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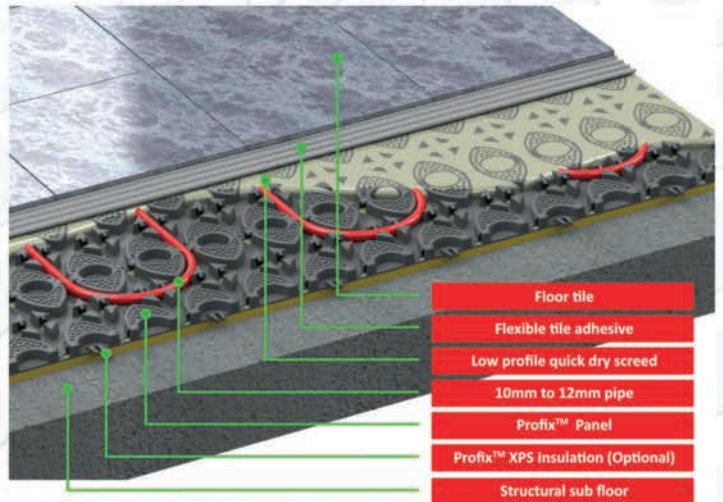


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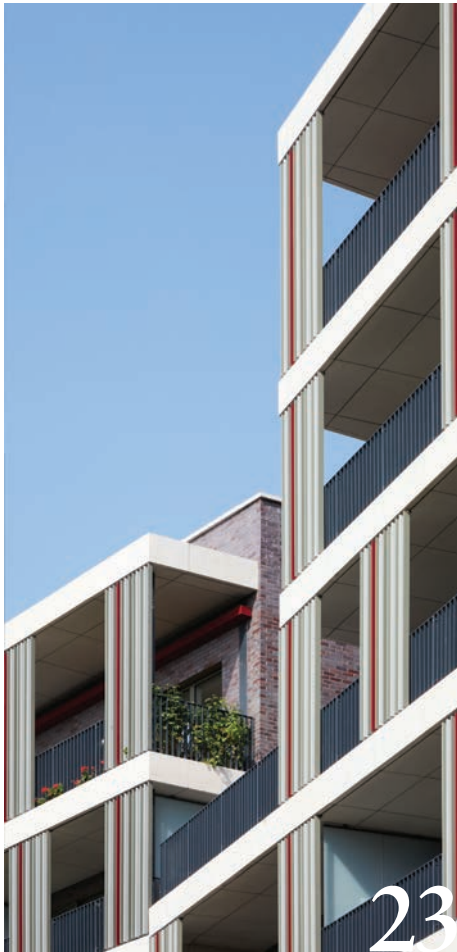


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23



27

CONTENTS

12.21

NEWS, VIEWS & INSIGHTS

- 04 Industry News
- 08 **View Point:** Rory Bergin from HTA on the persistent timber stigma
- 12 **Practice Profile:** White Ink Architects – the first 100% employee owned practice in Northern Ireland
- 17 CPD Focus
- 18 International Focus
- 20 Appointments & Company News

PRODUCTS

- 32 Groundworks & Drainage
- 32 Structural Elements
- 39 External Envelope
- 50 Insulation
- 51 Heating, Ventilation & Services
- 56 Interiors
- 61 Accessibility & Lifts
- 65 Safety & Security
- 65 Landscaping & External Works

PROJECT REPORTS

- 23 **Passivhaus goes large**
Agar Grove is set to become the UK's largest Passivhaus scheme, with housing tenants already seeing the benefits from a completed phase. James Woodward, architect at Hawkins\Brown speaks to Roseanne Field
- 27 **Opening a new volume in NYC**
A renovation project in Manhattan opens up a public library facility in a former department store to resolve functional anomalies, and provide a great experience for users of all ages. ADF's James Parker reports

FEATURES

- 35 **STRUCTURAL ELEMENTS: TIMBER**
Test data in the frame
In the post-Grenfell context, Steve Griffiths of Taylor Lane Timber Frame and the Structural Timber Association looks at recent timber fire testing data developments
- 43 **EXTERNAL ENVELOPE: DOORS & WINDOWS**
Traditional is the new modern
Tom Wright of George Barnsdale on how timber is being used to create designs that combine traditional approaches with minimalist design
- 53 **HEATING, VENTILATION & SERVICES: PLUMBING**
Water savings in the balance
Richard Bateman at RWC UK describes how thermal balancing valves help minimise water waste in larger buildings, as the pressure grows to save resources
- 63 **ACCESSIBILITY & LIFTS**
Access best practice
Alistair Stannah from Lifts Distribution & Service (UK) discusses best practice specification for making public buildings fully accessible for all users

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Annual subscription costs just £48 for 12 issues, including post and packing. Phone 01435 863500 for details. Individual copies of the publication are available at £4 each inc p & p. All rights reserved

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FROM THE EDITOR



How do you feel COP26 went? Architects who attended, was it as big a politically-hamstrung disappointment as the headlines – like the big last-minute watering down of India's promises on coal – suggested? Or was it actually a chance to sift through the 'blah blah blah' and find out what is currently happening on the ground, and take the inspiration away to drive faster to net zero? I'd love to hear your take.

The construction industry is, I'd argue, where many real examples can be found of the 'non state-actors' who can bring the momentum of action on our resilience to a broad-based level that will really begin to make the changes needed. This is mainly because buildings generate (in a now well-worn statistic), 40% of global carbon emissions.

Our Government is continuing to wave targets and loans at the industry, rather than practical measures. However part of the big changes are the Future Homes Standard, and a bunch of other initiatives already underway.

Not to add to the pile of daunting challenges before the industry, but according to eco-watchdog and architect Carl Elefante, "before Covid shutdowns reduced emissions for the first time in decades," annual energy and energy-related greenhouse gas emissions from the building sector totalled about 10 Gigatons (billion tons of CO₂ equivalent emissions), making up the more than apocryphal 40%. According to Elefante, and other experts in the field, the current trajectory global building is on – to satisfy our fast-urbanising populations will mean that by 2050 construction will account for at least 100 Gigatons.

The Intergovernmental Panel on Climate Change has now established a carbon 'budget' of 300 Gigatons to restrict the Earth's temperature rise to 1.5 degrees, and avoid the potentially catastrophic effects that have been forecasted of exceeding it.

This means the building industry must play its part now, and if Government endeavours don't have the national traction needed, then the supply side, small and large, have to simply persuade their clients to do what's right.

At COP26, the leading architectural bodies (ASHRAE, AIA, RIBA, etc) did what they do at such events, and put together a joint 'Architecture 2030' statement; hoped to push Governments into upping their targets on carbon reduction and safeguard the 1.5 degrees target. But in reality, they are simply another set of voices in a vast chorus of sensible people shouting essentially for a paradigm shift in how our profit-driven economic system is set up.

At what point does emissions enforcement, such as of the changes to Part L, become nationalised, and aggressive, as it probably needs to be? The signatories of the Architecture 2030 Communiqué described, rightly, how the architecture profession, and other construction segments are "transforming and taking significant action to mitigate and adapt to climate change," setting the bar for others to follow.

Yet, although that is true (good practice breeds good practice), and consumer demand is now firmly on a 'demand action,' far from complacent footing, the challenge is bigger than that will produce. The scale of carbon-saving activity that is really needed requires the kind of top-down approach that modern Western administrations are absolutely terrified of implementing.

James Parker
Editor

**ON THE COVER...**

The Stavros Niarchos Foundation Library in Manhattan has been reimaged by Mecanoo and Beyer Blinder Belle. The design opens up the interior and adds a 'wizard's hat' and roof terrace.

Cover image © John Bartelstone
For the full report on this project, go to page 27



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Jo Cowen Architects' offsite Build to Rent Bedfordshire development

Jo Cowen Architects (JCA) has unveiled plans for 650 'precision engineered' smart homes offering a high level of efficiency for rental tenants in Central Bedfordshire. To be developed and operated by Present Made, the £215m scheme will help to meet a "pressing housing need," said the architects, with 35% affordable housing provision.

Named Mill View, the development of single-family rental housing at Thickthorn Farm, near the village of Houghton Conquest, will also include a primary school, and an 87-acre country park. The park will be open to the public and make up over half the site's total area.

JCA's design aims to create a "new community that promotes health, wellbeing and sustainability and is integrated with its surroundings." Mill View will combine important green infrastructure with connections to support residents and wildlife, along with landscape corridors to create opportunities for "active travel" across the site.

The country park, which will include new woodland, is an important part of the vision for the scheme and will offer opportunities for leisure and relaxation and "act as a buffer between the site and the nearby village."

All the homes will be highly energy efficient, said the practice, thanks to a combination of smart technology and modern methods of construction. The houses will be "precision engineered in a factory environment in a process that is less wasteful, disruptive and time consuming compared to traditional construction techniques."



LEISURE CONCEPT

Scott Brownrigg reveals 'adventure tourism' concept for Irish estate

Scott Brownrigg has revealed concept drawings for a new sustainable tourist hub in the heart of County Monaghan in Ireland. The concept has been developed for the partnership between Monaghan County Council and Fáilte Ireland together with Professor Terry Stevens of Stevens and Associates as "key facilitator" of the study as well as "tourism research and concepts."

The vision, which has now been out to public consultation, identifies how land on Muckno Estate in Castleblayney could become a "resilient and innovative 'adventure tourist' destination that will act as a catalyst for regional tourism growth," said the architects. Built with community involvement, the proposal "will deliver benefits that harness the regenerative and wellbeing power of connecting adventure with nature, heritage, and culture."

The project draws inspiration from the estate's history and its glacial landscape; the proposals are based upon the "shaping of the drumlin, interspersed with loughs and lakes." A series of glazed domes embedded into the landscape, which "mimic the setting," said the architects, host a wide range of covered year-round adventure activities.

They also seek to protect Hope Castle, which was built in the 18th century.

Under the proposal, the castle will be enveloped by one of the glass domes, protecting it from the elements to help reduce future restoration and maintenance costs. High quality accommodation will be included to "reflect the shift in interest towards more low impact boutique locations with fewer rooms and a focus on wellbeing and the locale."

The project aims to be carbon neutral; each of the domes are designed with earth rammed walls built from materials excavated from site, and feature a locally sourced, sustainable-latticed timber roof inspired by the work of local architectural engineer Peter Rice. Passive environmental techniques will control the internal climate, as well as using ground and water sourced heat from the landscape and Lough Muckno. The proposal "augments the opportunity for biodiversity, water enhancement and well-being of this special landscape."

This new vision for the estate "fully integrates with the town, the wider countryside with its Greenways and other attractions." This will ensure "multiple benefits for local people and provide guests with a seamless, authentic but contemporary Irish heritage and cultural experience."



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VIEW POINT

Rory Bergin from HTA Design says that with timber under fire in the complex testing landscape post-Grenfell, specifiers are being wrongly deterred from choosing the material for taller buildings, while being asked for more sustainable designs

Current amendments to Building Regulations place restrictions on the use of combustible materials in the external walls and balconies of multiple-occupancy residential buildings with a floor 18 metres or more in height above ground level. The ongoing review of the regulations by MHCLG has led to consideration of this residential building height threshold being lowered from 18 metres to 11 metres. Some authorities and clients, like the GLA, have already begun the proscription of combustible materials from use in external walls in buildings, regardless of their height, within their affordable housing programme.

