

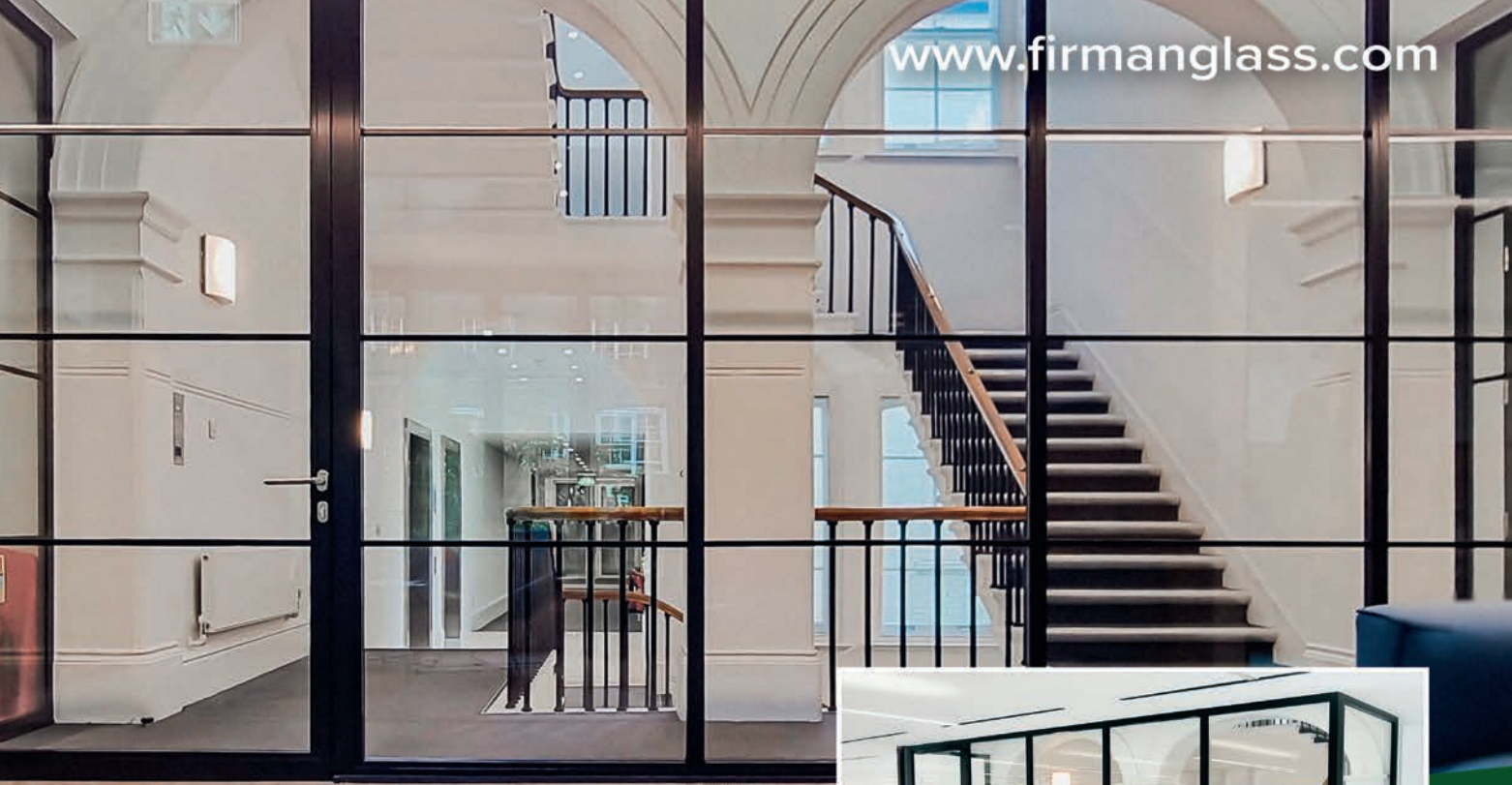
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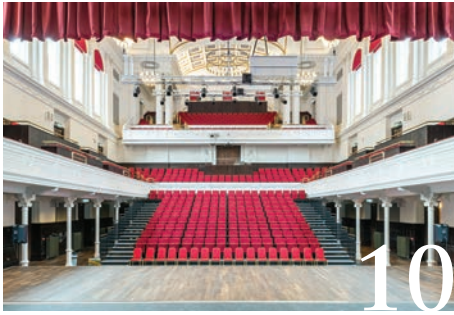
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# FROM THE EDITOR



It's an indictment of an industry that employs 2.9 million workers in the UK that still in 2024, only 6% are from ethnic minorities. Equally, despite years of attempts to increase diversity, only 15% of workers in construction are women. The age-old stigmas of the industry being 'male and pale' (and possibly 'stale') seem to be difficult to shift.

However, according to figures from a body recently formed to try and address the issue in the supply chain, the Construction Inclusion Coalition, 46% of people canvassed say they'd be more likely to seek work in the sector if it "demonstrated a strong commitment to diversity and inclusion." In a time of increasingly prohibitive skills shortages following the last recession, Brexit and the pandemic, surely we need to increase diversity for pragmatic reasons alone, notwithstanding several other good motivators.

Although the CIC's survey finding suggests that the "strong commitment" to changing the status quo may be lacking in many companies in the sector, I'd venture to suggest that they probably have very strong ambitions in the corporate ESG manifestos. It's the 'delivery' part that is the seemingly intractable problem – but what are the answers? Do we introduce more quotas, with the inevitable accusations of anti-meritocratic or even tokenistic recruitment, or do we try to work at the grass roots to make entry into the industry more attractive, practical and equitable, which is a long-term game. Arguably, we may not have time to wait given the huge building targets.

Architecture itself probably isn't the worst diversity offender, but there's no room for complacency. No-one would doubt that women were equally talented as architects as men, some might reckon they're potentially better. Yet last year the ARB found the profession was only 31% female. What is being done to support women as well as their partners to ensure careers and families can be balanced and both allowed to flourish? Ethnic diversity is even more dispiriting – 8% of the industry are Asian, and amazingly, only 1% are Black.

The CIC is determined to bring the industry together in a new way to make some inroads on this difficult culture change. That is why it's looking to expand its initial perimeters of a supplier-oriented group (including Travis Perkins, BAXI, Ibstock, Wavin, Knauf, among its 15 'strategic partners'). It is "calling on all parts of the industry, from contractors to manufacturers to join the Coalition and commit to making ED&I a priority by inspiring, sharing, listening, supporting, educating, and measuring progress."

The group has staged a series webinars so far, engaged 90 women in its 'Elevate Women's Network,' launched an online members' resource and 'inclusion toolkit' and is set to host its first 'Coalition in Conservation' event.

It could be a major platform for seeing things improve, and some of its members are already working to "reduce unconscious bias" in recruiting. I look forward to hearing progress and participating in sharing it.

## James Parker, Editor

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### ON THE COVER...

White Arkitekter brings the health benefits of mass timber to a substantial chunk of the new Velindre Cancer Centre in Cardiff

Cover image © White Arkitekter  
For the full report on this project, go to page 27

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## ADAPTIVE REUSE

# Edinburgh hospital reused as university site

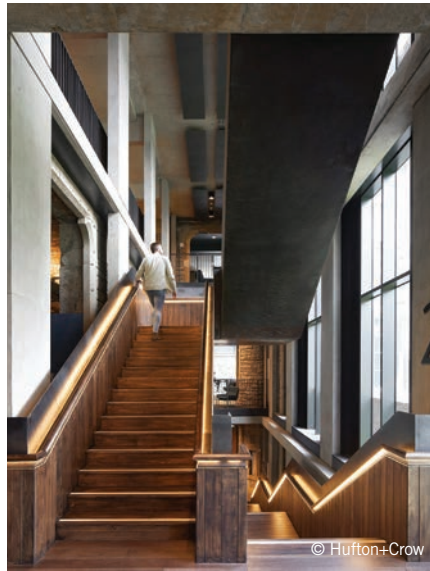
Edinburgh University's Futures Institute (EFI), an adaptive reuse of a 19th century hospital, has completed nine years after the project commenced in 2015. The design by Bennetts Associates "revives the key qualities of the existing building and transforms it through new uses, interventions and extensions."

David Bryce's original design in the Scotch Baronial style was completed in 1879 and featured 20 Nightingale wards in six wings, connected by long corridors to keep cross-contamination to a minimum. When the NHS vacated the former Royal Infirmary in 2003, it left the Category A listed building in poor condition, with numerous unsympathetic extensions, asbestos, dry rot and potential structural failure.

The transformation from a surgical hospital to the Futures Institute is "evident at several levels," says the practice. The building has been "stripped of its later accretions, so that the external and internal forms could once again be seen at their most impressive." This ranged from removal of extensions and mezzanine levels to suspended ceilings and services.

A comprehensive programme of repair and reconstruction was implemented, requiring substantial replacement of rotten floors, asbestos removal, strengthening of

walls and roofs, insulation of all external surfaces and reinstatement of natural ventilation. New accommodation was added on either side of the main corridor, to replace the separation required by the hospital with the functional integration, physical connections, social gathering spaces, larger rooms for 200 seats and touch-down areas needed by the Futures Institute. The wards themselves were converted to flexible work and teaching



spaces that were faithful to the elegant Nightingale proportions.

After years of accessing the building through A&E to the rear, the neglected main entrance was reopened and rejuvenated, making the clocktower the focal point. To symbolise the building's change of identity, a new pedestrian park that adds to Edinburgh's public realm and connects the Futures Institute to the city. It is now described as 'the front door to the University'. And below the square within the slope of the site, a 450-seat event space was constructed. Projecting 'light boxes' enhance the sense of space and help to demarcate the public square to the north, whilst "direct, grade level connections punch through the thick clocktower walls to the south."

Edinburgh Futures Institute now contains a "range of spatial experiences with proportions, materiality and variety that are unlike anything that could be achieved with an equivalent newbuild," says Bennetts. It demonstrates that low carbon-re-use of an existing building can be "stimulating and responsible" and done "without detriment to the original."

## SPORTS &amp; LEISURE

## Foster + Partners to lead masterplan for land surrounding Old Trafford

Foster + Partners has been appointed by Manchester United to develop a masterplan for land around Old Trafford Stadium – known as Old Trafford Stadium District.

The project encompasses the land owned by Manchester United FC that surrounds the existing stadium. The aim be to design a "world-class football

destination and home for Manchester United fans." The wider masterplan comprises mixed-use developments which will benefit the local community, attract new residents, increase job provision, and "make it a vibrant destination for visitors from Manchester, the UK and globally."

The exercise will "include substantial engagement with fans, community

members, local authorities and the Old Trafford Regeneration Task Force, whose feedback and insights will be incorporated into the masterplan design."

The stadium itself will not form part of this exercise – "its design will begin once the club has decided on the development options," commented Fosters, adding "a world-class stadium will ultimately sit at the heart of this ambitious new masterplan, as a catalyst for wider regeneration. Foster + Partners will also provide recommendations on how the Stadium District masterplan can "complement and align with the existing Trafford Wharfside masterplan."



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## HEALTHCARE

# Ramboll to lead design for new London children's cancer centre

Global engineering, design and sustainability consultancy Ramboll has been appointed as lead consultant for the design of the new Children's Cancer Principal Treatment Centre at Evelina London Children's Hospital, London.

Appointed by Guy's and St Thomas' NHS Foundation Trust, Ramboll will provide a full range of multi-disciplinary advisory and design services, with sub consultants providing further specialist support. This includes collaboration with ADP Architecture for architectural and lead designer services, with further specialist services from GL Hearn, Art in Site, Thornton Tomasetti and Safer Sphere. In line with the Trust's ambitions, the project will involve a multi-phased approach to ward decants and department remodelling across three separate buildings at the hospital. Design solutions will align with the Trust's sustainability strategy net zero requirements, covering plant selection,



renewable energy, water management, air quality and material use.

There are currently 13 children's cancer Principal Treatment Centres (PTCs) in England which provide specialist care for children aged 15 and under with cancer. Following an NHS England-led decision-making process, Evelina London Children's

Hospital (part of Guy's and St Thomas' NHS Foundation Trust), has been chosen as the future PTC location for south London and much of south east England. Evelina London is now working closely with patients, families, its own staff and staff from the existing service delivered by The Royal Marsden and St George's Hospital, to plan for the safe transfer of specialist cancer services to Evelina London Children's Hospital. The service is not expected to move before October 2026.

"Environmental sustainability will be integral to the development and delivery of this project," said Ramboll, adding that it contribute to the Trust's ambition to reduce their "absolute Scope 1 and 2 emissions by 47% by December 2029 and hit net zero carbon by 2045." Focusing on projects that are both sustainable and patient-focused, Ramboll's design solutions are "crafted to minimise environmental impact while having maximum effect on wellbeing."

## NEW APPOINTMENT

## Fereday Pollard appoints Jennifer Dixon in strategic growth role

Architectural and landscape design practice Fereday Pollard has appointed Jennifer Dixon as its director of growth and communications to spearhead the practices' growth programme and further strengthen its senior leadership base.

The appointment follows Dixon's "highly successful year already spent working with Fereday Pollard in an advisory capacity," said the practice. In this new position, she will drive the practice's "ever-increasing involvement in the engineering-led major transport and infrastructure sectors as well as its expansion into new related sectors and increasing international presence."

Jennifer brings 30 years of experience to Fereday Pollard having previously founded her own London architecture

practice in 1993, which later merged with Austin-Smith:Lord in 2003, where she became principal of its London studio. From 2013 to 2019, Dixon led the architecture discipline at AECOM across the EMEA region. Jennifer practises as an RIBA Client Adviser, and will continue to provide specialist advisory capability and capacity to client teams embarking on strategic-scale development, augmenting Fereday Pollard's existing expertise in pre-design advice and DCO services for infrastructure projects. She is a board trustee of RIBA and a director of the construction industry council.

Chris Pollard, managing director at Fereday Pollard, commented: "Jennifer's appointment comes at a pivotal time and follows on from a highly



successful period for the practice that has seen our new station at Abbey Wood receive a RIBA London award. Jennifer's appointment is not only an important next step for the future of the practice but with her extensive experience in the highly specialised environments of transport and infrastructure design, it also reflects our commitment to the ongoing development and expansion of the human-focussed design solutions we are proud to deliver within engineering-led major infrastructure."



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## PRACTICE PROFILE

# Holmes Miller

ADF's Kim Neville traces the evolution of multi-award winning Glasgow practice Holmes Miller, from its modest origins 70 years ago to overcoming a series of challenges which equipped it to deliver further future growth

**H**olmes Miller was established in 2011 following the merger of Holmes Partnership and The Miller Partnership, but its origins can be traced back more than 70 years.

The firm was initially founded in 1951 in Glasgow by Jack Holmes, who graduated from the Royal Technical College in 1940 before serving with distinction in the Highland Division of the Royal Engineers during World War II. After the war, Holmes oversaw the Hamburg City Architects Office for the army for two years before returning to Scotland to start his own practice.

In 1955, after Jack married architect and planner Kirsteen Borland they extended their relationship into their work, forming Jack Holmes & Partners, with Kirsteen as a partner. The firm became Holmes Partnership in 1981 with the introduction of a second generation of owners.

The firm's headquarters are still in Glasgow but the business has continued to grow, broadening its reach by adding UK and international studios. "We have experienced significant growth since our humble beginnings," reflects Callum Houston. Holmes Miller has an expanding presence in its St Albans studio, bringing the UK staff total to more than 70, and it has a studio in Guangzhou, China, increasing the overall headcount to nearly 100.

Aligned to its continued growth plans, the practice has also recently established a base in Leeds from where it will service clients and opportunities in the North of England. Reflecting on the past seven decades, Houston identifies some of the key challenges the firm has addressed. "Technological advancements, like the transition from manual drafting to CAD and the adoption of BIM, have completely transformed project design and management." Holmes Miller, like many practices, has also navigated the complexities of fluctuating economic conditions and an ever-evolving regulatory landscape.

A significant focus for the company has been aligning its aims with the UK's 2050 net zero ambitions, but investing in being ahead of the curve. "As the country moves towards net zero, designing sustainability has become increasingly crucial. However, by continuously learning and staying ahead of industry trends, we have consistently adapted and thrived."

The firm's culture has also evolved to foster greater collaboration



### PAISLEY TOWN HALL

The refurbishment was an example of how the practice can blend heritage with modern functionality, to create a "vibrant civic hub"

and openness among its team. "Our management culture is characterised by openness and collaboration," Houston asserts; "many senior team members have progressed through the ranks." The design studios have been transformed from traditional private offices to a range of informal breakout spaces, actively promoting interaction and the exchange of ideas amongst members of staff.

