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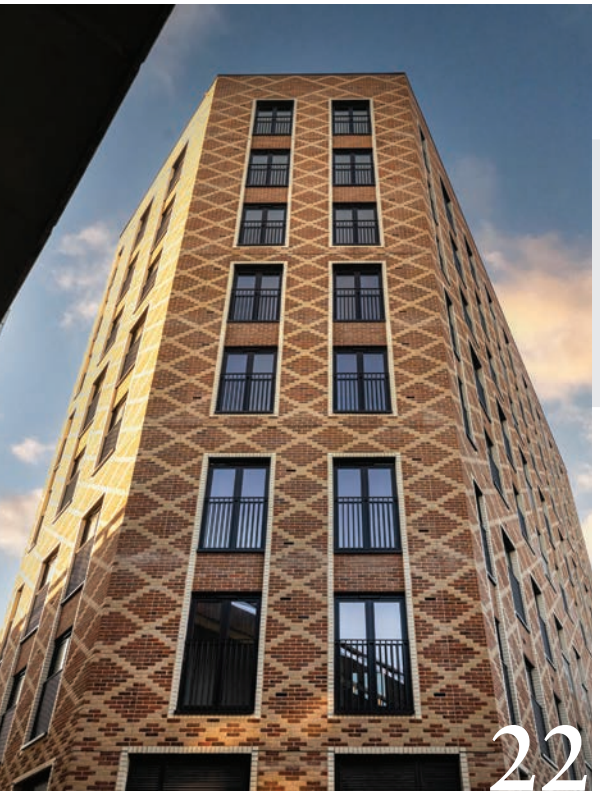

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FROM THE EDITOR

It's refreshing to see a non-'starchitect' winner of the Pritzker Architecture Prize, the accomplished but unshowy Liu Jiakun of China being this year's recipient. Looking at his buildings, reputed to "celebrate the everyday lives of people," they embody strong materiality, but also a certain modesty, especially given the "freedom from any aesthetic constraint" that the Pritzker jury claim his work demonstrates.

Sometimes sculptural, Jiakun's buildings also offer a variety of carefully considered responses to their context, lacking an overbearing 'signature' in favour of a softer, more permeable character. He describes this as the result of an aspiration to "be like water – permeate through a place without carrying a fixed form of my own and to seep into the site itself." And his re-making bricks from straw and rubble left after the 2008 Chengdu earthquake was a brilliant bit of reuse that's been rightly celebrated.

Liu is the 54th 'laureate' of the Prize, considered the most significant in international architecture. He was chosen, said the judges, in recognition of how he has "placed people and communities at the forefront throughout his four-decade career." He's only the third Chinese architect to have won the prize, (one of the other was Chinese-American – IM Pei, the other Wang Shu who founded Amateur Architecture Studio).

With a similarly sized pool of architects, the UK has done slightly better over the years, with five big names winning (Stirling, Foster, Hadid, Rodgers and Chipperfield). The UK's long tradition of international achievement might have led you to expect a couple more awards to be distributed outside of these household names. But US architects have only won the prize seven times, and produced no winner since 2005. This only reinforces the credibility of the competition, at least in terms of its country-diversity and global perspective, and possibly also reflects a change in focus away from prestige projects to something more 'holistic.'

The criteria for such international prizes are probably even more arcane and elusive than other national prizes. However, they always succeed in focusing attention toward the impressive results of committed individuals, and help us to realise the significant recent of the profession over recent decades.

Put into relief by International Women's Day recently, the lack of female representation in the Pulitzer Prize is stark, but it's also a sign of how the profession still finds it troublingly difficult to allow female designers to rise to the top. It took 25 years for the prize to be awarded to a woman, the late Zaha Hadid. And only five women have won since, two of whom (Yvonne Farrell and Shelley McNamara) had to share the prize in 2020, as they were deemed 'equal counterparts' at Grafton Architects. There is still a lot to do.

James Parker, Editor

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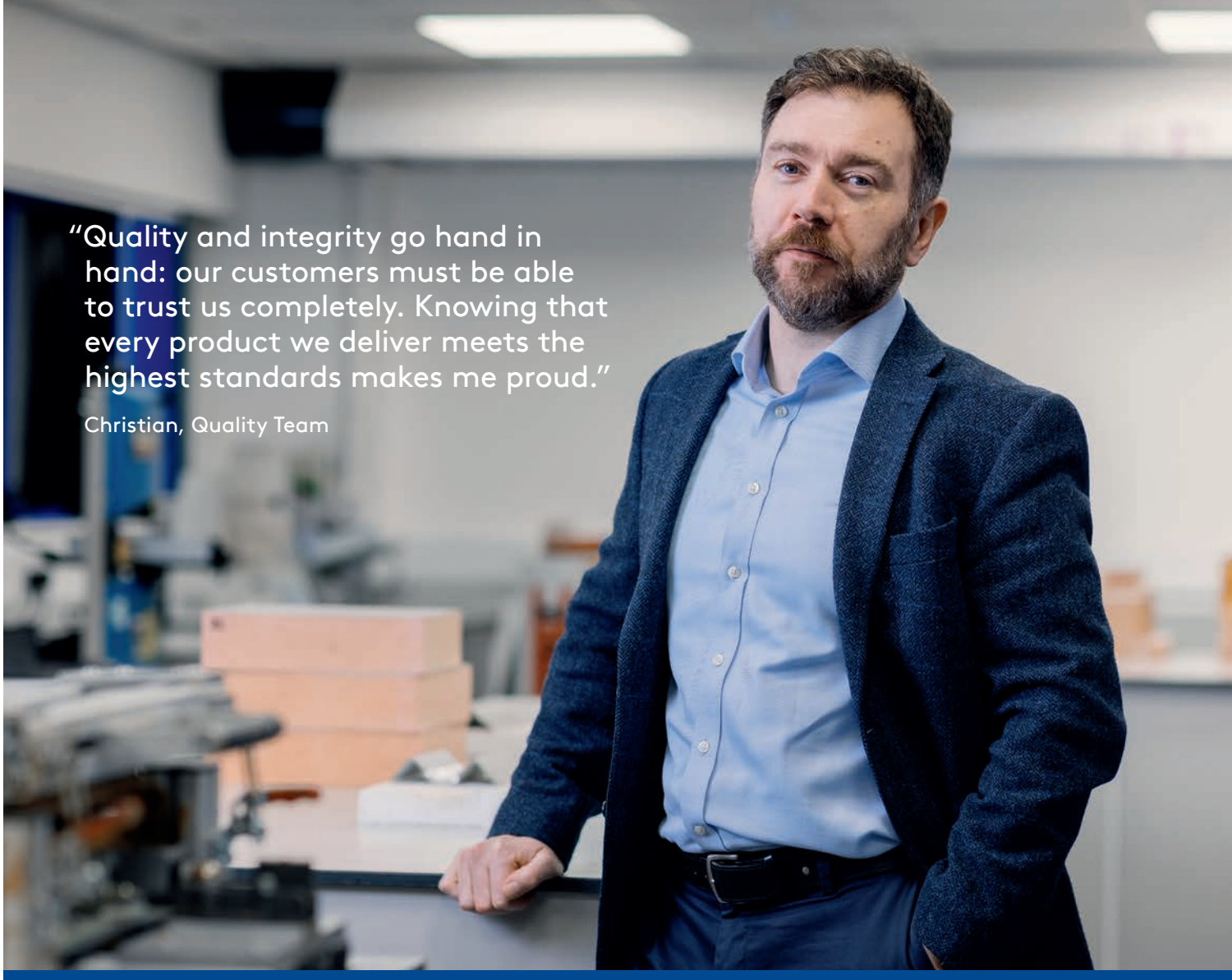
ON THE COVER...

Acklam Road – a richly detailed and rigorously designed scheme by PRP; delivered by HNW Architects

Cover image © Peter Langdown
For the full report on this project, go to page 22



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MIXED USE SCHEMES

First building at King Cross life sciences campus features Earth blocks

The Apex, the first building within London's largest purpose-built life sciences development, TRIBECA, has completed in Kings Cross. Designed by Bennetts Associates for Reef Group, The Apex offers 112,526 ft² of state-of-the-art office and laboratory space across six floors. It is the first of five buildings planned for construction, forming part of a bespoke mixed-use development. Following its completion in 2026, the scheme will deliver nearly 1 million ft² of premium workspace, laboratories, retail and residential space in the heart of London's Knowledge Quarter and biotech cluster.

Situated on the site of the former Royal Mail sorting office, often dubbed the 'Ugly Brown Building', The Apex will provide occupiers with a large open reception and ground floor cafe that sits level with the canal. There will also be extensive support facilities at the ground and basement levels, a roof terrace, and best-in-class commercial and laboratory space across all floors.

The Francis Crick Institute is supporting 52,000 ft² of space in the Apex and The London BioScience Innovation Centre ("LBIC") has signed a lease on 39,000 ft² of space – around 35% of the building, offering state-of-the-art scale-up lab facilities to its growing customer base as a world-leading destination for bioscience research and development. One of LBIC's first occupiers at The Apex is Baseimmune, a "discovery stage biotech developing universal vaccines with variant-proof antigens."

Bennetts Associates' design allows for optimum flexibility for tenants seeking unique working environments. A variety of lab and office configurations will also be realised via the hybrid base building which utilises a structural frame. Additionally, the servicing strategy enables a blend of uses, integrating additional riser space zones within core areas and drainage provision, whilst providing an enhanced ventilation system for lab use.

The Apex is the UK's first large-scale building to use site subsoil as a construction material. The project has used excavated clay to make 13,000 'Earth blocks,' which in turn have been used for the perimeter walls of the building's basement in place of block work.

Unlike standard blockwork, which has limited recycling potential, Earth blocks can be broken down and reused, or returned to nature at the end of their lifespan. As such, the Earth block can store the building resource within the walls of the development throughout the lifetime of the building. When compared to medium-density cement blockwork, the earth blocks emit only one-tenth of the CO_2.

This natural material also brings climatic benefits to buildings – it regulates indoor temperature and humidity levels and purifies the air by trapping airborne pollutants. The Apex is on target to reach BREEAM Excellent rating which strongly aligns with Reef Group's ESG commitments.

In keeping with the unique tapestry of materials of the Regent's Canal, a palette of traditional materials including brickwork have been incorporated in the exterior of the design. "The variation of tone across the buildings and landscaping has been developed to complement and enhance the rich materiality of the nearby Kings Cross conservation area," said Bennetts.

Gavin Pike, associate director at Bennetts Associates, said: "TRIBECA is a significant project we've been working closely with Reef Group on for eight years. The Apex sets the tone for the campus, which sits at the centre of what is set to be London's largest life sciences development. Once complete, TRIBECA will provide a new community for occupiers to collaborate and innovate in a contemporary canal side environment."

TRIBECA is set to complete in 2026.

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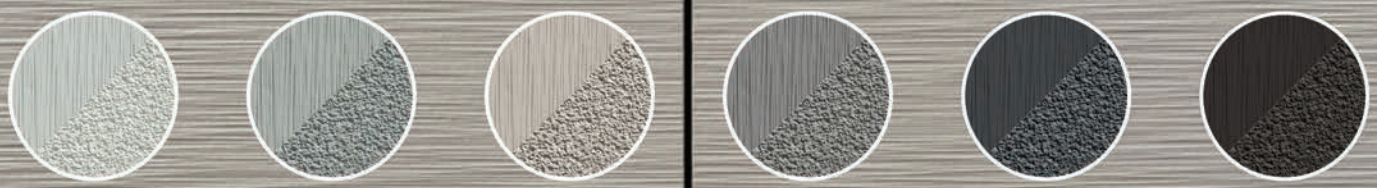

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HERITAGE & HISTORIC

‘Community’ architecture firm reveals plans for Manchester refurb

‘Community’ architectural practice Architecture Unknown has submitted plans to reimagine the former Middleton Conservative Club as a banqueting hall and community space.

The plans, submitted on behalf of local business Kohinoor Banqueting, will transform the site into a wedding venue and multi-use function space for the community. The planning proposal includes internal refurbishments and renovation of the existing heritage facade, as well as a double storey contemporary brick extension.

The proposal will see the disused area at the back of the building adapted into a car park, containing new plants, green swales and a green wall with the promise to retain existing trees, and where possible improve the biodiversity of the site.

In 2022, The Middleton Town Masterplan aimed to bring buildings in the town back to life through creative reuse, enhancing facades and shop fronts. The project was aimed at driving footfall to the area.

The modern and contemporary extension will take cues from the existing Middleton Conservative Club and the architecture in the surrounding area.

Daniel Kelso, a director of Architecture Unknown, said: “The plans for 77 Long Street are contemporary and fresh, nodding respectfully to the building’s heritage while making it fit for purpose. From conception to plans, it has been a collaborative process with the client to ensure we can put forward a beautiful space Middleton town can be proud of. There has been a real focus in maintaining the green space the local community loves, whilst improving access and making the building a go-to destination for events.”

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VIEW POINT

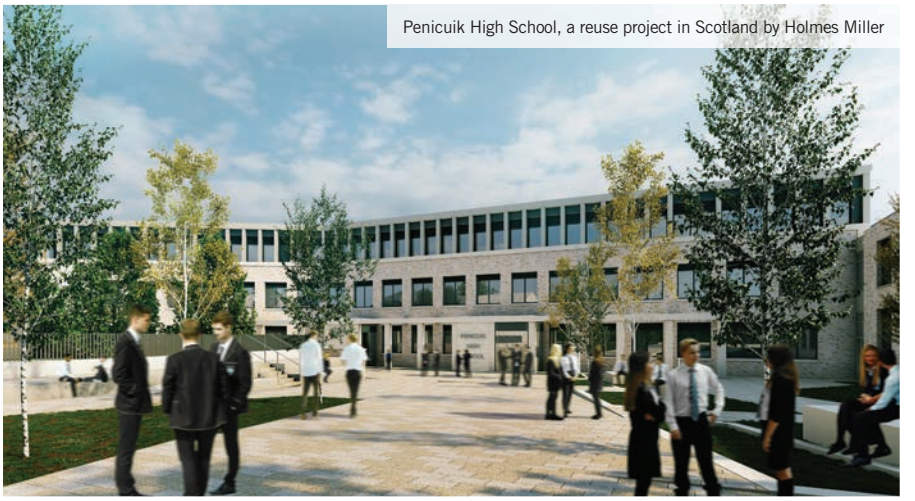
Magdalena Arent, building performance consultant at architect Holmes Miller, discusses strategies for when a low energy building is required, but Passivhaus 'doesn't quite fit the bill,' and something else on the sustainability standard menu is called for.

Passivhaus certification has become known as the industry's gold standard for energy efficient new buildings, especially in the context of the UK's goal to achieve net zero by 2050. Architects and contractors alike are zeroing in on this rigorous standard as the blueprint for creating low-carbon structures that are built to last, performing as intended, therefore cheaper to run and more pleasant to be in.

With the climate crisis intensifying, it's promising to see more clients taking ownership of reducing their building's energy consumption, both at the construction phase and in its operation. Many are now recognising the importance of exploring new ways to create more sustainable buildings, and are looking for the right advice on how best to minimise their environmental impact.

Passivhaus isn't just a benchmark – it's the target for sustainable design we should all be striving towards. It sets absolute targets for heating and electricity use, allowing for flexible design without neglecting non-regulated energy limits, which can significantly bring down energy costs. For large commercial buildings such as leisure centres with swimming pools, and supermarkets, the reduction in final energy bills can provide substantial savings. The calculations are also climate specific, making the Passivhaus methodology suitable for any location worldwide.

But when clients come to us looking to design green buildings, achieving full Passivhaus certification isn't always realistic. Its stringent requirements for airtightness, ventilation, and triple-glazed windows, for example, are often seen as expensive at a time when budgets are tight. And this isn't the only challenge. Achieving the full Passivhaus standard also requires a level of time and commitment which some feel is too high for something that isn't a mandatory requirement.