Just at a point in time when we need to be using more sustainable materials, there is fear and confusion across the sector about what is acceptable and what isn't when it comes to timber and combustibility. This confusion is partly driven by a bizarre interpretation of

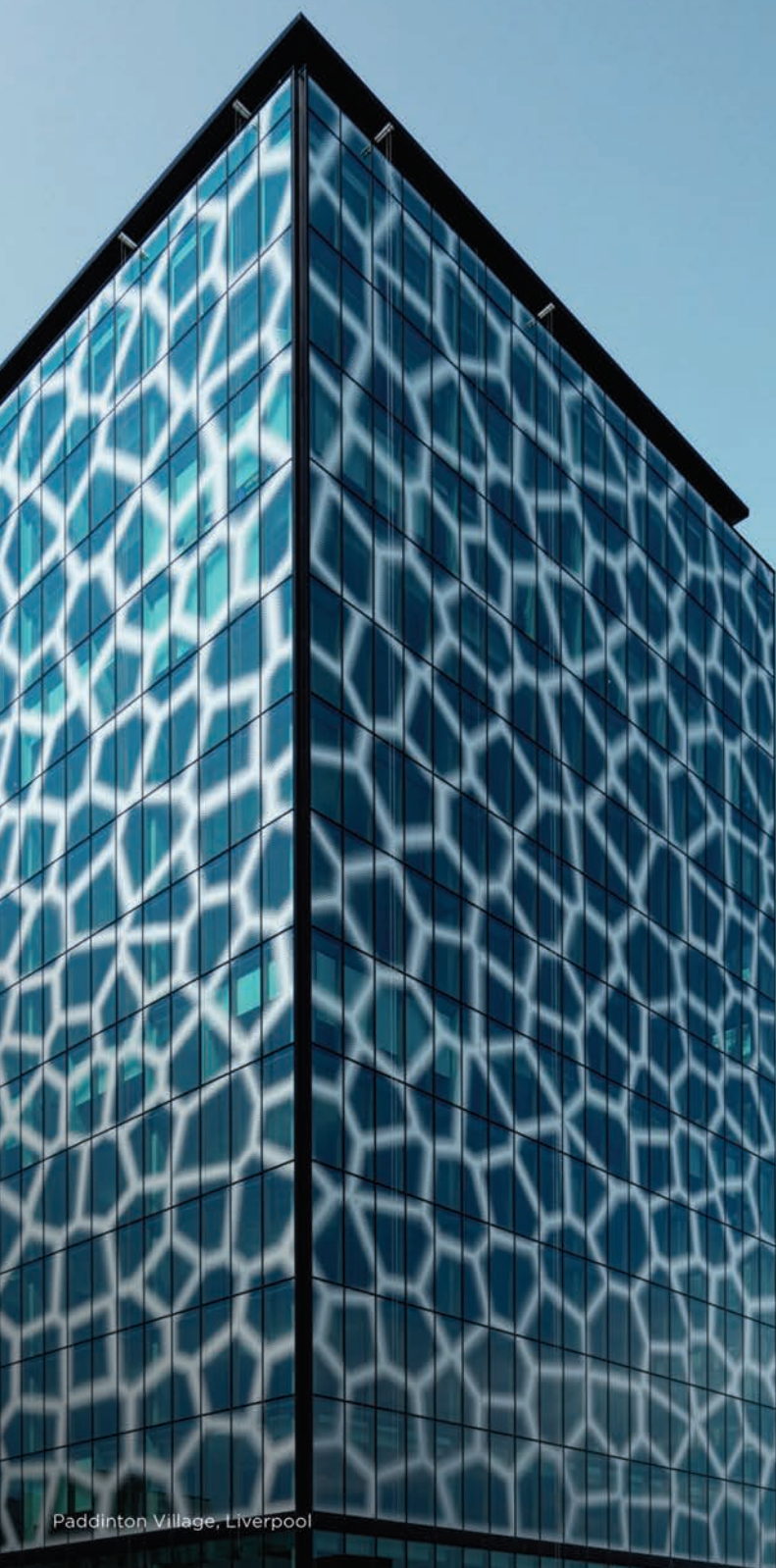
combustibility in facades which separates windows from walls, and treats them differently to the point where you cannot have a plastic interlayer in a glazed balcony balustrade but you can have a full-height plastic window overlooking it.

The way forward seems to be fire testing for products and systems. As architects, we are not experts on fire performance, and we shouldn't try to be, so we increasingly demand tested 'systems' from manufacturers to enable us to use them in buildings, particularly those considered to be riskier, but increasingly for all buildings. The problem with setting out fire guidance for buildings above a certain height is that residents and insurers of buildings which may be close to that height will look to those standards and say, why can't we have them for our building? Are we less safe because we don't meet that higher standard? This behaviour has led to the

GLA refusing to fund affordable dwellings of any height with combustible materials in the facades because they fear politically motivated headlines, and not because there is any reasonable risk attached to those buildings. We have had timber used safely in the structure of buildings for hundreds of years in the UK.

Meanwhile we are being pushed by planning policy and the imperative of mitigating climate change to reduce the embodied CO₂ in our designs. The RIBA 2030 Climate Challenge proposes that we should be reducing the CO₂ content of our buildings from an average of 1200 kg CO₂E/m² down to 625 kg CO₂E/m² by 2030. Timber construction is a major weapon in our battle to get there, and the Government has signalled that in the run up to the 2025 Future Homes Standard, that they will look at regulating this.





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Testing times

Instead of manufacturers collaborating to offer the industry a joined-up approach where a fully-tested wall system can be offered to the market, (and which could be insured easily as a tested product), we have firms going in the opposite direction and not taking liability for fire performance of their products. Without tested systems being offered to designers, the onus is pushed on to the design team to sort out who is responsible for fire performance of walls and floors. If no performance test is available then the design team should demand it, often at considerable cost and time delay. Architects' PI insurance doesn't generally cover us for accepting liability for the fire performance of untested systems.

Timber itself is not the problem – any failure of wood-based systems is usually down to piecemeal procurement, design competence and fragmented testing evidence – the Structural Timber Association has recently undertaken a whole raft of testing on this. To prevent timber frame buildings from prematurely failing to meet the statutory guidance (that is designed to protect life), designers must understand the complete design and construction process. Ultimately, we still have limited joined-up testing information available for engineers and architects to use. The protection of a building or asset is something that insurers are now becoming more concerned about; this raises a wider conversation.

The problem with taking the 'test everything' approach is that every project is different. Manufacturers reasonably ask:

what version of our system should we test – the one designed to meet GLA targets, the one designed to meet current Building Regulations, the one designed to meet the 2021/22 Part L Regulations, or the one designed to meet Part L 2025 (The Future Homes Standard)? If every manufacturer was to test every product against every possible use of it, we would need many more testing centres, and a large number of SME suppliers would go out of business.

An existing solution

However, the fire performance of loadbearing timber frame walls and floors from inside the building needs to be tested, plus the acoustic performance of compartment walls and compartment floors, and this can be done now – without considering all the variants for different regulations. There was industry guidance on this, which has been withdrawn following the Grenfell fire. Even where manufacturers have done this testing however, they won't take design liability for fire performance, leaving a vacuum in design responsibility that architects are expected to fill.

In addition, problems with performance of any kind, be it fire, acoustic, thermal, air tightness or water tightness, tend to happen at the interfaces between materials, so we would have to test every interface between every material. The 'math' demonstrates pretty quickly that with two types of timber frame, three types of insulant, and two external wall materials, joining two types of party walls gives you 24 tests. If you add in the varying requirements for changes to Building Regulations it comes to 72.



The answer is for manufacturers to collaborate to develop a set of standard approaches which can be tested

Rory Bergin, HTA Design

Unless testing houses can come up with a quicker and cheaper way of testing, this is not going to be possible.

I think that the answer to the problem is for the manufacturers of timber frame and other framing systems to collaborate and work together to develop a set of standard approaches which can be tested. Then fire consultants can use those as a basis to demonstrate that individual buildings are equivalent to, or demonstrably better than, a specific set of tests. Otherwise we are going to go in circles for years, and we are not going to be able to use timber frame to build more sustainable buildings – right at the point where we need it most.

Rory Bergin is partner, Sustainable Futures at HTA Design

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PRACTICE PROFILE



White Ink Architects

James Parker spoke to a Belfast practice founded at the start of the 21st century, which expanded to specialise in “difficult” mixed use schemes, and is now the first in Northern Ireland to be completely employee owned

White Ink Architects was founded in Belfast in 2001 by three architects, Sean Tunney, Claude Maguire and Joan McCoy. Initially called Maguire Tunney McCoy, it was rebranded as White Ink in 2003. The firm began as a partnership, but converted into a limited company in 2005, and took the plunge to full employee ownership earlier this year.

Tunney, Maguire and McCoy remain directors, but the company is now owned by a trust that holds shares on behalf of the employees, without individual risk being placed on them. This new ownership structure also benefits clients by further motivating staff, “as every employee has a vested interest in the success of the practice,” says McCoy. As well as sharing in the financial success of the business, staff “get to influence its future.”

The three founding partners had all come from studios working on multi-million-pound projects, and McCoy admits it was “quite a change to be working on smaller projects initially,” although the scale of jobs quickly grew. The first UK project White Ink was commissioned to design was an office fit-out in Manchester in 2005, and its reach has grown steadily across the country. From taking on its first admin assistant in 2003, the Belfast office now houses 32 staff, including over 20 architects.

Ethos

A key part of the practice’s ethos is to “bridge the gap between design and delivery” – i.e. “to be interested in both, where architecture realised is the aim – not simply designs on paper.” McCoy says that one of the firm’s points of difference is that it is “genuinely interested in construction and getting things built.” In addition, she says, White Ink “see every problem as a design problem – with a solution to be designed – whether it is planning a layout or working out a procurement strategy.”

Another important phrase that runs through the firm is ‘people first,’ considering everyone’s needs, from within the practice through to clients and external collaborators, contractors and building users. White Ink claim their designs are inherently informed by this, such as in residential projects, where “every single apartment is considered related to the needs of the occupants who will live in it for the next 70-100 years.”

Growing

As the practice grew, responsibility was delegated to individual team members, which now include an office manager, business support manager (covering finance, practice and IT), and a freelance IT consultant. Different team members hold responsibilities including Quality, Environment and Sustainability, Principal Designer, Specification and Marketing.

Alongside the three directors are five associates, but aside from this, the management structure is “quite flat,” says McCoy, as well as being meritocratic. “Anyone can be a project lead – if they show aptitude, responsibility, and talent.”

As projects have increased in size, the practice has naturally had to formalise roles and responsibilities within project teams – including defining the project lead and specific responsibilities. While their key expertise is in “complex and difficult” mixed use urban developments, they have also carried out refurbishments, industrial work, and university schemes.



Brentford Lock West Phase 2, delivered by White Ink Architects, concept design architect: Mae © Simon Kennedy

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Queen's University Belfast staff accommodation © Donal McCann Photography

Culture

To help maintain office culture during the pandemic, staff held daily Teams 'tea breaks', as well as a virtual Christmas party in 2020. Since returning to the office, the directors are consulting staff to retain a mix between home and office working.

When it comes to working on projects beyond Northern Ireland, despite being in Belfast, McCoy says that they "often find we can arrive in London earlier than someone located outside central London!" She reports that clients across the UK believe the practice has "a different attitude" to other firms; characterised by a sense of resourcefulness in particular. Having worked with generally lower budgets, and much lower budgets than London schemes, they have "learned to be extremely creative to produce great design on a small budget," and we bring these lessons to our larger projects. There is a resulting 'can do,' collaborative and practical attitude, she says.

Rather than going the management buy-out or external buyer route, the new employee ownership model means that future directors of the practice "will be determined by leadership skills and talent – not ability to access funds," says McCoy. This method also "allows them to secure the ethos and culture of the practice" – something that cannot be guaranteed with an external sale, where a buyer "might introduce a different culture or seek to take the practice in a direction that is not supported by the employees."

The firm is proud to have a workforce that is 40% female, and has recently added a Wellbeing team who are working with a clinical psychologist. This recently started by addressing physical wellbeing as well as a student 'lunch n' learn' programme "which aims to introduce them to all aspects of work in practice in a structured way."