### Ethos in practice

Their ethos is to create an environment based on mutual respect, where "everyone is valued and actively encouraged to use their voice to help shape the most productive and supportive workplace."

Their sector-specific teams (Holmes Miller has a strong track record in sport and leisure, health and wellbeing, justice, public

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#### HMP & YOI STIRLING

Holmes Miller's "pioneering custodial facility" in central Scotland was designed for "mental wellbeing and trauma-informed care"

buildings, residential, and education) share their experience and knowledge with staff through training and mentoring, ensuring the firm retains and passes on expertise.

More recently, the firm has made significant strides to align with causes and bodies that reflect its core values. Notably, a partnership with the Passivhaus Trust, which advocates for energy-efficient building practices and sustainable development, "marks a significant shift towards environmental activism," says the firm.

Rather than following a distinct design signature, the practice adopts a "bespoke, people-focused" approach for each project to harmonise with the local community to help it feel organically integrated into its surroundings.

#### Exemplary

One of Holmes Miller's standout sustainability-first projects is Scotland's first Passivhaus leisure facility, the Blairgowrie Recreation Centre. The practice is acutely aware of greenwashing concerns and aims to put sustainability at the core of every project through a "dedicated sustainability charter" which incorporates user wellbeing goals.

Sciennes Primary School is Scotland's first Passivhaus primary school, opened in Edinburgh in 2023 with a £3.2m CLT-constructed two-storey extension to the grade B-listed existing building in the Marchmont conservation area. It exemplifies a harmonious blend of sustainability and modern functionality, as detailed in a report in the January 2024 edition of *ADF*.

Holmes Miller aims to go beyond industry standards on sustainability, incorporating Passivhaus principles into designs "even when certification isn't a project goal." They developed an in-house tool for assessing embodied carbon, now used on all projects.

Other key recent projects include a pioneering prison, HMP & YOI Stirling, designed to focus on mental well-being and trauma-informed care which picked up a 2024 Scottish Design Award for its "innovative approach." The Allander Leisure Centre, which opened in March 2023 in East Dunbartonshire is "another strong example of the practice's understanding of the role public buildings play in fostering community cohesion and enhancing quality of life," and places a focus on accessibility, inclusivity, and sustainability.

The firm says that having "passionate staff" leads to better outcomes, so they actively encourage their team to align their personal interests and strengths with project commitments. A great

## The firm is navigating increased demands for expanded sets of 'deliverables' and project scope, particularly regarding BIM, without corresponding fee increases

example is the Early Years Centres for East Dunbartonshire Council it has designed, with project lead Mark Ellson drawing inspiration from his experiences with his young family to create an enhanced secure play area. This space exceeded defined standards by 50% and has "ensured that children have a safe, active environment that caters to their developmental needs."

Collaboration is vital for fostering an environment where ideas can flow freely, and Holmes Miller found this basic requirement of architecture tested post-pandemic, as "Teams calls can only go so far." They believe nothing compares to the effectiveness of face-to-face interaction.

Holmes Miller introduced a nine-day, 72-hour working fortnight last year following an employee-led consultation. This offers a slight reduction in hours with no loss of pay, "resulting in more effective project collaboration, and a stronger office culture," as well as a better work-life balance. The firm has also integrated remote working flexibility, "prioritising health, well-being, and performance."

Although the firm has made numerous contributions to the built environment over its 70 years, Houston regards the introduction of the nine-day fortnight as one of its most significant milestones achieved to date.

#### Current challenges

Like many architectural firms, Holmes Miller faces several current challenges, including uncertainty in project pipelines, extended project durations, and pressures on client budgets. They are also contending with the rising costs of professional indemnity insurance, software, and general living expenses. Additionally, the firm is navigating increased demands for expanded sets of 'deliverables' and project scope, particularly regarding BIM, without corresponding fee increases.

In response to this, the firm is "focusing on enhancing efficiency and streamlining processes to deliver projects more effectively within budget constraints." It says a key measure for achieving this is "emphasising clarity in project scopes from the outset, for mutual understanding of deliverables and expectations."

The practice wants to offer its staff "fair compensation" for their work in a tough market, and has identified part of the means to this as "cultivating sustainable partnerships with clients who value their services," in order to support both "creativity and business objectives."

As well as contributing to tackling the carbon reduction challenge, Holmes Miller is "focusing on increasing their involvement in projects that positively impact society." By collaborating closely with local communities, the firm aims to enhance well-being and quality of life through thoughtful, inclusive design.

These clear strategies show a commitment to pushing architectural boundaries while creating lasting value for clients and communities. It's focused on driving positive change both in society and the environment for the next 70 years! ■

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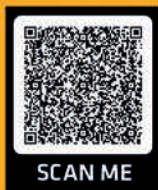


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# VIEW POINT

Architect and National Retrofit Hub co-director Sara Edmonds discusses the critical need for a major retrofit programme to tackle fuel poverty, reduce emissions and improve housing quality, and how the Hub is driving collaborative action

The challenge of retrofitting the UK's existing housing stock is well-known, yet the urgency has never been greater. With an estimated 5.6 million households in fuel poverty and the heating of residential buildings responsible for 20% of the UK's greenhouse gas emissions, the need for a transformative approach to housing is clear. This transformation extends beyond merely reducing carbon emissions or cutting energy bills; it's about enhancing the health, wellbeing, and security of millions of people across the country.

Retrofitting represents a crucial societal shift that we can't afford to delay further. The outdated, inefficient housing that characterises much of the UK's landscape is not just an economic and environmental burden; it stands in the way of achieving the quality of life that everyone deserves. The path ahead is challenging, but the stakes are too high to settle for anything less than a comprehensive commitment to change.

## The role of the National Retrofit Hub

Since joining the National Retrofit Hub (NRH) as a co-director in the summer of 2023, I've witnessed the pivotal role we play in advancing the UK's retrofit agenda. The NRH was established to serve as a central coordinating point for industry leaders, policymakers, and other stakeholders to collaborate effectively on enabling the local delivery of retrofit across the UK.

The Hub is organised around six working groups, each focusing on different key areas of the retrofit challenge:

- warm, healthy, net zero homes;
- supply chain, products & solutions;



- workforce growth and skill development;
- finance;
- delivery approaches;
- driving uptake.

Through these groups, we are working together to identify gaps, prioritise key areas, and agree on practical actions to enable retrofit at scale. As co-director, my focus has been on ensuring that these efforts are action-oriented, with clear deliverables that drive meaningful progress

at the local level across the UK.

One of the most significant aspects of our work at the NRH is our ability to convene and unify a wide range of stakeholders. This goes beyond sharing knowledge; it's about fostering collaboration that leads to rigorous, meaningful outcomes. The NRH provides a platform where diverse voices come together, ensuring that positive action is prioritised and that we are collectively driving towards our shared goals of enabling the local delivery of retrofit at scale.



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## Energy Performance Certificates have long played a crucial role in promoting energy efficiency, but their current framework has significant limitations. The National Retrofit Hub is bringing together stakeholders to coordinate efforts to collectively reform EPCs

### Releasing resources for retrofit progress

Through our convening and collaborative work, we've made important progress in addressing the challenges of large-scale retrofitting. One example is the "Delivery Approaches: State of the Nation Review" which we developed in collaboration with our partners Arup and Ashden, and our Delivery Approaches working group.

This 50-page report provides a comprehensive analysis of retrofit delivery across the UK, highlighting areas where collaborative efforts can enhance existing models, overcome barriers, and create new initiatives for local retrofit delivery. The report's three core aims are:

- Evaluate the current state of retrofit delivery and determine the scale required to meet decarbonisation targets.
- Examine the resident journey across five key delivery pathways, identifying challenges and opportunities within the current policy and industry landscape.
- Identify best practices and emerging opportunities to strengthen collaboration across the sector.

The report serves as a springboard, encouraging the advancement of retrofit delivery and underscoring the importance of collaboration between industry, government, and communities in accelerating the retrofit of millions of homes.

### Coordinating on EPC reform

Energy Performance Certificates (EPCs) have long played a crucial role in promoting energy efficiency, but



their current framework has significant limitations. Recognising the need for a more effective system, the National Retrofit Hub is bringing together stakeholders to coordinate efforts to collectively reform EPCs.

Our approach involves bringing together all the work that has already been done in this area, ensuring that the wealth of existing knowledge and research is fully utilised. We have facilitated industry-wide workshops that bring together a broad spectrum of stakeholders—ranging from policymakers and industry experts to practitioners on the ground. These workshops are crucial for fostering dialogue, sharing best practices, and identifying the gaps that must be addressed.

Beyond these collaborative efforts, we are conducting research to ensure that our recommendations are both evidence-based and aligned with the practical needs of the sector and the public at large. The outcome of this comprehensive process will be a set of recommendations that we will present to guide future policy and improve the effectiveness of EPCs as tools for driving substantial energy efficiency improvements.

Through this coordinated effort, we are working together to ensure that the reformed EPC framework will better

support the UK's ambitious net-zero targets and drive meaningful progress in the retrofit sector.

### Looking ahead: The future of retrofitting in the UK

As time goes on and the UK approaches its net-zero targets, retrofitting existing homes becomes more than just a policy objective — it's a pressing need that directly impacts peoples' health and wellbeing.

At the NRH, it's as much about the way in which we operate as it is about the subject matter. Our approach is rooted in collaboration, practical action, and shared leadership. By bringing people together, fostering innovative solutions, and influencing government policy, we're helping to make retrofitting a key part of the UK's strategy for a resilient, low-carbon future.

For us, retrofitting isn't just about reducing emissions; it's about creating homes and neighbourhoods that are warmer, healthier, resilient and more affordable to live in. It's the foundation of our efforts to build a more sustainable, equitable society.

*Sara Edmonds is an architect, and co-director at the National Retrofit Hub*

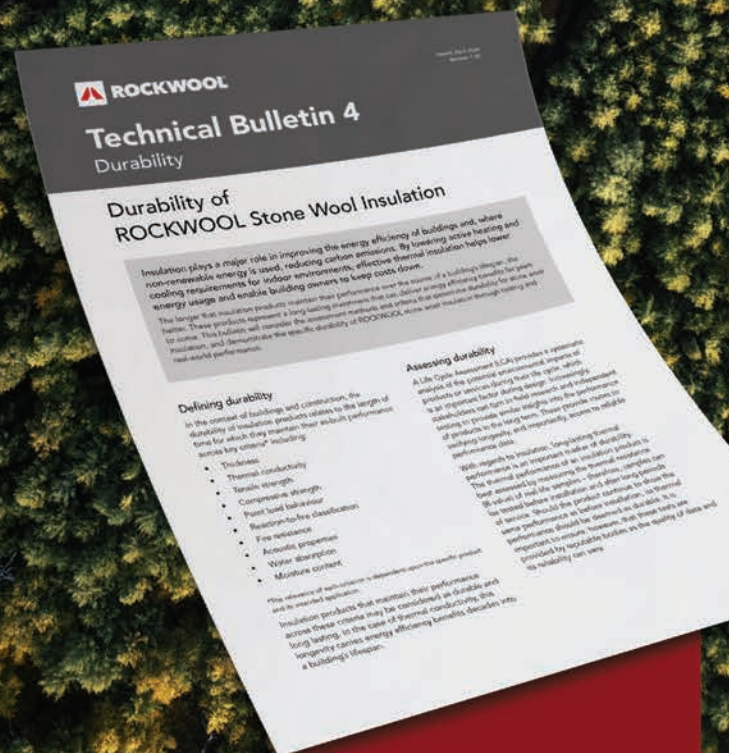


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## INDUSTRY VIEWFINDER

# Principles for Adaptive Reuse Projects

Reporting on a recent survey of architects which clarified the opportunities as well as challenges presented by pursuing the increasingly popular sustainability route of adapting existing buildings for new uses

**A**daptive reuse schemes are likely to always be the most sustainable answer to a client's requirement across many sectors. They also offer the opportunity to work with existing architecture, whether 'heritage' or relatively modern, and conserve all materials which are worthy of reuse, instead of seeing them disappear into the waste stream.

Projects may upgrade the existing building fabric to bring a structure up to current and future performance standards on thermal and moisture criteria. At the same time, they can harness existing spatial characteristics of older buildings, such as from a former retail or industrial use, for a new use class such as residential.

Partly due to a series of constraints facing UK investment, and a shortage of viable sites alongside the benefits of reusing urban buildings which may have attachments to local communities, adaptive reuse is increasingly the route of choice. For clients such projects can be major mixed use opportunities that can act as keystones for local regeneration projects. But they can also see smaller schemes which were burdens turned into long-term assets.

Adaptive reuse also gives architects the ability to celebrate the original building by adding new design interventions which can blend with or offer juxtapositions that enhance the original building, so it is seen in a new light, potentially revealing historic details. A high proportion of respondents said they were adding a significant amount of new build (70%-80%) to the existing building in projects they have undertaken. This can offer inspiration for designers, while requiring design flexibility in the project team, which is one of a distinct set of challenges.

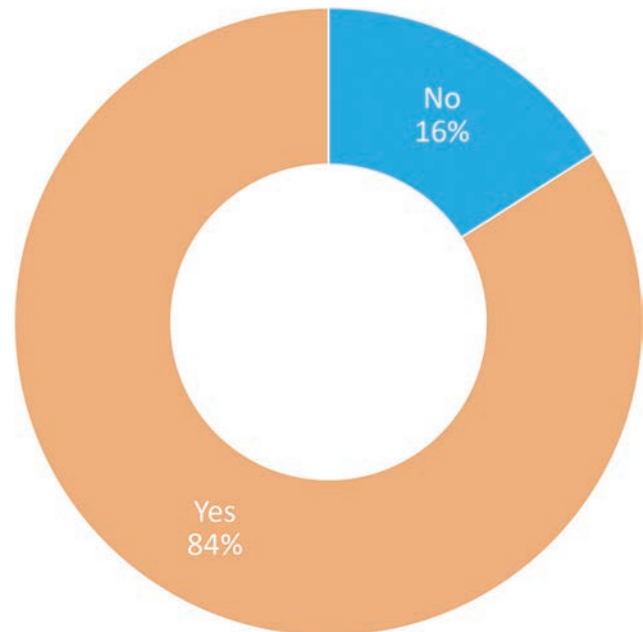
We conducted a survey to discover architects' views on both these factors and the considerable benefits for designers, the majority of respondents having had experience of working on adaptive reuse projects. The results present an interesting snapshot of designers' views on the merits of the concept, as well as successful approaches, and their remaining challenges.

Most respondents (84%) backed a presumption in favour of

adaptive reuse over demolition, agreeing that "architects should look to adaptive reuse as the first option for projects where there is an existing building, rather than a presumption for demolition and new build."