Penicuik High School, a reuse project in Scotland by Holmes Miller

Governments are now recognising this though, and things look set to change in the coming years. Scotland has committed to developing a Passivhaus equivalent standard with detailed benchmarks, yet to be established, due to be mandatory by 2028. In Wales, the current Passivhaus label is deemed to comply with Building Regulations.

Achieving the full Passivhaus standard also requires a level of time and commitment which some feel is too high for something that isn't a mandatory requirement

There are also other ways to create sustainable buildings without having to face these challenges. And for those who can't quite justify the added investment needed to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The Penicuik High School retrofit had an operational energy target of 67 kWh /m²

achieve Passivhaus status, or for buildings where it simply doesn't suit, that doesn't mean settling for mediocrity. Aiming for a less stringent certification that still far exceeds building standards is a no-brainer.

We recently designed a sustainable strategy for the reuse and retrofit of Penicuik High School – a 1930s energy-hungry school building in Midlothian, south of Edinburgh. The project will transform the school into an inclusive, energy-efficient learning environment for over 900 pupils. Its new three-storey extension will enhance capacity and double the support space for students with additional support needs.

The client's key aspiration is to create a school designed in line with Scottish Futures Trust's Learning Estate Investment Programme (LEIP) – setting an operational energy target of 67 kWh/m² per annum for 'core areas' and 'core hours.' Key retrofit measures include a combination of Crittall triple glazed windows and Passivhaus certified windows, enhanced insulation, MVHR units, and the most efficient solution for domestic hot water provision. Overall, our approach is expected to reduce energy usage by at least 60%, regardless of fuel source.

Adapting historic buildings like this one to meet modern sustainability standards can be challenging, but LEIP recognises this by setting its energy target on a sliding scale. Its approach of focusing on total energy demand promotes an efficient design first, before applying other cost effective and carbon saving solutions such as heat pumps and PV panels.

Tackling the existing building stock plays a crucial role in safeguarding the future of our communities and the planet. Rather than stray away from these challenges, architects must embrace and find creative ways to navigate them to put the right methods in place.

Our approach to Penicuik High School demonstrates how combining thoughtful energy-efficient design and retrofitting can deliver meaningful impact. While not every project can incorporate all these approaches, even small steps can contribute to creating more sustainable spaces. There are a range of credible, affordable, and achievable alternative standards that still deliver substantial energy efficiency improvements. The key lies in assessing each project individually in order to identify the right standard.

For instance, the Passivhaus Institute (PHI) Low Energy Building Standard, mirrors the core requirements of Passivhaus, and offers the same quality assurance, but offers more leeway on energy usage. This makes it a practical alternative that doesn't mean sacrificing the benefits of high-performance design, such as excellent comfort and air quality.

Similarly, realising the challenges posed by Passivhaus, the Association for Environment Conscious Building (AECB) has introduced the CarbonLite standard, which bridges the gap between Passivhaus and current Building Regulations. This standard still uses the same Passivhaus Institute assessment tool (PHPP), the same calculation methods, and still has rigorous quality assurance, but has less onerous demands in terms of heating and primary energy and airtightness.

CarbonLite provides a robust framework for sustainable construction, enabling clients to contribute to the net zero mission without the heavier burden of Passivhaus certification. The model works particularly well for retrofit projects, as it allows a staged approach. This might begin with upgrading to a clean heating system, with more costly adaptations, such as improved insulation, planned in for a later date.

At the beginning of every project, we'll present these options to our clients to help align targets with their aspiration, but the beauty is they don't need to decide at the outset. We can work with them throughout the design process to help them choose what works best.

The choice between Passivhaus, AECB, or another certification isn't about ticking boxes; it's about making real strides toward energy-efficient design. As designers, that's something we should all be aspiring to.

Holmes Miller recently launched a revised sustainability charter, and as part of this we've adapted our approach to embed low carbon design into the bedrock of every project, whether it's aiming for Passivhaus certification or not. Passivhaus principles guide our design process from the ground up, with aspects such as compact form, optimised glazing and shading, and low energy equipment placed at the top of our priority list to ensure we're driving better efficiency across all our buildings.

Passivhaus may be considered the jewel in the crown of sustainable design, but if we really want to improve the way we build, educating clients on the spectrum of options available to them is crucial. It's always better to do something than nothing, and sustainable design doesn't have to be an all-or-nothing approach. It's about taking realistic, incremental steps to make every building better – and in the fight for a greener, happier, and healthier future, every step counts.

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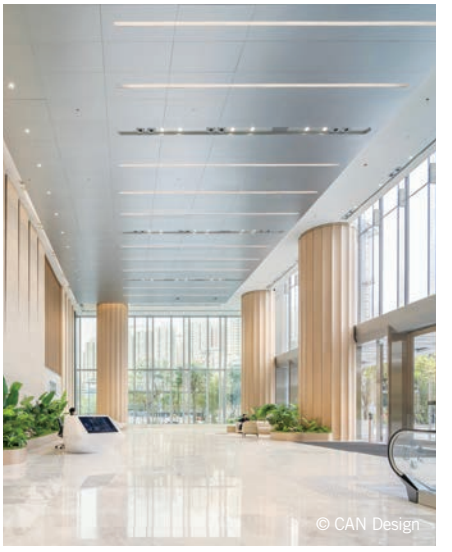
CONSTANȚA MASTERPLAN, ROMANIA
FOSTER + PARTNERS

Foster + Partners has developed a "vision masterplan" for a 38-hectare site at the heart of Constanța, a port city in the Dobrogea historical region of Romania. The practice has worked closely with local stakeholders and IULIUS, a real estate developer and operator specialising in mixed-use urban regeneration projects in Romania, in order to produce the masterplan. The design breathes new life into the previously industrial site, turning it into a thriving 'city within a city,' with cultural and educational buildings, retail, entertainment, sports and leisure facilities, as well as verdant public parks and botanical gardens.

Located in the centre of Constanța, the masterplan's influence extends far beyond the site and will have a positive effect on the wider city. The mixed-use scheme addresses seasonal fluctuations in visitor numbers, with a diverse range of activities and attractions that appeal to residents and visitors all year round. Learning from extensive community surveys, the masterplan also provides new typologies of buildings and public spaces, which are currently missing from the city's urban fabric.

Extensive landscaping across the site draws inspiration from the local ecological context, with hundreds of mature trees providing environmental benefits and enhancing wellbeing for the city's residents. Existing structures, such as silos, are repurposed as theatres and pavilions for community gatherings and events. New green pathways and cycle lanes around the edges of the site enhance mobility and reconnect once disparate parts of the city.

Stefan Behling, head of studio at Foster + Partners, said: "It is a great honour for us and a unique opportunity for Constanța to create a new destination, which stitches together the urban landscape and completely transforms the experience of the city. Greenery is woven through the masterplan, with a series of interconnected parks, gardens, and vibrant community spaces that make use of existing industrial structures. The city's unique character – and historic significance – is celebrated and enhanced through our design."



THE BAY HUB, HONG KONG
CAN DESIGN

CAN DESIGN has completed The Bay Hub, a newly renovated Grade-A office landmark in Kowloon. The project "combines functionality with elegance, fostering creativity and wellbeing for tenants and visitors," said the architects.

The key focus of the renovation included transforming the dining area on the ground floor, and the lobbies, with particular attention to reimagining the spatial design of the ground-floor lobby. This effort aims to provide corporate tenants with an elevated sensory and functional experience.

CAN said it has "meticulously crafted an urban sanctuary that promotes a healthy and elegant lifestyle. Inspired by nature, the design seamlessly integrates outdoor elements into the interiors, creating a serene yet dynamic atmosphere."

Located near the Kai Tak and Kowloon Bay MTR stations, The Bay Hub offers "seamless connectivity" to Kowloon and Hong Kong Island, and "combines the essence of nature with the vitality of urban life." The architects added: "Stepping into the building, one immediately enters a space that balances tranquillity with dynamism, making it more than just a workplace, it is a new urban landmark that inspires potential and creativity."

A newly designed water feature at the entrance replaces the former planting area, introducing an element of natural flow into the space. Verdant greenery sets a refined and tranquil tone for the office environment, "immersing visitors in a serene atmosphere." Each floor of the building spans approximately 3,500 m^2, with the renovation covering approximately 8,000 m^2 from the ground floor to the third floor. This upgrade significantly enhances the overall quality and user experience of the space.

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INDUSTRY VIEWFINDER

Revisiting Design Thinking on Passivhaus

Introduction

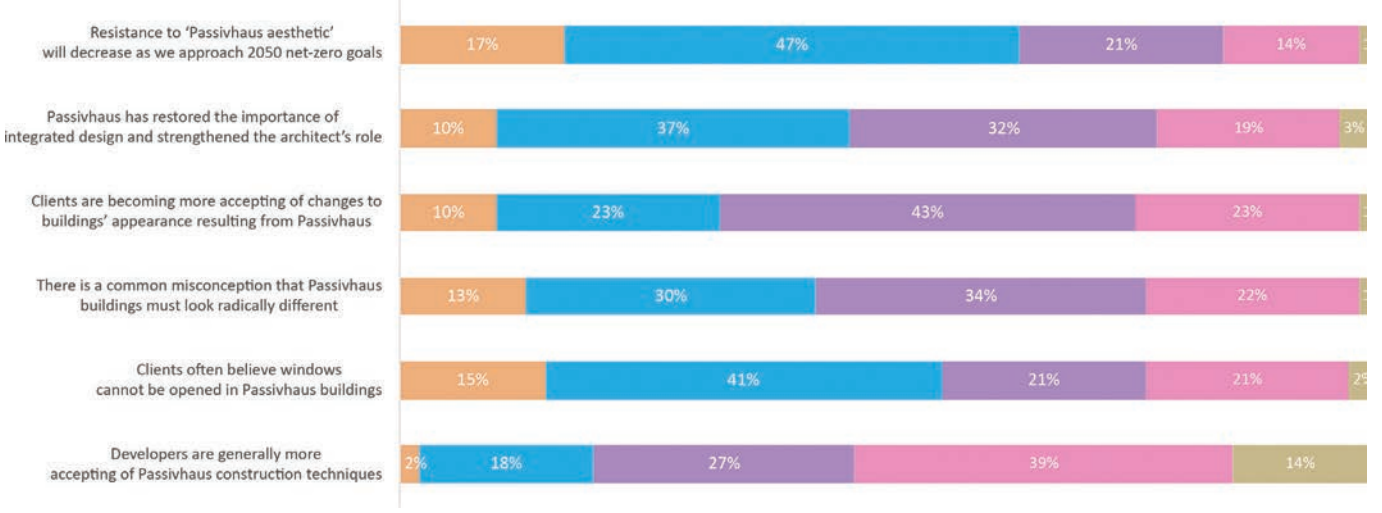
Passivhaus is still an emerging part of the UK's mainstream design and construction landscape, even seen as an esoteric, marginal option in some spheres – due to its perceived cost, difficulty and implications on lifestyle, among other blocks to adoption. However, in certain parts of the UK, in particular Scotland, it has become a greater part of everyday discussion for specifiers: the country is to introduce a law in 2026 to make a 'Passivhaus-equivalent' standard mandatory for all new homes from 2028 onwards.

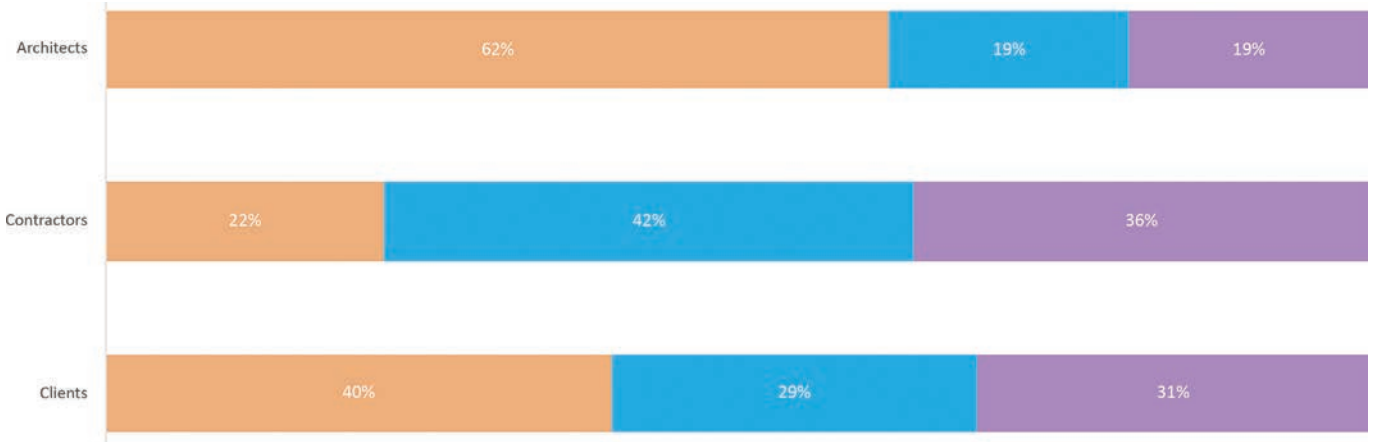
In 2021 we surveyed architects regarding their experience of, and attitudes towards, Passivhaus design using a variety of 'passive' approaches to save energy use, and the results were illuminating. While our research confirmed some of the reasons for the relatively slow take-up across the UK for Passivhaus projects, according to our respondents the design approach was not necessarily as challenging for architects, or their clients, as common perceptions may have suggested.

By 'revisiting' the subject, we aimed to see how the profession's views may have changed (or remained similar) since 2021, but we also introduced a range of new questions to gain deeper insight into some areas such as challenges faced on projects, 'compromises' required, design and software approaches, cost issues, and the possibilities of scaling Passivhaus in various sectors.

In order to track progress since 2021, we repeated a range of questions, including which sectors respondents felt most appropriate for going the Passivhaus route. These included how much they agreed with a series of preconceptions around Passivhaus design – from whether resistance will reduce as we approach net zero, to whether it strengthens the architect's role, and if clients are becoming more amenable generally, over time. We also sought to find out whether views had changed among clients on the appearance of Passivhaus buildings, and developers' growing acceptance or otherwise; and lastly on misconceptions that these buildings must look radically different.

We asked again what factors were driving Passivhaus option to see if the nuances around views had altered in the four year interval, and what actions needed to happen for wider adoption, and we asked about remaining stigmas, the priorities for sustainable





Do you believe that Passivhaus design is becoming more popular in the UK among architects, clients & contractors in the past year or two? Yes No Unsure

technologies in Passivhaus, and respondents' construction methods of choice.

Comparing views in 2021 & 2025: Drivers

We asked a series of questions which were identical to those posed in 2021. There was a marked increase in the number of architects saying they have worked on Passivhaus projects, demonstrating a reassuring uptick, on the evidence of our two survey samples at least. Most (65%) had not done a Passivhaus scheme in 2021, and only 19% were currently working on a Passivhaus-certified building. In 2025, the responses were divided 50/50, with 50% saying they have worked on a Passivhaus project.

In both surveys we asked our respondents what they believed the most important drivers were for Passivhaus projects, and client engagement was on top in 2025, but also very near the top in 2021, showing their buy-in is one of the most, if not the most important factors for making Passivhaus happen. Despite this, clients' specific CSR policies were not one of the most important motivators of projects, only chosen by 18% in 2025 and 20% in 2021.

Low carbon policies and the low carbon agenda in general was climbing the list of priorities in the 2025 survey, chosen by 56%, compared with 45% in 2021. Architects' own ecological and design aims were important, with 46% in 2025 choosing this, although it had dropped slightly from 56% in 2021. The Future Homes (and Future Buildings) Standard was somewhat more important, as it has manifested more clearly as a target (52% in 2025 versus 30% in 2021). Unfortunately for specialist organisations like the Passivhaus Trust, the impact of their advocacy on driving schemes had dropped, according to our survey group, with only 36% picking this factor this year compared with 63% in 2021.