Emma Wright, who joined in 2013, is an example of the practice's success in nurturing recruits, having won Belfast Telegraph's Young Architect of the Year in 2019. She worked on the School of Biological Sciences at Queen's University Belfast, which was awarded RIBA Journal Best on Show Readers' Choice

2020. Emma was instrumental in developing the practice's BIM protocol and the project was one of the first BIM Level 2 buildings delivered in Northern Ireland.

Other standout examples are Peter Greenwood, who joined in 2014, and established the practice's Environmental Management system. He has worked on the RIBA award winning Brentford Lock West, Queen Mary University London retrofit and newbuild and North Wharf Gardens Paddington mixed use hotel and education schemes. Last but not least, Sarah McGonigle developed White Ink's quality management system and applied a "wealth of technical and statutory knowledge" to both project delivery and the Construction Industry Forum NI.

Commissions

The practice says it has a strongly proactive approach to commissions: "It is important not simply to take things as read, but to look at the wider context – as there are often ways to obtain more value or to unlock opportunities that the client may not have seen."

The practice counts among its key skills peer reviews of other designs, for example if a client is considering buying a site with planning permission, the practice will identify opportunities to add value to an existing design. This allows clients to make informed decisions about site value based on realistic outcomes.

Recent projects that showcase the practice's range of strengths include a staff accommodation scheme at Queen's University Belfast, which showed how they could create "beautiful, modern family friendly homes" in a conservation area. The brick facade details were carefully considered to create a "modern reference" to adjacent Victorian buildings, and the buildings were carefully planned to optimise natural light into the living areas in each apartment and create sunny courtyard garden spaces to the south.

Brentford Lock West, London saw the practice of "adding value" to an existing design, "while ensuring that the architecture was not diluted," says McCoy. Initially the firm employed its knowledge to review the existing Stage 4 planning approved design to assist a contractor bidding for the contract. White Ink "completely rationalised the structural design of the basement and reconfigured apartment layouts to improve efficiency and to achieve a viable, buildable and compliant design solution, while retaining all aspects of the original design intent/brief and the specified quality of materials and finish."

The 'Block E' element picked up the RIBA London Award 2018, and phase two, Keelson Gardens, was shortlisted for the RIBA's inaugural Neave Brown Award for Housing in 2019, as well as winning the RIBA London Award 2019 and RIBA National Award 2019.

Goals

The practice's short-term goals, in addition to embracing a 'hybrid' home/work balance, are to "increase employee engagement under the new ownership structure." This will, says McCoy, "help us retain and improve our client and people focus," with the longer term goal being to use the fact that employees now directly benefit to "drive improvement." They are also tackling the current wider issues, including "putting structures in place" so staff are able to take the role of Principal Designer under the Building Safety Bill, with a goal to make the firm "leaders" in this post-Grenfell area. McCoy adds that they are also investing in training to "ensure that our team can lead the sustainability agenda to minimise our impact on the planet." ■

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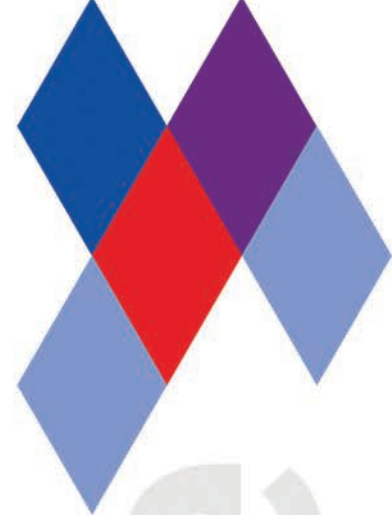
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THE PAVILION, PENNSYLVANIA FOSTER + PARTNERS

The University of Pennsylvania has announced the opening of The Pavilion, as a 'state-of-the-art' inpatient facility designed by the PennFIRST 'integrated project delivery team' with Foster + Partners, HDR, engineers BR+A, and LF Driscoll, Balfour Beatty and Penn Medicine. The building has been designed to "enable collaboration and research centred on patient-focused care," and to serve as "a blueprint for the 'hospital of the future,'" said the architects. Serving as a "bridge" across the urban academic medical campus, the design creates a new public square, and a focus for the surrounding buildings, "anchoring the Pavilion and creating new connections between the hospital and university campus," said Fosters. "The building's form and colour, and articulation of the facade, reference the historic Penn campus and are in keeping with the architecture." Gardens planted around the public spaces are accessible to visitors, and a new landscaped pedestrian path provides a direct connection with the public transport system. The Pavilion's patient care floors were designed with what's believed to be a unique, flexible planning system that enables the 72-bed floors to be broken down into smaller unit sizes that respond to changing needs and patient demands. The 504 inpatient rooms are "conversion-ready," with space and infrastructure designed to handle any level of acuity from medical-surgical to intensive care. The design is "sustainable, efficient, uplifting and sensitive to its surroundings, with the human experience in mind."



ATELIER GARDENS STUDIOS, BERLIN MVRDV

MVRDV has received planning approval for the first two studios in a scheme to "sustainably transform" the campus of Berliner Union Film Ateliers (BUFA), on the southern edge of Berlin's Tempelhof Airport. The five filming studios and assortment of ancillary facilities form a dense 23,800 m² campus: large, brick buildings define narrow alleys and open plazas. MVRDV's design takes advantage of the existing structures, while incorporating an "ecologically focused landscape," says the firm. The first of these developments are the transformation of the building known as House 1, and the renovation of Studio 1, a listed building. For Studio 1, the design needed to lengthen the lifespan of the building to ensure a sustainable future for the campus while also respecting its history. MVRDV's "low tech transformation" includes an intricate overhead curtain rail that becomes a focal point of the space, supporting a variety of colourful curtains, each with different functions. Brick walls are kept visible, while above the curtain rail, a skylight is added. The transformation of House 1 incorporates a wooden frame and climbing plants, delivering maximum impact with minimal material. This frame extends above the roofline to form a sheltered garden and rooftop pavilion.



FUTURE TIMES, QIANHAI, CHINA LWK + PARTNERS

LWK + PARTNERS in collaboration with DDON has won the international competition to design landscape areas of multiple sites of Future Times, in the fast-expanding Chinese city of Qianhai. It is one of the city's largest "transport-oriented developments" and forms part of a "low-carbon vision." LWK + Partners will design over 200,000 m² of landscape, taking into account Qianhai's urban planning objectives to be "ecological," "all-dimensional," and "compact." The resulting landscape scheme will "establish the overall development as a contemporary urban landmark," said the firm. The development is located in Qianhai's Guiwan financial business district, where most financial institutions and high-end commercial projects are expected to be sited. With functional buildings distributed across a massive site, the landscape team sees it as a key design objective to "guide and coordinate the circulation of people." Pedestrians will be "drawn naturally into the project through landscape features and environmental-friendly facades," said LWK + Partners. A skybridge will be transformed into a hanging garden island and two tower facades will be designed as a "vertical landscaping spectacle."



MASARYČKA, PRAGUE ZAHA HADID ARCHITECTS

Construction of the Masaryčka mixed use scheme in Prague is continuing, with works to construct the higher floors of cantilevered offices with terraced roof gardens. Planned to open in 2023, the 28,000 m² Masaryčka building incorporates seven storeys within its eastern section, and reaches nine at its western end. A reconstruction of Masaryk railway station, will create a new public park partially over the railway tracks, and will provide a new pedestrian route between Na Florenci Street in the north and Hybernská Boulevard to the south, in addition to enhancing accessibility to the railway platforms below. Masaryčka will replace the existing car park on Havlíčkova Boulevard with a new public square – a gateway to the city for suburban and domestic rail services as well as the planned airport rail link to Prague's Vaclav Havel International Airport. Targeting LEED Platinum certification, Masaryčka design incorporates a triple-insulated facade and natural ventilation, supported by a high efficiency plant with waste heat recovery systems. Photovoltaics will harvest renewable energy, while smart management systems will help to reduce energy consumption.



BASTIAN GALLERY, BERLIN JOHN PAWSON

The design of the Bastian Gallery in the Dahlem district of Berlin by John Pawson has been shaped by the idea of "re-examining prevailing contemporary notions of what constitutes appropriate space for the viewing of art." The gallery is a rectilinear volume, clad in sandstone and "set in nature." A series of full height openings, edged in galvanised steel, punctuate the facades. "The elongated proportions of the composition are subtly enriched by the vertical graining of the oak used for doors and for ventilation elements," say the architects. The building's 12.5 x 20 m footprint delivers a 500 m² programme, divided equally between ground floor and basement levels, with stone floors and ceiling heights of 5.6 metres in the public ground floor galleries, and 2.8 metre high ceilings in the downstairs staff areas. In the galleries, the detail of the viewing conditions are set by the pared back character of the spaces, natural light and the "thresholds drawn between the interior and exterior worlds of art and nature."

BAL and ARDEX UK achieve international greenhouse gas emissions reporting standard

Building Adhesives Ltd (BAL) and ARDEX UK, part of the global ARDEX Group, specialist manufacturers of construction materials for the tiling, flooring and general construction trade, have both achieved ISO 14064:1 (otherwise known as CEMARS) for the quantifying and reporting of Greenhouse Gas (GHG) emissions and removals.

Building Adhesives and ARDEX UK are the first companies in the ARDEX Group to achieve this standard and are believed to be the first companies in the tiling and flooring sectors to be reporting their GHG emissions through this internationally recognized standard.

This standard will assist both companies by providing accurate data to assess the impact of the various initiatives to be adopted in their efforts to deliver ambitious Carbon Neutral plans by 2030 (scope 1 and 2).

To achieve this internationally recognized standard, BAL and ARDEX UK worked with



Achilles (an independent consultancy) to accurately measure their GHG emissions and create positive strategies to manage and continually reduce impacts.

Achilles' Carbon Reduce (powered by Toitū) scheme highlights the necessary data required which is then measured, monitored and calculated under the ISO 14064:1 scheme.

Following successful completion and assessment, executive reports are produced for independent verification.

Solutions to manage and reduce greenhouse gas emissions at source were then provided, with external impartial auditors authorised to verify GHG inventories in accordance with the standard's requirements.

Even before achieving ISO 14064:1, BAL and ARDEX UK have put in place several measures to reduce their carbon footprint including: converting diesel forklifts to electric; partnering with a 100% renewable energy provider; replacement of energy inefficient lighting with more efficient LED systems; promoting the use of electric company vehicles and installation of EV charging points; reducing the use of "virgin" plastics; increasing the use of recycled raw materials.

www.bal-adhesives.com

www.ardex.co.uk

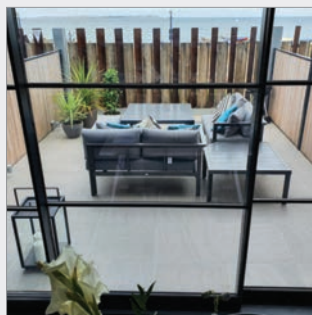
Sika's modern methods of construction division hits the mark on expertise



Sika's modern methods of construction division is testament to its world-leading status as a manufacturer and supplier of construction materials for a wide variety of applications. The team works with offsite manufacturing and assembly companies to look at how Sika products can be used as part of the process in this fast-growing sector. Sika's decision to create this team of experts in 2019 came at a time where offsite manufacturing was growing in popularity, as a result of its multiple benefits including improved quality control and reduced waste and speed of construction. Now, an extended team of offsite manufacturing specialists has been selected to cover a breadth of skill and expertise. Sika offers the industry's widest product ranges for sealing and bonding, roofing, building finishing, passive fire protection, damping and reinforcing, concrete, flooring, waterproofing and wall finishes for interior and exterior applications, and bathroom pod waterproofing and tiling systems. With extensive technical expertise and solid practical experience on every continent, in many climates and environments, Sika is a qualified, reliable partner for all manner of manufacturing and construction needs.