### The opportunity of adaptive reuse

Adaptive reuse can be more economically viable than a demolish and rebuild solution, while the environmental sustainability

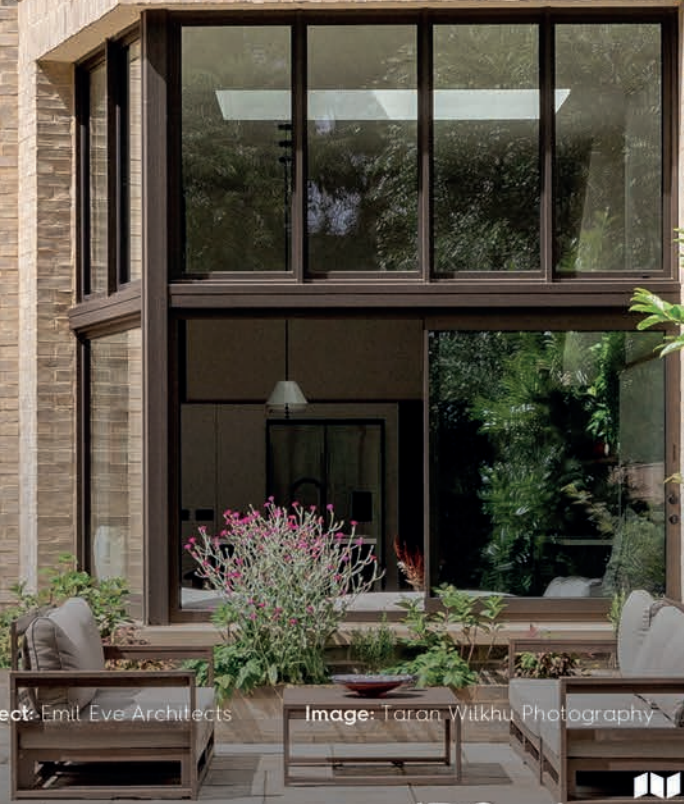


*"Should architects look to adaptive reuse as the first option for all projects where there is an existing building on the site, rather than a presumption for demolition and new build?"*



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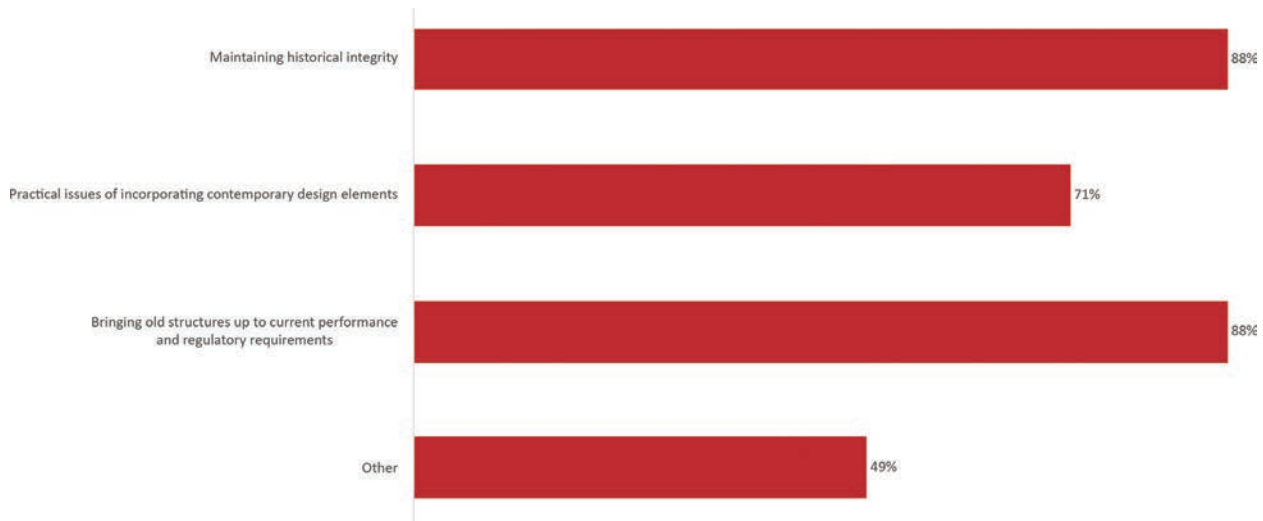
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*"What are the key challenges in balancing heritage preservation with innovative design in adaptive reuse projects?"*

benefits of preserving an existing structure are a given. However the less tangible social and cultural value of retaining a locally loved building new or small, albeit in a new guise, is another major reason why more and more projects are going the reuse route.

On the importance of sustainability, only 8% of our respondents said that it was the most important factor driving adaptive reuse, however a solid 53% said it was very important, and only 10% said it was not very important.

In pure economic terms, as well as the savings on materials, there are also the major labour savings to consider, given the prolonged skills shortage in the UK. Turning derelict buildings into functional spaces means greater economic sustainability for urban areas, with schemes tending to attract businesses and raise property values.

As well as reusing the building itself, many adaptive reuse projects involve futureproofing old buildings with measures such as improving building fabric, windows and doors, and introducing renewable technologies. This can involve installing new insulation, energy-efficient windows, and HVAC systems. Such upgrades not only reduce the operational costs of the buildings but also contribute to broader environmental conservation efforts.

As urban landscapes change dramatically and quickly with new development, reusing existing heritage buildings can help to counter resistance among local communities to the more modern additions which are changing the familiar built landscape. Adaptive reuse projects can also breathe new life into neglected areas, addressing derelict buildings which may have been regarded as long-term eyesores which were a part of the areas' challenges. Community cohesion can even be reinforced. Schemes from relatively modest conversions of church buildings into community centres to major mixed use schemes in former industrial buildings can give urban areas long term sustainability which by connecting to existing transport nodes, further supports carbon savings.

## Challenges

Many of the challenges of working with existing buildings are self-evident – developers and project teams have to navigate complex regulations, and spend a large amount of design time on structural integrity, thermal upgrades and restoration where required. There is also the unpredictable risk of contamination issues in older

buildings' sites, and unforeseen construction issues which may arise during a project.

In addressing existing building fabric and changing structures internally, it is essential that in attempting to improve building performance, design and construction teams do not introduce more problems. These could include additional interstitial condensation, and corresponding air quality problems, or user accessibility issues.

Our survey saw a dead heat in the top responses to the options given on potential challenges. 88% of respondents chose "maintaining historical integrity" making it the top choice in line with "bringing old structures up to current performance and regulatory requirements." In second place was "practical issues of incorporating contemporary design elements," and we received some 'verbatim' comments on other key challenges, including 'finding experienced professional partners,' and 'ensuring that the new use of the building will provide sufficient income to keep it in good condition.'

The most prevalent barrier for our respondents in the conversion of buildings deemed 'heritage' was achieving new levels of air-tightness, with 41% of respondents saying this presented a 'major barrier' and 32% a 'moderate barrier.' The fact that VAT was charged on refurbishment and not new build was the second highest, seen as a major barrier for 32%.

Moisture control was a major barrier for 18% of respondents, but also a 'moderate' barrier for 45%, and similarly large in the list of barriers was 'local objections' (18% major, 50% moderate). Slightly less problematic were 'structural issues' (only 48% said it was a major or moderate barrier), 'client issues' (36% major or moderate), and materials sourcing challenges (51% major or moderate). Possibly related to the air-tightness score, cooling was seen as a major or moderate barrier by 37%, and fabric upgrades were a significant barrier for many (half picked it as a major or moderate barrier). And incorporating renewable heating in heritage buildings was a challenge for 44% of respondents.

## Solutions

### Performance goals

One positive result from our survey sample of architects was that nearly three-quarters (69%) were seeking to exceed Building

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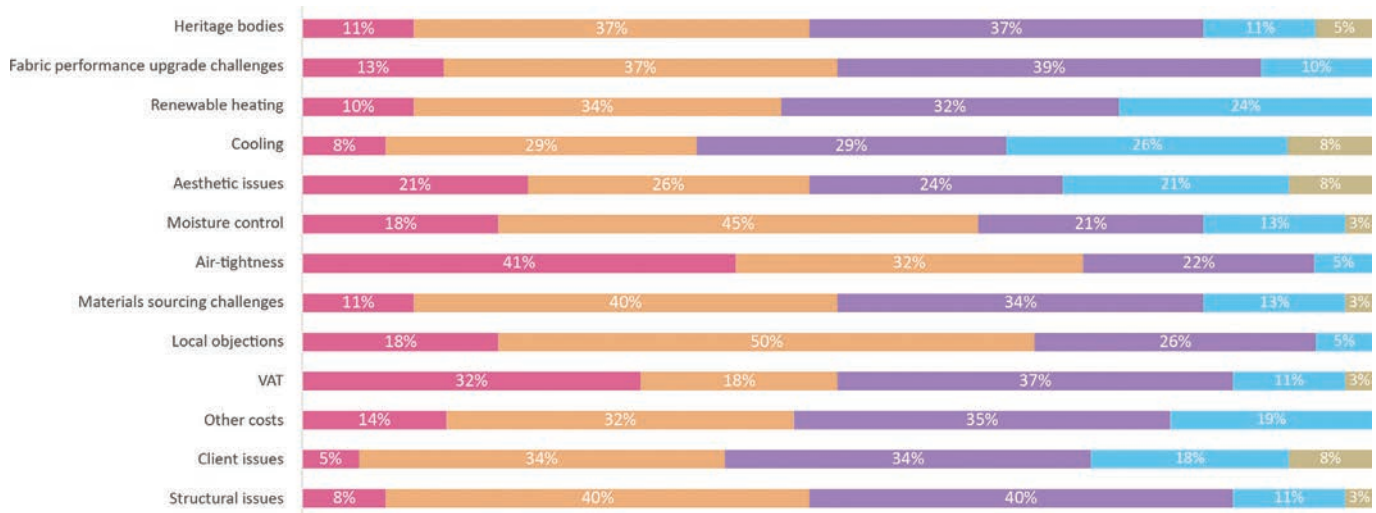


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"How much of a barrier to conversions of heritage buildings for adaptive reuse are the following?"

Major Barrier Moderate Barrier Slight Barrier Small Barrier No Barrier at All

Regulations compliance on energy efficiency with the adaptive reuse projects they were working on. A relatively small number (6%) were looking at EnerPhit 'deep' retrofit targets for far greater energy efficiency than standard. 38% were only targeting Building Regs compliance on their projects.

BREEAM was the most used accreditation system, with 41% of respondents using it for adaptive reuse projects, with LEED picked by 36% and LETI by 39%. The more specialised BREEAM Refurbishment and Fit Out system was being used by 33%, and WELL was only being used by 22%.

### Assessment of historic buildings

In terms of their experience working with heritage bodies, our respondents who had worked with Historic England gave it a significantly higher score (29% 'very good') versus other bodies such as the Society for the Protection of Ancient Buildings (11% 'very good,' but 6% 'very poor'). However, only 21% hadn't worked with Historic England, where 39% hadn't worked with the SPAB.

The priorities when preserving historical authenticity on adaptive reuse projects broke down into a relatively even set of popular choices. Collaborating with experts was in front at 57%, and 'preserving as much of the original structure as possible' was in line with 'conducting historical research' (both at 52%). Then at 50% were 'incorporating traditional building materials and techniques,' 'making sensitive additions that don't alter existing structures,' and 'ensuring you avoid pastiche.' Picked by 38% was 'producing contrasting new additions which enhance the original,' and only 14% selected 'blending as much with the original aesthetic as possible' as a goal.

### Stakeholder engagement

We asked our respondents to select and then individually rate their 'Top 5' priorities for getting stakeholder engagement right. These ranged from addressing concerns with changes to the building's interior and exterior and generally, to engaging heritage groups, investors and contractors and the supply chain early in projects, and using accredited experts. The answer with the most points (98)

was 'addressing concerns to the building's interior,' with concerns around external changes only two points behind. In part an answer to such issues, the third priority for our respondents was 'engaging heritage groups early on,' with 91 points.

We again asked our audience to select and rate their top five priorities for community engagement on projects. Communicating and promoting the project's benefits was seen as the number one priority, with 107 points resulting from our architect audience's ratings. Second, however, was grasping the nettle of the objections that may be commonly received, by addressing them proactively (via face to face meetings) scoring 100 points. Third, and not far behind was presenting the projects regularly, including updates to the design. Disappointingly, pushing the sustainability benefits of an adaptive reuse project to help onboard the local community was seen as the lowest priority of the above factors.

### Permitted development

Permitted development (PD) has opened the floodgates for many developers to tackle disused commercial and other premises in urban centres. However schemes have often been controversial on their build quality, and architects have been vocal in their opposition to what has been perceived as a 'free for all' in some areas.

We asked our survey, 'do you believe it is sensible to continue enabling developers to convert commercial properties into resi without needing full planning?' Most believed that permitted development should not be allowed to continue in the current form. Among the few supporting comments were: "We should take every opportunity to put existing structures to productive use," and "yes, I believe following the Building Regulations is enough."

One naysayer to the merits of PD said that developers were likely to aim for conversions due to the potential for greater margins: "profit matters; conversion attracts 20% VAT whereas new build does not." Another commenter did not agree that permitted development should continue unregulated, but instead with a "light touch planning" approach applied.

**Download the full white paper report on this Industry Viewfinder study at [insights.netmagmedia.co.uk](https://insights.netmagmedia.co.uk)**



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# INTERNATIONAL FOCUS

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Images © Nigel Young / Foster + Partners



## TRANSAMERICA PYRAMID CENTRE, SAN FRANCISCO FOSTER + PARTNERS

Foster + Partners has completed the restoration of the Transamerica Pyramid Centre in San Francisco. The biggest renovation in the building's 50-year history, the project gives a new lease of life to one of the city's most recognisable landmark towers – the Transamerica Pyramid Centre encompasses an entire city block in the Financial District.

The tower's lobby has been redesigned to emphasise the building's structural rhythm. A study of the original building blueprints by the architects showed a spectacular diagonal structure, which was hidden above the ceiling. This structure has been revealed and clad to match the building's exterior, creating a seamless transition between inside and outside. The full height of the lobby is restored, with a "soaring" glass facade that brings light deep into the space.

The refined material palette of oak, marble and terrazzo was selected to align with Pereira's original design. At the rear of the lobby space, the tower's annex has been restored with new skylights and glazing.

The lobby and amenity levels have been "reimagined" as elevated hospitality spaces, with an emphasis on quality and comfort. Fosters commented: "Incentivising the return to the office, a fitness centre and sky lobby are located at the middle of the tower – offering a state-of-the-art gym, sauna and yoga studios, as well as high-quality spaces for work and relaxation with panoramic city views." The tower is topped by an exclusive bar for office tenants.

The Pyramid's famous spire will also be re-lit for the first time with over 1,300 ft of newly installed LED lights, as part of a comprehensive new lighting design of both the interior and exterior by the L'Observatoire International.



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# CPD FOCUS

## PALACE INTRODUCES RIBA-APPROVED CPD PRESENTATION FOR THE SPECIFIER MARKET



Palace Chemicals has introduced a new CPD presentation entitled 'Successful Specification of Wall and Floor Tiling and how to avoid Common Failures'.

Developed for architects, specifiers and large contractors, the new presentation provides important information in these key sectors where there is often a lack of information readily available and answers questions frequently asked by architects when contacting Palace's technical department. It's also a great way to keep CPD qualifications up to date.

The main topics covered are as follows:

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- Tiling over timber-based substrates.
- Tiling over different screed types.
- Best practice floor tiling installation.

### Considerations when specifying tiling for walls

- Weight loading limits of substrates.
- Correct preparation.
- Best practice wall tiling installation.

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The contents are RIBA-approved, so anybody viewing the presentation can be confident that the information is accurate, up-to-date and not commercially biased. The CPD is being delivered as a face-to-face seminar, either at the customer's premises, at Palace Chemicals' training facility in Liverpool, one of Palace Chemicals customer locations or virtually over Teams.

"With one of the widest ranges of tiling adhesives and preparation products on the market, we know we have a lot to offer the specification sector," says Steve Ball, Commercial Director. "Our new CPD presentation is one of a number of initiatives we have taken recently to demonstrate our competence and enhance our offering, and we are really looking forward to presenting it to members of the influential A&D market!"

Anyone interested in booking a seminar should contact Nick Bratt, national technical sales manager, at [nick.bratt@palacechemicals.co.uk](mailto:nick.bratt@palacechemicals.co.uk).

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### SFS CPD SEMINARS DOUBLING DOWN ON KEY INDUSTRY TOPICS



SFS Group Fastening Technology has created a comprehensive selection of CPD seminars which are intended to offer architects and other specifiers valuable insights into relevant industry topics, embracing key issues such as sustainability, safety and structural stability. The presentations have been compiled to ensure participants gain a better understanding of the topics which range from fall protection systems to the fixing of warm roofs. Each seminar normally runs for 40 minutes with the opportunity for questions afterwards, while RIBA Chartered Architects will qualify for double CPD points.

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**BUILDING  
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**VELINDRE CANCER CENTRE  
CARDIFF, WALES**

# Natural remedies

The new facility under construction in Cardiff designed by White Arkitekter will show it's possible to achieve a significant NHS building using mass timber; in a project that aims to create the UK's most sustainable hospital



#### LOW IMPACT

The building was designed with most departments on two of its three levels, and with a low profile to ensure minimal impact on its surrounding landscape

The new Velindre Cancer Centre currently under construction in the west of Cardiff is a low-rise, elegant building with lofty ambitions to be the UK's most sustainable hospital yet. This hope rests on the design by White Arkitekter which presents a building fabric designed for health both environmental and for users, with a hybrid structure consisting of a CLT timber framed core and a mix of concrete and hempcrete wings.

The emphasis is on a "harmonious environment for patients, visitors and staff" which harnesses the benefits of timber for creating a warm, calm feel that's something of a rarity for health buildings of this type in the NHS. The building also prioritises daylight, views and natural materials, all of which are enhanced by the extensive exposed timber surfaces in public areas. Its breathable structure will assist both the facility's sustained efficiency and users and staff enjoyment of the spaces.

Key moves to further reduce the building's carbon score include prioritising

local sourcing, all-electric heating, and circular economy principles employing low-carbon materials and offsite methods. In addition, it is the project investors Kajima Partnerships' goal to make "minimal impact on the surrounding countryside." Kajima led the Acorn Consortium which was appointed to build the facility following a public procurement process run by Velindre University NHS Trust; consisting of several firms including White Arkitekter, main contractor Sacyr UK, Kier Facilities Services, and Camlins Landscape Architects.

The project is based on a "mutual investment model" undertaken between the consortium and the Welsh Government, who were driving it centrally as a major infrastructure scheme for Wales. There has been controversy around escalating build costs, with the project reportedly due to cost significantly more than the £562m it was priced at when initially tendered in 2021. However despite this, the architects and project team have achieved a remarkable feat in not only securing the



client's sustained support and investment, but getting this pioneering design for an NHS building onto site.