Remaining stigmas

With certain presumptions on Passivhaus design arguably being a stumbling block for many clients and developers, we wanted to know to what extent they agreed with some commonly heard statements on perceptions of how designs looked and functioned 'in the flesh,' and the prognosis for potential evolution of views to bring Passivhaus further into the mainstream. We asked whether architects believed that resistance to the 'Passivhaus aesthetic' (due to more compact building forms) will decrease as we approach

Chosen by 56% of respondents was the preconception among clients that windows could not be opened in Passivhaus buildings

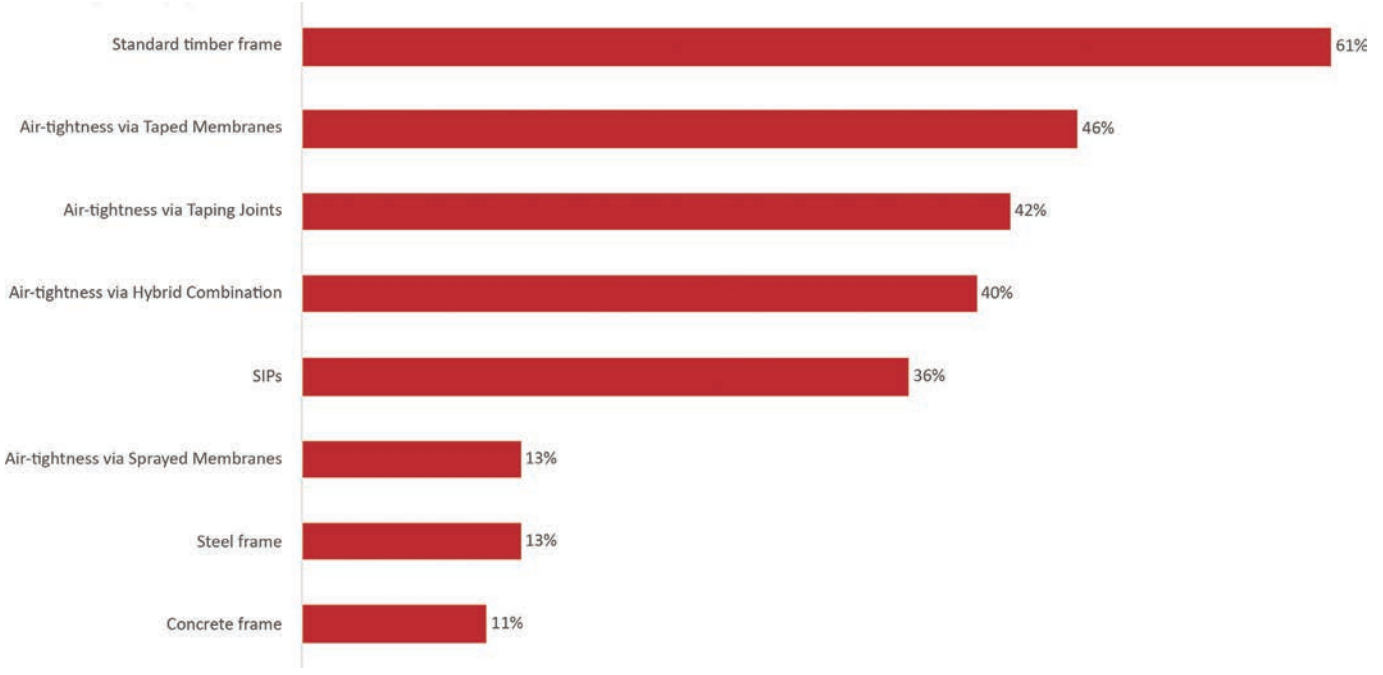
2050 net zero goals,' and it was the top answer for respondents in 2021, with 93% saying they agreed with this. It was even further ahead of other options in 2025, albeit with a lower overall tally of 64% (in 2025 respondents gave fewer scores across the board to the 'preconceptions,' suggesting that stigmas are slowly receding).

In second place in 2025, agreed with by 56%, and perhaps surprisingly given the other serious issues ('radically or dramatically different' aesthetics, and developers' acceptance levels), was the preconception among clients that windows could not be opened in Passivhaus buildings, for fear of their energy performance being compromised. This was a stubbornly high figure, only dropping slightly from the 2021 survey in which 58% thought that these assumptions were extant among clients.

The issue around whether buildings needed to look radically different was seen as a common misconception by 43% of our cohort in 2025, a welcome reduction from the 65% saying this was the case in 2021. This allowed the positive conclusion that for our two samples, there were somewhat fewer knee-jerk reactions to Passivhaus based on assumptions around how these buildings may look, in an overall improving picture.

Developers were generally more accepting of Passivhaus construction techniques, according to our latest survey, 41% said that they were coping with the changes required in construction, and this was double the previous figure of 20% in 2021.

There was one exception in the list to the conclusion that respondents were finding fewer stigmas still persisting, namely the positive assertion that Passivhaus has 'restored the importance of integrated design and strengthened the architect's role.' With Passivhaus design necessitating both an unusual degree of design rigour and a truly holistic focus on all of the services within a building and how they interact with the structure, there is a view that the architect's role is both expanded and strengthened. However while a substantial 83% agreed with this in 2021, the



Which construction methods & design approaches do you prefer for Passivhaus projects?

finding had far fewer votes in 2025 (those agreeing totalled only 47%), suggesting that as Passivhaus develops and becomes more widespread, the role of the architect is not as prominent as many may have hoped, possibly driven by the critical need to control costs in the current climate.

We also sought to give credence to the positive assertion that clients were more accepting of the changes to buildings' appearance resulting from Passivhaus, as the building approach became more common. Unfortunately, this result had moved in the wrong direction, with a strong finding of 82% agreeing in 2021 being moderated to something much more mediocre in 2025 – only 33% said that their clients were readily accepting the changes required.

In 2021 the key result was 'generally much more uncompromising design rules' (corroborated by half of respondents). This rigidity of the Passivhaus regime was however less challenging in 2025, although still retaining the number one spot, for 38% of respondents. Secondly, 'boxy appearance' was tied with 'challenges of MVHR maintenance,' at 36%, although again these were lower than in 2021 as designers had become more accustomed to Passivhaus, with 42% and 37% respectively. For this year's group, 'differently positioned/smaller windows' saw a jump of 11% from 2021 as a persistent stigma for clients.

A key verbatim comment recorded from one respondent around client's perceptions, beyond the extra cost required, was that there was an "underappreciation of the comfort benefits" offered by Passivhaus. Other revealing comments included a perception among clients that "design is focused on reducing heating consumption with little attention given to wellbeing and overheating," and that "it costs too much and is stuffy," and the idea that "the occupier is not in control."

With the advent of the 2025 Future Homes Standard (FHS) requiring an uplift in new homes' energy efficiency – albeit arguably in the event requiring less improvement in the Standard's consultation iteration than had been anticipated, we asked architects whether they thought that there was room for both the FHS and Passivhaus in UK construction. This was partly due to views having been expressed in the industry as to whether the FHS could render Passivhaus redundant, but our 2021 contingent was largely favourable to the idea of both standards being in effect, and used – overall 90% agreed there was a place in the market for both standards. However, a further 38% believed that the FHS "will make Passivhaus obsolete."

Come the 2025 survey, which was compiled several months after the launch of the 2023 consultation on FHS (which revealed modest targets and no increase on U-value requirements on the previous Building Regulations), opinions were somewhat more muted. 90% still believed there was a place for both standards, and only 10% said they still thought the new FHS would make Passivhaus redundant, arguably a negligible result.

Contractor challenges

According to our respondents, was using Passivhaus for designing and certifying projects becoming more popular in the UK among architects, clients & contractors over the past few years. Generally speaking, and speaking as architects, they believed their profession was likely to be more amenable and keen to engage in Passivhaus (62%), contrasting with only 19% saying that Passivhaus was not becoming more popular among architects.

Unfortunately, the news was not so good with contractors (at least from our architect respondents' standpoint), with a meagre 22% saying Passivhaus had grown in popularity as an option, whereas a decisive 42% said it had not. In terms of clients, it was more balanced, with 40% saying that clients were becoming more favourable to the idea of investing in Passivhaus.

The above findings on popularity growing among architects suggests that the various design challenges involved were not

Only 26% of our respondents believed they had achieved that level of integration between fabric and services

prohibitive for many, however they were acknowledged by our survey group, and we asked them to select and rate their five most pressing design challenges. The answer with the most votes was 'eliminating cold bridges,' with reducing such thermal bridging providing a headache in many areas of the external envelope such as around windows and doors.

The second major challenge, unsurprisingly, was achieving airtightness, with tapes and rigorous design detailing being particular focuses, as we will see in the solutions section below. Third, and possibly a new area for many architects to tackle, was incorporating the necessary space and integration to include MVHR services infrastructure, followed by MVHR design itself at number four. Number five in the list was including the necessary amount of insulation in walls, floors and roofs, which can often impact on floor space and therefore living space, but also presents cost and spatial challenges in build ups. Finally, there are installation challenges to avoid gaps in what will in the end be hidden parts of the building.

Building technologies

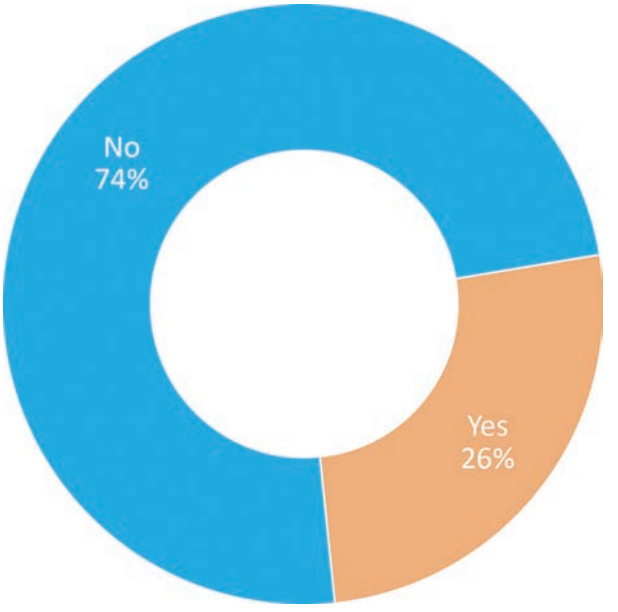
We asked respondents which building technologies they were prioritising for meeting Passivhaus standards in both studies, and many answers in 2025 replicated the pattern of the previous study. In a new question for 2025, we asked which materials (as well as installation skills) that architects had experienced challenges with, in their Passivhaus projects. Perhaps showing the correlation with timber as a preferred structural solution, most respondents picked sourcing timber frame as the key challenge, followed by membranes, SiPS panels (also containing timber), concrete envelope, steel, MVHR and brick. Surprisingly, given the issues reported around supply of heat pumps, this was only a sourcing issue for 10% of respondents, and reassuringly 40% of respondents said they had experienced no product or skills availability issues.

Design compromises

In this year's study, we delved deeper into design to discover the potential design 'compromises' that architects may have needed to make in Passivhaus projects in order to achieve the stringent demands of the certification route. These were not performance compromises (in fact the opposite), and were instead referring to adjusting traditional notions of proportion and other aesthetic preconceptions required to achieve Passivhaus certification.

The most popular option was the need to 'adjust ventilation strategies,' followed closely by the need to 'simplify the building form,' and third was 'restrictions on material choices.' Other inclusions were changed layouts and reduced floorplates, reduced window sizes and deeper window reveals. Non-opening windows was not a top issue – only picked by 12%, but was still a consideration, while 26% had not experienced any design compromises of this sort that needed to be addressed.

One of the hardest parts – as well as most successful in terms of reducing heat loss – about Passivhaus designs is fully integrating building fabric with infrastructure such as building services like plumbing and electrics. However, this requires not only full coordination across teams, but a degree of focus and rigour that is unusual in many construction projects. This hels to explain why only 26% of our respondents believed they had achieved that level of integration between fabric and services to minimise any gaps in the building.



Have you achieved Passivhaus designs that fully integrate building fabric and infrastructure (building services etc)?

Lastly, we asked the important question of whether, based on their experience of projects, architects believed that Passivhaus can be widely scaled across various sectors – which is going to be necessary to achieve the exponential carbon cuts needed for net zero. There were a range of responses on this issue from our respondents – confirming expectations, the top answer was new build residential, with 82% believing that Passivhaus could be expanded on a large scale in housebuilding, despite the challenges.

Conclusion

As well as reinforcing some of the reasons why clients and architects are increasingly looking to Passivhaus as the answer to the energy efficiency challenges in new buildings, our survey also contains a series of evidential factors that show why wider adoption of Passivhaus in the UK is still lagging behind European neighbours.

One of the key findings from our architect respondents is that there has possibly been excessive focus on creating Passivhaus buildings which function as 'mini power stations' or 'machines' whose sole purpose is to reduce owners' bills to zero. While this may be crucial for achieving the bigger picture of net zero, in order to broaden Passivhaus' appeal to the widest potential range of buyers and renovators, as well as clients across other sectors such as commercial, there needs to be more holistic focus on the benefits it can bring users day to day. Arguably the discussion needs to move on from issues about maintenance of MVHR and keeping windows shut, to a more aspirational conversation which includes marketing Passivhaus for its lifestyle benefits, such as in terms of the comfort, health, and even luxury, that users can enjoy.

CPD FOCUS

Visit **www.architectsdatafile.co.uk** to subscribe to the CPD Focus newsletter – featuring the latest CPD courses, seminars and documents for architects

PASSIVE FIRE PROTECTION IN RAINSCREEN CLADDING

AIM – Acoustic & Insulation Manufacturing has introduced a new CPD module for architects and specifiers looking at cavity barriers in rainscreen cladding. The one-hour module covers Passive Fire Protection and the updated regulations that cover fire cavity barriers, as well as exploring the use of other products fixed to or part of facades. Designed to develop the knowledge and understanding of architects and specifiers, the module explains in which order and how products should be installed. It considers fire testing and the difference between 'Resistance' to and 'Reaction' to Fire and the corresponding terminology. The use of barriers for achieving fire compartmentation within the external wall is also examined with reference to Association of Specialist Fire Protection (ASFP) advice. The CPD module draws on AIM's 35 years' experience in the design, manufacturing and testing of high-quality passive fire insulation products and is presented by AIM's specification manager Simon Mayes. Simon has 20 years' specification experience in the construction industry working for manufacturers including British Gypsum, Saint Gobain Isover, Komfort, Cembrit, Siderise and Proteus Waterproofing liaising with architects, designers and main contractors regarding supply of fire, acoustic and thermal products. The module is available either online or in person.

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SPECIFYING LOFT LADDERS – NEW CPD FOR ARCHITECTS!

Premier Loft Ladders is pleased to announce its brand new CPD – *'Specifying Loft Ladders'*. This RIBA approved CPD is designed to provide architects and designers with all the information they need to specify the most suitable loft ladder for their project. The seminar will explore the types of loft ladder available and the applicable industry standards and building regulations. It also covers important considerations, such as identifying who will be using the ladder, critical dimensions, environmental performance, fire safety and security.

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FREE REMOTE RIBA CPD SESSIONS – COMING THIS MONTH!

Get ready for more expert-led, free CPD sessions available remotely from **Quantum Profile Systems**: Friday 21st March – *'How to Correctly Specify Cavity Barriers'*; Thursday 27th March – *'How to Correctly Specify Safe Stairs'*; Friday 28th March – *'How to Correctly Specify Flooring Details'*. All start at 10.30am. Why should you join? The RIBA Core Content is completely free and accessible from anywhere. Plus, a past participant's feedback said: "Surprisingly good content and delivery." Don't miss out – sign up now for a reminder closer to the event!

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Decorative casings in a class of their own

Without column casings and building lining solutions from Peterborough based specialist, Encasement, many universities, colleges and schools would probably be less engaging and attractive learning environments.

Primarily specified to conceal structural steelwork or building services, column casings and wall linings combine this practical benefit with the ability to improve the aesthetics that can blend in or contrast with interior decor. Also, where column casings are used to conceal exterior features, they are often used to enhance building entrances through the material options available, as well as the choice of colour and finish used.