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Norcros Adhesives is the trusted solution for seaside new build properties



Norcros Adhesives has been involved in a project to construct a new development of houses and holiday lets in the popular seaside town of Whitstable, Kent. The project consists of seven houses for private sale and eight holiday lets. All are designed according to the local style to fit in with surrounding buildings and are finished to a luxury standard, offering spectacular views across the bay towards the Isle of Sheppey. The tiling contractor was Cerface of Gillingham, while the main contractor was Westridge Construction. The tiles were supplied by Plus 39 of Rochester and Solus Ceramics. Norcros Adhesives has had a long and successful partnership with Cerface, who prefer to use Norcros Adhesive products wherever possible.

"Projects these days are challenging enough," says Chris Clark the director of Cerface, "so to be able to use products from suppliers that you know will work makes a lot of difference. On this project we had every confidence that the Norcros Adhesives products would work very well for the areas involved."

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Itech and BMI Icopal shortlisted for award



A challenging and high-quality installation of three new warm roofs on the plant rooms of the Hatfield Tunnel in Hertfordshire saw Itech Roofworks – working in association with BMI Icopal – shortlisted in the Cold Applied Liquid Waterproofing category in the National Federation of Roofing Contractors' 2021 UK Roofing Awards. Itech installed the full BMI Sealoflex Prima System. BMI Sealoflex Prima benefits from accelerated curing, allowing it to be used at lower temperatures. Completely cold-applied, solvent-free and with no unpleasant odours make it more user-friendly for the installer.

marketingukandi@bmigroup.com www.icopal.co.uk

STA responds to the net zero strategy



The Structural Timber Association (STA) has welcomed the Government's Net Zero Strategy: Build Back Greener, which places a firm emphasis on reducing the embodied carbon of buildings by adopting more sustainable materials, such as timber. Andrew

Orriss, chief operating officer of the STA, commented: "Naturally, as the STA we believe that timber is an excellent building material when used in an appropriate context and our objective is – of course – to promote its many benefits. Our online library contains a wealth of documents, with information on all aspects of timber construction."

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BUILDING PROJECTS

AGAR GROVE CAMDEN, LONDON

Passivhaus goes large

Agar Grove is set to become the UK's largest Passivhaus scheme, with its housing tenants already seeing the benefits from the first completed phase. James Woodward, architect at Hawkins\Brown, tells Roseanne Field why the practice decided to pursue the 'gold standard' of energy efficiency for large-scale affordable housing

Agar Grove, earmarked for refurbishment as part of Camden Council's Community Investment Programme, was the biggest project the council would undertake within the overall scheme. Split into six phases, the project will provide 507 homes – both new build and refurbished – for new and existing tenants, and private sale, as well as new communal

spaces such as gardens, play areas, shops, a cafe and a community hall. The aim was for the project to be self-financing through the sale of the private homes on this sought-after north London site.

In 2012 Hawkins\Brown put in a joint OJEU bid with architects Mae, the latter having worked with Camden Council previously. Part of the plans included a



“The masterplan is built around a series of streets and squares that stitch the estate back into the surrounding streets”

James Woodward, Hawkins\Brown



PROJECT FACTFILE

Client: LB Camden

Masterplan: Hawkins\Brown, Mae, Grant Associates

Lead designer: Hawkins\Brown

Architects: Hawkins\Brown, Mae

Delivery architect: Hawkins\Brown (Phase 1c), Architype (Phase 1a/b)

Contractor: Hill Partnerships

Project manager: Arcadis

Structural engineer: Stantec (Phase 1a/b), Price and Myers (Phase 1c)

Services engineer: Max Fordham, Robinson Associates (Phase 1a/b delivery)

Landscape: Grant Associates

Passivhaus consultant: Max Fordham

Passivhaus certifier: WARM



comprehensive resident consultation that would largely dictate what direction the project would take, a concept that appealed to Hawkins\Brown. “We were attracted by the prospect of creating an exemplar regeneration scheme – Camden was keen on a resident ballot to establish the principle of the development, and in 2013 this was really unusual,” explains James Woodward, architect and Passivhaus certified designer at Hawkins\Brown.

At this stage however, Passivhaus wasn’t in the brief. Woodward explains that the practice has found on “a lot of projects” that when it comes to Passivhaus, “the client needs to develop confidence that it won’t have an adverse impact on cost or programme, by which time the scheme has already developed.” It was the consultation process with residents that led to the idea that Passivhaus certification could be the target for Agar Grove. Woodward explains: “Existing residents voted in favour of comprehensive redevelopment, as opposed to infill or refurbishment options.” With a major objective of the client behind the regeneration the estate being “to minimise fuel poverty,” all new blocks in the scheme will be built to Passivhaus standards.

The estate’s housing stock, which dates back to 1966, had become “inefficient, outdated and disconnected from the wider city.” An 18 storey tower block was at the heart of the estate, with low-rise blocks surrounding it, comprising 249 social-rent homes in total. “The masterplan is built around a series of streets and squares that stitch the estate back into the surrounding

streets,” explains Woodward. “Streets are lined with maisonettes and shared entrances, with bedrooms located away from the street at ground level, and each perimeter block contains a shared semi-private residents’ amenity space plus infant play space.” The central tower block will be stripped back to the concrete frame, and the space around it extended to provide amenity space. A new tower will house a community centre and tenant management offices.

The project was broken down into six phases in order to minimise disruption to existing tenants, and keep the community together. Phase 1a consisted of building 38 social rented homes on a site which previously housed garages predominantly, and four homes. This enabled, says Woodward, a “single phase decant” process for the entire estate – delivering on another of the client’s main objectives. “Camden had promised the residents that they could watch their new home being built then move just once, into their new home.” Only one family from those four houses elected to move away from the estate altogether.

A collaborative effort

A multitude of firms have been and are involved in the design and construction of Agar Grove. Hawkins\Brown have, alongside Mae, designed the masterplan and completed detailed planning for specific blocks. These were then individually taken on by different architects for their detailed design under the appointment of contractor Hill. Architype were the Passivhaus delivery architects for both Phase 1a and 1b.

Hawkins\Brown have also been appointed to deliver Phase 1c – 125 homes across two blocks – one of which they originally designed, and the other being by Mae. The Hawkins\Brown team contains three Passivhaus Certified Designers, including Woodward, and will be collaborating with Max Fordham who are also looking after the PHPP model.

Sustainability

While all new build elements are aiming for Passivhaus status, EnerPhit – the retrofit equivalent – is not currently being targeted for the refurbishment of the tower block; the team are instead aiming to achieve BREEAM Domestic Refurbishment Excellent certification. However, explains Woodward, “Until the structure is stripped back, we are unsure exactly what quality of fabric we have.” It will be taken back to the concrete frame and then extended, in order to minimise embodied energy, he says.

Designing for Passivhaus is demanding, and the typology as well as scale at Agar Grove was always going to increase the design challenges. “At the outset this was quite an unusual typology for a Passivhaus scheme,” says Woodward. Despite this, the standard wasn’t amended or revisited by the Passivhaus Institute in order for Phase 1a to receive its certification. A further advantage of the multi-phase approach is that the practice will take lessons learnt from earlier phases and apply them to upcoming ones on achieving the energy efficiency needed.

One of the main challenges encountered early on in the project was how to minimise thermal bridging, given heavyweight materials were being used for the facade (brick and stone). Minimising thermal bridging has been key, with masonry support required due to the brick cladding, explains Woodward: “This works hard to support metal balustrades and GRC window linings, so as little as possible bridges back to the primary structure.” Balconies have also been stacked where possible, and the designers “internalised some, to minimise the thermal envelope,” he adds. These internal balconies – or “external rooms,” also offer better privacy and shelter to residents.

Air tightness, another crucial element, was achieved through various design measures. “It was a mixture of concrete framing, wet plaster ‘parged’ blockwork infill, triple glazed windows and an array of airtightness tapes for various junctions,” explains Woodward. Blown mineral fibre insulation was “key to ensuring continuity of insulation, with minimal thermal bridging and avoiding a



Interior images © Tim Crocker

resulting performance gap,” he says. This insulation took up an additional 50 mm of space, but this was gained back thanks to the full filled external walls, which removed the need for a cavity.

One of the biggest challenges was avoiding overheating – largely from solar gain. The east and west facing facades in particular proved problematic, explains Woodward, due to the lower position of the sun in the sky. “Getting the window design right was tricky,” he says. “The proportion is key to get maximum daylighting for a given glazed area. We needed to work hard to achieve a balance, especially seeing as Passivhaus does not measure daylighting, but criteria still need to be met for planning.”

Windows and balconies on the south facade were particularly important for helping achieve these daylighting requirements and ensuring a pleasant living environment. The balconies have a “dual benefit” Woodward explains, not only providing outdoor amenity space for residents, but also shading during the summer months. “Their depth ensures that low winter sun can still penetrate deep into the plan,” Woodward adds.

The way tenants would use and live in the building was also key to maximising the building’s energy efficiency potential. Expectations of likely user behaviour were modelled in the PHPP software, with one of the “most difficult areas” being overheating, says Woodward, such as “assuming whether residents were likely to open their window if rooms felt too hot and stuffy.” All other elements were kept as simple as possible for





AGAR GROVE AWARDS

CIBSE Awards 2020: Project of the Year – Residential (Winner)

New London Awards 2019: Overall Winner; Sustainability Prize (Winner); Housing (Shortlisted)

London Planning Awards 2019: The Mayor's Award for Good Growth (Winner); The Mayor's Award for Sustainable and Environmental Planning (Winner)

Housing Design Awards 2019: Completed (Shortlisted)

RTPI Awards 2019: Excellence in Planning for Homes – Small (Shortlisted)

The Sunday Times British Homes Awards 2018: Development of the Year – More than 100 homes (Shortlisted)

The Sunday Times British Homes Awards 2015: Housing Project (Commendation)

Housing Design Awards 2015: Project Schemes (Winner)

BD Architect of the Year Awards 2014: Masterplanning & Public Realm (Shortlisted)

BD Architect of the Year Awards 2013: Masterplanning & Public Realm (Shortlisted)

residents, with most of the home technology “running in the background.” Nonetheless, he explains that they were given a “detailed home user guide to ensure any questions were answered.” The controls were kept as simple as possible, for example a dial in the kitchen to control the MVHR boost for cooking or bathing.

MVHR was used internally in Phase 1a, and this is the intention for all future phases. Communal plant has been installed on the roof, to provide convenient access for maintenance purposes – and because it provides a cleaner air source. Looking ahead to the rest of the development, the third phase will use an all-electric system with communal air source heat pumps, an ambient loop and a unit-based water-to-water heat pump and tank, only possible due to the recent decarbonisation of electricity in the national grid.

Further key sustainability design measures on the project include a site-wide SuDS strategy, centred around permeable paving and attenuation, and an emphasis on biodiversity. “Biodiversity targets are based on Camden’s own standards and have resulted in most roofs being either green or planted as a wildflower meadow.” Over 100 bird and bat boxes will also be installed across the estate in what Woodward describes as “suitable locations integrated into the brick facades.”

Reconnection

One of the major focuses for the masterplan was improving the layout of the estate and its connection with the wider area – a task Woodward says was an essential part of improving the estate as a place to live. “The existing estate had a perimeter fence, and no clear hierarchy between public and semi-private spaces,” he says. “Landscaping was poorly programmed, and mainly acted as a buffer space to ground floor bedrooms.”

The layout was reconfigured to make it “coherent,” connecting the estate to the city via pedestrian and cycle paths. Vehicle access has also been provided although the only parking included in the masterplan was for existing blue badge holders. If and when residents move, the plan is that the parking spaces will be given back to the landscape.