### Healthcare planning context

Over recent years, cancer diagnosis has increased as the research has improved, also revealing new types of cancers. While treatments have improved greatly, it's estimated the numbers of people living with cancer in the UK will pass 4 million by 2030. At the same time, life expectancy following a diagnosis is far better in 2024, thanks to the range of treatments available, but this all means that there is a need for more facilities.

While there is a view that cancer facilities should be specialist centres which house the expensive high-technology treatments, but patients remain in the community, The Velindre Cancer Centre is slightly different. It is a long-standing cancer treatment unit founded in 1947 at the birth of the NHS, but requiring a significant upgrade in provision to meet

demand. The building contains several linear accelerators, and replacing this tech in a new facility was just part of the challenge facing the project team.

Michael Woodford, project lead & director of the London Studio of White Arkitekter explains that the Strategic Outline Case for this project arrived at the conclusion that refurbishing and adding to the existing facility in a traditional piecemeal NHS fashion was not the preferred solution. Land adjacent to Whitchurch Hospital belonging to the Cardiff and Vale Community Health Board and located half a mile away, was identified as the location for a new facility. "They used to keep horses there and grow food for this beautiful Victorian psychiatric hospital."

The tender process was fruitful for the architects, says Woodford, being a "competitive dialogue" between the design team and client, "a very lengthy and robust process responding to the brief." He explains further: "You're actually co-

**There are contrasting arguments that such natural materials can offer key benefits for cancer patients in particular**



**The emphasis is on a “harmonious environment for patients, visitors and staff” which harnesses the benefits of timber for creating a warm, calm feel that’s rare for buildings of this type in the NHS**

designing with the trust project team, and it must be incredibly intense for them, because they have to do it with multiple clinician teams, and keep walls between them, because they’re doing something completely different to us.”

#### **Design approach**

Alongside the clinical requirements for the departments within the building, the sustainability drivers were fundamental to the brief given to White – Woodford says in fact that “the biggest the most important thing in the brief, aside from the schedule of accommodation, was the sustainability drivers.” They were contained in a 100-page document detailing the sustainability goals; “material use, particularly natural materials, health and wellbeing, within the building fabric, air quality, landscape, green infrastructure and sustainable drainage solutions, green roofs, everything you could imagine really.” Importantly and unusually, embodied carbon targets were also included as well as operational carbon, as part of the

aim for a minimum of BREEAM Excellent.

Woodford said that one of the beneficial outcomes of putting embodied carbon at the top of the agenda was the practice questioning itself and saying: “Why don’t we take that really seriously and have that as a key pillar of our design process anyway?” He describes the lean design approach taken by White, as part of meeting these goals: “Our approach to the design was driven completely by the carbon agenda, and the best thing you can do is build less stuff.”

As part of reducing the build in order to push carbon down, White “challenged the client on car parking requirements.” They collaborated on green travel plans but in the knowledge that users tended to drive to the facility because of several issues including a lack of good local public transport.

In addition, the trust wanted to maximise the use of timber in the building, but Woodford summarises the challenge of realising this aim: “We have met the



aim, but timber in healthcare is difficult, particularly with new post-Grenfell fire legislation and Part B in general.”

However, he asserts the benefits: “There is a lot of evidence that the traditional white walls and vinyl floors are actually not great for people’s health and wellbeing, so we did a lot of work internally on using natural materials such as lino, and daylight.” The architects even looked at cleaning regimes and the wellness impacts of typical hospital cleaning products: “We went really deep into it, to try and look at the whole spectrum of people’s health,” says Woodford.

He says there is a lack of updated technical evidence for why wood should not be used in healthcare interiors on grounds of harbouring bacteria. There are contrasting arguments that such natural materials can offer benefits for cancer patients in particular, who can for example suffer from ‘neuropathy’ i.e. nerve damage during chemo and radiotherapy treatment, which makes

touching colder materials very unpleasant.

He says that the practice’s argument was “there are some rooms where infection control is very important, such as an operating theatre, but there are a hell of a lot of rooms where it’s not.” He adds: “If you go to an outpatient clinic, why do you have to sit on a plastic chair, and why can’t you have a timber window?” Woodford also believes that the benefits for staff of natural materials cannot be underestimated, given that these are not only places for users and equipment, but are equally workspaces. In terms of daylighting, the architects did modelling to ensure the clerestory glazing that runs around the top of the facades was correctly sized for the benefit of all.

The client in this case was keen for this building to have some of the feel of a Maggie’s Centre (there is already one on the Velindre Cancer Centre site, designed with a timber interior by Dow Jones Architects). This was a component of the client’s drive for using timber as a fundamental part of this new building, but



Woodford plays down any notion of this being an experimental building: “We did break the mould, but we weren’t being super-innovative, just pushing back against some of the norms we have in the NHS, and taking the client on the journey.”

### Forms & levels

A set of sustainability factors were embedded throughout the design decision

phase, and helped to shape the building itself. “We followed a sustainability process through, from the siting and the building’s footprint, all the way through to the paint. It was always in the decision matrix, and the client was on board.”

White applied a lot of its extensive Scandinavian knowledge of not only building in timber, but also providing a different level of environmental quality





in clinical spaces; “We have worked on a lot of projects in Sweden where daylight and windows are expected in operating theatres,” says Woodford.

In terms of cost, Woodford asserts that the learner design approach integral to this project’s sustainability ethos, reducing elements where possible, meant that major savings were obtained. “The outline planning had a multi-storey car park and

energy centre, which we removed,” he says, adding that it originally had a much larger footprint (the car park is now in the basement). “It has less impact on nature, and less infrastructure is required.”

The planning conditions necessitated a low-rise volume for the 35,000 m<sup>2</sup> footprint required, but this also assisted the specification of timber in the current context. The internal arrangement is broken

#### **A CLT HEART**

The ‘Lofla’ (Welsh for living room) CLT circulation space extends the length of the unit; its two entrances mean that patients’ first impression is of a timber building



## The all-electric hospital has a million kilowatt hours of PV interwoven with green roofs, and air source heat pumps as well as mechanical heat recovery

down by department, with outpatients, radiotherapy, imaging and diagnostics on the ground floor and inpatient rooms on the first. There are two circulation cores at the north and south ends of the building.

There is also an education facility, as well as catering and FM, administration and pharmacy. In terms of how the clinical adjacencies were arrived at, Woodford says that there are always a wide variety of requirements, and resolving these “is kind of like a 3D puzzle.” He continues: “The arrangement was about making it as efficient as possible; you also have to think about growth over time; and changes in medical pathways and treatment.”

The architects developed a rational H-shaped diagram with a central atrium core of CLT called the ‘Lolfa’ (Welsh for living room), which patients enter into first. There are entrances at the west and east; “because it’s kind of a building in the round, and rather than enter via a roundabout we wanted to address the neighbourhood because it’s kind of in the middle of this landscape.”

The departments are all accessed from

the atrium core on the ground level, with most patients going to the outpatients and radiotherapy facilities. There is also direct access for the Centre for Learning, which also includes an Innovation Lab offering research and training. Patients and visitors will experience a timber-clad entrance area with a cafe and restaurant, a patient-transport waiting area and a lounge for younger patients.

The first floor contains all the inpatient facilities, and the southern facade has a discreet balcony allowing patients at end of life to be outside. There are also internal courtyards, and on the lower ground floor of the sloping site is the chemotherapy suite, directly connected to the car park enabling discrete regular access. The pharmacy is also located here, connecting horizontally to chemotherapy but also vertically to the other areas.

The facade of the building was designed to allow internal spaces to be easily reconfigured without the need for structural alterations. This intends to make it easy to adapt the hospital to future innovations in treatment and equipment. What the practice



asserts is an “extremely low carbon” solution was arrived at by an approach of “material mapping” done around Cardiff to help reflect the local vernacular, and the result is a mix of materials. They wanted to use stone where possible, so the base is gabion walling including offcuts from a nearby quarry, tying the volumes together. The southern wing will have a timber cladding, and the north face will be zinc; the education block is clad in brick.

The practice was determined to have as little impact on the existing site as possible. The aim is for landscaping to be kept as wild as possible, and a community kitchen garden and orchard will hark back to the original site and how it was used to grow food for the Whichchurch Hospital. “It’s a beautiful location on all sides,” says Woodford, “patients basically overlook a forest.” Native and indigenous species have been brought in, and there is virtually no boundary between the hospital perimeter and local footpaths through the attractive nature surrounding the site.

Structurally, the challenge, says Woodford, was around minimising the

amount of timber required, versus the performance required for a healthcare facility: “Timber is not ideal for things like vibration. We came up with a flexible structural grid with Arup: keeping the recycled concrete very thin in the floors meets all the vibration record requirements and helps keep the building low.”

### Sustainable by nature

The all-electric hospital has a million kilowatt hours of PV interwoven with green roofs, and air source heat pumps as well as mechanical heat recovery. In addition the preparation has been beneath the scheme and in the basement for the future possible addition of ground source heating. The nature-focused SuDS system installed include minimal below-ground pipes, a swale network and a retention pond.

Where timber is not possible to be used in the build due to clinical requirements, the studio plans to use concrete with recycled ground granulated blast furnace slag (GGBS). The nine concrete linear accelerators in the radiotherapy department contain “a lot less concrete,” than normal,

### A BETTER OUTLOOK

The unit’s interiors will benefit from generous views of courtyards, and daylighting



#### CATERING FOR STAFF & PATIENTS

Patients and staff will be able to use a timber-enhanced restaurant adjacent to one of the entrances

says Woodford, due to the approach they have taken of using lead-lined blocks, which also provides flexibility for future changes of configuration.

Once the practice knew that the wings were going to be in concrete, they delved into the more sustainable alternatives that would be possible, as “alternatives to traditional plaster board and metsec,” as Woodford characterises it. Hempcrete uses natural hemp and lime to help create structures which balance moisture while donating other thermal benefits. “It sounds a bit like a wonder material, but it’s very low tech, you build a frame and you put blocks in with lime mortar and you build a wall.” Although not as much was used as White had hoped on this project, hempcrete still provides a good deal of the structure.

#### Conclusion

Woodford says that over his several years working on this complex project, it became apparent that architectural success in a healthcare building might be about a different, and more fundamental set of values from the aesthetics-based ones that designers are traditionally taught to prioritise. This could partly explain why in his view, designing for healthcare functions isn’t given the respect that it truly deserves, including in

the mainstream architectural media.

“I think the trouble with architecture in general is that we’re very focused on the object and what it looks like,” he says. “And healthcare is not really about the object, it’s about the system, the technical arrangement and also the impact it has on people and outcomes.” He adds: “If you design something really well and efficiently, where people want to work and like to work and patients feel better, there are direct correlations with you staff retention, staff employment, and patient health and wellbeing.”

The hospital is scheduled to open in 2027, when it will show the NHS that it’s possible to realise a treatment facility using a large amount of mass timber, because it’s good for people, and it’s worth the extra investment required. In the end, just because health buildings and cancer facilities in particular will increasingly require a large amount of high-tech equipment to help treat people, those buildings do not simply have to be housings for that equipment. All of the investment is for people to get well, so the buildings need to be funded on that basis too, to bring the wellness benefits that can help. Putting timber to the fore shows it’s the ultimate feel-good material, and can house the most intensive healthcare facilities beautifully. ■

#### PROJECT FACTFILE

**Client:** Velindre University NHS Trust/ Sacyr UK

**Consortium:** Kajima Partnerships, Sacyr, Aberdeen, Andrew Scott, Kier Facilities Services, White Arkitekter, Ingho, Hydroc, BAC, MJ Medical, Turley, Studio Response, Camlins Landscape Architects, Osborne Clarke, Operis, Confab Lab

**Floor area:** 36,000 m<sup>2</sup>

**Dates:** Competition win July 2022, start on site 2024

**Awards:** European Healthcare Design Award 2022



## Gilberts helps hospital safeguard staff when researching disease



Blackpool Teaching Hospitals NHS Foundations Trust has opened an extended histopathology laboratory at the Royal Victoria Hospital as part of a five year plan to improve facilities for staff and care for patients. To deliver on the commitment to create resilient environments, whilst reducing its carbon footprint and saving energy, the new facility is ventilated using grilles and diffusers from leading air movement specialist – and Blackpool manufacturer – Gilberts. A combination of Gilberts' MN multi-nozzle diffusers, DG square faced louvres, GHV double deflection grilles delivers the high air flow required for the space. PGR perforated face diffusers provide air extract to efficiently remove used air and airborne contaminants. Gilberts' Ductgard dampers provide fire and smoke protection. All are linked to a central control panel, also supplied by Gilberts. The modern-styled grilles and diffusers combine to provide the high volumes of entrained air critical for such a sensitive environment, to safeguard staff who are diagnosing and studying diseased tissue. The histopathology laboratory extension @ Royal Victoria Hospital builds on Gilberts' proven track record in healthcare air movement.

01253 766911 [info@gilbertsblackpool.com](mailto:info@gilbertsblackpool.com)

## A. Proctor Group creates new Head of Global Sales Modular Offsite role



A. Proctor Group is proud to announce the promotion of Adam Salt to the position of head of global sales modular offsite, effective immediately. The newly-created role sees Adam promoted from his previous position as a business development manager within the group, and reporting directly to managing director Keira Proctor. Adam is now responsible for overseeing the export division, growing and developing key accounts, researching potential new distributors, and building a significant customer presence internationally. This pivotal role will also see Adam spearheading the company's modular strategy on a global scale, driving growth and innovation in this rapidly evolving sector. As part of his new responsibilities, Adam will maintain links with the UK modular sector. He said: "I am honoured to accept this position and lead our global sales efforts. A. Proctor Group is known for its commitment to quality and innovation, and I'm eager to work with our talented team to expand our reach and continue delivering exceptional value to our customers. The A. Proctor Group is a 4th generation family business with a history of technical innovation, promoting good practice, and developing products that contractors and offsite manufacturers want to use."

01250 872261 [www.proctorgroup.com](http://www.proctorgroup.com)



## Multiboard helps Mango Mosaics

Caroline Jariwala is still keen to learn from other members of the artistic community, though in this instance the piece of wisdom was about how to overcome the physical shortcomings of the plywood she regularly used as a substrate for her commissions. While trying to be as sustainable as possible in making use of reclaimed tiles and distressed ceramics as the raw material for much of her work and teaching sessions, the backing materials, or substrates, are normally new sections of board and with an increasing demand for her to create mosaics which will be exposed to the weather, the reason she decided to experiment with the use of Marmox Multiboard, was the specialist tilebacker board's resistance to repeated wetting. Caroline commented: "It was just over a year ago that I heard from other artists on a mosaics social media forum that they were successfully using Multiboard as a base for their work, because it is so easy to cut and offers such a good bond for different types of adhesive – and it is totally waterproof."

01634 835290 [www.marmox.co.uk](http://www.marmox.co.uk)

## Local authorities need advice from architects



The challenges facing local authorities and housing officers have never been more real as they seek to tackle societal, fuel poverty and climate-related issues. Frequently, it is architects who can provide the advice and solutions needed. Architects bring the breadth of experience

and knowledge necessary to create homes that are fit for the future. By taking a holistic approach to design, they consider not only spaces, aesthetics and structures but also the social, economic, and environmental context. Visit West Fraser's website to find out more.

[uk.westfraser.com](http://uk.westfraser.com)

## NVHRe wins at HVR awards



Breathing Buildings is celebrating winning 'Commercial/Industrial Ventilation Product of the Year' category at the prestigious HVR Awards 2024. The company impressed the judges with its new NVHRe, Natural Ventilation with Heat Recycling and Heat Recovery (NVHRe), which is its latest addition to its award-winning range of Natural

Ventilation with Heat Recycling (NVHR®) systems. Breathing Buildings scooped the award at a glittering awards ceremony on Thursday 12th September at London's Chelsea Harbour Hotel.

01223 450 060 [www.breathingbuildings.com](http://www.breathingbuildings.com)

# Introducing ROCKWOOL SCB



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[rockwool.com/uk/SCB](https://rockwool.com/uk/SCB)



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# The retail mix – combining design with practicality

With recent reports of an upturn in retail construction showing a 21% increase in quarter two compared to the same period last year, this is not only good news for the sector, but also for shoppers, as supermarkets and other retailers invest to attract customers and respond to online competition with updated and more attractive shopping experiences.

The purchasing environment is a key aspect of the retail experience and the importance of combining practicality with aesthetics is essential. Decorative column casings and building linings are key components in this process, as they provide practical solutions for concealing interior and exterior structural steelwork, while adding to a building's aesthetics.