In educational buildings, the presence of large numbers of students has an important influence on the specification. Where decorative casings are specified for use in high traffic areas, such as main entrances, common rooms, foyers, sports halls and other public spaces, durability is an essential requirement for most projects.

Individual classrooms, dedicated STEM blocks, science facilities and research labs are also subject to similar considerations, where the balance of material choice and finish are often defined by the level of durability required.

Understanding and meeting the differing demands from architects, educational design teams and specifiers have been key influences on Encasement's product range. Its column casings range, which is used on new-build projects and refurbishment schemes includes six individual products that provide a wide choice of materials and finish options dependent on whether the casings are for exterior or interior use.

Circa and Quadra casings are manufactured from pre-formed MDF and plywood, respectively, while the Forma range is fabricated from metal. Alongside these, Polyma GRP and Gypra GRG column casings are both produced from moulds, using glass reinforced plastic (GRP) and glass reinforced gypsum (GRG).

Bishop Vesey's Grammar School

Lime Wood School, Erith

Forma metal and Polyma GRP casings are widely used in educational buildings, as their toughness and finish options make them an ideal solution. Forma, can be specified in a range of shapes including circular, square, rectangular, hexagonal or bespoke forms and they can also be stacked to reach extended heights.

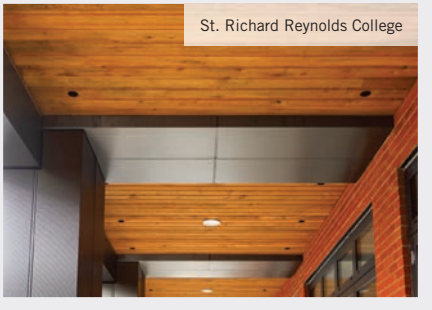
Farnborough 6th Form College

As well as installations at Lime Wood primary School in Kent and Winchester College, projects at, the University of Bedfordshire's STEM laboratories and Birmingham University Dental School, all exploit Forma's diverse properties in both interior and exterior applications.

Where casings are required for interior use only, then Circa and Quadra allow circular, square and rectangular profiles to be specified, while also providing a wide range of finishes, with the most popular being decorative high pressure laminates (HPL).

In addition to resisting damage, scuffs and scratches, HPL provides specifiers with a broad palette of finishes including plain colours, wood grains and metallics, as well as textured and real wood veneers. Although Gypra GRG is also an interior only product, it is rarely specified for educational projects, as moulded gypsum is less resistant to damage than other types.

Alongside the company's six individual ranges of column casings, its Vecta building lining system provides high quality solutions for interior wall linings, bulkheads, soffits and reveals. Vecta has been used in a range of interior education projects, including extensive remodelling of London's South Bank University, as well as exterior applications, such as the overhead walkway casings at St. Richard Reynolds College in Twickenham.



St. Richard Reynolds College

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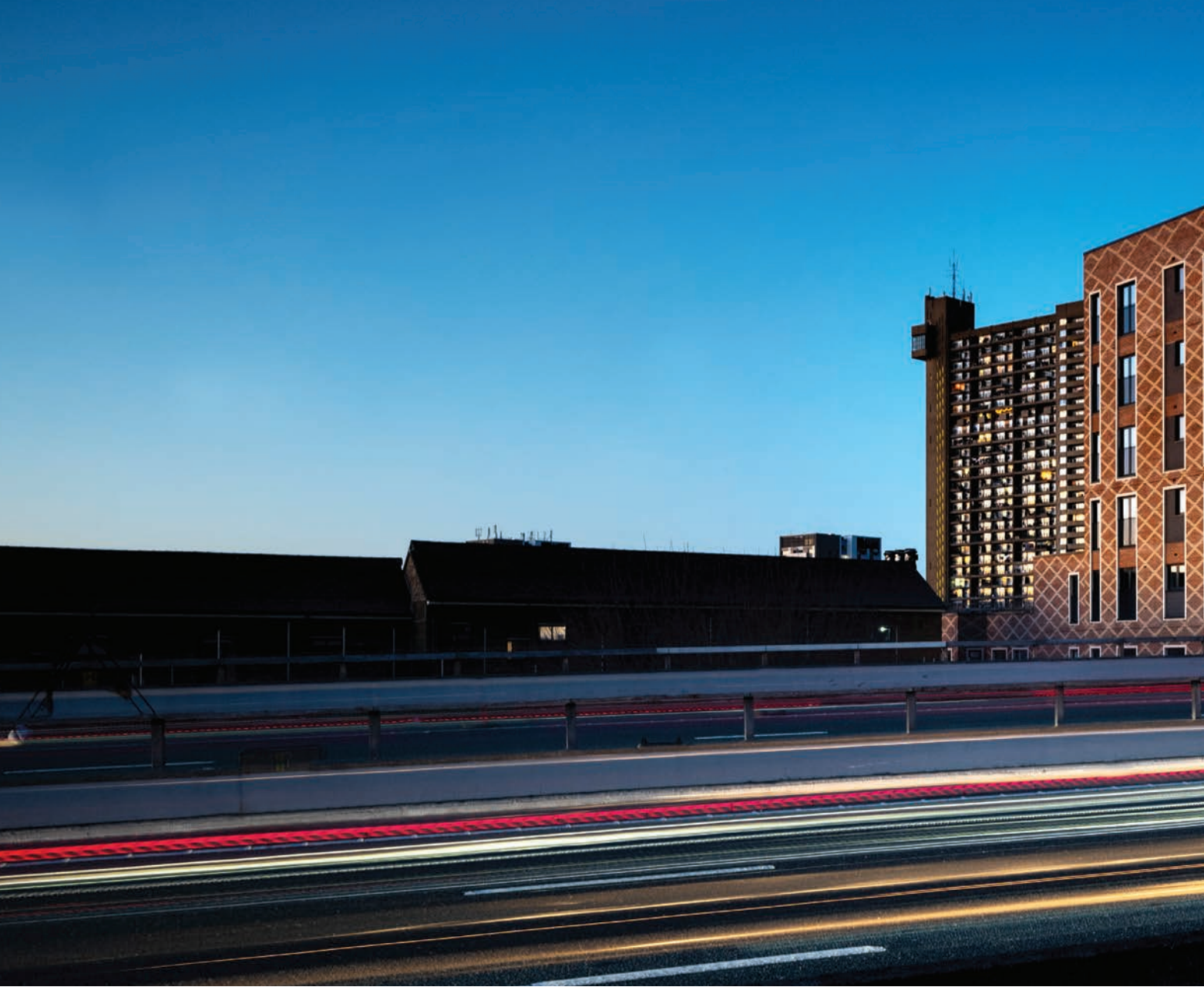
Vecta

Verta



BUILDING PROJECTS

ACKLAM ROAD
KENSINGTON

A sensitive approach

Alongside the particular goals of a housing scheme for the Borough of Kensington and Chelsea, its proximity to Grenfell Tower intensified the need for extensive collaboration with local stakeholders. Roseanne Field reports on how HNW Architects successfully delivered PRP Architects' richly detailed design.


© Peter Langdown

The Royal Borough of Kensington and Chelsea (RBKC) is currently embarking on a new homes delivery programme which will see it deliver a total of 600 homes across the borough, including a minimum of 300 social rent homes as well as open market homes to rent and a variety of community and employment facilities.

The phased programme, named 'New Homes, Safer Homes', saw Phase 1 completed at the end of 2024 and comprised three projects, including Acklam Road. RBKC identified potential plots within the borough which would be developed within the programme; Plots 5 and 6 on Acklam Road were chosen as "key sites" for Phase 1, with RBKC leading the initiative and appointing Morgan Sindall as contractor on the project which comprises a total of 32 new apartments.

The homes developed under the scheme were built to a high standard, with prioritisation of high insulation levels, a "careful" selection of construction materials and methodology, and installing heating and hot water systems that utilise renewable energy in order to both reduce energy bills, and help the council work towards zero carbon objectives.

Located less than a mile from Grenfell Tower, the Acklam Road project was progressed with a particularly sensitive approach as a result.

It was vital Morgan Sindall brought the right people on board to collaborate on the project, and with the outline design having

FLEXIBLE
The building features flexible community spaces (coloured yellow)

been already developed, the contractors appointed HNW Architects to deliver the project from Stage 3 through to completion. "Our role involved ensuring design continuity while coordinating with RBKC, the NHBC and Building Control to meet strict safety and technical standards, while maintaining the strong architectural identity of the building," HNW Architects explains.

The proposal was for the development to comprise a mix of social rent and open market apartments. The final decision on tenures was balanced between local housing needs and financial viability. The focus was, however, on "providing high quality, tenure-blind accommodation," HNW Architects explains.

The 32 homes consist of 20 social rent apartments and 12 open market apartments, all of which are accessed via a single shared entrance and communal spaces. Four of the social rent homes are also fully wheelchair accessible. While the open market homes were necessary for financial viability, RBKC wanted to prioritise the number of social rent units to "address local housing demand, ensuring the scheme delivers both affordable and high quality living environments."

A collaborative effort

The project involved many stakeholders and collaborators, both for construction and safety purposes, and to ensure its impact on the surrounding community was a positive one. As well as the construction of homes, the project comprised community space on the ground floor to be utilised by the nearby Swinbrook Estate community to the west and the Al-Manaar Muslim Cultural Heritage Centre opposite.

RBKC, PRP Architects, Morgan Sindall and also HNW Architects engaged Swinbrook Residents' Association and the Al-Manaar organisation, and both were involved in developing the site's proposals. The Swinbrook Residents' Association helped create an accessible space on the ground floor that they will utilise within their community, and the remaining community space on the ground floor.

As well as to best influence its impact

on neighbouring communities, the project also necessitated collaboration on a more technical level, with residents' safety of the utmost importance. "Our delivery role necessitated extensive collaboration with key stakeholders, including RBKC and the NHBC, and the planning, fire, and Building Control departments." explained HNW.

Discussions were particularly focused on the fire, thermal, and acoustic elements of the homes, and "precision and attention to detail was critical, to ensure compliance without compromising design integrity," says HNW. Any decision relating to these aspects was thoroughly researched and discussed with all necessary stakeholders before any final decisions were made.

Fire performance in particular was understandably a top priority. "The team were rigorous in sourcing, researching, and communicating compliance with specific requirements," HNW Architects explains. "The resulting design and seamless incorporation of stringent fire safety measures demonstrates a commitment to precision and excellence in execution, exceeding performance standards."

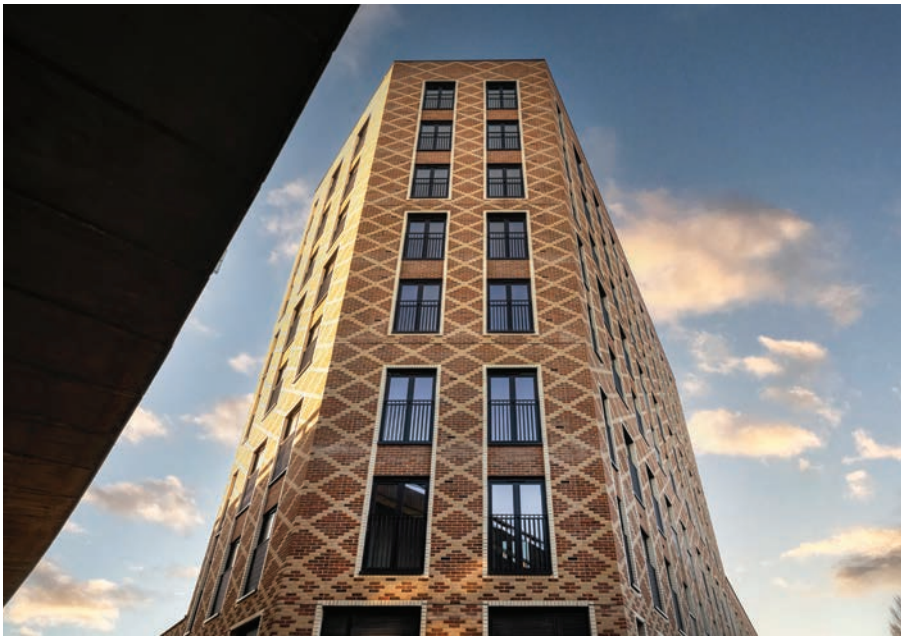
The final project includes an enhanced, commercial-grade sprinkler system installed in every apartment and throughout communal, non-residential areas. The design also allowed for two staircases serving some of the accommodation, and two emergency evaluation lifts, and a dry riser. Every apartment also features a high-end smoke detection and alarm system, and an evacuation alert system.

Responding to context

The initial design concept was developed by PRP Architects and was ultimately driven by the end goal of providing housing that would be high quality in both appearance and build, while being sympathetic to the surrounding area and meeting stringent requirements. Being a "constrained urban site," the design needed to "balance contextual sensitivity with technical and regulatory requirements," explains HNW Architects.

Making sure the development would sit in harmony with the surrounding buildings,

The red brick facade was inspired by the nearby Al-Manaar Muslim Cultural Heritage Centre



AFFORDABLE WIN
The scheme won the Inside Housing award for Best Affordable Housing Development under £20m in 2024
Photos © Peter Langdown

The final decision on tenures was balanced between local housing needs and financial viability

particularly given the busy and already highly built up location, was particularly important. From our conversations with PRP Architects, "The concept took inspiration from the local built environment, particularly the distinctive brick textures of Al-Manaar, to ensure the development felt integrated within its surroundings," HNW Architects explained. "The primary design inspiration takes cues from local building materials and features."

In particular the decision to utilise a traditional red masonry facade was inspired by the Al-Manaar centre, with the bricks laid in a distinctive herringbone pattern. "The facade establishes a visual dialogue with the neighbouring Al-Manaar Centre, reinforcing a sense of place and grounding the building within its context," HNW Architects explains. "This design element is carried throughout the external envelope, with its pattern density adapting based on its position on the elevation."

As envisaged by PRP Architects, the red brick has been interspersed with rich brown bricks and white bricks. The brown bricks have been laid in a soldier course arrangement, to "create a cohesive visual language, aligning full height windows with raised cill openings for bathrooms and kitchens," HNW Architects explains. "White brick surrounds and deep reveals add depth, while dark brown aluminium window frames and matching balustrades create a refined, cohesive finish."

As well as neatly tying the building to its surroundings and contributing to the desired high quality finish, the materials were also chosen for their resilience and non-combustibility. "The material palette balances durability, fire safety and aesthetics," HNW Architects explained.

As well as the nearby buildings, the development's proximity to the elevated Westway A40 dual carriageway also had to be considered during the design stage. Acoustic performance, air quality and fire safety all came into play in relation to this, ultimately "shaping both the facade and internal layouts," explains HNW Architects.

Outdoor spaces

Another key factor which influenced the design was the need for outdoor amenity space – often hard to come by in such central locations – resulting in the inclusion of a third floor podium garden. "The design prioritises occupant welfare through features such as the winter gardens and fully accessible podium garden, offering residents a tranquil retreat and place to interact with neighbours," says HNW Architects.

The garden – which was considered to be a "vital outdoor retreat" – includes "thoughtful" landscaping alongside ornamental seating, benches, and tables for socialising and dining, and play elements for young children, to create a "welcoming, user-friendly outdoor space." There are also raised metal planters and timber seating which add to the garden's character, and enhance biodiversity. The decision to situate the garden on the third floor was influenced by the need to optimise land use.

Tenure-blind form

The overall final volume of the building was another decision that was meticulously considered, weighing up the potential of the site with planning, environmental and spatial considerations. A townscape study was undertaken by PRP Architects, which assessed a total of five massing options. The study considered elements such as structural needs, MEP, fire safety, residential service needs, rights of light and overshadowing.