At ground level the practice included maisonettes which allowed them to lift the bedrooms previously at this level up and away from the street. A two storey plinth in the form of different textured brickwork to that above “gives a more expressed character to the elements closest to the street, with deeper window sills and Juliette balustrades,”

says Woodward. Residents benefit from “passive surveillance” from the waist-height kitchen windows. Double height communal entrances also sit within the plinth – these provide a direct view through to the communal garden upon entering.

The facade is predominantly brick, with reconstituted stone; both materials chosen to complement the surrounding buildings. Stone banding was included to give “depth and detail,” and “break up what could otherwise be quite a dominant facade,” says Woodward. Decorative metalwork was also included in the form of a side panel to windows, doors and balconies, further reducing the proportion of brick and, explains Woodward, “ensuring a low proportion of glazing for the north facade, minimising heat loss as there would be relatively little gain on this elevation.”

The building was designed to bring in as much natural light as possible into both flats and communal areas such as stairwells and corridors. The flats give residents a larger living area than they previously had – Woodward states the practice’s previous work “helped with producing efficient flat and core layouts.”

Moving forwards

Completion is hard to put a time on due to the single phase decant – each phase requires demolition before construction can begin, which in turn relies on the previous phase being completed so residents can move. The budget is also frequently re-appraised as the market fluctuates, dictated by the potential value of the homes to be privately sold.

With residents now living in Phase 1a, Woodward says they’re currently measuring a 70% reduction in their energy bills – it had been estimated a 90% reduction could be possible. “Residents are very happy, especially those that came from overcrowded homes, and those who have purpose-built wheelchair homes for the first time,” says Woodward.

Looking ahead to the rest of the project, Woodward says one of the biggest challenges is going to be applying the Passivhaus construction methodology that Hawkins\Brown developed to the new build tower in Phase 2b. He also anticipates the retrofit of the existing tower will “bring its own complications with extending floorplates and the compromises required when dealing with existing structures.”

Performance measurement is being carried out within the completed apartments to enable lessons to be learned for the future phases, as well as a qualitative survey of how residents are using their new homes. ■



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**BUILDING
PROJECTS**

**STAVROS NIARCHOS FOUNDATION LIBRARY
NEW YORK CITY**

Opening a new volume in NYC

A renovation project on 5th Avenue opens up a public library facility and resolves the functional anomalies of a former department store to provide high quality spaces for all users. James Parker reports on a fruitful collaboration between two leading practices

On 5th Avenue, sitting adjacent to the famous Beaux-Arts Stephen A Schwarzman Building, the main research library of the New York Public Library, is a more modest, but important part of the overall network.

What was once a deep-planned department store, then the Mid-Manhattan Library, has now been reimagined as the Stavros Niarchos Foundation Library (SNFL), by a partnership of Mecanoo and New York firm Beyer Blinder Belle. The

WIZARD'S HAT

The aluminium 'Wizard's Hat' that crowns the building combines some interesting geometry with a subtle reference to nearby Beaux-Arts structures



© John Bartelstone



© Max Touhey



design opens up the interior to provide a hugely improved environmental quality to attract new users, and adds a striking green 'wizard's hat' and roof terrace.

Following the completion of its much smaller (although still 16,722 m²) sister, and working to the team's masterplan, the practices are now continuing with the sensitive updating of the 1911-built Main Branch itself, which is due to complete in 2023. A research library with a vast paper, digital and image archive spanning the history of New York, its top floor houses the Rose Main Reading Room, which in part provided inspiration for the refurbishment of the Mid-Manhattan Library.

Mecanoo, and its founder Francis Houben, have a storied track record in libraries, from the Stirling Prize-nominated Library of Birmingham, to the expansive green roof-covered library at the University of Delft, to the refurbishment of Mies Van Der Rohe's Martin Luther King Memorial Library in Washington DC. BBB brought vital expertise from overseeing major NYC renovations such as restoration, rehabilitation, and adaptive reuse at some of New York City's most iconic and treasured landmarks, such as Ellis Island, Grand Central Terminal, and New York City Hall.

The practices were selected jointly by the City for this high-profile project, needed to help bring greater logic to the buildings for

thousands of daily users. It was part funded by NYC, but received a large donation from The Stavros Niarchos Foundation, the legacy of the Greek shipping magnate.

Elizabeth Leber, managing partner at BBB, says the working relationship between her practice and Mecanoo was "excellent from the start." She explains: "There is a common respect for each other and for the work, and a spirit of collaboration, directness, and transparency between our firms and between Francine and me as architects, women, and individuals."

Three teams were established within Mecanoo's HQ in Delft, but it also set up an office within BBB's New York base for the five year project duration. The client's brief, built around the 'life-long learning' concept, essentially to provide facilities for all ages, was a "good foundational document," says Leber. But being prepared a year before their appointment, the architects reviewed "whether it still reflected the space needs and programmatic aspirations of the librarians, curators, other staff, and our leadership team," says Leber.

The resulting scheme encompassed both buildings, and a third existing structure which was to be closed, so the close collaboration was essential to navigate its complexity; bolstered by extensive use of BIM. This allowed both practices to work on the same models, but also gave the client the opportunity to experience the ongoing design in 3D using VR headsets.

Masterplan

Francine Houben gives *ADF* an insight into the fundamentals of library design; "A lot of architects think that libraries are about books, but they are about collections." She explains that tackling both buildings simultaneously enabled the two practices to analyse and resolve their programme issues, across a wide range of physical and digital collections.

There were some obviously illogical aspects to the existing programme. For example, the children's library was in the SASB (which is a more discreet research facility), and the picture collection was in the circulating library, so these were switched to the other respective sites.

The overarching intent of the masterplan was to try and provide a connection between the two buildings, given that they are separated by busy 5th Avenue, to form one 'campus.' One key means of achieving this was by ranging seating along the north-west facade to ensure users have a clear view of SASB, and literally to raise the roof



© John Bartelstone



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by 1.6 metres, to enable open air visual connection with the building's historic counterpart from a new terrace.

Design approach

The SNFL is the largest lending library in the New York Public Library network, with 1.3 million visitors annually. Being designed as a store, which remained its function until the 1970s, it has a more prosaic, although elegant look. As well as a large lending library, it also accommodates English teaching and other workshops and classes.

As well as taking detail cues from the much-loved research library across the road, the architects also “tried to listen to the logic of its programme,” says Houben, when it came to the redesign of the lending branch. They would need to achieve the aspirations without extending beyond, or altering, the historic envelope. That being said, fortunately the six-storey building was not a ‘designated individual landmark,’ which, says Leber, “gave us more latitude.” She adds that despite this, it has “great bones, good visibility, and a stately presence.”

Despite being well used, says Houben, the six-storey structure's internal design meant it was “not a healthy building, with dark spaces, high shelving and poor ventilation.” A small pocket park sits to the north, however windows facing it had been filled in, so one key move was to open up views of

this precious green space.

The chief design challenges were an “enormous amount of columns,” alongside the fact the building would have to rehouse its 400,000 books, while opening up the dark floorplate and accommodating the children's library. However, if the architects didn't use high shelving, which creates its own challenges, “all the floors would be full of bookshelves,” says Houben.

Slightly emulating the ‘hanging book wall’ Mecanoo devised at Delft University of Technology, the architects designed a hybrid floor plan combination – removing and replacing a large part of the building's rear flank internally, to provide a “Long Room” over five levels, containing tall bookshelves. Houben was also inspired by the Long Room at Trinity College, Dublin, where bookshelves are perpendicular to the axis.

The key idea for this 60 metre long space, was to still make it “browsable by hand,” despite housing a high volume of books, thereby freeing up the rest of the floorplates to have a variety of collections in low-level shelving.

A three-storey atrium was created above the ground floor, with tall windows opened in its red-painted south wall, providing views over the previously unseen pocket park. The atrium separates the retained existing three floors of lending library space from a new compact structure of five slim

“A lot of architects think that libraries are about books, but they are about collections”

Francine Houben, Mecanoo

PUBLIC SPACE

The building was opened up to the rear, adding an atrium and new steel floors – housing tall bookshelves arranged perpendicular to the axis



© Max Touhey

REFERENCE

The artwork to the atrium ceiling makes a subtle reference to the historic painted ceiling of the much-loved research library across 5th Avenue

steel floors running the length of the ‘leg,’ filled with bookshelves arranged at right angles to the open space.

Such an arrangement of shelving, when placed across a main library floor, is “always unpleasant,” says Houben. However, locating it at the other side of the atrium means it doesn’t impede views, circulation, or the overall experience, and in fact imparts a vibrant new feeling to the space.

There is a glazed bridge link at third floor level, and a ceiling mural by New York artist Hayal Pozanti – a subtle reference back to the SASB’s Rose Main Reading Room.

Interior quality

The double-height ground floor, including a reinstated mezzanine, has a lively “grab and go” feel in terms of its library functions. The architects have made a virtue of the massive square columns, painting them bronze to add to the sense of arrival. Self-service desks sit along one side to enable visitors to return books, moving forwards to the reception if they need assistance.

The architects designed long oak tables hung between the columns throughout the building, and chairs, both of which in their materiality and form echo those in the Rose Main Reading Room in the SASB building. The architects also kept the generous existing stairs to the mezzanine

level, fitting with Houben’s aim to “make a walkable building.”

Another long table on the ground floor overlooks 5th Avenue, and has been envisaged as a popular, sociable meeting place. The architects created a wide variety of social and quiet spaces throughout the building. Many areas, including the ground floor reception hall ceiling, have slatted timber acoustic ceilings, although some are treated differently. A table adjacent to the lifts on the ground floor, has acoustic slats with LEDs placed between them. Levels five and six contain a Business Library and Adult Learning Centre respectively, connected by a further stair void above the atrium. The feel is a little more “protected” at level six, says Houben, with people visiting the learning centre “sometimes shy, because they don’t speak or read English very well.”

The long tables, connecting the columns, are placed to exploit the grid differently on each floor, to create “different atmospheres” on each, appropriate due to the different collections and users. The fourth floor benefits from the longest table, and a low level ‘seat’ version of the approach can be found on the second floor, enabling long vistas across the spaces.

The long table in the learning centre has an important role, hoped to provide a strong “community feeling,” says Houben, which will help support people with English as a second language. There is perimeter seating throughout, with carefully detailed composite desks running along the windows giving great views of the city.

Attracting children & teens

As they did at the Library of Birmingham, the architects created new voids for young peoples’ library services within a basement/sub-ground floor level. For these user groups, this offers benefits of being closer to street level, “but also protected,” says Houben.

The open plan area still manages to separate the teenage area the younger children, using a multi-function space bookable by either section of the library. Each area has its own well-crafted, generous staircase, and in the case of the teenagers’ area, glazed ‘labs’ where users can learn current skills like how to make a podcast. Space for such studios was granted by the floorplate being larger than other floors, thanks to extending underground beyond the perimeter of upper floors.

Borrowed natural light comes down to the level from the ground floor glazing, and



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‘nook’ spaces with special acoustic treatment provide more privacy for children to read away from the more social areas if needed. A further internal glazed partition enables kids to drop books and view a sorting machine grab and process them.

Liz Leber says that there are some key interior design aspects which bestow particular qualities to each area to increase library use. “The technology enhancements in the Teens’ area, the pops of colour in the Children’s area, the professional atmosphere of the Business Library and Adult Learning Centre – these are what we hope will attract New Yorkers and visitors to come and enjoy the many services that SNFL provides.”

A new outdoor space in NYC

The roof terrace has had a series of major interventions, beyond elevating the floor level so that users can look over the parapet at the stunning views along 5th Avenue. The addition of the ‘Wizard’s Hat’ in green-painted aluminium adds greater presence in the streetscape, conceals plant, and ties in with the metal roofs or ‘chapeaux’ of several historic buildings nearby. Some are in the Beaux-Arts style, like the adjacent SASB, such as one visible from the new roof terrace. Lights placed along the edge of the overhanging canopy give the roof a decorative touch that further echoes Beaux-Arts design.