Used on both new-build and refurbishment schemes, Encasement's Verta column casings and Vecta building linings ranges offer a wide choice of materials and finish options for exterior or interior applications and are installed in a diverse range of retail projects for well-known brands, including Tesco, Porsche, ASDA, Kia Motors, Next and Greggs.

## Verta column casings and applications

Circa and Quadra casings are manufactured from pre-formed MDF and plywood respectively, while the Forma range is fabricated from metal. Alongside these, are



Porsche West London



Tesco in Yardley, Birmingham

Polyma GRP (glass reinforced polymer) and Gypra glass reinforced gypsum (GRG) options, as well as Metza casings, which are a specialised solution designed to provide fire protection for mezzanine floor supporting columns.

Where casings are needed for interior use only, Circa and Quadra allow circular, square and rectangular profiles to be specified. They also provide a wide range of finish options with the most popular being decorative laminates, as they are resistant to scuffs and scratches, and can be specified in plain colours, wood grain and metallics, as well as textured finishes.

While every Encasement column casing type is suitable for interior use, both the Forma and Polyma ranges are also widely used for exterior retail projects, such as store fronts, canopy supports or as a feature on retail park units, due to their durability and inherent weather resistance.

Available in aluminium or stainless steel, Forma casings can be specified in circular square, rectangular or hexagonal forms, as well as bespoke shapes. A wide choice of finishes is available including PPC options in any RAL colour, as well as brushed, anodised, embossed or textured finishes, such as Rimex.

Strength, durability and colour choice are also features of the Polyma GRP range, which can be key considerations in retail environments. As Polyma GRP casings are produced using moulds, this manufacturing process allows a high degree of design flexibility with shape; size and colour options all open to specification to meet bespoke project requirements, as well as standard profile options.

## Vecta building linings

Alongside Encasement's column casings, the Vecta building lining range provides high-

quality solutions for interior wall linings, bulkheads, fascias, soffits and reveals which are already installed on a range of projects including major brands, such as Tesco, Prêt à Manger, Mini and Greggs.



Petit Prêt at King's Cross

Depending on the application, the Vecta range can be specified in a choice of materials and finishes. High-level bulkheads, such as 100-metre long solution at Tesco in Yardley, Birmingham, use PPC aluminium, although they can also be manufactured from stainless steel, as well as GRP or GRG, which can help save weight, although consideration should be given to the materials' suitability for each application.

By offering the Vecta column casing range and the Vecta building linings system, retail construction specifiers can source a range of specialised products from a single company.

01733 266 889 [www.encasement.co.uk](http://www.encasement.co.uk)



Vecta



Vecta



# Marmox answers the call at London Build 2024 with A1 rated Fireboard

With the findings of the Grenfell Inquiry continuing to reshape building practices across the UK, the annual construction show at the capital's famous Olympia venue is this year doubling in size and being refocused as the London Build Fire & Security Expo (November 20-21st) with insulation specialist Marmox UK Ltd on hand to demonstrate its recently launched Fireboard product on Stand L42. The Marmox Stone Wool based product shares the unique Marmox honeycomb surface structure with its XPS forerunner and is suitable for both internal and external wall insulation (IWI/EWI) applications.

Externally the A1 non-combustible certified Fireboard can serve as a weatherproof render-backer, or be used internally across walls and ceilings to take a plaster finish, while providing sound absorption properties, along with thermal insulation. The 600 x 1,200 mm Fireboards are available in thicknesses of 20 mm, 50 mm and 100



mm and with the polymer modified mortar honeycomb coating applied to both faces. With a nominal density of 150 kg/m<sup>3</sup> the boards' core material offers a compressive strength of 90kPa (9 tonnes/ m<sup>2</sup>), while its high insulation performance will help combat thermal-bridging and the formation of surface condensation, as well as having the potential to cut energy bills.

The Marketing Manager for Marmox, Grant Terry, commented: "As a regular exhibitor at London Build and other major

trade shows, we endeavour to ensure the products we showcase are as relevant as possible to both specifiers and installation specialists; and believe that Fireboard is an ideal offering to help meet the multiple challenges presented by the Building Safety Act as well as Part L of the Building Regulations. The introduction of Fireboard into our range significantly enhances our offer to the construction industry, meaning we have an A1 non-combustible backer board for internal or external use, which can safely be installed across masonry as well as timber or steel framing systems."

As detailed in its A5 technical brochure which can be downloaded, Marmox Fireboard has been tested to prove compliance with BS EN 1182, EN 1716 and EN13823 (Resistance to fire test) conducted by UKTC, along with other testing completed by the BRE.

[sales@marmox.co.uk](mailto:sales@marmox.co.uk) [www.marmox.co.uk](http://www.marmox.co.uk)

LONDON BUILD STAND L42

## New appointment strengthens Palace Chemicals' position in the specification sector



Palace Chemicals is delighted to announce that Nick Bratt has recently joined the company as national technical sales manager. This is the latest in a number of initiatives designed to strengthen Palace's position in the fast-growing commercial and specification sector. It is an area where the company already has a significant presence, but it believes that, due to the strength of the Palace product range and current market trends, there is a big opportunity to grow the business. Nick joins Palace, following a career of 30 years in the tiling industry, 17 of which were at Norcros Adhesives in a technical sales role, working closely with specification customers. Prior to Norcros Adhesives, Nick was at BAL for ten years and Marlborough Tiles and Stone & Ceramic before that. This wealth of experience and the depth of his contacts within the tiling industry are second to none. Alongside Nick's appointment, the company, which is a member of NBS, is taking a number of other initiatives such as working with Glenigan, and it has also recently completed a RIBA-certified CPD.

0151 486 6101 [palacechemicals.co.uk](http://palacechemicals.co.uk)

## ARDEX Group UK invests in sustainable energy



The ARDEX Group UK has commissioned more than 1,600 solar panels at its manufacturing facilities in Stoke-on-Trent and Haverhill. The high-performance photovoltaic (PV) systems have been installed on warehousing and manufacturing units at both sites and will generate approximately 30% of the ARDEX Group UK's electrical power requirements. The installation of solar panels is part of a global sustainability initiative in which the company is investing around €3 million globally. Installation of 1,332 panels were completed at ARDEX UK in Haverhill in September last year and since commissioning, more than 269,686 kWh of solar energy has been produced – equivalent to the consumption of 100 houses. A more modest 334 panels were installed at the Group's Stoke-on-Trent facility – Building Adhesives Ltd in Trentham – with commissioning completing in March this year. This is due to limitations for more panels from the local grid, however plans remain to invest in more panels at Building Adhesives Ltd once the local grid has been updated and allows this to be done. Since March 50,080 kWh of electricity has been produced – which is the equivalent of taking 9,814.4 kg CO<sub>2</sub> out of the atmosphere or planting 594 trees.

01782 591100 [www.bal-adhesives.com](http://www.bal-adhesives.com)



20-21 November  
Olympia London

# London Build 2024 presents its biggest edition yet



On 20-21 November, the UK's leading and largest construction show, London Build, is back and this year it's set for its biggest edition yet, with brand-new, exciting features and stages for attendees to discover!

London Build 2024 is doubling in size, taking over both Grand & National Halls at Olympia London. Your ticket gives you access to over 35,000 attendees, 700+ incredible speakers across 12 CPD stages, 450+ exhibitors, feature areas, networking parties, endless entertainment, DJs, and live music through the Festival of Construction.

Attendees will get the opportunity to connect with industry leaders, discover upcoming project opportunities, and uncover the latest trends and technologies shaping the UK's built environment.

With 12 dedicated conference stages running over the two days, topics include the tall buildings boom, driving for a more sustainable future, the importance of diversity, mental health and wellbeing in construction, innovations in MMC, and much more!

Confirmed speakers include:

- Luke Askwith, european practice area leader at Gensler
- Ron Bakker, founding partner at PLP Architecture
- Charles Betts, regional director, fire engineering & London office leader at AECOM
- Simon Cloherty, operations director at Robert Bird Group
- Dr Zainab Dangana, head of sustainable technology services, Wates



- Andrew Dewdney, head of modern methods of construction at Kier Construction
- Danielle Doherty, head of social value at VINCI Building
- Joanna Gilroy, group director of sustainability at Balfour Beatty
- Chris Mattock, head of sustainability for infrastructure at Mace
- Juan A. Morillas, head of sustainable design at John Sisk & Son
- Jason Moss, head of health, safety & wellbeing at McLaren Group
- Karen Mosley, managing director at HLM Architects
- Dr Riette Oosthuizen, partner – planning at HTA Design
- Caroline Pontifex, director & head of workplace & design at Savills
- Gwyn Richards, planning & development director at the City of London.

### Brand new for 2024

#### London Build Fire & Security

Due to such high demand from the industry, the London Build Fire & Security Expo will be taking over Olympia London's National Hall in its own dedicated, stand-alone show! Co-hosted alongside London Build 2024, it will feature over 100 exhibitors showcasing the latest cutting-edge technologies and solutions in fire safety and security and thought leaders speaking on dedicated conference stages for fire safety and building security, including panel discussions, workshops and interactive demos from leading end-users and industry experts.

#### Skyscraper & Tall Buildings Stage

For the first time, London Build will have an entire stage dedicated to Skyscrapers and Tall Buildings, with a two-day conference bringing decision makers together to innovate and share successful strategies for creating sustainable and impressive high-rise structures. Be prepared to discover groundbreaking technologies, gain invaluable insights, and stay at the forefront of the construction industry. Hear from industry leaders from AECOM, The City of London, Knight Frank, Robert Bird Group, Savills, SOM and many more.

#### AI & Digital Construction Stage & CPD Workshops

Each year the London Build AI & Digital Construction Stage attracts thousands of digital construction professionals from across the UK to learn about the latest technology and innovations from across the sector. This year sees the addition of a brand new Digital Construction Workshop stage, featuring in-depth presentations showcasing the latest technology, innovation and digital transformation tools from leading industry experts.

London Build is free to attend and promises two fun-filled days of high-level content, networking opportunities and endless entertainment. Register of free and start planning your visit today by scanning the QR Code below.

*Article supplied by  
London Build*



**Attendees will get the opportunity to connect with industry leaders, discover upcoming project opportunities, and uncover the latest trends and technologies shaping the UK's built environment**

## Nuaire at London Build 2024



Nuaire and Domus Ventilation will be exhibiting together once again at London Build (20-21 November at Olympia London) on stand C52. Providing customers with a true breadth of ventilation solutions and expertise, whether it be the residential new build sector, social housing or commercial applications (the latter of which is served by Nuaire's product portfolio), Domus Ventilation and Nuaire ventilation systems are renowned for saving energy and improving indoor air quality.

[www.nuaire.co.uk](http://www.nuaire.co.uk) [domusventilation.co.uk](http://domusventilation.co.uk)

LONDON BUILD STAND C52

## Time for Timber Hub at Offsite Expo



The Structural Timber Association has launched a new Time for Timber Hub at Offsite Expo, to provide a vital source of information and resources to those interested in building in structural timber. With all eyes on the new Labour Government to deliver its ambitious commitment to building 1.5 million homes in the next five years, offsite manufacture and low carbon structural timber has an essential role to play. To support in this effort, the new Time for Timber hub has been developed to provide the HOW – guidance on how to plan, design, cost and build in structural timber.


01259 272 140 [timefortimber.org](http://timefortimber.org)

## BISON UK partners with EJOT to provide anchoring solutions for major road tunnel project



EJOT has provided more than 6,000 high performance mechanical anchors for the installation of the electrical services and public address (PA) system in one of the country's most high profile new road tunnel projects. EJOT and LIEBIG branded HCR (high corrosion resistance) anchors have been supplied for the major civil engineering project by BISON UK. As one of the world's leading manufacturers of heavy duty anchors, through-bolts and concrete screws, which are used extensively in many different types of construction projects, EJOT's UK anchoring team was able to meet the requirements of the brief with maximum efficiency. They recommended two products from its portfolio – the EJOT BA-E Plus HCR through-bolt manufactured in 1.4529 high corrosion resistance stainless steel, and the LIEBIG Superplus BLS-P self-undercutting heavy duty expansion anchor manufactured in A4 stainless steel. The BA-E Plus 10/10 HCR through-bolt anchors specified have been used to securely attach the bracketry for the electrical system trays throughout the tunnel development.

01977 687040 [www.ejot.co.uk/case-study-high-corrosion-products-tunnel-applications](http://www.ejot.co.uk/case-study-high-corrosion-products-tunnel-applications)




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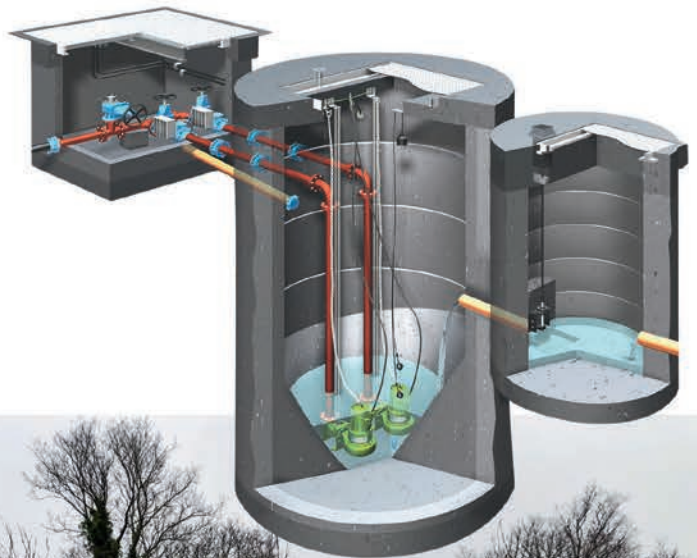
# **T-T ADOPTABLE PUMPING STATIONS**

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**T-T Pumping  
Stations**



# ACO MultiDrain® Brickslot: sleek, efficient drainage for modern designs

When designing outdoor spaces, finding drainage solutions that enhance your aesthetic vision without compromising functionality is key. That's why ACO is excited to introduce the expanded MultiDrain® Brickslot range – a sleek, minimalist drainage system that integrates seamlessly into block paving, blending into your project's surface while providing effective water management.

Our MultiDrain® Brickslot system now offers more options, giving you the flexibility to choose the perfect fit for your project.

## MultiDrain® Brickslot Variations

### Single Slot

A simple 10 mm slot that blends into the design, keeping the drainage system nearly invisible for a clean, subtle look.

### Twin Slot

Two narrow slots enhance inlet capacity while maintaining a sleek, modern appearance, offering a balance of performance and style.

### Triple Slot

Three slots maximise water flow without sacrificing the minimalist aesthetic, ideal for high-efficiency drainage with a refined finish.

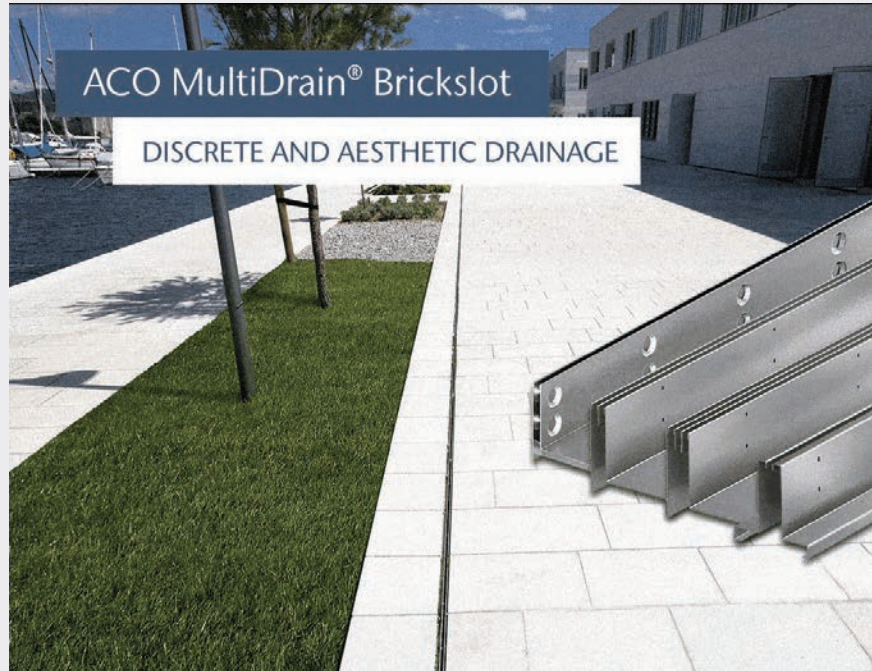
### Strip Slot

A continuous slot that seamlessly integrates with boundaries or paving patterns, providing both visual cohesion and effective drainage.

## Why ACO MultiDrain® Brickslot?

### Versatility

Compatible with the entire MultiDrain range, the system can be tailored to both large and small drainage areas. Its heavy-duty design



makes it ideal for handling foot traffic as well as light commercial zones.