In the end an eight storey form was decided upon, stepping down to the north west to transition more seamlessly to the neighbouring homes, and increasing at the opposite south east end to create a visual landmark from the Westway road. "Chamfered elevations orient dwellings away from traffic, enhancing frontage


© Peter Langdown

© HNW Architects

DETAILS
The ornate brickwork design (realised by Lee Marley Brickwork) included 36 types of special angled bricks plus hit and miss sections

and access to a communal roof garden." At ground level, setbacks allow for soft landscaping, defensible spaces, and a future pedestrian route, while the enclosed winter gardens provide acoustic and air quality protection."

It was an important element of the design that the building – including communal areas and the apartments themselves – be tenure-blind. The ground floor residential lobby is just that, and "activates the street corner," explain HNW Architects, "while the single storey replacement community space on the southern corner benefits from multiple aspects." Active frontages were a priority, providing natural surveillance, and it was also important that the community spaces be flexible and complement the Al-Manaar Centre.

Necessary residential services, such as refuse, cycle storage and the substation were "carefully integrated" to minimise their impact visually.

The apartments are a mix of one-, two-, and three-bedrooms, all with a fully enclosed balcony or winter garden. The family sized homes were mostly designated for social rent, responding to local demand. All three-bedroom apartments feature ensuites, as do the majority of the two-beds. There are two stair cores which serve the lower levels, up to the residents' terrace on the third floor. Meeting new regulations, there are two lifts – one of which is for firefighters – and these offer access to all floor levels including the wheelchair accessible apartments. "Private winter gardens enhance acoustic comfort for all homes, shielding them from the elevated Westway," HNW Architects adds.

Prioritising sustainability

While a high quality design and fire elements were of the utmost importance, that's not to say sustainability factors fell by the wayside. In fact there are a "suite of environmentally conscious measures," HNW Architects explain, aligning with RBKC's "commitment to green building practices, and ensuring the building becomes increasingly sustainable with the greening of the grid." The council's "green commitment" has seen it fitting all new homes with double glazing, to help "lead the transition to net zero."

The design and construction of the building utilised a fabric first approach. High levels of both insulation and airtightness were integrated into the construction, and thermally-efficient windows and doors were installed to both minimise energy loss while reducing running costs for residents. In order to reduce waste and lifecycle costs, materials were carefully chosen based on their durability and longevity. The building also utilises air source heat pumps, in order to reduce the use of fossil fuels.

A challenging build

As well as the elevated Westway road, the site is also near multiple tube lines, making the construction process "notably challenging," says HNW Architects.

This again meant collaboration between all involved parties – including the contractor, civil and structural engineers, Transport for London and Network Rail. This close collaboration was crucial, particularly during the groundworks phase of the project, but not only to ensure the build progressed as smoothly as possible. HNW Architects explains: "This coordination was essential to ensure compliance with underground asset protection requirements."

The confined, urban site also presented logistical challenges. Any potential disruption to neighbouring properties needed to be minimised, and the small site meant the construction needed to be meticulously managed and organised. For example, delivery schedules were organised so that Friday prayer times at the Al-Manaar centre were avoided, as the road can get busy.

While the design made the most of the space available, this consequently meant there was limited room available on the site for material storage and welfare facilities during construction. "To address this, construction began above the double-height ground floor, with first floor masonry support angles providing structural stability for the brickwork above," explains HNW Architects. "This approach enabled the creation of sheltered storage space for materials, ensuring the smooth progression of the project despite space constraints."

Despite the challenges, construction of the project went well, beginning in summer 2022 and finishing in 2024. To further the positive impact on the local area, contractor Morgan Sindall created a new kitchen for the nearby Golborne Youth Centre, arranged local education events, and hosted apprentices and a variety of work experience placements on the project.

The project was officially opened in September 2024 by Deputy Leader Councillor Kim Taylor-Smith who commented that the project is a "great example of our commitment to providing social rent homes for our residents and ensuring they are able to stay in our borough. It's good to see that despite the challenging economic climate, we are delivering homes to those who need them most in our community."

Acklam Road has already received high praise, including winning 'Best Affordable Housing Development – Less Than £20m' at the 2024 Inside Housing Awards. "The response has been overwhelmingly positive, with praise from both the client and the local community," says HNW Architects. "Recognised for its thoughtful design and attention to detail, the scheme has been celebrated for seamlessly integrating with its surroundings while delivering high quality, sustainable homes."

Positive feedback has included praise for its role in addressing local housing needs – providing social rent homes where they're needed – and enhancing local community spaces. The collaborative approach has also been applauded, along with the team's commitment to minimising potential disruption during construction. Councillor Sof McVeigh commented that the scheme is "beautifully designed, with such attention to detail," and RBKC project manager Alekhya Yalamanchili said it "sets a new standard for high quality, sustainable housing in urban settings."

Summarising his experience on the project, Morgan Sindall project director Lee Askey said, "Working with HNW Architects, the award-winning Acklam Road development has been an exciting project for us. Not only has it created many social rent homes but it will also provide the local community with a variety of valuable new spaces." ■

PROJECT FACTFILE

Client: RBKC
Concept architect: PRP Architects
Contractor: Morgan Sindall
Delivery architect: HNW Architects
Fire Engineer: Osborn Associates
Structural & civil engineer: Engineers HRW
MEP engineer: DBS
Groundworks & twinwall system: JP Dunn
Landscape architect: The Terra Firma Consultancy
Acoustician: Sweco
Brickwork facades: Lee Marley Brickwork
Masonry support: ACS
Roofing: Bauder
External Doors, Windows & Curtain Walling: Leay
Balustrading & Wind Posts: Structural Stairways

Peace of mind for a luxury West London home

Charter Global have been pleased to design, supply and install security shutters to a luxury property based in one of the most prestigious residential areas of West London.

The new owner was looking for a home his family could stay in whilst they were in the UK, but had concerns about the number of high profile break-ins the neighbouring properties had experienced.

The existing house was being completely refurbished, giving Charter Global the opportunity to provide an unobtrusive security measure that could be seamlessly integrated into the interior design; including hidden boxes and guides, and connection into the home automation system.

Charter Global's signature prime residential shutter range, Equilux, matched the client's requirements for a security solution that could protect the property whilst the client was abroad, and in the evenings/overnight.

When deployed, the security shutters provide a visual deterrent to any would-be intruders, as well as a physical barrier to any attempted to break in.

31 Equilux security shutters were manufactured and installed across the property. This included internal shutters behind the doors and windows on the ground and first floors. These shutters featured a concealed hood box that was installed above the ceiling, causing minimal impact to the luxury aesthetics.

Interior blockwork was amended to allow the guides to sit clear of the window opening, giving better design aesthetics, and the ceiling beneath the shutter boxes incorporated a removable panel providing access for service and maintenance.

A clever, bespoke solution using a horizontal security shutter was installed to protect intruders looking to enter through the top of the ground floor conservatory as well as external shutters for the conservatory.

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BEWI becomes first ICF supplier to be NHBC-accepted!

BEWI is thrilled to announce that its Thermomur® ICF system is now an NHBC-accepted system – and it is the first ICF (Insulated Concrete Formwork) system to achieve this accolade. Certification by the NHBC shows that Thermomur® has been rigorously assessed and meets NHBC's robust Standards. Critically it also demonstrates that subject to appropriate design and installation, the system can be used in homes covered by all NHBC's warranty products. BEWI Expanded Polystyrene (EPS) blocks ensure an outstanding thermal performance for new build projects and extensions. The 350 Super version of the product achieves a U-value of 0.15W/m²K, although all five standard wall types in the range are covered by the approval. Thermomur® also enables a fast and efficient build, with minimal mechanical equipment on site, and is totally compatible with the BEWI Jackodur® Atlas Foundation System, made from Extruded Polystyrene (XPS), which ensures superior insulation, combined with stability for the foundation slab. BEWI Thermomur® is a sustainable Modern Method of Construction which integrates insulation materials into the concrete formwork.

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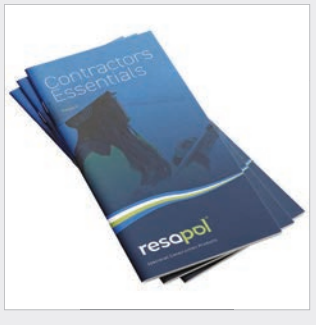
Contractors Essentials Brochure Edition 2: Your ultimate guide just got better!



Resapol is excited to announce the launch of Edition 2 of the Contractors Essentials Brochure, providing an updated and comprehensive guide to support contractors in their daily operations. Building on the success of the first edition, this latest version features an even wider range of essential products, including sustainable options and exciting new launches, equipping professionals with the tools they need to stay ahead in an evolving market. Designed to be an indispensable resource the Contractors Essentials Brochure offers an insight into a selection of the products available from Resapol. The full product range totals some 6,000 products, from some of the world's biggest manufacturers spanning waterproofing, concrete repair, sealants, adhesives, grouts, flooring, roofing, highway and landscaping products.

The new brochure is available in all Resapol branches as well as on the downloads section of the Resapol website. Request a hard copy by calling or email sales@resapol.com

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Custom Fabricating Services – Site specific pump station requirements

Delta Pumps and Basement Drainage Distribution Hub is home to Delta's in-house fabrication team. Our fabrication team not only fabricates the Delta 710, 910 and 800 Series chambers (used in structural waterproofing application) but also have capability and capacity to customize pumping systems to match any size and/or configuration to your specific site requirements.

All Delta pumping systems are fabricated from our dedicated Distribution Hub, a 3,500 ft^2 warehouse dedicated to pumping stations, packaged pump stations and basement drainage related products, from BBA Approved packaged pump stations, high water level alarms, control panels, battery backups to pipework and fittings, supporting the team's ability to meet the growing demand for quality basement drainage items.

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To aid specification simply complete the information fields in our online pump calculator tools – www.deltamembranes.com/product-categories/pump-calculators – If pumping requirements are outside of standard stock range then click submit and our specification team will be on hand to assist.

Retrofitting or new

Delta's pumping systems are suitable for new and retrofitting projects. We recommend consultation with a Delta Pumps Registered Servicing Provider/manufacturer with knowledge of pumps prior to replacing equipment to ensure the replacement pumping system operates in accordance with site specifics.

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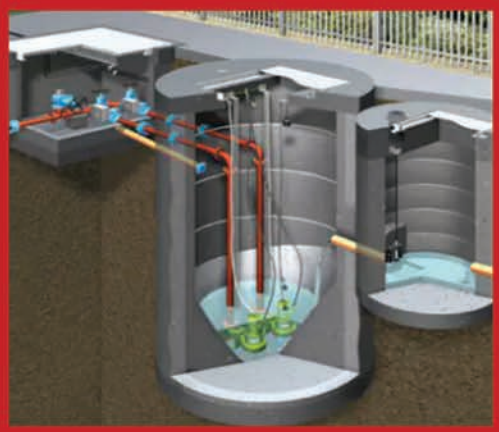

About us:

Here at Maris Pumps we aim to provide our customers with the most up to date equipment and professional backup service on the market

Choosing the ideal pumping station for your application can be difficult with so many models and options available - the first choice you have to make is whether a package or adoptable pumping station. From the design, installation, commissioning and maintenance of new systems to the refurbishment of existing systems, all delivered by our own in-house experts.

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The pressure is on

T-T Pumps' Jon Whittingham discusses the rise in use of package pumping stations as sites using gravity drainage for waste or surface water become rarer – and the key points that architects should consider.

When it comes to specifying a solution for the removal of waste and surface water from a development, package pumping stations are an increasingly popular choice. With so many options available in today's market, including a wide range of chamber sizes and pump models that cater to different applications, they are a versatile solution that can be implemented on diverse sites.

Package pump stations can be procured within short timescales to fit with tight project deadlines and benefit from a ready-to-use design that permits quick installation below ground in comparison to bespoke methods such as pre-formed concrete rings.

Conventionally, systems consist of a pre-formed chamber (traditionally made from glass reinforced plastic). Chambers are now more commonly constructed in materials like polyethylene due to production repeatability and lower environmental impact), pre-assembled internal pipework and valve assemblies – delivered to site ready for immediate installation.

The increasing need for pumped drainage solutions is also driving package pumping station use. As new infrastructure is developed across the UK, the number of sites available with topography that facilitates gravity drainage is dwindling, necessitating an increased use of pumped drainage systems. These systems play a crucial role as part of the infrastructure they serve, but informed selection is essential to effective waste management that protects buildings and the environment from spills.

Compliance

Approved Document H details essential design features for drainage and waste disposal systems. This includes key aspects for pumping stations, such as provisions for 24 hours of storage within the pump station chamber, in the event of a system or power failure.

Individual product certifications can also

The number of sites available with topography that facilitates gravity drainage is dwindling

be a clear indication of both high quality and compliance with relevant regulations – such as BBA Approval.

Specification

An understanding of the application that the station will serve and its associated risks is equally as important as the product itself. Pumping stations are designed to collect and deliver waste and surface water to an appropriate destination where another service then takes over, like a sewer. The composition of the medium to be pumped needs to be studied so that the correct product is selected for water to be transferred effectively. For example, a pump to transfer wastewater from a single domestic property will be different on flow rate and solids handling ability to a surface water drainage pump on a sports ground.

Often overlooked, the size of the delivery pipe work – or rising main – can also be a restricting factor to how a pumping station performs. The designer of the pumping station itself should advise upon the correct selection of discharge pipe.

Septicity within the foul water network is an ever-increasing concern. Modern day water saving utilities mean sewage waters are becoming naturally more concentrated. Less wastewater passing through pumping systems is leading to an increase in retention and therefore septicity.

Air management

Pumping systems can block, and blockages can result in down time and potentially costly repairs. Blockages are often the result of poor system design or abuse by users incorrectly disposing of foreign objects, yet trapped air can also be the cause.

As pumping stations become a more frequent requirement, so does the need to pump over further distances – with water travelling through numerous kilometres of pipework not an uncommon occurrence.

Identifying points where air may collect along this pipework and establishing the risk of system syphon in advance of pumping station installation can prevent the need for costly and time-consuming remedial works. A competent pumping system designer should identify the need for, number of and positioning of air release valves to ensure uninterrupted flow.

Jon Whittingham is pumping stations manager at T-T Pumps

Prestigious Biodiversity Benchmark

Tata Steel's Shotton Works has achieved The Wildlife Trusts' Biodiversity Benchmark for land management, as part of its wider sustainability commitment. This makes the site based in North Wales the largest industrial manufacturing site in Wales to currently hold the nationally recognised standard for commitment to biodiversity and responsible land management. Tata Steel's Shotton sustainability commitment set out a long-term strategy focussing on four key pillars: reducing the site's carbon footprint; developing products that enable sustainable construction; biodiversity; and maximising material efficiency and achieving zero onsite waste.

www.colorcoat-online.com www.wildlifetrusts.org

Student helps Vent-Axia win two awards

Vent-Axia, is delighted that the valuable work University of Bath student Roben Els undertook during an industry placement at the company contributed to it winning two environmental industry awards. The project Roben worked on at Vent-Axia was helping set up and run the company's new materials testing database on recycled plastic. This groundbreaking work was recently recognised by the industry with Vent-Axia winning the H&V News Awards 'Low Carbon Impact' award, and the BEAMA 'Net-Zero Collaboration Award', winning the latter with AO.

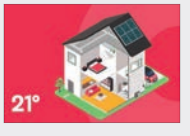
0344 856 0590 www.vent-axia.com

Duplex 120 Riser Door

The Duplex 120 Riser Door is a premium fire-rated access panel designed for maximum safety and durability. Offering 120-minute fire resistance on both sides, it ensures superior protection in high-risk areas. Constructed from robust materials, it provides a secure and aesthetic solution for concealing riser shafts while maintaining accessibility. Its custom sizing options allow seamless integration into various building specifications. The discreet, flush-fitting design enhances visual appeal without compromising functionality. Please visit the **Jupiter Blue** website for more information.

01937 325 325 www.jupiterblue.co.uk

Comprehensive sustainable building approach



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AIM's Acoustic infills to reduce reverberation at Hartlepool Active Wellbeing Hub

AIM – Acoustic & Insulation Manufacturing's cut to fit Acoustic Trough Infills have been incorporated into roof areas at Hartlepool's new £34.65m 'Highlight' Active Wellbeing Hub. Designed to reduce reverberation in buildings with a high proportion of hard internal surfaces, especially where noise is generated within the building such as sports facilities, the infills fit into the troughs of perforated metal profiles used in structural steel roof decks.

