforces our drive toward data-driven solutions and gives architects and contractors complete confidence in FZ400. Feedback has been very positive. Architects and Main Contractor clients demand data driven solutions so the development and success of this test will be well received in the Construction Industry."

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## Resistant glazing for modern safety requirements

Stephen Malkin of Promat UK explains why a complete system approach to fire resistant glazing design and specification is key, post-Building Safety Act.

uilding products of all kinds are understandably being subjected to much greater scrutiny since the publication of the Building Safety Act 2022, and all the resulting legislative, procedural and compliance changes.

In terms of best practice for the design, specification and installation of fire resistant glazing projects within the construction sector's new safety-focused era, this is largely no different to what many leading passive fire protection product manufacturers and industry associations, including the GGF, have always advocated.

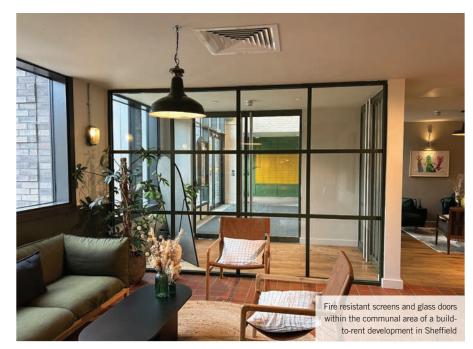
A key part of this is a 'system approach' wherever possible for glazing elements or doors that must offer a minimum level of resistance to fire as part of the strategy to protect building users and assets. Individual product performance declarations are crucial, of course, but this is just one consideration and they cannot be relied upon in isolation.

For internal features such as glass screens, partitions with doors, glass doorsets and walk-on glass floors to be able

to demonstrate a level of fire resistance. they have to be assessed or tested as a complete assembly. That means the glass, frame, beads, seals, fasteners and every other material or component used to create the finished unit have to be combined and assessed by appropriate technical specialists to determine if the performance will be achievable.

And we know that architects value system testing too. This was evident from ADF's 'The Changing Face of Product Certification' white paper, published in September last year, in which 88% of respondents said they believed "testing and certification of product systems should be made a requirement."

A key benefit of choosing a fire resistant glazing system which has been tested and



certified by an accredited third party body is that it ensures reliable performance and reduces risks of product substitution or poor installation, given the parameters set by the test certification. The end result is that it provides additional peace of mind for building owners and occupants.

The best way to ensure all the project goals can be achieved, however, is always to engage with the system manufacturer at the earliest opportunity to fine tune the design, avoid delays and maximise potential within the budget available.

#### Integrity & insulation (EI) or integrity-only (E)?

One of the most important considerations to start with is what type of system to use. Fire resistant glazing which incorporates thermal insulation, and hence provides protection from the heat generated by fire, Fire resistance is rarely the only design objective when creating internal glazing elements

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In office buildings, fire resistant glazing plays a crucial role in providing safe working environments which also benefit from plenty of natural light transmission

is known as integrity and insulation or EI. This is one of three classifications used, with the others being E, integrity-only, and EW, integrity with radiation protection, which is not widely used in the UK.

It is crucial to specify the appropriate level of protection for the application given how destructive and dangerous high levels of heat can be. Glazing which offers integrity-only protection (E) may be perfectly adequate for applications where the risk from heat has been properly assessed, but in many cases integrity and insulation (EI) glazing offers the most effective solution.

EI protection can be provided by fire resistant glazing systems for a minimum of 30 minutes across several different types of frame material. These ratings increase in 30-minute increments, enabling EI30 and EI60 specifications to be achieved routinely, as well as EI90 and EI120 in certain frame types, sizes and configurations.

## Unlocking the potential for fire glass to be multi-functional

Fire resistance is rarely the only design objective when creating internal glazing elements. Unfortunately, that can add complexity to the design and specification unless the proposed system has the flexibility to enable other performance, light transmission or aesthetic goals to be achieved.

The latter is extremely important in the majority of projects, particularly commercial buildings such as offices, hotels, bars, restaurants and retail stores, but also for high-end residential. Choosing a fire resistant glazing, window or door system, therefore, that can provide assured passive fire protection 'almost unnoticed' ticks all the boxes where visual appeal is a priority.

With the advanced systems available today, that can mean design characteristics such as butt-jointing of the glass panes, slim framing to replicate Crittall-style windows or 'through the glass' door handles can be accommodated without compromising the target fire performance.

In addition, depending on the system, enhanced acoustic performance will often be achievable with increased thickness of the glass or in one of the panes where a double glazed unit is used.

Stephen Malkin is sales manager for glass at Promat UK

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