### Design Support

ACO can offer support throughout the design process, by running hydraulic checks for channel capacity and offering specification guidance.

### Customisable Solutions

When a specific specification is required ACO can offer a fully bespoke options in galvanised or stainless steel.

Whether you're working on public plazas, pedestrian areas, or commercial developments, the ACO MultiDrain® Brickslot range provides the flexibility, durability, and aesthetic finish you need to bring your designs to life.

Please visit the website to find out more about the ACO Brickslot.

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# Keep healthy and even cool with underfloor heating

Ashley Cooper of WMS explains why underfloor heating is a key way to improve indoor air quality and reduce airbourne pollutants, while also providing a cost-effective way of mitigating overheating in homes

While soft furnishings are typically known as the main culprits for harbouring dust mites, skin cells and dander, convection heating systems and forced air systems are also a magnet for dust and germs which gather behind and inside the panels. Then, when a convection heating system is turned on, it often causes air to circulate more aggressively, and the problematic particles are encouraged to circulate into the atmosphere. When dust, allergens, and other particles are distributed throughout the space, it can exacerbate symptoms for those who suffer from allergies or respiratory conditions.

This is just one of the issues that underfloor heating can help with, as radiant heat reduces the movement of dust, making it one of the healthiest ways to heat a building. Radiant heat eliminates air movement from the heating system as it warms the fabric of a room. It doesn't use air as a medium to transport heat, so it minimises the movement of dust and allergens. This leads to a cleaner and healthier environment.

## Even heat distribution

If a traditional heating system isn't well designed, hot and cold spots can be found within a room, leading to uneven temperature distribution. Cold spots within a space can cause condensation on walls and windows, leading to dampness and potential mould growth, negatively impacting indoor air quality. Mould not only adds to property maintenance requirements, but also exacerbates respiratory conditions.

Ventilation isn't always the answer, as during the colder months, with energy conservation remaining at front of mind, having windows and doors open



for long periods is an unlikely option. In any case, condensation will still appear if warm, moist air contacts a cold surface in the home that's below the dew point, even with ventilation.

Underfloor heating provides a solution, as the series of continuous loops fitted under a floor create a large radiant surface that heats a room from the floor upwards. This delivers even heat distribution across the entire room, helps prevent the formation of cold spots where moisture can accumulate, and minimises the likelihood of damp conditions leading to poor air quality.

The physics of underfloor heating also means that such systems provide a more stable and consistent temperature, which helps maintain balanced humidity levels – just another way that radiant heat helps to create healthier and more comfortable living environments.

## A multifunctional solution

With summers becoming hotter, homes are

**Radiant heat reduces the movement of dust, making it one of the healthiest ways to heat a building**



at increasing risk of overheating. Part O of the building regulations defines requirements for mitigating overheating in new residential buildings.

An emerging solution is an underfloor heating system combined with a heat pump but run in reverse, to offer a passive or near-passive means of heat removal. The system requires no additional or special components apart from a control system that is designed for cooling as well as heating.

Radiant cooling provides a fresh perspective on indoor climate control and aims to work entirely in harmony with nature rather than against it. Instead of forcing cold air out, radiant cooling works by using cold surfaces to remove the heat radiated from objects within a room. We recently published our Part O research paper, 'UFH? That's Cool,' which further explores the potential of UFH systems to help the industry meet the requirements of Part O of the Building Regulations.

### Sustainability from the ground up

When it comes to underfloor heating pipework, the sustainable choice is superior-quality PE-RT (polyethylene of

raised temperature resistance) pipe, which is composed of five bonded layers. Polyethylene has excellent properties at high pressures and temperatures, as well as being very flexible and easy to use. It is non-corrosive, has very good resistance to frost, and has a high impact strength. It's also 'creep-resistant' and contains an integral EVOH oxygen barrier layer to prevent water oxygenation inside the system.

PE-RT pipe is designed to be environmentally friendly. It can be melted down to be used again or recycled. In contrast, PEX pipework, which contains toxins and can only be burnt or buried due to the molecular cross-linking process.

Some PE-RT pipes also come with a product warranty of up to 50 years, offering specifiers, housebuilders and homebuyers alike peace of mind in the quality and durability of the products. However, if the pipe is not disturbed during its use, it is expected to outlive the life of the building itself, further enhancing a building's sustainability credentials.

*Ashley Cooper is managing director at WMS*



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## Slot into a pioneering way to achieve comfort conditions



A ‘first of its kind’ air movement diffuser is set to revolutionise how comfort conditions are maintained inside commercial buildings. The Series JSL-T ultra-high-capacity linear slot diffuser with thermal transition is the latest development from **Gilberts Blackpool**. Series JSL-T automatically adjusts airflow within seconds of any temperature variation being detected to maintain the preset ambient. Clever design in the configuration of the plenum and diffuser, and utilisation of thermally reactive components, means Series JSL-T functions without any electrical input or auxiliary power. In cooling/isothermal mode, air supply of up to 250 l/s/m is delivered horizontally. When a variation in temperature is sensed, the diffuser automatically switches to project the air vertically. As Series JSL-T has an airtthrow of 5m, this ensures rapid, effective mixing of air within the occupied zone, maintaining the ambient temperature without stratification nor draughts. The diffuser is relevant for both ceiling and side wall applications. It can also be specified with acoustic and/or thermal insulation. The combination of features optimises its incorporation into almost any building services project in a commercial environment.

01253 766911 [info@gilbertsblackpool.com](mailto:info@gilbertsblackpool.com)

## FP McCann Thin Flat Roof Tiles installed on North Ayrshire Care Home



FP McCann has supplied its thin leading edge interlocking concrete roof tiles branded “Thin Flat” to a brand-new care facility in Largs, North Ayrshire. Once complete early next year, the new 80-bed care home will provide accommodation for its elderly residents over three levels. Amongst its many state-of-the-art facilities will be activity rooms and dining areas, a cafe, a gym and a cinema. The former Warren Park Nursing Home was demolished in 2022 in advance of the new building work being undertaken by Northern Ireland based construction group Corramore on behalf of client the Care Concern Group. To complement the surrounding properties many of which have slate tiled roofs, a colour-matched FP McCann concrete roof tile has been installed, significantly saving on cost, with nearly 16,000 tiles together with 360 ridge tiles required to complete the roof. The FP McCann Thin Flat Black roof and ridge tiles have been supplied from the company’s new ultra-modern £30 million tile factory in Cadeby near Nuneaton, Warwickshire. All FP McCann concrete roof tiles and accessories are of the highest standard and are covered by a 15 year Guarantee.

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# Clearly ready for the FHS

Paul Higgins of TuffX explores glazing options for meeting the demands of Part O but also the upcoming Future Homes Standard, on aesthetics and function

**D**uring an era of change in the construction, we are also at a pivotal moment when it comes to glazing – and there are now a variety of glazing options which have been specifically designed to be future-focused. The latest Building Regulations, including Document L, Document O and the incoming Future Homes Standard (FHS), are part of an ongoing and focused drive towards net zero in 2050; ultimately, the performance of our glazing products is only going one way – up.

The relatively new Approved Document Part O, designed to tackle overheating, is

driving change. The Document seeks to ensure that the design and construction of new residential buildings limit unwanted solar gain in summer and, if required, provide adequate means to remove heat from the indoor environment. This is becoming more of an issue with the heatwaves the UK has experienced in recent years.

## Solar glass solutions

To deliver the comfortable ambient interior temperature occupants are looking for, without the need for air cooling technologies, high-quality solar glass



products will play an essential part in achieving new standards.

With solar control glass, the amount of solar energy entering a building is controlled using a tinted coating on the outside of the glass. In short, solar glass products can reflect heat away from the inside of the home to help ensure the space doesn't get overheated. Solar glass is also a much more cost-effective solution to the problem than specifying air cooling technologies, and it's possible to specify solar glass, which is designed to reflect twice as much heat as standard glass.

### The heated glass revolution

From a FHS perspective, one solution which can be a direct replacement for traditional radiators is heated glass for bi-fold doors, which enables natural daylight and thermal comfort to be enhanced simultaneously.

Composed of a sealed unit layered with an intelligent conductive coating that is electrically heated to convert electric power into radiant heat yet has no visible trace of a heating system inside. The coatings used are completely undetectable, so from a homeowner's perspective, the glass will look the same as in any other bi-fold door.



An energy-efficient solution, the glass units are also thermostatically controlled, creating ambient temperatures perfect for installation within aluminium bi-folding door systems.

### Multifunctional & maintenance-free

Opening up even more possibilities with roof glazing, heated glass infill panels are also available, meaning that the roof glazing will not only illuminate the space throughout the day but also provide a radiant heat source for the space in the colder months, enabling both natural daylight and thermal comfort to be enhanced simultaneously.

Heated glass dramatically reduces condensation, preserving uninterrupted views and potentially contributing to a healthier indoor environment. Plus, no ongoing maintenance is required, providing a hassle-free heating solution compared to systems that need regular servicing, further adding to the benefits of heated bi-fold glazing.

*Paul Higgins is commercial director at TuffX*

## Matching colours should not involve different shades of opinion

**M**aking sure you have the right colour for decorating projects is not always straightforward.

HMG Paint has researched the subject of colour matching very thoroughly and has now issued a detailed guide to help both the user and the decorator to get it right first time.

Shade cards and wall charts can prove misleading so HMG offers some sensible do's and don'ts. Colours can vary slightly throughout shade cards and that can be as

a result of the printing inks used. Cards can 'yellow' over time, matching one batch with another can be tricky and observing colours under different sources of illumination can be misleading.

HMG ensures that every colour in its library is standardised in digital format, all are allocated unique library codes and every colour produced is measured against the standard using a spectrophotometer. The firm's batch cards are also stored for up to five years in a dark storage area so previous batches can be checked.

Simple advice to the end user includes always make sure you use the same batch on the same job and when ordering colours be specific. HMG makes the point that ordering, for example, Ford Gentian Blue is not specific but ordering Ford Gentian Blue XSC1146 is.

Orders should also be placed against standard RAL or library codes and users should bear in mind that colours are a matter of perception. One person's view of



"one shade lighter" can differ from someone else's view. A physical sample is a better bet.

HMG reinforces the point: "has the colour been observed in natural daylight?" HMG match all its colours under natural daylight.

The comprehensive Guide to Achieving the Correct Colour is available via the HMG Paints website, part of the company's comprehensive Knowledge Base of informative articles covering various aspects of decorating from paint application to problem solving.

0161 205 7631

[www.hmgpaint.com/knowledge/knowledge-base/302/hmg-guide-to-achieving-the-correct-colour](http://www.hmgpaint.com/knowledge/knowledge-base/302/hmg-guide-to-achieving-the-correct-colour)





## Hörmann UK launch ProductPortal

Leading door and loading solutions manufacturer Hörmann UK has introduced a new online portal to provide architects and specifiers with access to information across its wide range of industrial, commercial, and domestic construction products. Designed and developed to make life easier, ProductPortal is quick and easy to use and brings together everything required to specify Hörmann products into just one place. The portal has been created with a clear, simple layout offering quick and flexible searches for Hörmann products, with multiple functions and filters which allow for further refinement of product details. In-depth information is provided which includes a full product description, technical data, tender texts, downloadable CAD drawings and BIM models. All relevant product brochures, datasheets, videos, and certification documentation are also available. As a quick introduction and to illustrate just how easy it is to use the new portal, Hörmann have produced a short, demonstration video which is available on the Hörmann YouTube channel Hörmann Product portal or by visiting the portal at Hörmann Business Portal.

[www.youtube.com/watch?v=AqOLSGy3\\_AE](http://www.youtube.com/watch?v=AqOLSGy3_AE)  
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# How to balance preservation with modernisation

Ardit Strica of Onduline Building Products discusses the challenges faced in heritage roofing projects and offers insights into selecting appropriate materials and techniques that meet both conservation and performance requirements

Restoring heritage buildings is a meticulous process that requires a deep understanding of both the historical significance of the structures and the modern standards that must be met. Contractors working on these projects are faced with the challenge of preserving the aesthetic integrity of heritage sites while ensuring that the buildings are safe, functional, and compliant with modern building standards.

One of the primary concerns in heritage roofing projects is the selection of materials that align with the original appearance of the building while providing the necessary durability and performance required. While traditional materials such as slate, clay, and wood have a timeless appeal, they may no longer be practical for modern roofing demands. For example, original materials might be unavailable, too costly, or lack the durability required to withstand modern-day conditions.

In addition to material selection, contractors must consider the structural integrity of older buildings. Many heritage buildings were constructed without the modern reinforcements we take for granted today. Therefore, adding new roofing materials that are significantly heavier than the original ones could compromise the building's structural stability. This means that any solution implemented must not only preserve the visual appeal but also respect the load-bearing limitations of the existing structure.

The aesthetic value of a heritage site is often tied to its roofing. The rooflines, tiles, and overall roofing design contribute significantly to the building's character. When restoring or replacing a roof, it is crucial to replicate these elements as closely as possible to maintain the historical



authenticity of the site. However, modern performance standards require that the roof also provides adequate protection against weather, insulation, and ventilation, which older roofing systems were not necessarily designed to handle.

## Innovative solutions

To address these challenges, innovative materials and techniques have been developed to meet both conservation and performance goals. Lightweight composite materials, for instance, can mimic the appearance of traditional roofing materials such as slate or clay tiles while offering enhanced durability and reduced weight. These materials are often designed to meet modern standards of insulation, waterproofing, and fire resistance, thus ensuring that the restored roof performs well without compromising the building's structural integrity.

**One of the primary concerns in heritage roofing projects is the selection of materials that align with the original appearance**



Furthermore, incorporating technology in the planning phase, such as 3D modelling and thermal imaging, can further aid in achieving precise and efficient installations. These tools help in assessing the building's needs and simulating the impact of different materials and techniques, ultimately supporting a decision-making process that honours both the heritage and functionality of the site.

Another approach that is gaining popularity is the integration of sub-roof systems, which provide a multitude of benefits without compromising the historical appearance of the building.

Sub-roof systems are installed beneath the primary roofing materials, playing a critical role in enhancing the durability, energy efficiency, and weather resistance of a heritage building's roof. By adding an additional layer of protection, sub-roof systems help to manage moisture, prevent leaks, and improve insulation, all while remaining invisible from the exterior. This makes them particularly valuable in heritage projects where maintaining the original look is paramount.

Sub-roof systems are particularly beneficial in heritage projects because they

allow for the use of any roof tile, new or old while offering complete watertightness, enhanced protection and durability.

The systems are designed to work beneath any type of roof tile, providing a watertight barrier that safeguards the building without altering its external appearance. Contractors can maintain the original look of the roof by using the same style of tiles or slates that were initially installed, while the sub-roof system ensures that the building meets modern performance standards. This means that the visual integrity of the building is preserved, while the roof benefits from the additional strength and resilience that comes with contemporary roofing technology.

Restoring the roof of a heritage building is a delicate balance between preserving the past and embracing the future. By marrying traditional craftsmanship with advanced materials and techniques, contractors can ensure that restored roofs not only meet modern performance standards but also support the preservation of the building's historical and architectural value.

*Ardit Strica is technical manager at Onduline Building Products*



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# LAMILUX introduces bright spaces in the future of sustainable education

A new build school in Dunfermline, Scotland, has replaced St Columba's RC High School and Woodmill High School as part of the new Dunfermline Learning Campus. Historically, both schools were rated as Grade C (poor) due to their condition, which initiated proposals from Fife Council to replace the deteriorating buildings with a new single site. The new campus now brings together students and staff to a modern, fit-for-purpose and low-carbon facility across 26,666m, making it the UK's largest Passivhaus education building.

LAMILUX put together a bespoke rooflight package design proposal, tailored to the client, comprising of 20 Glass Roof PR60 Passivhaus mono pitch rooflights and 25 Glass Skylight FE Passivhaus rooflights. A full turnkey solution from design detail to installation was commissioned, to collaborate with the Scottish Governments investment to meet the international Passivhaus standard for energy efficiency, whilst supporting Fife



Councils demonstration of commitment to forward thinking sustainable education.

Natural light and integrated ventilation now floods classrooms, corridors and the sports hall to contribute to the creation of a highly performing building that will be stimulating, comfortable and energy efficient, all supporting an improved learning and concentration environment.

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excellent air tightness values the LAMILUX Glass Roof PR60 Passivhaus mono pitch rooflights were designed south facing, to deliver ample daylight, whilst avoiding overheating and ensures a comfortable indoor climate all year round.

Within the planning process, each of the 45 rooflights were carefully considered and designed to be unique in its overall size, number of glass fields, and number of ventilation flaps to ensure that each of the rooms below benefit independently from the right indoor air quality and daylight distribution.