The new facility will open at The Waterfront, Hartlepool, in autumn 2025, replacing the town's ageing 1970s leisure centre. The development for Hartlepool Borough Council is being delivered in partnership with main contractor Wates, a leader in the sport and leisure sector, while the striking design has been created by GT3 Architects.

Via SIG Tyneside, AIM has supplied the Acoustic Trough Infills for two large roof areas to Wates' contractor Chemplas, the North East-based roofing, cladding and glazing company.

"The roof design specified acoustic trough infills," explains Chris Dale, AIM's business development manager (north). "Having received profile details from Chemplas, AIM cut the easy to fit infills to suit the deck. Though a small part of the roof system and a simple product, our Acoustic Trough Infills are a very effective and cost-efficient way to reduce reverberation in a building."

AIM Acoustic Trough Infills are available in a range of densities and are factory cut to suit any trapezoidal profile or perforated standing seam decking. The infills are stone wool, which is recognised as a good sound absorbing material. Acoustic performance is dependent on the structure of the deck and the open area within it.

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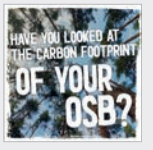
SterlingOSB Zero engineers out carbon



While its burgeoning popularity can be attributed to an array of technical benefits, in these days of heightened environmental awareness and the push to achieve Net Zero, SterlingOSB Zero, from timber panel specialist **West Fraser**, can assist the construction industry to cut carbon emissions. The board is primarily manufactured from a natural product which in itself locks in CO_2 from the atmosphere, with round wood sourced as sawmill residues and co-products in the form of peeled chips. The traditional alternative, plywood, requires the peeling of much larger tree trunks taking longer to grow.

uk.westfraser.com

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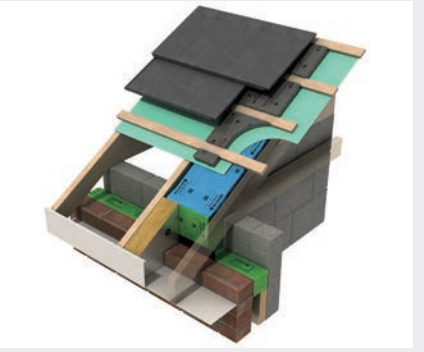
Mayplas adds new passive fire, acoustic and thermal products to housebuilder range

Mayplas, a specialist in passive fire protection, acoustic and thermal insulation for the housebuilding industry, has introduced three new products. The new Thermal Eaves Batt, Party Wall Head Cap System and Therma Soffit add to Mayplas' comprehensive portfolio of products for timber and masonry frame applications.

The new Mayplas Thermal Eaves Batt provides a thermal barrier at the interface between the ceiling loft space and the external wall of new build homes. Comprising two main components, an eaves tray and a stone mineral wool insulation batt, the batt prevents cold spots and reduces heat loss while providing a clear air path between the roofing membrane and insulation to avoid condensation. The batt is suitable for roof pitches up to 45°.

The new Party Wall Head System provides fire protection compartmentation at the party wall junction. Installed together as



per Mayplas' Installation Guide, the two-component system - a party wall head cap and a tile batten barrier, achieves 60 minutes fire integrity and insulation tested to the principles of EN 1363-1:2012 and EOTA TR31:2008 and independently assessed in accordance with BS 476-20:1987 and BS 476-22:1987. The system addresses Building Regulations requirements to maintain the continuity of fire resistance between a compartment party wall and the underside of the roof covering, so preventing the spread of fire and smoke.

Mayplas' third new product also works at the party wall junction. The Therma Soffit provides thermal insulation within the soffit. It is available in two thicknesses, 100 mm and 150 mm, facilitating required thermal resistance values (Approved Document L) and providing resistance to the passage of sound synonymous with stone mineral wool insulation (Approved Document E).

These new products join Mayplas' MP552 Cavity Stop Socks, MP556 Fire Stop Slab, MP551 Timber Frame Cavity Barriers and MP557 Acoustic Party Wall DPC cavity barrier, all recently tested to BS EN 1366-4:2021, to meet a wide range of housebuilders' specialist insulation needs.

0161 447 8320
www.mayplas.co.uk/housebuilding-solutions

Siderise launches 2-hour rated version of its RH25 Rainscreen Horizontal Cavity Barrier

Siderise RH Rainscreen Horizontal Cavity Barriers are used to protect building facades around the world. To meet the growing industry demand for fire resistance performance that goes beyond requirements, the passive fire protection manufacturer has launched a new 2-hour rated version of the product, suitable for air gaps up to 25 mm. The RH Rainscreen Horizontal Cavity Barrier has been developed to meet the complex requirements of ventilated cladding systems. The Lamella stone wool barrier includes an integral strip of intumescent material along the leading edge which, when exposed to temperatures > 130°C, exfoliates to close the residual gap and prevent the spread of fire within the time required by the relevant test standard and detailed in our certification. This latest version of the product achieves 120 minutes Integrity (E) and Insulation (I) when tested to ASFP TGD19 (prEN1364-6) 'Fire Resistance Test of Open State Cavity Barriers' following the strict furnace controls set by BS EN 1363-1:2020. This performance has been independently assessed and is IFC Certified (IFCC 1712).

01656 730833 www.siderise.com

Proctor Air® brings benefits of modern technology to traditional Scottish roofs

An architect's home near Dundee is seeing the benefits of its new roof underlay. Neil Simpson, a partner at Wellwood Leslie Architects, is fitting the **A. Proctor Group's** Proctor Air® himself while renovating the roof of his stone-walled property built in 1902. "Proctor Air has been excellent," explained Neil. "It is relatively easy to install, and has protected us from the weather. The wind used to whistle through the roof before, but we've seen a difference straight away in reducing that infiltration." Situated in an exposed location overlooking the River Tay, the house is subject to the elements. As Neil has continued to live in the property during the work, the underlay had to be capable of protecting the property and its occupants. Proctor Air has a water resistance classification of W1, and its BBA certificate states the hydrostatic head is greater than 1m. This water hold out performance means Proctor Air can be left exposed for up to three months. While the reroofing work has not experienced too much rain, there have been strong winds. Proctor Air can be used in wind zones 1-4 without additional measures such as taping joints or additional battens.

01250 872 261 www.proctorgroup.com/products/proctor-air

The Benefits of Automatic Revolving Doors: A Modern Solution for Today's Architecture

By Andy Iredale, National Sales Manager (Automatics) at GEZE UK

In an age where efficiency, sustainability, and user experience are paramount in building design, automatic revolving doors emerge as a compelling choice. These architectural features do more than just add a touch of elegance to a building's entrance; they offer a range of benefits that enhance both functionality and aesthetic appeal. Let's now explore those benefits in more detail.

Energy Efficiency

One of the most significant benefits of automatic revolving doors is their energy efficiency. Unlike traditional swinging doors, revolving doors create a barrier that minimises the exchange of indoor and outdoor air. This design prevents drafts and helps maintain a consistent indoor climate, reducing the reliance on heating and cooling systems. In a world grappling with climate change and rising energy costs, utilising revolving doors can lead to significant savings on energy bills.

Improved Traffic Flow

Automatic revolving doors are designed to facilitate the seamless movement of people in and out of a building. In high-traffic areas, such as hotels and shopping centres, they allow for a continuous flow of foot traffic without the need for manual operation. This not only speeds up entry and exit but also reduces congestion at the entrance, creating a more pleasant visitor experience.

Aesthetic Appeal

From an architectural standpoint, automatic revolving doors are undeniably striking. They provide a sleek and contemporary look that enhances a building's facade. With various design options available – ranging from glass finishes to custom sizes – these doors can be tailored to match the specific aesthetic of any building. A well-designed entrance can set the tone for a positive first impression, making automatic revolving doors an attractive choice for businesses looking to make an impact.

Noise Reduction

In urban environments, noise pollution is an ever-present challenge. Automatic revolving doors can help mitigate this issue by creating a sound barrier between the bustling outside world and the tranquillity within. This reduction in noise enhances the overall comfort of occupants, making spaces more enjoyable for both visitors and employees.

Enhanced Hygiene

Hygiene can be enhanced by reducing the need for people to touch door handles or push doors, helping to limit the spread of germs and bacteria. Motion sensors that detect movement and automatically open and close doors can achieve this. This is especially important in high-traffic areas like hospitals, shopping centres and restaurants, where maintaining hygiene is essential.

GEZE UK: Automatic Revolving Door Solutions

GEZE UK is a world leading provider of state-of-the-art door and window control systems, offering an extensive range of automatic revolving door systems suitable for a range of buildings.

Revo.PRIME

This door system takes centre stage, offering unmatched creative flexibility for your building's entrance. With a minimal canopy height of only 75 mm and a discreet drive unit, it achieves a sleek, modern look. The system's slim 60 mm profile further enhances its appeal, making a bold statement.

TSA 355 Automatic

The TSA 355 Automatic revolving door system is the ideal drive technology for doors with diameters up to 4,000 mm. Suitable for both three- or four-leaf internal and exterior doors, the TSA 355 Automatic excels in environments with high foot traffic.

To find out more about GEZE's Automatic Revolving Door range, scan the QR code. For any general enquiries, please contact us via our website or email.

info.uk@geze.com www.geze.co.uk/en

Illuminate sustainability

Natalie Goodridge of LAMILUX UK explains why incorporating daylight into architectural designs has become a central focus in sustainable designs.

Integrating rooflights or roof glazing into a building design not only enhances aesthetic appeal but also supports designers with a commitment to sustainability by reducing energy consumption and creating healthier, more comfortable spaces. Cutting out rooflights in favour of cost-saving measures could undermine a project's sustainability goals and furthermore could lead to long-term negative effects on the building's user satisfaction, and overall quality.

Thermal insulation in rooflights is crucial for enhancing a building's energy efficiency and reducing heat loss or gain. Glazing, frame material, seals and positioning of rooflights are all factors that should all be carefully considered when specifying rooflights in order to achieve optimal sustainability outcomes.

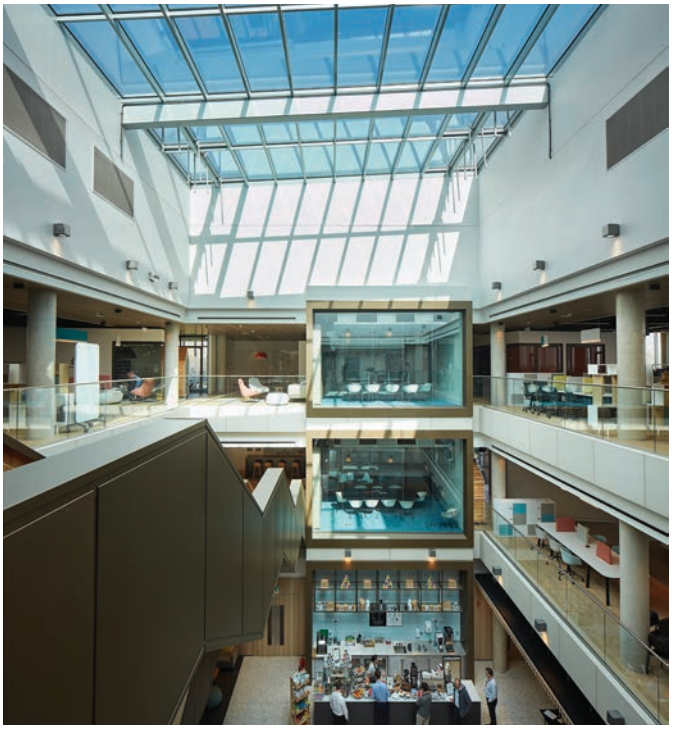
In terms of well-being, creating well-lit spaces with natural light has proven benefits for the physical and mental well-being of building occupants. Natural light can improve mood, boost productivity in learning and working spaces, and even regulate circadian rhythms which helps to synchronise the body's internal clock with the wider environment.

The connection from the inside of a building to the outside world is something artificial lighting and conventional windows just can't replicate, especially in spaces without exterior walls that can accommodate traditional windows.

Natural ventilation can also be incorporated within rooflights, promoting a healthy indoor environment. This is particularly beneficial in spaces like offices, schools, and residential buildings, where air quality and comfort are essential. Part F of the Building Regulations provides guidelines for ventilation in residential buildings and the positioning and type of rooflight used to maximise airflow should also be considered here.

By incorporating natural daylight into a building, this reduces the need for artificial lighting which contributes to lowering a building's overall energy consumption. Less dependence on artificial lighting leads to a decrease in electricity demand, helping to lower overall energy usage and thus supporting the building's energy efficiency goals by lowering a building's environmental impact. Rooflights can provide passive solar heating during the winter months by allowing sunlight to enter and warm the interior. This can reduce the need for additional heating, particularly in cold climates. On the flip side, rooflights can be designed with shading devices or coated with low-emissivity glazing to reduce unwanted solar heat gain in summer, helping to maintain a comfortable indoor temperature without the additional need for air conditioning. This contributes to energy

Rooflights offer the perfect fusion of aesthetics and performance, and can play a crucial role in sustainable design



efficiency throughout the year and will almost certainly also result in financial savings on heating and lighting expenses, providing a cost-saving advantage for the building occupants.

Based on a life-cycle assessment (LCA), an Environmental Product Declaration (EPD) looks at everything from raw material extraction and production to transportation, use, and disposal. With standardised data, EPDs allow comparison between different rooflight products and materials, to help identify more sustainable alternatives and select products with lower environmental footprints.

For buildings looking to achieve Passivhaus certification, architects can source Passivhaus certified glass roofs or skylights. Such components will enable simple integration to the structure without compromising on the required performance calculations to meet the rigorous standards. Notable examples of buildings that have successfully incorporated rooflights and subsequently achieved Passivhaus certification include the Dunfermline Learning Campus, Harris Academy Secondary School, and the Bicester Eco Centre, all of which feature a blend of rooflights, smoke vents, and glazed roofs in their architectural design. The original design of these buildings aimed to maximise natural light within an open-plan office or to establish a tranquil environment in an atrium area.

There is also continued support for architectural buildings that are focused on LEED and BREEAM as rooflights contribute to sustainable design strategies that can help a building earn points towards green building certifications.

Rooflights offer the perfect fusion of aesthetics and performance, playing a crucial role in sustainable design. By incorporating rooflights into your architecture, you not only enhance the visual appeal of a space but also make a positive impact on energy efficiency.

Natalie Goodridge is marketing manager at LAMILUX UK

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Second Steel Window Association Awards

Following the success of the inaugural **Steel Window Association's** awards in 2024, 2025 sees a bigger and better programme with the addition of two new categories – Refurbishment Project of the Year, and Product Supplier of the Year option. The full list of categories comprises four awards – Commercial, Domestic, Refurbishment and Product Supplier of the Year. The awards were created to celebrate the work of the companies that make up the Steel Window Association, showcasing impressive commercial, domestic and refurbishment projects.

www.steel-window-association.co.uk

TORMAX delivers modern access to Castle Hotel

Warwick Castle Hotel lies in the heart of the 64-acre grounds. Door automation expert **TORMAX** worked with main contractor RED Construction Group to deliver an entrance solution that welcomes guests into the impressive reception, with a combination of two sets of bi-parting automatic sliding doors. The doors work in tandem to create an effective entrance lobby that minimises heat loss from the building. Powered by two TORMAX iMotion 2202.A door drives, the busy entrance system is engineered for longevity and low maintenance. All in-house designed iMotion drives feature AC motor technology that has none of the parts that generally wear out, such as gears and brushes. Combined with a state-of-the-art microprocessor control system, iMotion delivers market-leading reliability for door automation. "We are delighted to have installed our energy-efficient iMotion automatic entrance system at the new Warwick Castle Hotel," comments Simon Roberts, MD for TORMAX UK. "Designed for durability and a long-life span, iMotion technology supports the hotel's sustainability goal while providing a seamless and welcoming experience for every guest."

sales@tormax.co.uk

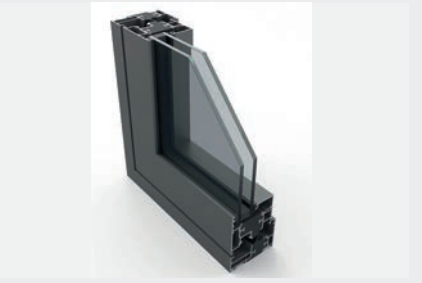
Senior celebrates a decade of PURe® innovation!