The ‘Hat’ covers three connectable lecture rooms, plus an events space and cafe. The canopy protects users from the cold but also heat that can challenge New Yorkers, despite the delights of this new, publicly accessible outdoor space in the heart of Manhattan. With the final touch of a sunken ‘secret garden’ on the original roof level, Houben says, “now everyone wants to get married here!”

Reactions

Houben reports that the clients and users are pleased with what the architects designed to be a “timeless building.” It subtly emulates the SASB (one of the city’s most popular public buildings), using materials like oak and terrazzo, and while the facade has been renovated, and windows renewed, the original 5th Avenue entrance has been kept.

Houben adds that bringing in Mecanoo was a “big risk,” for the city – “why use an architect from abroad?” But in solving the riddle of excavating substantial space from the plan – while housing all the books previously crammed into the structure – and not breaking the envelope, she says: “I thought we really brought something from the Netherlands to New York.” Houben concludes: “Sometimes libraries can be about who makes the craziest building; I think we just made a good building.” ■

The key idea for this 60 metre long space was to still make it ‘browsable by hand,’ despite housing a high volume of books

Newly renovated church blessed with warmth from secondary glazing installation

Downing Place United Reformed Church is situated in Cambridge. It was formed in June 2018 following the joining of Emmanuel and St Columba's United Reformed Churches, which were previously situated in different locations, but in close proximity. Downing Place United Reformed Church occupies the former St Columba's building in Downing Place, which was built in 1891 in the Early English style and stands within the Historic Core Conservation Area. The redeveloped St Columba's site has been extensively renovated as part of a £3.3 million project led by Archangel Architects into an open and inclusive church, and community centre.

The main contractor Coulson Building Group contacted Selectaglaze to discuss secondary glazing solutions for the purpose of thermal retention.

56 units were installed; comprising of four Series 45 side hung casements in the Chapel and 52 Series 46 slimline fixed lights installed



in the Nave. The slimline Series 45 hinged casement system is suitable for treating many types of window and standard sized doors. Neat flush hinges and slim handles or flush locks provide clean internal lines. The Series 46 slimline fixed light can be shaped or curved to a full circle – ideal for church windows that do not need to be opened regularly. Little maintenance is generally required to well designed and constructed stained glass. Both the Series 45 and 46

secondary glazed units will reduce heat loss by up to 50%. High performance compression seals will almost eliminate drafts and ensure much greater comfort near the window.

A large circular primary window in the Nave was perhaps the most complex treatment due to its shape and elevated position. Having previously worked on a similarly large circular window, a timber mullioned cartwheel frame was crafted to securely hold the secondary glazing. The timber subframes were built in segments with each mullion split to be screwed together within the window opening during installation, forming the cartwheel frame. Seven bespoke Series 46 fixed light segments were made for it and glazed with 6 mm toughened glass to give additional rigidity and structural strength.

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Premier Tech Water and Environment is pleased to announce the launch of its Rewatec range of compact and vertical pump stations. Building on over 50 years' of experience in the design, development and manufacture of innovative water and wastewater treatment systems, Premier Tech has redesigned its range of compact and vertical pump stations to provide a reliable and efficient solution for raising sewage, effluent, wastewater and surface water in areas where a gravity discharge is unavailable. By consolidating the design methodology and relevant componentry of the existing range where appropriate, and by analysing the operational effectiveness of each tank, Premier Tech has streamlined its manufacturing and ordering process to significantly reduce lead times across the new range, resulting in a much quicker delivery time for all its customers across the UK. In addition to increased efficiency, the performance of the new compact and vertical pump stations has also been elevated, providing robust, easy to install and long-lasting solutions for total peace of mind. As part of the new range, a single pump is provided with every pump station as standard.

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Premier roofing with BMI Icopal



Originally built in 1889, the Natural History Museum at Tring houses one of the world's largest and priceless collections of stuffed and preserved animals. With the existing flat roof sections of one building nearing the end of their life, swift remedial action was required.

Faced with a variety of challenges for each section, BMI, working with IMA member, Corby-based Premier Roofing Systems, specified a number of products from its comprehensive range of bitumen membrane solutions. The recommended solution was the BMI Profiles XL system incorporating BMI Icopal Thermazone insulation.

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From neglected bungalow to forever home



When Mark and Jayne Holdsworth bought a neglected 1960's bungalow, they could already envisage a fantastic forever home. With the building situated on a steep slope, the floors needed to be installed to take the levels of the house up before making the building watertight. The Holdsworths' builders' merchant recommended West Fraser's CaberDek and the results spoke for themselves! "We needed a hard-wearing heavy-duty product that provided protection from the elements. With CaberDek that's exactly what we got!" said Mr Holdsworth. Samples of CaberDek can be ordered on the website.

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Test data in the frame

Steve Griffiths of Taylor Lane Timber Frame and the Structural Timber Association looks at the latest developments on fire test data in the timber frame industry, post-Grenfell

For many years, the construction industry – not least the timber frame sector – has relied upon fire test data provided by plasterboard manufacturers. Plasterboard is the industry standard for dry lining walls in domestic properties and provides good fire protection as it is designated a ‘material of limited combustibility.’

Plasterboard does not form part of a timber frame kit. Typically, this comprises wall panels, roof trusses and joists. Most standard wall panels are designed with reflective breather membrane, OSB, and a timber stud. Many frame manufacturers then offer a variety of panel options which include additional products such as insulation, vapour control layers, service battens and conduits that can be fitted offsite. The plasterboard is fitted onsite by dry liners once the timber frame has been erected.

Post-Grenfell, some plasterboard manufacturers withdrew their test data however, and the responsibility then rested on UK timber frame manufacturers to produce independent fire resistance test evidence for their bespoke products. These are tested in accordance with European test standards – BS EN 1365-1:2012 (walls) and BS EN 1365-2:2012 (floors).

Wall systems for example, must meet the REI 30 and 60 minute standards, with REI defined as R (load bearing), E (integrity) and I (thermal insulation). They are tested on the internal face only.

The wall is also under load during testing to mimic the full permissible load of the structure. In the past, fire tests were conducted with either 60% or 100% load ratio. Today, there is scant guidance on load ratio, and it is down to the test agency to decide on the load applied to the panel for testing. The timber frame industry is working hard to standardise this, so that there is a commonality to loadings applied and harmonised testing of materials.

A ‘pattern book’

The testing undertaken by timber frame manufacturers and industry organisations is

complemented by a research project led by the Structural Timber Association (STA) – representing the structural timber sector and associated supply chain companies.

The STA has invested in a “fire in use” research project to test commonly used timber frame wall, floor and roof make ups. This work has been done in partnership with CSIC, University of Edinburgh, and trade associations and has been reviewed by BRE Global. The pattern book of EN tested timber wall, floor and roof systems provides best practice recommendations for the design, specification and construction of buildings up to 18 metres. The intention is that it will develop as the STA collaborates with suppliers and organisations to increase the number of systems.

Fire stopping socks

One vital element in fire stopping is the fire stop sock which restricts the spread of fire and smoke within external masonry walls. These products are often the responsibility of the timber frame manufacturer, and as such can be supplied and fitted by them. However, due to potential ‘tampering’ by subsequent trades, this responsibility is on the proviso that evidence is provided when the timber frame is handed over.

Typically, an architect would specify a 50 mm clear unventilated cavity in an external masonry wall. Fire socks break up this cavity, limit the oxygen, and ultimately stop the spread of flames and smoke. They offer flexibility, tolerance and adaptable compression. This can be particularly useful in the gable end of a single dwelling where the tolerance may have drifted with brick laying. Fire socks can also assist in closing gaps between units, for example, in the roof space over the party wall spandrel. One consideration is that because there are too many variables in a render or lightweight cladding finish, a timber frame manufacturer would not supply fire socks for these.

Steve Griffiths is technical director for Taylor Lane Timber Frame and committee member of the STA fire task team



The timber frame industry is working hard to standardise, so that there is harmonised testing



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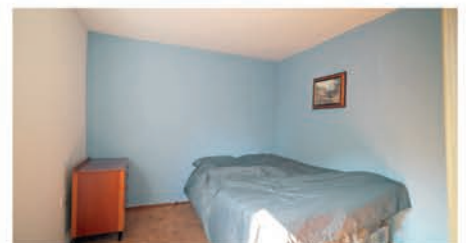
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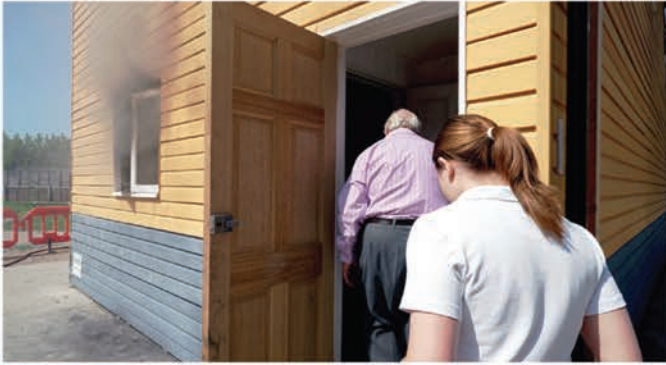
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See more details of the fire test and the results overleaf.*



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5: One of the burnt rooms rapidly and fully restored and ready for occupancy. Removal and replacement of burnt plasterboard and replacement of electric fittings took about 2 hours and 40 minutes.



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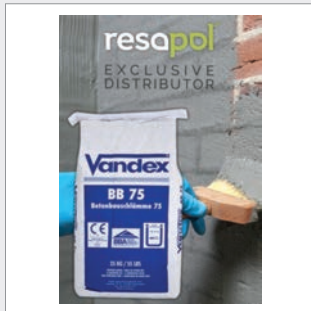
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Hörmann UK showcase expertise at The Building Centre, London



Hörmann UK has opened an exhibition space at the popular Building Centre in London, to demonstrate the wide-ranging benefits of its extensive product portfolio to architects and specifiers. Celebrating its 90th birthday, the Building Centre promotes innovation in the built environment and provides Hörmann with the opportunity to provide professionals across the Capital with a collaborative and engaging environment where they can gain inspiration and advice for upcoming projects. Hörmann UK's popular PORTAL Journal, which showcases and explores the latest trends and advancements in architecture in Europe across 50 issues, will be hosted on an interactive podium to demonstrate the impressive capabilities of Hörmann's product offering. Visitors will be able to use a digital platform to access information regarding Hörmann's diverse product range, including multi-function and fire rated steel doors for commercial construction projects, and its high quality and aesthetically striking internal doors for residential developments. Information regarding Hörmann's popular and robust loading solutions for the logistics industry will also be available.

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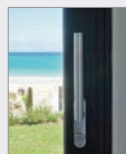


Freefoam Building Products are proud to announce the launch of a new animation style video to illustrate how to fit cladding. In recent years Freefoam have seen a steady rise in sales of its PVC cladding range.

However, in the last 18 months, with homeowners using disposable income to improve their properties, sales have skyrocketed. Freefoam have recorded a 55% increase in sales making cladding a fantastic opportunity for any home improvement company, builder or PVC fitter. Research has shown that fitting video's are incredibly useful and well received by installers and DIYers alike.

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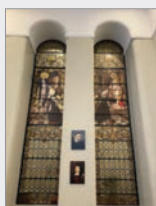
Coastal Group combines style with durability



Coastal's BLU Range of 316 Marine Grade Stainless Steel Hardware has been fitted to several projects at the Carbis Bay Hotel & Estate, including the Beach Lodges and new Orangery. Being located on the coast, a hardware solution was needed that combined faultless performance with the right aesthetics and protection from corrosion. Coastal's BLU Hardware became the obvious choice due to its winning design combination of style and performance. The BLU range is made from 316 Marine Grade Stainless Steel, available in contemporary and classic styles, and suited across a number of finishes. It comes with a Lifetime Guarantee.