LAMILUX U.K Ltd, Patron members of the Passivhaus Trust, are delighted to showcase the rooflights designed, manufactured and installed on this stunning and sustainable project on behalf of AHR and Bam Construction Ltd.

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## Historic hangar buildings transform with Sto



An external wall insulation system manufactured by Sto has helped to renovate historic hangar buildings at Pembroke Dock in Wales. Architects Purcell specified Sto to upgrade annexes connected to two hangars, allowing them to be transformed into new office and workshop spaces. For both projects, the StoTherm Mineral M external wall insulation system was selected with a Sto render facade finish, and includes mineral fibre insulation boards providing a high level of fire protection and thermal performance. Main contractor R & M Williams fixed the insulation boards to cement particle boards, installed to the light-steel frame structure, with Sto-Rotofix Plus mechanical fixings. Sto's extensive StoColor system enabled the facade of the new annexes to be finished in a blue resin StoSilco K1.5 render to match the colour specified by and signed off by the conservation officer. For the extension, the render was colour matched to the existing lime render. StoColor Silco G silicone resin facade paint, applied as a final finish to the Sto render, has also provided high levels of water repellence and resistance to algae and fungus growth, which is essential given the hangars' close proximity to the sea.

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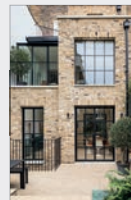
## AliDeck unveils the AliRail system



AliDeck is delighted to introduce the AliRail Insight Glass Balustrade System. Featuring Pyroguard Balustrades fire-rated glass, it promises to establish new benchmarks in safety and aesthetics for architects, specifiers and developers. The new offering provides a unique solution for fire-safe glass balustrade systems, meeting the stringent safety requirements of BS 8579:2020 for projects exceeding 11 metres in height and that of Approved Document B. The AliRail Insight system achieves an A2 reaction to fire rating, ensuring top-tier fire safety without compromising on sleek design.

[www.pyroguard.eu](http://www.pyroguard.eu) [www.alideck.co.uk](http://www.alideck.co.uk)

## Renaissance for W20 steel windows



As home renovation remains popular, and with the focus being on the acquisition and refurbishment of rural properties, this has resulted in Steel Window Association (SWA) members reporting a higher than usual demand for the replacement of the traditional W20 style windows. The president of the SWA and contracts director at Associated Steel Window Services, Kris Bennell, comments: "W20 steel frames are the ever reliable, ever popular traditional option for the sector, which are liked by both planners and heritage bodies for use in a host of different property types."

[www.steel-window-association.co.uk](http://www.steel-window-association.co.uk)

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# Senior brings light and shade to new hotel scheme

Dual coloured and slim framed aluminium fenestration solutions from Senior Architectural Systems have helped bring architectural interest to the external facade of a new multi-storey hotel in Coventry whilst ensuring the interior spaces benefit from plenty of natural light.

Constructed by main contractor Bowmer and Kirkland, Hotel Indigo Coventry has been designed by architects Chapman Taylor and boasts a striking exterior which features Senior's popular SF52 aluminium curtain wall system and SPW600 aluminium windows throughout. The leading manufacturer's



SPW501 aluminium commercial entrance doors were also specified, with the full glazing package fabricated and installed by specialist contractor Acorn Aluminium.

Senior's in-house powder coating service was instrumental to achieving the desired aesthetic for the hotel's exterior facade which required the aluminium fenestration systems to complement the use of striking silver-blue metallic cladding. Opting for a dual colour finish, Senior's aluminium fenestration systems were powder-coated in anthracite grey on the exterior and grey-blue to the interior of the frames. The SF52 curtain walling has been installed in columns that run the length of the building, with the metallic cladding installed in between. The darker colour of the aluminium curtain wall and inset windows add depth to the building, with the recessed columns of glazing complementing the lighter shade of the facade material.

In addition to design flexibility, the slim frames of Senior's SF52 curtain wall



system and SPW600 aluminium windows have helped to create a comfortable interior environment by maximising the flow of natural daylight and providing exceptional thermal-efficiency to achieve the desired U-values.

To discover more about Senior's extensive range of aluminium windows, doors and curtain wall systems, as well as details of the company's state of the art powder coating facility which is located at the company's South Yorkshire site. Please visit the website or search for Senior Architectural Systems on Twitter, LinkedIn and Facebook.

01709 772600

[www.seniorarchitectural.co.uk](http://www.seniorarchitectural.co.uk)

## Garador training courses a huge success



Garador says its training courses are proving a huge success. Garador runs training courses on both product familiarisation and also installation. The product training courses is geared towards sales staff and covers the huge range of doors available plus information

on surveying, specification and pricing. The installation course offers updated garage door information plus hands on installation training and an operator session. Courses run over two days at the company's purpose built modern training facility adjacent to the Garador garage manufacturing plant in Yeovil, Somerset.

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## A stylish, plug in bathroom solution

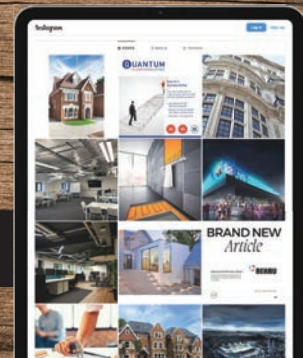


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# Innovative concrete veneer acoustic wall panels create industrial look



CMS Danskin Acoustics has launched an innovative new concrete veneer wall panel to provide an ‘on trend’ industrial look combined with acoustic benefits for commercial interiors, such as hotel lobbies, retail outlets and exhibition and meeting spaces.

Xapa, pronounced shapa and meaning veneer in Catalan, is a routed slat, PET felt sound absorber panel faced with a decorative, authentic concrete veneer. It is a lightweight alternative to solid concrete walls, providing a fashionable concrete appearance, without the reverberation issues associated with hard wall surfaces.

Xapa panels are available in smooth or travertine finishes, both in a range of four colours – taupe, charcoal, light travertine and dark travertine.

“There are concrete-look, vinyl covered panels on the market, but Xapa is different. It has a concrete veneer that feels and looks like concrete, because it is concrete,” said Andy Turner of CMS Danskin Acoustics’ product development team.

“Solid concrete walls present reverberation issues, making spaces noisy even to the extent of making conversation or concentration difficult. Xapa gives the desired minimalist concrete look with the benefit of good acoustic performance,” he added.

Xapa is available in two standard thicknesses – 14 mm or 26 mm, offering a choice of acoustic performance. Used with a CMS Danskin Acoustics coreboard, Xapa achieves up to Class A sound absorption. CMS Danskin Acoustics provides a free

reverberation calculation service as well as full technical and on-site support.

The Xapa concrete veneer panel is one of a range of veneered acoustic panels being developed by CMS Danskin Acoustics. CMS Danskin Acoustics products also include a timber veneered slat acoustic wall panel, also in a range of colours.

A data sheet and installation guide is available at: [www.cmsdanskin.co.uk/general-construction/absorption-reverberation/xapa/](http://www.cmsdanskin.co.uk/general-construction/absorption-reverberation/xapa/)

Part of the Performance Technology Group, CMS Danskin Acoustics produces and sources insulation products advising on all matters relating to sound reduction materials and noise reduction strategies, including floors, ceilings and walls, to combat airborne and impact noise. Notable projects include the Bank of England, the Royal Shakespeare Theatre, The Shard and the W Edinburgh.

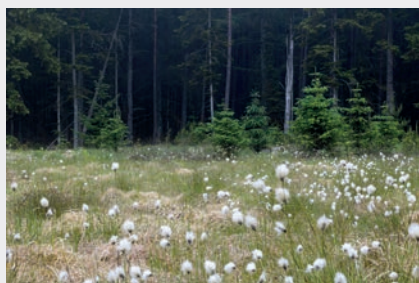
01925 577711  
[www.cmsdanskin.co.uk](http://www.cmsdanskin.co.uk)



# Troldtekt A/S reduces carbon footprint with new initiatives

In three years, Troldtekt has reduced its carbon footprint per square metre of acoustic panels produced by 6.9%. This is shown by data in Troldtekt's CSR report for 2023. The reduction has occurred in Scope 3, which mainly covers cement from Aalborg Portland. Part of the explanation is due to the cement type FUTURECEM™.

Cement provides the well-known Troldtekt® acoustic panels with their robustness, fire retardant properties and extensive durability. But the cement from

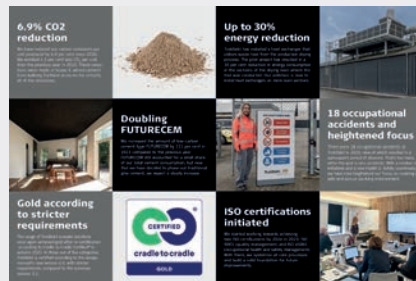


Aalborg Portland also accounts for virtually the entire carbon footprint of the panels. In 2023, Troldtekt reduced its carbon footprint per square metre of acoustic panel produced by 4.3%. Over three years – from 2020 to 2023 – the reduction has been 6.9%.

The new CO<sub>2</sub> figures are included in Troldtekt's CSR report for 2023. It shows that 99% of the carbon footprint in 2023 came from the so-called Scope 3, which primarily covers the purchase of cement. At Troldtekt's own factory (Scope 1 and 2), 94.5% of energy consumption in 2023 came from renewable sources in the form of biofuel and wind power. This figure was slightly lower than in previous years due to a period of maintenance on the biomass boiler.

## FUTURECEM MAKES A DIFFERENCE

In 2023, Troldtekt doubled the share of acoustic panels produced based on the cement type FUTURECEM. Together with other reductions at Aalborg Portland, this



is a significant part of the explanation for the decrease in the carbon footprint. FUTURECEM utilises the synergies between calcined clay and lime filler, making it possible to replace a large part of the burnt clinker in the cement.

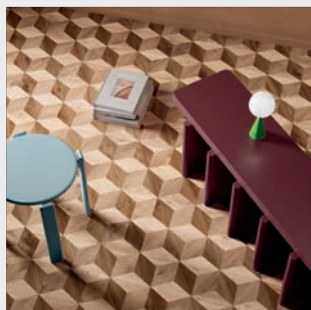
Over the entire product life cycle, the carbon footprint of Troldtekt acoustic panels based on FUTURECEM is:

- 26% lower than that of Troldtekt panels based on grey cement
- 38% lower than that of Troldtekt panels based on white cement.

Read the full report here: [www.troldtekt.co.uk/media/f5zoy0bi/troldtekt\\_csr\\_2023\\_en.pdf](http://www.troldtekt.co.uk/media/f5zoy0bi/troldtekt_csr_2023_en.pdf)

[info@troldtekt.dk](mailto:info@troldtekt.dk) [www.troldtekt.co.uk](http://www.troldtekt.co.uk)

## Give your space stand out style with Moduleo Moods



Moduleo® Moods has been used to bring inspirational flooring design to hotels, offices, restaurants, shops and more. Through bold geometric designs or subtle tessellating patterns, designers have used its shapes and designs to create extraordinary flooring in receptions and lobbies, bars, meeting spaces, store fronts and more. Now updated with new patterns and natural wood and stone effects, Moduleo Moods is ready to bring exciting new looks to commercial spaces. Moduleo's designers have looked to the Roots collection for Moods, selecting 12 wood and stone effects with four shapes. Through imagination and creativity, these in-stock options have been turned into 15 different patterns with a total of more than 70 different floor designs to choose from. With Moduleo Moods, designers can make the floor theirs and create something really special for their project. All of the stock options in Moduleo Moods uses Moduleo's best specification. A 0.55 mm wear layer and scratch and stain resistance make sure that Moods can withstand use in busy spaces while staying looking good. The wood and stone effects are also enhanced with EIR technology for a realistic texture that's perfectly in sync with the design.

01332 851 500 [pro.moduleo.com](http://pro.moduleo.com)

## Mapei joins net zero carbon in operation spec at Winterstoke Hundred Academy



Mapei floor preparation and fixing products have featured as part of a net zero carbon in operation school project at Winterstoke Hundred Academy secondary school in Somerset. It was designed to achieve a BREEAM 'excellent' rating and protected local plants and wildlife through a biodiversity net gain of 10%. Forbo designs specified included Sphera Element homogeneous vinyl flooring, Sphera SD anti-static vinyl flooring, Surestep Original safety flooring and Safestep R12 safety flooring. During the flooring installation, Mapei Eco Prim T Plus universal acrylic primer was used to treat the substrates. Mapei Latexplan Trade – a protein-free, low odour levelling and smoothing compound – and Ultraplant Renovation Screed 3240 fibre-reinforced self levelling compound were used to prepare subfloors, along with Mapeproof One Coat surface damp proof membrane. Two Mapei adhesives, featuring solvent-free and very low VOC formulations, were used to complete the flooring installation. They included multi-purpose adhesive, Ultrabond Eco Fix and Ultrabond Eco TX3 wet grab adhesive.

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## Playfully stylish, perfectly practical

Team, communal, and school sports shower installations are often limited by budget, leading to cheap, uninspiring fittings that compromise both aesthetics and functionality while presenting challenges in cleaning and maintenance. Where user experience is affected, care of the fittings may also suffer and further shorten the lifespan of the installation.

The Horne Dušo shower column offers a stylish alternative to typical group showers, which often use fixed heads, and exposed or recessed pipework. While 'recessed' setups look cleaner, they're harder to maintain.



Surface installations can be unsightly, difficult to clean, and potentially risky where hot water pipes are exposed near the floor. The Dušo combines the cost benefits of exposed installations but with more elegance and minimal visible pipework.

With its sleek, slender design, the Dušo features a polished chromium-plated head, brightly anodised aluminium body, and robust injection-moulded polymer spray-plate and actuator paddle. Available in aquamarine, grey, yellow, and black, the Dušo complements interior designs aimed at creating an inviting and bright shower space.

Designed for optimal user satisfaction, the taller-than-average column, and easy-to-use paddle operation caters to both adults and children. The shower runs for approximately 60 seconds per actuation, reducing wear and preventing user frustration. The coloured spray plate and paddle can also indicate water temperature, for example denoting a separate cold temperature option, or to assist users with limited sight.

Constructed from robust and durable materials, the Dušo is built to last, whether



installed inside or out. Its smooth surfaces and flexible silicon rubber nozzle array make cleaning easy, while the easy-access flow control cartridge and protective strainer ensure minimal maintenance.

The Horne Dušo shower column offers an attractive but durable, and practical solution for communal showers. Its robust design, ease of installation and maintenance ensure long-term performance at a relatively low cost, making it a smart choice for any project. Specify via NBS Source.

01505 321455 [www.horne.co.uk](http://www.horne.co.uk)

## Mapei Topcem features in upsized Primark Metrocentre



Fast-track Mapei Topcem has recently been installed as part of an extensive resilient flooring project at Primark Metrocentre in Gateshead. The expansion project, throughout the ground floor, included upsizing by over 14,100 ft<sup>2</sup>. The Mapei installation was carried out by DPC Screeding for Knowles & Co, Chartered Building Consultancy & Project Management. Mapei Topcem was specified by Knowles & Co following a previous successful installation at a large retail store in Newcastle. The floor installation at Primark included vinyl and LVT tile, and Topcem enabled the resilient flooring to be laid after four days. A special fast drying hydraulic binder developed for high traffic areas, Mapei Topcem is used to create bonded, unbonded and floating screeds. It can be utilised on new and existing concrete – and with piped underfloor heating – and is suitable for ceramic and porcelain tiles, natural stone, vinyl, wood, PVC and carpet installations. Ceramic and porcelain tiles can be installed 24 hours after application and natural stone after two days. For more information about Mapei floor preparation products and other ranges, please get in touch.

[info@mapei.co.uk](mailto:info@mapei.co.uk) [www.mapei.co.uk](http://www.mapei.co.uk)

## Smoothing compound provides A\* finish



F. Ball and Co. Ltd.'s new high flow, two-component smoothing compound, Stopgap 1400, has delivered a copybook finish at the newly constructed Carew Academy for children with special educational needs in the London Borough of Sutton. Commenting on the project, Rudy Owens contract manager

at Ideal Interiors Southern said: "Everything has gone smoothly, with F. Ball's Stopgap 1400, in particular, helping us move from one area to another efficiently when latexing and meaning that we could continue with work upon returning the next day."

01538 361 633 [www.f-ball.co.uk](http://www.f-ball.co.uk)

## Functional, bespoke utility kitchen collection



Keller Kitchens is home to an extensive range of utility room furniture in numerous finishes and configurations. Designed for clever but stylish solutions, this range can also be used within storage and laundry rooms too. With the range of tall, base and wall units, along with complementary

interior fittings and handles, the homeowner can create a truly personalised utility room, where ease of use and great design go hand in hand. The units can be combined with Keller's existing kitchen ranges for an overall, streamlined scheme.