Senior Architectural Systems, one of the UK's largest privately owned manufacturers of aluminium windows, doors and curtain walling, is marking another major milestone – 10 years of its patented, award-winning PURe® system!

Back in February 2015, Senior set new standards for low U-value aluminium windows and doors by creating a system that was the first to the UK market to feature an enhanced thermal barrier made from expanded polyurethane foam (PUR). The innovative use of this material, which is traditionally used in cladding and insulation, gives PURe® the potential to achieve U-values as low as 0.71 W/m²K for windows and 0.93 W/m²K for doors, significantly improving energy efficiency and reducing heat loss.

Senior went on to be awarded a UK patent (GB252363.8) for its PURe® system and soon extended the range to cater to both commercial and residential markets. Over the past decade, the PURe® range has evolved to offer a variety of configurations, including casement, tilt and turn, and parallel push windows, as well as folding sliding, inline sliding, lift and slide, single, and double doors. Senior added further strength to the range in 2019 with the launch of the PURe® Commercial Door – the manufacturer's largest, strongest and most flexible aluminium door system to date. Most recently, in 2023, Senior collaborated with supply chain partner and composite door supplier Hallmark Doors and Panels Ltd to develop a new residential entrance door that combines the patented PURe® thermal efficiency with PAS 24 security.

Senior has also won a number of prestigious awards for the design and development of its PURe® range over the last decade, including in 2023, the King's Award for Enterprise in Innovation. Prior to this, Senior was recognised at the 2020 Made in Yorkshire business awards for its work on the PURe® system and for its commitment to investing in the manufacturing sector on both a regional and national level.



As the popularity of PURe® has grown over the last ten years and with demand increasing significantly following the introduction of new lower U-value targets per the recent updates to Part L of the Building Regulations, Senior has also made significant investments in its manufacturing capabilities. In late 2022, Senior opened its new Thermal Improvement Facility in Rotherham – this has taken the company's overall UK manufacturing capacity to 220,000 ft² and significantly boosted production of its PURe® windows and doors.

01709 772600 seniorarchitectural.co.uk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VE may still have its day

Uncontrolled value engineering has rightly been criticised for its focus on cost cutting and poor-quality construction outcomes. Adam Sumner of Pura Facades thinks the time is now right to re-assess the potential of VE in the industry as part of a responsible, but pragmatic specification process.

The specification of construction products is a complex process that has fundamental implications for the aesthetics, safety, function and cost of a building. Quite rightly, the term 'value engineering' has come in for substantial criticism since Grenfell Tower, however is the time now right to reappraise the practice of 'specification reassessment' as long as it conforms to the principle and spirit of the Golden Thread?

The history of VE

Value engineering was pioneered by US firm General Electric during World War II, when three engineers noticed that substituting materials and methods often reduced costs. Called "value analysis" or "value control," this technique crucially did not affect the quality or performance of the end products being manufactured.

In principle, value engineering focuses on the functions of components and materials, rather than their physical attributes. It promotes the substitution of materials and methods with less expensive or more readily available alternatives. The ultimate formula for value is often defined as a function divided by cost.

By the 1980s, these engineering-based concepts were becoming widely adopted in other industries such as construction, automotive and aerospace. In the UK, the post-Grenfell Hackitt Report criticised the overtly simplified, cynical use of VE to win contracts, based purely on cost reduction.

Now, a more nuanced approach is becoming carefully considered by the building sector, involving all of those involved in the specification chain, including architects, designers, developers, contractors and product manufacturers. Concepts such as the Golden Thread, the new Building Safety Regulator and a shift in culture towards 'safety first' is heralding an era of more responsible value engineering.

As part of a company with over 25 years' experience in cladding, Pura Facades prides itself on always doing the right thing when it comes to building safety, but an overly cautious 'belt and braces' approach to specification can lead to huge construction inefficiencies, unnecessary cost inflation and problems with project completion. Safety should always take precedence, but there are myriad other considerations that deserve attention before a final decision is made on often complex building systems.

Take, for example, a recent development we are involved in at Canary Wharf – an unused office block which is being transformed into a luxury apartment complex.

Having been approached by the main contractor to supply more than 8,000 m^2 of high-quality stone cladding, our engineering team assessed this request and suggested there could be a better way. In close co-operation with the architect and contractor, we proposed an alternative solution which comprised a mixture of lightweight glass

Concepts such as the Golden Thread, and the new Building Safety Regulator, are heralding an era of more responsible value engineering

Glass reinforced concrete on top of coated aluminium MetSkin facade – a "sophisticated mix"

reinforced concrete (GRC), fibre cement panels and solid aluminium cladding.

Crucially, this sophisticated mix of three different facade products has achieved a high-quality look and feel to the exterior of this prestigious development, without compromising the safety of the building. Given the non-inflammatory nature (A-rated) of all the supplied materials, this approach maintains the safety of the external envelope, while making the installation process quicker and safer for contractors.

As well as aesthetics, safety benefits and ease of installation, the trio of alternative cladding materials also generated a cost saving benefit, when compared to the original specification. However, ease and speed of insulation, safety and availability of materials were equally important as this consideration.

Cost savings generated by value engineering should not be ignored, as long as the vital elements of aesthetics, installation, efficiency and safety are not compromised.

Innovation and creative thinking have always played key roles in adding value to construction projects. Our experience on this and other projects demonstrates that clever thinking can really add value at the specification stage of the build, without compromising safety performance.

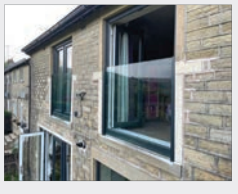
There must surely be a space along the 'Golden Thread' where informed product managers can advise contractors and architects on better ways to solve problems? In our experience, those involved in specification of cladding systems sometimes lack up to date knowledge of the latest materials, finishes and fixing systems available and this is where we can really add value to the conversation.

We all agree that building safety should never be compromised, but there should still be room made for innovation and pragmatism within the specification process.

Looking ahead, greater connectivity across the construction chain is being facilitated by the widespread use of BIM and other digital tools. Moreover, the emerging power that is AI will enable more informed decision making on prospective products and their safety, performance and aesthetic test data.

Adam Sumner is specification manager of Pura Facades

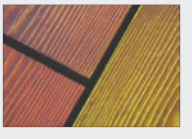
CRL Paris System available in four finishes



Newly available in a chic and sophisticated Matte Black finish, the **CRL** Paris System offers a simple, stylish and streamlined solution for anyone looking to install a French balcony. Extending the appeal of the CRL Paris System even further, the new Matte Black finish joins the existing White, Grey and Mill finishes. All have been designed to match popular window frame finishes to bring a minimal, high-end look to any building's exterior while being extremely secured for the end-user.

01706 863600 www.crlaurence.co.uk

Introducing Valcan's Evverlap®



Introducing EvverLap® by **Valcan** – an A2 fire rated, non-combustible fibre cement weatherboard that beautifully replicates the look of teak wood grain with a unique raised texture. These plank-style boards provide both an authentic aesthetic and exceptional durability without compromising safety. Available in 11 solid colors and 10 stained options, they are the perfect modern alternative to traditional timber cladding like Larch and Cedar. EvverLap® is less absorbent than timber weatherboard cladding products due to the calcium silicate and cement base used in the production process.

01278 428 245 valcan.co.uk

Vivalda launches new website

Vivalda Group has unveiled its new website, which showcases the widest range of cladding products in one place, available to contractors in the UK and Irish building trade. While the new, easy to navigate site carries a huge range of decorative cladding brands including Cedral, Equitone Hardie, Swisspearl, Rockpanel and Trespa, it also highlights associated products such as framing, fire barriers, insulation and building boards. The company's own UK designed and made solid aluminium facade system, MetSkin, is also featured.

sales@vivalda.co.uk vivalda.co.uk

Informative & entertaining round table events

Always looking for new ways to engage with our audience, *ADF* now hosts round table events. With constant updates to building regulations, round tables are an ideal way to gauge industry concerns/problems, to future-proof your marketing strategy. Hosted by our Editor, James Parker, we ask a diverse selection of our readers to attend, providing us with insights across the full spectrum of our audience. Sponsoring a round table enables you to position your brand/company as a voice of authority within the industry.

insights.netmagmedia.co.uk/round-tables

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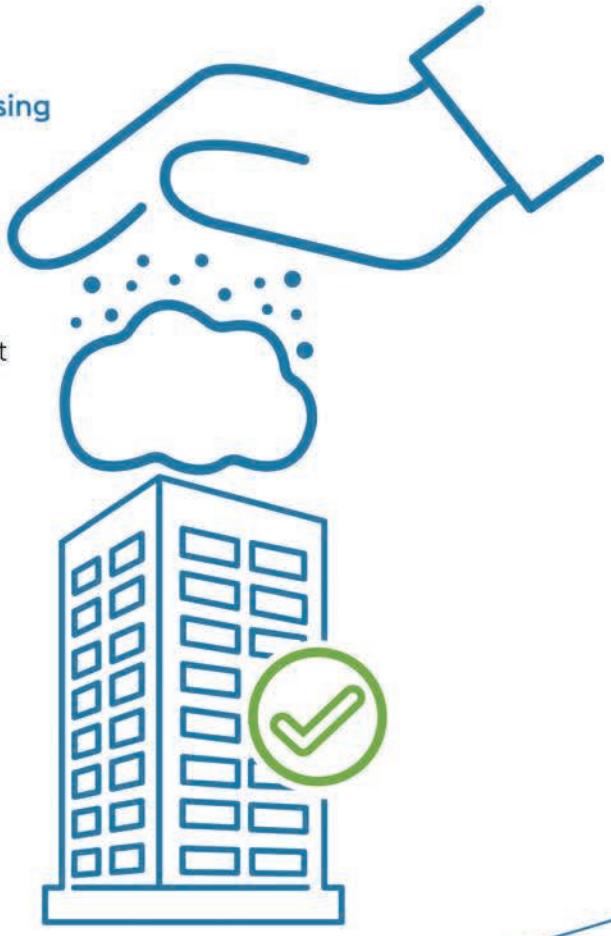
Metsec Decarb, a range of Dry Lining and SFS sections utilising the very latest steel making technology. Reducing the CO_2 and carbon footprint of your next project.

The range uses steel made from new, state of the art electric arc furnaces the alternative to burning fossil fuels, in the traditional blast furnace method. It's that simple. Giving significant reductions in CO_2 that can be balanced against the 30 year London Plan offset charges, or to help achieve the ever increasing sustainability project targets.



- No greenwashing
- No mass balance approach
- No carbon offsetting
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- Project specific Environmental Product Declarations available which accurately calculate the project savings on embodied carbon
- CO_2 savings on top of Metsecs SFS 30 year MetWall perform through the wall warranty
- Comprehensive library of fire testing for both product ranges
- Metsec Decarb also available through CCF – Tradeline and SIG – Speedline ranges of dry lining profiles.

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ONE STEP AHEAD.

New acoustic liner ensures great acoustics and easy handling

Both a building's users and its developers have a good reason to get excited about the new Troldtekt Plus 25 panels. This specially developed acoustic panel sets a high standard for both sound absorption and building efficiency. Danish manufacturer Troldtekt A/S introduces yet another innovative solution for the construction industry: Troldtekt Plus 25 is an acoustic panel that combines high sound absorption with significant practical advantages such as low weight, space-saving design and low overall costs.

In practice, Troldtekt Plus 25 is a two-layer panel but only 25 mm thick, just like Troldtekt's traditional single-layer panels. A special acoustic liner made of non-woven acoustic fleece is applied to the back of the panel and ensures high sound absorption.

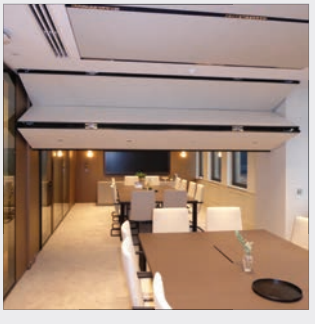
As a suspended ceiling, Troldtekt Plus 25 has a so-called alpha value of 0.9 (αw = 0.90), which means that it can achieve Class A sound absorption at a suspension depth of 200 mm. The fact that the panel excels in the low frequencies (125-250 Hz) makes it perfect for applications such as classrooms and meeting rooms.

The acoustic fleece itself is so thin that the panel measures and weighs the same as a traditional 25 mm Troldtekt acoustic panel – without a backing layer. This makes it significantly easier to stack, cut, lift and assemble on site. With a thickness of only 25 mm and a weight of 11.5 kg, Troldtekt Plus 25 offers significant logistical and practical advantages including transportation, storage and installation.

Depending on the panel specified, reaction to fire is classed in accordance with EN 13501 as B-s1,d0 or A2-s1,d0 respectively. Cradle to Cradle Certified® at Gold level, Troldtekt wood wool acoustic panels are manufactured using wood from certified forests (PEFC/09-31-030 and FSC®C115450) and can contribute positively to a building's BREEAM, WELL or LEED points. Samples, case studies and technical guidance are available from Troldtekt's website. See product listings on NBS (bit.ly/3vxoTfq) or Material Bank (www.materialbank.eu)

sales@troldtekt.co.uk www.troldtekt.co.uk

Advanced moveable wall systems maximise space flexibility at leading London firm



At the offices of Russell Reynolds in London, **Style** worked with contractor, Thirdway, to add adaptability to the main meeting room whilst contributing to an interior decor that delivers the 'wow' factor demanded by the client. A Skyfold moveable wall gracefully descends from the ceiling cavity at the touch of a button, allowing two smaller meeting rooms to be quickly created. Dividing the meeting area from the large open-plan breakout space, a fully automatic Dorma Huppe Variflex glass wall system, finished with Interpon Bronze frames, runs the entire length of the room. With exceptional acoustic ratings of 59 dB for the Skyfold and 52 dB for the Variflex, concurrent meetings can take place entirely undisturbed, while the glass moveable wall maintains a light, open plan feel. Style's combination of Skyfold and Variflex moveable wall systems allows the room to be reconfigured in several different ways, depending on the daily meeting schedule. The quality of the finishes ensures both walls add to the overall interior design of this very stylish office space.

sales@style-partitions.co.uk

Mapei system helps restore Kentish Town Underground Station

A comprehensive Mapei system has been used in the refurbishment of tiled and rendered areas at Kentish Town Underground Station. The application, carried out by Cleshar for Transport for London, forms part of an upgrade of the north London Tube station. The specification included Mapei mortars, adhesive, grout, sealant and UltraCare maintenance products – featuring very low VOC EMICODE: EC1 Plus formulations – and protective paint system, Silancolor Tonachino Plus. An interchange station located in the London Borough of Camden, Kentish Town Underground Station had 1,786,866 entries and exits in 2023/24, making it the 293rd most used, out of 2,581 stations in Great Britain. In addition to an upgrade of escalators, removal of a redundant ticket office and realignment of ticket barriers, other essential works at Kentish Town include deep cleaning, painting, installation of new wall tiles, and new signage. Mapei systems played a key role in the refurbishment works, being used to repair wall surfaces through tunnels, install ceramic tiles and protect the finished render.