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ASWS shines in specialist glazing



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Senior helps build The Nest



Various solutions from Senior Architectural Systems have flocked together to create The Nest, a new community sports facility in Norwich. The new state-of-the-art sports centre features Senior's slimline SF52 aluminium curtain wall system alongside SPW600 aluminium windows and both SPW501 and SD automatic sliding commercial doors. Sustainability and life-cycle costs were also an important part of specification process, with the durability and cradle-to-cradle recyclability of Senior's aluminium curtain wall, doors and windows making them the ideal choice.

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Traditional is the new modern

Tom Wright of George Barnsdale explores the use of timber in ‘minimalist’ designs



“We must recognise the importance of timber in overcoming our climate challenge,” David Warburton wrote to his fellow MPs recently. On paper, politicians are making the right noises, having enshrined into law a commitment to reduce carbon emissions by 78% versus 1990 levels. The MP goes on to predict that we will move from a “20th century built environment comprising concrete and steel, to a 21st century that lives in harmony with nature.”

Modernist architects often ask whether it is possible for a timber window to look right in a minimalist project, and the response is always ‘yes.’ People are increasingly incorporating timber into contemporary designs, combining modern Passivhaus standards with sustainable, carbon reducing materials. A great example is Hackbridge Passivhaus Plus Primary school, which is described as a modernist log cabin. Using contemporary machined timbers that are sleek and modern, unlike the rustic timber frames of the past, it is possible to achieve a minimalist aesthetic. Engineered timber is much less likely to twist and warp, meaning symmetry and form are easier to achieve than was the case with old timber buildings.

As timber window manufacturers, the increased use of timber in the built environment is heartening, but we still regularly face questions about the durability of timber windows and doors. This is a hangover from the poorly made,

cheap wood windows used in low cost housing of the 1960s and 1970s which gave timber a bad name, ably fuelled by the strong marketing messages of the PVCu market. In fact, modern engineered timber windows are scientifically proven to last 65 years or more with minimal maintenance if made to approved standards. However, there is a role that architects can play in ensuring they last a lot longer than this.

The modernist styles of buildings incorporating flush windows and flat roofs is far from ideal when it comes to protecting buildings in a four season, temperate climate with wide variation in rainfall and temperature. In fact, water ingress is responsible for a high percentage of claims against architects. The technology developed in modernist design would have impressed architects of the late 19th century, but they would be surprised at the abandonment of precedent in vernacular design and detailing gleaned over centuries of trial and error.

There are a few things to consider when it comes to successfully incorporating timber windows and doors into a design. Where possible, protecting the building from rain and harsh sunlight is the key. From the foundations up, the act of displacing water away from the building extends the life of the windows as well as protecting the walls. For instance, overhanging eaves are great for helping to control temperature inside the building, as long as you can avoid cold bridging.

It is possible to achieve a minimalist aesthetic using contemporary machined timbers



While traditional details may be at odds with the clean lines of modern building projects, there are lots of ways of achieving the same result using contemporary architectural language and design elements. Peter Barber Architects for example have mastered the art of combining a British vernacular with the demands of contemporary architecture.

When it comes to positioning the windows, they should ideally be set back in the reveal – this helps to protect them further from adverse weather. The Orsi Kaneh building in Iran is a great example of how a timber building can be optimised to deal with extreme weather whilst retaining a contemporary feel.

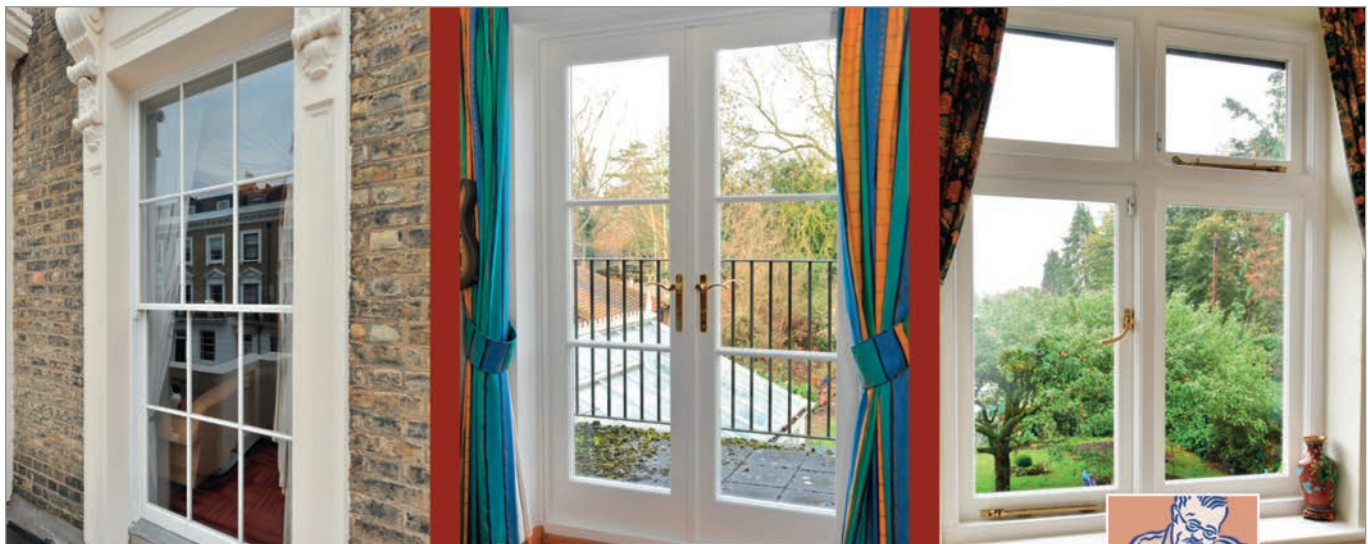
It is advisable to try to set the windows on stone, tile or aluminium and avoid extended cills. Much of the damage that occurs to windows starts on the cills and in the bottom joints where water sits and eventually moves up the grain of the timber if they aren't made correctly. Whilst modern engineered windows incorporate precision joints, end grain sealing and modern breathable coatings, sitting them on stone would help preserve them even further and reduce maintenance. Of course, there are

considerations around the sourcing of the right sustainable materials here too.

Timber doors can prove a challenge. In order to satisfy Part M of the Building Regulations (covering accessibility), there is a tendency to create a contradiction between the need for level thresholds, and the demands of a sustainable future. Many architects have a habitual cognitive bias against timber in favour of aluminium, due to the outdated perceptions of timber. There are gains to be made environmentally by going for timber doors – which are usually more competitively priced too.

While there is no perfect solution to the climate crisis, as hosts of COP26, Britain needs to be leading the way when it comes to the most sustainable building material available – timber. The creativity and vision that architects possess should enable them to overcome the connotations of old fashioned, traditional timber designs to create modern, sleek, stylish and contemporary buildings that are also kind to the environment and more pleasant to live in.

Tom Wright is managing director at George Barnsdale



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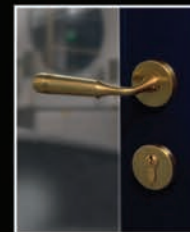
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Garador's extra secure and highly insulated garage doors – the way forward for modern homes



Home security remains a high priority for homeowners throughout Britain and having extra security in place, from high security window and door locks to electronic surveillance, is a growing trend. But one area that is often neglected is the garage.

Garador's Premium Sectional Doors offer a number of outstanding design features:

High security

A garage door can be the first port of call for a burglar as it helps them gain access into the main house, but increasingly burglars also target garages for what they can find inside. With modern DIY and gardening equipment, home gyms, and now some being used as home offices, garages can provide valuable takings for a modern burglar.

Britain's leading garage door manufacturer, Garador, recognise the importance of high-security garage doors and recently introduced Secured by Design (SBD) accreditation to their fully insulated sectional garage door

range. The Secured by Design badge is a clear indication that the product has a much higher level of security and has undergone rigorous testing to withstand an attack from a burglar.

For full SBD accreditation, these doors also need to be fitted with a GaraMatic automatic operator. These operators transmit using 128-bit encryption that is used by many banks today for their online banking security, so no one can copy your signal but importantly, the system also has a mechanical locking mechanism built into the operator boom. This stops potential burglars from forcibly lifting the garage door and gaining access to the garage.

High insulation


While security is today a vital element, Garador haven't forgotten insulation, another aspect that is essential in a modern home. Garador's exceptional premium sectional garage doors have been specifically designed to offer a high level of thermal insulation. Each section of the door is 42 mm thick and filled with PU foam. Additional features also

include rubber seals on all four sides, to ensure weather and drafts are kept outside. This thermally insulated design is ideal for keeping the garage warm and dry, especially when it is adjoining the main house when it can help to lower your heating bills.

Contemporary design

As with any major feature in a home, design is also key and Garador have ensured that while these garage doors offer outstanding security and insulation, they also excel in other facets to suit modern properties. A very minimalist modern appearance is perfectly suited to contemporary architecture characterised by individuality, but it is also practical with door sections that lift vertically and run on tracks back into the garage meaning there is no "kick-out" from the door and parking right up close is possible. Garador's range of Premium Sectional Doors are the way forward for any modern home.

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Schöck Isokorb for Passivhaus Large Project of the Year

Winner of the Large Projects category of the UK Passivhaus Awards 2021, the first phase of Agar Grove, in Camden – anticipated to be the UK's largest residential Passivhaus development when completed – tackles occupant wellbeing, climate action pledges and fuel poverty. In meeting such high levels of sustainability, a key element is the avoidance of thermal bridging; and one of the most effective countermeasures has been incorporated – Isokorb technology from Schöck.

Balconies always pose a risk

Throughout the 493 home redevelopment, brick and reconstituted stone facade materials predominate, with stone banding providing depth and a quality finish to the balconies that run the full width of the facade. Balconies are always likely to pose a risk when it comes to thermal bridging and it is here that the design detailing involves the first of the Schöck load-bearing structural thermal break types used at Agar Grove – the XT type K. Thermal bridging is a frequent cause of increased heat and energy loss and also condensation, which is likely to result in mould formation, building damage and even consequent health implications. The Isokorb XT type K for concrete-to-concrete applications is one of the most technically advanced countermeasures for incorporation into Passivhaus projects and features a compression module HTE-Compact and 120 mm insulation thickness. Designed for free cantilevered balconies, it transfers negative moments and positive shear forces.



Image – Jack Hobhouse

More thermally efficient than wrapped parapets

The second Schöck product at Agar Grove protects against any thermal bridging risk at the parapets – without any wrapping being required. With most parapets, the conventional method is to wrap the perimeter of the wall with an insulation barrier. However, the Schöck Isokorb XT type A is a product that requires no wrapping and which offers a more cost-effective and more thermally efficient solution. Its installation results in low psi-values, significantly reduced heat loss, greater freedom of design – and there is no risk of any additional thermal bridging through balustrade fixings. Other

key benefits are durability and water impermeability, so there is no maintenance required due to waterproofing problems.

Unquestionable environmental performance

Not only does the Isokorb range provide a number of solutions to meet Passivhaus standards, it also exceeds the requirements of the Future Homes Standard, helping the industry move towards the Governments 2050 net zero carbon targets. In addition to concrete-to-concrete and maintenance free parapets, there are solutions too for concrete-to-steel, steel-to-steel – and innovative technology from Schöck even enables the retrofitting or renovation of balconies. Products meet full compliance with the relevant UK building regulations and there is also the security of independent BBA Certification, which provides NHBC approval. The requirement that the temperature factor used to indicate condensation risk (fRSI) must be greater than, or equal to, 0.75 for residential buildings, is easily met by incorporating the Isokorb.