[www.kellerkitchens.com](http://www.kellerkitchens.com)

# How flexible design transforms retail environments

Retail design strategically utilises space, aesthetics, and functionality to enhance the shopping experience. Zentia's Prestige suspended ceiling tiles offer a wide range of colours to align with brand identity and seasonal themes. Their easy installation and adaptability enable quick changes to store layouts without compromising aesthetic or acoustic quality, ensuring a seamless and inviting retail environment.

Retail design directly impacts the customer experience and a shopper's willingness to buy a product. It encompasses everything from store layout and organisation to interior design and colour selection. Acoustics and the careful use of colour play an important part in this.

While colour can be used in retail interior design to enhance a brand, it is important to use it thoughtfully. Too much vibrant colour can cause sensory overload and make it difficult for customers to focus on products. Too much dark colour can make a store feel gloomy, causing customers to exit before purchasing. The Prestige family of products



is an excellent product to use in retail ceiling design. It offers three different levels of sound absorption and is available in six different edge details. It can also be ordered in 34 different colours, as well as white. It is one of our most flexible product ranges for both acoustic performance and aesthetics.

Prestige acoustic ceiling panels are quick and easy to install, especially when used in combination with Gridline, our suspended ceiling grid.

Choose a Board edge for a flat ceiling installation that completely exposes the ceiling grid, or a Tegular24 or Tegular15 edge type to create geometric shadows across the

ceiling surface. Prestige ceiling tiles can also be specified in SL2 planks, ideal for corridors, as well as unique Integra and Conceal edge types, designed to eliminate shadows and conceal the suspended ceiling grid entirely.

Rated Class A for sound absorption with  $\alpha_w$  1.00, the Prestige hA+ tile provides settings with a dose of calm and quiet. It is ideal for banks and other high street environments that are usually quiet. This tile is available in white only, so it suits interiors that require a more neutral colour scheme.

For retail environments that need a more lively atmosphere, the classic Prestige ceiling tile are Class C rated in sound absorption, with an added sound attenuation rating of 33 dB, a combination that helps manage ambient noise levels in open plan spaces.

Prestige ceiling tiles maintain superior aesthetic standards while providing crucial acoustic benefits, ensuring a pleasing shopping experience that minimises and manages disruptive noise levels.

0191 497 1000  
[www.zentia.com/en-gb/the-prestige-family](http://www.zentia.com/en-gb/the-prestige-family)





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The difference is in the detail

# Going beyond Gateway 2

Chris Hall of Siderise looks at the new design quality regime under the Building Safety Act, and the Gateway 2 approval for higher-risk buildings in particular, discussing what architects need to know on the documentation requirements



**Reports from the Building Safety Regulator suggest that so far, applications have frequently lacked the level of detail and documentation necessary to progress through Gateway 2 smoothly, leading to project delays**

One of the most significant changes brought in by the Building Safety Act (BSA) is the new building control regime and approval ‘Gateways’ for higher risk buildings (HRBs) – in particular Gateway 2. Here, a full application is submitted to the Building Safety Regulator (BSR) outlining how compliance with the functional requirements of the Building Regulations will be met, and construction cannot begin until it is approved. For architects, this means that plans must be prepared with an appropriate amount of detail, particularly around key elements such as fire safety.

However, reports from the BSR suggest that so far applications have frequently lacked the level of detail and documentation necessary to progress through smoothly, leading to project delays. To help overcome this, there is a clear need for construction product manufacturers – especially those producing life safety-critical products – to provide support beyond the basics of accurate product information.

## Fundamental information

Accurate and substantiated product information is essential for safe designs, regardless of the building type or use. Therefore, as standard practice, manufacturers must ensure architects have access to clear, accurate and up-to-date

product information that is not ambiguous. Any performance claims should be backed up by testing carried out to the standards stipulated by the applicable compliance guidance or the regulations as a minimum. These results should be verified by accredited third-party certification bodies wherever possible for greater assurance. This data should also be captured within usable BIM models which have been authored to industry standards such as the NBS BIM Object Standard.

However, a common misunderstanding is that Gateway 2 is simply an assessment of the building design. The BSR states that plans need “to outline exactly how compliance with the functional requirements of the Building Regulations is going to be met – and that they do not rely on unrealistic management expectations.” This means that there needs to be detailed justifications of why certain products or approaches are being used on a specific project and how they contribute to compliance. For this to happen, contractors and specialists must not only be brought into the design process at a much earlier stage than what had become the norm, but manufacturers must be ready to share their expertise to ensure products are used correctly to support compliance and long-term safety of the building.

## Application support

Manufacturers are often considered specialists, and are seeing an increasing trend of being asked to support designers in preparing key details or providing the right training and education at this crucial stage. This can include project-specific advice and guidance ranging from product selection and calculations, to arranging bespoke testing of specific elements.

For project teams, working with manufacturers earlier on in the construction process can also help to limit the risk of changes to specifications, as the products will not only be specified correctly for

the application but will be cost factored too. The new building safety regime requires all projects to demonstrate a clear change management process. On higher-risk projects, this is prescribed by law. A “change to any part of the active fire safety measures or passive fire safety measures in a proposed higher-risk building referred to in the fire and emergency file” after Gateway 2 approval is classed as a ‘major change’ and would mean that project teams would need to refer back to the BSR. They then have up to six weeks to approve the change or request more justification. As well as incurring a fee, this could potentially cause significant delays to the build programme, as no work can begin on the area subject to the change until it has been approved.

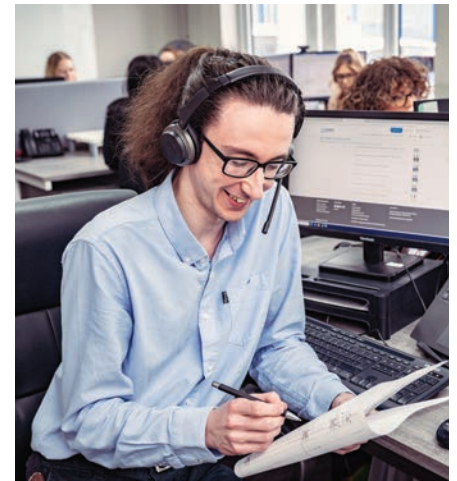
Additionally, early involvement from manufacturers of safety critical products can help build up a bank of information that can be incorporated in or used to contribute to the Golden Thread. This can include everything from test data to a history of technical communications and training, which can be added to in later stages of construction, such as when product installation inspections have taken place.

Of course, for manufacturers to be a genuinely useful resource during the pre-construction phase, it is vital that the industry feels confident in their skills, knowledge, experience and behaviours. Therefore, manufacturers need to make a clear commitment to competency and upskilling. This ensures that design or product suitability advice is backed by accurate and accessible product data and has been delivered by someone competent enough to interpret the project needs and requirements, understand any potential parameters or limitations, and identify the right solutions.

### Supporting safety

Gateway 2 is a real opportunity for the industry to ensure the highest levels of fire and building safety are inherent to the design from the outset. Manufacturers of life safety critical products can lend their expertise and experience to support designers in producing detailed applications that demonstrate the diligence necessary to create safe and long-lasting buildings.

*Chris Hall is external affairs director at Siderise*



**Gateway 2 is a real opportunity for the industry to ensure the highest levels of fire and building safety are inherent to the design from the outset**

### Catalogue delivers more choice for the trade



Leading specialist supplier, **IronmongeryDirect** has released its latest catalogue featuring 500 new additions to its extensive range. Perfect for tradespeople browsing whilst on the go, the 2024 Autumn edition is available for free delivery or to view online on the retailer's website. The most recent catalogue details the retailer's key product lines as well as a selection of its new and exciting additions, which include

products from renowned brands such as Alexander & Wilks, Heat Mat, and Heat My Home.

0300 303 88 21 [www.ironmongerydirect.co.uk/free-catalogue](http://www.ironmongerydirect.co.uk/free-catalogue)

### Vent-Axia's new range of fire airbricks



**Vent-Axia** has launched a new range of low-resistance, non-combustible metal fire airbricks. The new Pyrocheck Fire Airbricks are fully compliant with both Approved Document B (Fire Safety) of the Building Regulations and Building (Scotland) Technical

Handbook 2019. Developed in-house the Pyrocheck Fire Airbricks range features a low-resistance design to ensure high airflow and has been performance tested to BS EN 13141-2-2010. The new class A1 fire metal ducting kits and fire airbricks comply with the requirements of the current Part B of the Building Regulations.

0344 856 0590 [www.vent-axia.com](http://www.vent-axia.com)

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A sky full of stars

Photo credit: HiFi Cinema

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# Videx launches the Klass monitor



Videx Security has announced its new Klass Monitor. This latest innovation in the Videx IPure range combines the latest technology and modern design to provide a leap forward for smart building entry solutions.

The Klass Monitor provides a wide range of smart integration with various systems, including building and home automation, third-party CCTV picture-

in-picture, anti-intrusion, full video and speech intercommunication and access control. Built on standard IP protocols, it guarantees limitless integration with third-party devices, enhancing both security and system customisation.

The monitor boasts a range of smart features including a proximity and light sensor for automatic screen activation and adjustment, both of which can also trigger

automations with third-party systems. The picture-in-picture integration enables a real-time, multi-angle view of any desired entryway, allowing for a much safer and secure method of guest entry. All functionalities can be easily controlled through the Videx App, which mirrors the intercom's user-friendly interface.

Rob Sands, technical director at Videx Security, said: "We're excited to introduce the Klass Monitor which is engineered to provide an exceptional user experience. Its ultra-slim profile and tempered glass finish make it a perfect addition to any high-end application."

"At its heart is an embedded Linux system for maximum reliability and a built-in browser for comprehensive system management. Additionally, it features a chronothermostat for precise temperature control, enabling users to manage room temperature, set and modify desired temperature programmes and display humidity levels.

"The Klass Monitor's integration capabilities and advanced features set a new benchmark in the door entry system market. It embodies our commitment to providing high-performing, reliable solutions that cater to the needs of modern smart buildings."

For more information about the Klass Monitor and other Videx products, please visit the website.



0370 300 1240 [www.videxuk.com](http://www.videxuk.com)

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# Success cast in stone

Toby Marlow of Haddonstone explains how architects can achieve the best outcomes when using cast stone and what advice they should expect from a manufacturer

There is a virtually endless variety to the forms which cast stone can take, from fully structural elements weighing three or four tonnes, to decorative reproductions of different architectural periods. Cast stone is regularly used to create lightweight retrofit designs which can quite literally create a Trompe L'oeil just a few millimetres thick, while appearing to have been carved from a slab of quarried rock.

Sourcing the right products for individual projects, however, means engaging with an experienced manufacturer able to offer the best possible technical and aesthetic advice based on long practical experience of producing bespoke, as well as standard cast stone designs.

Established in the early nineties, the UK Cast Stone Association (UKCSA) has grown over the decades to the point where its 11 full members – as well as an impressive list of associate members – offer a truly comprehensive selection of products ranging from garden planters to large scale structural components. UKCSA members' capabilities range from producing stonework for modern, new developments to sensitive restorations of historic and listed buildings. In fact, it is Britain's rich architectural heritage, from Roman times through to influential periods including the Georgian era, that drive customers and their consultants from across the continent, North America and Asia to seek the services of UK cast stone manufacturers.

It is a truly eclectic industry, and one which can appear complex to the uninitiated. This means that cast stone manufacturers need to ensure they fully understand their customers' unique project specifications, as well as being able to educate their clients on the different categories of product available, and their characteristics.

Significantly, while cast stone products manufactured in the UK are normally compliant with overseas building standards, the converse is not the case: and UK



Wet cast material poured by hand into a bespoke mould

specifiers should not assume that foreign made goods will match up in terms of production standards, especially regarding frost resistance – or with our increasingly onerous safety requirements.

UKCSA full members manufacture three main types of products, with wet cast being the closest relative to conventional precast concrete units. In practice, these typically use a 5% water content to ensure the cement is properly hydrated, though particle size within the mix affects compaction; and the end results.

The biggest contrast to semi-dry alternatives, however, is the use of super-plasticisers, which afford the mix the consistency or slump of structural concrete normally delivered to construction sites, with a strength of around 45 N, which with reinforcing offers superior load carrying capabilities, as well as allowing complex profiles. Then, fibre reinforced, hollow

**It is Britain's rich architectural heritage, from Roman times through to influential periods including the Georgian era, that drive customers and their consultants from across the continent, North America and Asia to seek the services of UK cast stone manufacturers**



Stainless steel structural reinforcement bars being manufactured

castings are ideal where weight is to be kept to a minimum.

While some architects will be sufficiently experienced to know the type of product they require for specific projects, in most cases they will rely on the cast stone specialist to advise on the most suitable solution; normally involving a collaborative process to determine the correct mix and stone colour, whether reinforcement is required, and the various decisions to be made in relation to installation.

Although UKCSA full member manufacturers offer standard product ranges, some 70-80% of orders involve totally bespoke castings, for which individual moulds must be fabricated – arguably the most skilful part of the process; and one requiring exact measurements – while offering the most aesthetic and technically appropriate answer.

Normally beginning with the architect's drawings or at least a sketch, the manufacturer will help decide where to position the joints in castings like cills and provides expertise on the correct positioning of fixings to ensure secure installation. The positioning and type of reinforcement is also particularly of importance on thinner section products. With a 40 mm cover being required to protect against corrosion, it may be necessary to switch to thinner bars or to

use stainless steel: whereby the cover can be cut to 25 mm. However, the design of the reinforcement will remain the responsibility of the project structural engineer.

It has further become commonplace for manufacturers to receive design information in the form of 3D images and STL files that are combined to help create a full-size, printed PU model of items like ornate plaques or corbels. The manufacturer then creates a fibreglass and rubber mould from which the castings are produced. As with all bespoke moulds, the normal practice is to keep them for at least three months after the product is made, but this can be extended indefinitely where it is known further castings will be required.

There is also the choice of whether the manufacturer's role is extended by involving one of its experienced independent installers. Conscientious UKCSA full member manufacturers and their experienced independent installers, in fact, consider the entire process through scheduling production and deliveries, to protect castings appropriately during transport, and ensure a safe and timely installation is achieved.

Haddonstone is one of the UKCSA's founding members, and one project involved a two-year plan to extend and refurbish the 12 Apostles Greek Orthodox Church at Brockmans Park in Hertfordshire. For this bespoke project, Haddonstone worked closely with the lead consultant, GLA Architecture & Design, as well as main contractor, MP Build, to supply a package of dry cast enrichments to closely match the building's style and history. Now, the cast stone elements frame the main door and three different style windows, while the roof gables feature reduced sized quoins and sculpted apex stones.

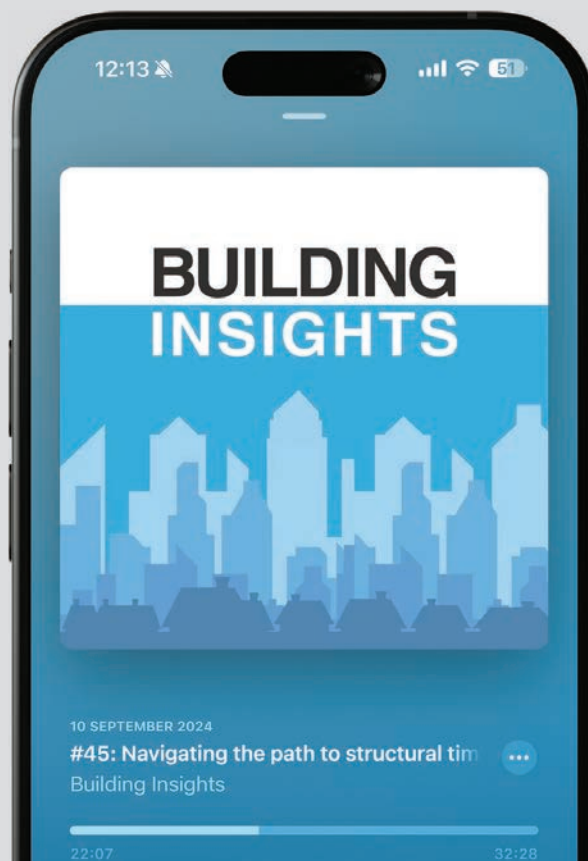
In conclusion, the cast stone industry in the UK, exemplified by UKCSA members, offer a diverse range of high-quality products and bespoke services, essential for both modern construction and the restoration of historic buildings. By collaborating closely with architects and contractors, these manufacturers ensure that each project benefits from expertly crafted, durable, and aesthetically appropriate solutions, tailored to meet the specific needs and standards required.

*Toby Marlow is building & construction director at Haddonstone*



# BUILDING INSIGHTS

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# IMAGINE FACADES BEYOND LIMITS

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