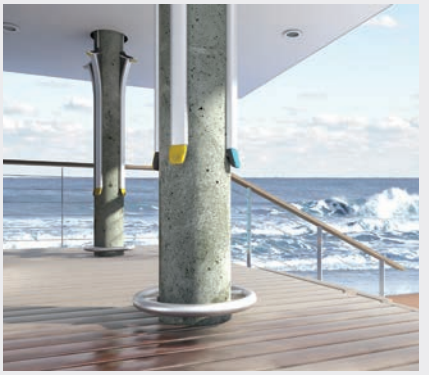
info@mapei.co.uk www.mapei.co.uk

Duŝo: The quick-fit, long life shower for leisure & outdoor spaces

When a fast refurbishment is needed, the Horne Duŝo shower column is the ideal solution. Fully pre-plumbed, installation is refreshingly simple – just a support screw to hang the unit, three fixings into the wall, and a single connection to the mixed water supply. That's it – the perfect upgrade for group showering spaces with minimal downtime.

Its anodised aluminium casing and robust injection-moulded polymer components make the Duŝo uniquely suited for outdoor installations or chlorine-rich environments like swimming pools and lidos. Whether at a holiday park, a beachfront lido, or a leisure centre, the Duŝo's durable materials resist corrosion, ensuring long-term reliability.

The Duŝo is an economical choice, integrating a timed-flow mechanism that delivers approximately 60 seconds of water per activation, preventing unnecessary water wastage. The integral 8 litres-per-minute flow regulator minimises the consumption of



pre-heated water, while precision-engineered spray plate nozzles accelerate the water flow, creating a more satisfying shower experience.

With its sleek, minimalist form and a choice of four colours – aqua blue, bright yellow, grey, or black – the Duŝo complements a wide range of design schemes, ensuring both visual impact and practicality. Cleaning and maintenance are also simple, with easy access to spray plate, flow control components and its protective strainer for cleaning or replacement.

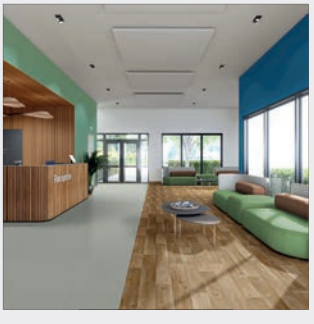
For multi-shower installations, Horne's Valve Sizing Tool [b.link/WhatSizeTMV] can help specifiers determine the optimal thermostatic mixing valve capacity, ensuring consistent flow rates and safe water temperatures across all outlets.

Fast to install, built to last, and designed for both aesthetics and efficiency, the Duŝo shower column is the smart choice for leisure, outdoor, and group showering facilities. With durable, corrosion-resistant materials, water-saving technology, and straight-forward maintenance requirements, it delivers long-term performance with maximum impact.

Specify via NBS Source or visit the Horne website to learn more.

b.link/NBS_Horne_DusoSportShower
www.horne.co.uk

IVC Commercial launches Pionieer 70



Providing 18 dB of impact sound reduction in heavy duty environments, Pionieer 70 is the new acoustic flooring solution from **IVC Commercial**. With a 0.7 mm wear layer and Class 34 rating, it can withstand busy environments such as school corridors and receptions, communal areas in housing, aged care and social care environments. Anywhere there is a demand for a durable and easy to maintain finish that deals with acoustic challenges, Pionieer 70 steps up to the mark. Not only delivering excellent acoustic performance, IVC Commercial Pionieer 70 also features Invertech. This is a patented technology to enhance the floor's appearance that works with PUR Shield to improve maintenance and resistance to marks and stains. Pionieer 70 comes in 22 wood, colour and material effects to give a versatile design option. Adding a welcoming atmosphere in aged care environments with wood designs like Ohrid Oak or delivering an architectural feel with the concrete of Regina in commercial offices; Pionieer 70 brings exceptional design matched to excellent acoustics and durability.

0330 1222 133 www.ivc-commercial.com

Vent-Axia launch high-speed hand dryer

Vent-Axia has launched the next generation of hand dryer with its Tempest SmartDry high-speed hand dryer. The Tempest SmartDry is designed with a built-in HEPA filter, antimicrobial cover, and patented noise-cancelling technology. Attractive and energy efficient, the Tempest SmartDry's advanced technology features adjustable air speeds, and provides a short hand drying time. Available in black, white, and silver the hand dryer is easy to service and maintain since it features a plug-in back plate and a smart LED indicator that monitors operation and maintenance status.

0344 856 0590 www.vent-axia.com

Shaking up the kitchen with Keller

With **Keller**, the popularity of the Shaker door continues apace. Traditionally used in country-style kitchens, the door style is equally at home in contemporary kitchens today. And for an even more modern look, the new Avalon door is just the job – it's reverse Shaker door! Here in Sea Salt with a champagne-coloured handle in two finishes, the Avalon is available in eight Master Collection colours, 21 Comfort Collection colours and 2,050 NCS colours in structured or silk lacquer.

www.kellerkitchens.com

Proctor Group

Spacetherm Aerogel. A very high performance, ultra thin insulation for thermal upgrades, saving valuable space without altering the exterior fabric of a building.

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Winds of change for testing

Lisa Stephens of ROCKWOOL UK gives an update on the latest developments in wind load testing to equip buildings for the more extreme winter storms we are seeing.

Across the globe, extreme weather conditions are becoming more common, with heavy flooding, wildfires and hurricanes regularly making the news headlines and heavily impacting towns, cities and communities often with devastating consequences.

Recent research by Newcastle University and the Met Office, looking specifically at the UK, has concluded that climate change may increase the number of extreme winter storms, including strong winds.

Analysing data from climate simulations covering historical (1981-2000) and future (2060-2081) periods, the research showed that "as the climate warms, these events are likely to become more severe, with stronger winds and heavier rainfall happening together."

The study advised that these changes are mainly driven by increased rainfall, as a 'thermodynamic' response to rising temperatures. Additional contributing factors include a strengthened jet stream and its southward displacement that brings storms through warmer areas, leading to further increases in rainfall.

Resilient structures

Wind load (which refers to the forces exerted on a structure by wind), depends on factors like location, building height and surrounding terrain. Urban environments, in particular, are at heightened risk due to the funnelling effect of wind between buildings, which amplifies local wind speeds. Likewise, coastal and high-altitude locations require specific design adaptations to address elevated wind pressures.

Architects have always had to contend with the impact of wind. However, as wind speeds increase due to climate change, so do the loads that buildings must endure. While wind-tunnel testing and computational fluid dynamics (CFD) modelling are commonly used to assess wind loads on buildings during the design phase, identifying areas of high stress and highlighting the impact of building geometry on wind load, analysis of material testing data is also critical.

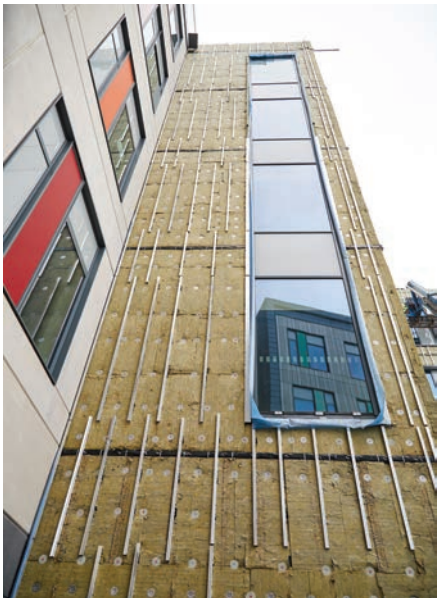
Tested for site

Rainscreen insulation, often used on high-rise buildings more exposed to extreme weather and wind, must withstand such pressures. Wind-load testing is common for most rainscreen insulation available in the UK and Ireland; however, testing programmes vary in terms of the build up.

Typically, rainscreen insulation is independently tested in accordance with BRE Digest 346 Part 7. This testing regime sees product samples placed and sealed into dynamic wind loading test apparatus and subjected to sequential proportional loading cycles that mimic what a building would experience within a 50-year lifespan. The process tests the insulation prior to the final cladding being added, which, in reality, will give further protection.

To ensure that test scenarios reflect typical construction types, it is important to consider all materials within the build-up

As wind speeds increase due to climate change, so do the loads that buildings must endure



A breather membrane is important to the testing process, as the wind can infiltrate behind it and exert pressure on the insulation

and the impact they may have on other materials and the test result. This means examining whether, for example, a breather membrane was included in the test data available for your choice of rainscreen insulation.

A breather membrane is important to the testing process, as the wind can infiltrate behind it and exert pressure on the insulation. By assessing the insulation and membrane, both installed according to respective manufacturer guidance, the testing process examines and provides architects with the results of a build-up that more closely replicates what is used onsite.

With this in mind, we have recently published test results that assess the performance of our rainscreen insulation with a breather membrane in a minimum of category four hurricane conditions.

Resilient choices

The inclusion of a breather membrane is one way that 'true-to-site' testing programmes have been designed to assess wind load performance. Fixing choice has also been explored, acknowledging site practicalities.

In some circumstances, for example, space does not allow the use of a typical 70 mm EJOT fixing on a steel frame cladded facade and as such, a 50 mm option is used. This recent wind load testing programme explored using 50 mm options against category four hurricane conditions to independently verify performance in such site circumstances.

Another test configuration included a masonry facade with the same insulation installed within an ACS channel fixed to a light-gauge steel frame without mechanical fixings. This setup was tested for category five hurricane conditions, again providing independent verification of performance and highlighting possible time and cost savings onsite.

By testing materials in true-to-site configurations, manufacturers can demonstrate that their products meet the specific demands of real-world applications. This level of rigour is fundamental in rainscreen systems, where insulation must contribute to thermal and acoustic performance and resist wind pressure to maintain overall facade stability.

Lisa Stephens is product manager at ROCKWOOL UK

New from Hörmann – automated driveway bollards

Hörmann UK have announced that they are launching a new automated security bollard that has been designed and built specifically for domestic installations. Introduced to counter vehicle thefts, the bollards provide an effective way to increase security and prevent theft from unauthorised access to a property. They are suitable for driveways, entrances to private roads and installation in front of garages for added anti-theft protection. The Hörmann A114 automatic bollards are manufactured from brushed stainless steel and are sleek and elegant in design. Built to be durable and robust, they are available in two barrier heights – 600 mm or 800 mm and with a diameter of 114 mm. They are quick and easy to install being supplied as a ready-to-install 'plug and play' unit, with an integrated foundation box. Installation can typically be achieved within 1 hour. Fitted with an electromechanical drive, the bollards are designed for average use frequencies of approximately one hundred cycles per day and require minimal maintenance.

01530 516868
www.hoermann.de/en/innovations/detail/show/automatic-bollard-a-114-600/800-e-plug-and-play

Revolutionary new natural insulation

Ecological Building Systems, a leading supplier of natural building products for sustainable construction, has introduced an exciting new type of sustainable insulation to the UK and Ireland. Gramitherm is the first insulation to be produced from grass, which is sourced from public parks and grass verges, combined with recycled jute fibres, plus a recycled polyester binder, to produce one of the most sustainable forms of insulation on the market and is exclusively available from Ecological Building Systems in the UK and Ireland.

info@ecologicalbuildingsystems.com ecologicalbuildingsystems.com

Panasonic heat pump cuts energy costs

An environmentally conscious retired couple in Bedfordshire sought to replace their expensive running and inefficient old traditional heating system in their four-bedroom, 1890's-built rural property with a more sustainable heating system. After consulting with Clima Renewables, who had been maintaining the old system, the couple opted to install a **Panasonic** Aquarea J Series T-Cap Monobloc Air to Water heat pump unit. The installation was completed with the Panasonic Aquarea Smart Cloud control system which allows the couple and the installer to remotely control the heating system.

01707 378670 www.aircon.panasonic.eu

Focusing on breathing

Ian Rogers of Gilberts Blackpool explains the importance of balancing ventilation with carbon reduction strategies in order to achieve the right air quality for users.

Breathing – it's essential to life not only for humans, but for buildings too. In the drive towards reducing greenhouse gases, achieving the top standards of BREEAM, LEED et al, it is crucial that all involved in the building design – new build and retrofit or refurbishment – remember that crucial fact.

We focus on 'building tight,' to prevent the fortuitous air – and therefore energy – leakage, but ventilation is critical, for the health of the building, its occupants and its equipment.

It is a point emphasised in a new report by the National Engineering Policy Centre. Led by CIBSE, the Royal Academy of Engineering and the Institute of Mechanical Engineers, the report stresses that healthier, more sustainable spaces come from balancing insulation and ventilation.

To many, it seems contradictory when designing low or zero carbon schemes, where the very ethos is about minimising heat loss, that we need to focus on letting fresh – therefore, cooler air – in.

The keys are balance and control – choosing solutions that optimise energy efficiency while maintaining healthy, compliant indoor air quality (IAQ), that remove damp, condensation and airborne pollutants without removing too much heat.

It's easier said than done, as we are constrained by the fact that 80% of our existing buildings will still be in use by the net zero target date of 2050, and, with the rising price of land, we are increasingly building upwards. The taller the building, the greater the variation of air pressure – a fundamental of ventilation – and thus greater air movement within as warm air naturally rises. That means greater potential energy use – and carbon creation – in controlling the internal environment.

It is self-evident that the 'greenest' ventilation is natural. It uses no energy, relying solely on natural air movement principles to function. It is, after all, how two of our most iconic buildings – Hintze Hall at the Natural History Museum and the Houses of Parliament – were ventilated when originally designed. But it requires much care at the design stage to balance the air paths and air flow.

Natural ventilation in the Natural History Museum's Hintze Hall – refurbished by Gilberts

Hence the evolution of hybrid ventilation. It centres around stand-alone natural ventilation for each space or zone, complimented by an 'as and when needed' mechanical boost, usually via a low energy fan. The system works by mixing the incoming fresh air with the warmer internal exhaust air to maintain compliant IAQ in each stand-alone space. The fresh air is drawn in through the facade at high level, and exhausted through the same route, once natural air movement principles have circulated the air throughout the space.

Most systems can be tailored to individual specification by the inclusion of LPHW heat coils, connected to heat pumps and additional filtration.

It is even possible to adjust the system to run on 100% fresh air, using the optional heat coil to temper the incoming air temperature. Using the heat coil also eliminates the need for radiators, which optimises usable floor space, reduces

Natural ventilation requires much care at the design stage to balance air paths and air flow

BREEAM Very Good was attained at the renovated India Buildings in Liverpool, with concealed ventilation

Linear bar diffusers reduce condensation at the BREEAM Excellent 103 Colmore Row, Birmingham

overall build costs and embodied carbon, and makes a positive contribution to the carbon footprint.

However, natural or hybrid ventilation does not suit every building. Hence why we see mechanical ventilation – PIV, CAV, VAV, and other variants. With these, HOW that air is controlled – how it is delivered, circulated, exhausted – is crucial to the success and green credentials of the building when operational or occupied.

Thermal diffusers can monitor the indoor air temperature and adjust airflow automatically – with no electrical input – to maintain the preset ambient within seconds and thus avoiding excess loading on the building services whilst the BMS senses and adjusts? And diffusers are being developed that can be easily re-positioned across the ceiling as the space below is re-purposed for agile workspaces.

Strategic positioning of linear slots vertically by a foyer entrance can create an invisible curtain to control cool air and airborne pollutants every time the door is opened. Placing them in the ceiling above and in front of large glazed areas can help control solar heat gain and remove a 'hot spot' for condensation – demonstrated at 103 Colmore Row, Birmingham (pictured).

Coanda plates added to swirl diffusers make a dramatic impact on the efficiency of the 'airthrow' across exposed ceilings and avoidance of 'cold dumping' – improving occupant comfort. Such seemingly insignificant elements make major improvements to the carbon footprint.

Advanced software such as Computational Fluid Dynamics (CFD) enable virtual test and validation of ventilation performance, and adjustments to be made to achieve or surpass the targets.

The technology also means architects can make the diffusers a focal point of the interior; coanda plates can be made bigger, smaller, of different materials; and swirl diffuser face plates can be perforated to reflect a brand identity or logo. Or the air supply inlets can be unobtrusive, concealed behind an interior feature.

To breathe easy going forward, architects need to work with experts – building services consultants and ideally, manufacturers who have the in-depth knowledge to guide architects.

Ian Rogers is sales director at Gilberts Blackpool

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