Contact Schöck or visit the website for a full introduction to the extensive range of product solutions.

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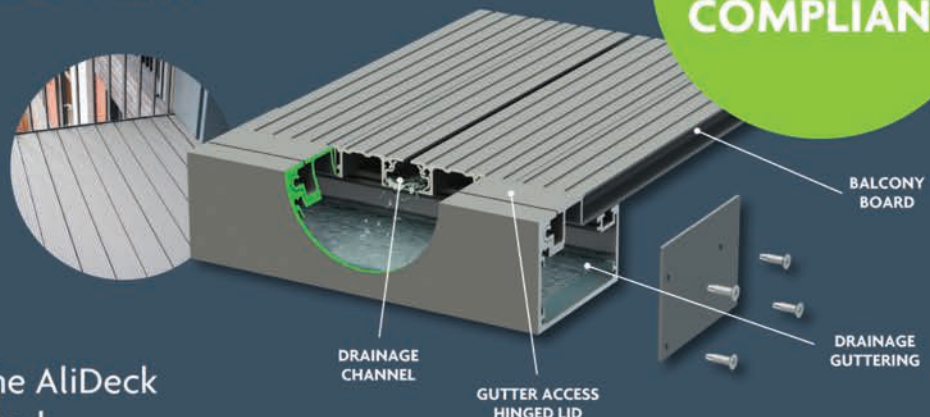
This innovative drainage solution delivers positive drainage to balconies, with our Drainage Channel between the deck boards capturing and directing water to the Drainage Gutter for controlled evacuation to a specified outlet.

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Join the green scene

Klasse Group is excited to announce the launch of Outwear™ a high-performance sheathing board designed to transform the construction of the building envelope. Created using a distinctive green finish it provides the important Euroclass A1 level of fire protection and is designed to be fully compliant on structures over 18 m in height.

It is so easy to cut to size using a simple 'score and snap' technique which will negate the need for specialist tools and will eliminate dust and noise on site.

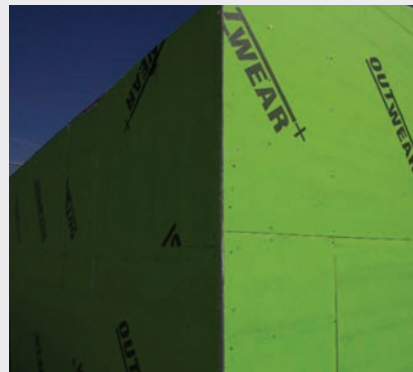
Fixing is simple using the dedicated FixingPoint screws and can be easily handled as the boards are typically 30% lighter than traditional cement boards. This also allows them to be curved and used with a variety of facades including brick, timber, metal, render and rainscreen panels.

As well as being A1 fully non-combustible, it is water resistant and can be left exposed on structures with a 12-month guarantee before you need to complete



the cladding. Once installed it is backed up with a 12-year warranty to give added peace of mind.

The versatile capabilities of Outwear™ makes it ideal for installation on modular buildings, concrete & steel frame buildings and timber frame buildings. Construction costs can be reduced by quick installation enabling internal trades to start quicker.



Klasse is a family run, British owned manufacturer of adhesive solutions and multi-layer laminate protection solutions. Klasse's specially formulated products are the result of years of development and testing by its chemists. Klasse products are successfully sold throughout Europe.

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www.klassegroup.co.uk/outwear-board

Insulate your front door as well as your home



One of Britain's leading garage door and front door manufacturers **Garador** now offer top of the range front entrance doors which offer the highest levels of insulation and security to fit in with modern homes.

Their FrontGuard 46 and 65 ranges offer exceptional thermal efficiency. The robust exteriors are filled with highly efficient insulation foam and the door frames and seals that have been specifically designed to minimise heat loss and to eliminate thermal bridges. Garador's FrontGuard front entrance doors are some of the most thermally insulated front entrance doors currently available in the UK and can help home owners achieve substantial energy savings.

Garador's front entrance doors all come with 5 point high security locking systems and are available in a wide range of designs and colours which will also complement the designs of Garador's garage doors.

01935 443722 www.garador.co.uk

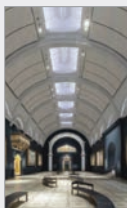
N T Sweeting with BMI Redland shortlisted



N T Sweeting – working with BMI Redland – were shortlisted in the Roof Tiling category in the 2021 UK Roofing Awards. When the roof of The Gables needed renewal, the challenge faced by N T Sweeting was both preserving the heritage aesthetic of the property, and also ensuring the quality of roof covering and workmanship was on a par with the original installation. Property consultants, CSN, recommended BMI Redland Rosemary Clay Classic plain tiles in Medium Mixed Brindle and using the BMI SpecMaster service. The BMI SpecMaster service results in a 15-year whole-roof guarantee when it is installed to specification.

marketingukandi@bmigroup.com redland.co.uk

Sto system upgrades acoustic environment



The StoSilent Distance acoustic ceiling and wall system from **Sto** was specified for the world's leading museum of art, design and performance and it now creates the perfect acoustic environment for a high-profile display of Renaissance art treasures. The V&A in London recently completed a landmark refurbishment of its Raphael Court where the StoSilent Distance system is now installed. The StoSilent Distance acoustic boards were finished with StoSilent Décor M. This spray-applied surface coating created a classic fine-stippled finish which perfectly matched the aesthetic of the gallery.

0141 892 8000 www.sto.co.uk

Introducing enhanced components for flat roofing systems

Bauder is introducing two new products to enhance its waterproofing systems. Bauder has launched BauderTEC DBR 06 for use as an Air and Vapour Control Layer (AVCL) in single ply systems, and as an AVCL and carrier membrane in cold applied liquid applications. This product will be replacing the current 0.4 mm BauderTEC DBR used in Thermofol and Thermoplan single ply systems and replacing BauderTEC KSD DUO used in Bauder LiquiTEC and LiquiTOP cold applied liquid systems.

BauderTEC DBR 06 is a 0.6 mm thick, technically advanced, self-adhesive, elastomeric, reinforced bitumen AVCL, featuring an aluminium foil facing for vapour impermeability. In both single ply and cold applied liquid applications, BauderTEC DBR 06 can be used over certain new and existing roof systems and new deck substrates including profiled metal, plywood and OSB.

The additional thickness of DBR 06 when installed within a single ply system increases

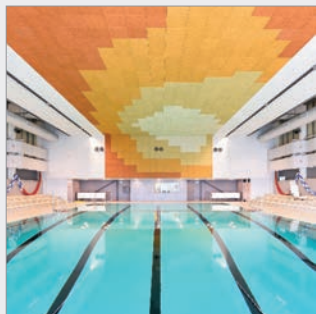
the robustness of the overall system and allows for use within a fully adhered assembly. When used in cold applied liquid systems, DBR 06 increases flexibility of the system and the thickness at the laps is reduced, resulting in easier installation of the system and a smoother finish. In addition, the product is more lightweight than other AVCLs meaning projects benefit from safer and faster installation, resulting in shorter lead times.

Bauder has also released a new accessory product for waterproofing soil vent pipes. The Bauder SVP Cover is designed to facilitate the detailing of soil vent pipes up to 600 mm high on Bauder RBM, Thermofol, LiquiTEC and LiquiTOP flat roof systems. The Bauder SVP Cover provides a visually appealing way to waterproof soil vent pipes.

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Acoustic panels can embrace the extreme



Recent tests have shown that Troldekt acoustic panels withstand moisture levels up to 98%, even when combined with high temperatures up to 40°C. These latest tests were carried out by the accredited Danish Technological Institute to the European product standard for suspended ceilings (EN 13964). While the composition of the panels has remained unchanged, this new round of stringent testing reinforces the fact that the panels are suitable for the most demanding of wet, warm and humid environments such as swimming pools, changing rooms and shower rooms. In these environments, it was found that the panels are dimensionally stable and retain their flatness. This means they do not warp over time, giving them a life span in excess of 50 years. The panels are inherently robust and durable because the combined strength of the cement coupled with the breathability of wood means the structure does not rot and acts as an anti-microbial surface resisting fungal growth and other microorganisms. For very humid environments where chlorine is also present, Troldekt offers special structure screws in the highest corrosion protection category.

Troldekt.co.uk

Revit® BIM files now available



Domus Ventilation, manufacturer of market-leading mechanical ventilation systems that save energy and improve indoor air quality, is pleased to announce that its full range of Revit BIM (Building Information Modelling) files can now be downloaded directly from its website, www.domusventilation.co.uk, free of charge. The Domus Ventilation BIM library features an extensive array of products, including energy saving, whole house Mechanical Ventilation with Heat Recovery (MVHR) appliances, as well as award winning Radial semi-rigid duct systems and its full range of rigid ducting and accessories.

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AET – a significant refurbishment element



AET's underfloor air conditioning system has allowed the developers, Brookfield Properties, to offer truly adaptable office space fit for 21st century ways of working, thus differentiating their market offering. During the design process

the decision was made to incorporate AET's underfloor system on both the lower ground and ground floors to ensure consistency of interior design aesthetic as well as mechanical services, taking the total area served to just under 13,000 m².

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wood fire

Water savings in the balance

Richard Bateman at RWC UK looks at how thermal balancing valves help minimise water waste in larger buildings, as the pressure grows to save resources

Wasting water is a particular problem in big buildings that use recirculating hot water systems that haven't been designed or installed correctly, such as hotels and leisure centres. From taps being left on too long, to boilers needing to work harder than necessary, thousands of litres of water – and the associated energy needed to heat it – might be wasted from just one building.

Clearly there's an economic cost, but this kind of wastefulness contributes to the very real issues around our global climate emergency. The good news is that a lot of this waste can be reduced through intelligent use of the right valves. Even if we can't control what every single occupant is doing, clever design of the plumbing system can make a big difference.

Bringing balance

In commercial and healthcare buildings, hundreds of people rely on instant hot water, for handwashing, showering or cleaning. It is vital that the supply delivers efficiency, so the the system doesn't have to work harder than needs be to achieve the required temperature at the furthest reaches of the system.

The use of thermal balancing valves (TBVs) is essential to prevent this. TBVs use a thermostatic element that works against a spring to adjust the flow rate of the hot water through the valve, depending on its set temperature. As the temperature rises through the network the valve begins to restrict to maintain this set temperature. For safety, the valve is designed to never shut down completely, even in the event of failure.

Let's first look at how TBVs work from a safety perspective. In larger properties, where the occupants and users may be vulnerable – like hospitals – Legionella thermal flushing is common. This is a process where the temperature of the water within pipework is raised to a disinfecting temperature that can be more than 85°C, and drained from all serving outlets. Once this process has been completed, the system temperature is lowered. Often thermal balancing valves are manually opened to allow circulation

through the valve without restriction.

Valves are available however that need no manual adjustment to allow flow – simply recognising that the inlet temperature is above 70°C, and opening automatically. Hundreds of TBVs are often required for these larger systems so the time and hassle saved by this automatic feature is key.

Sustainability

As well as making hot water systems safer for use, TBVs also bring energy efficiencies by putting less stress on the boiler. If the system is thermally balanced, the users can access hot water as soon as they open the tap. However, if the system isn't properly balanced, users have to wait for hot water to reach the outlet by keeping the tap turned on, which leads to unnecessary water wastage.

TBVs are designed to balance the entire hot water network, therefore individual valves should be installed at every hot water draw off area. For example, if there are 100 rooms in a hotel, a TBV should be installed for each room. This will ensure a constant temperature across the circulating loop no matter where you are in the building.

Think big

The 2021 National Infrastructure and Construction Pipeline sets out nearly £650bn of public and private investment that will transform people's lives for decades to come. From the 10-year school rebuilding programme to the creation of 40 new hospitals by 2030, as well as many more projects in between, big buildings are a key focal point of the UK's construction strategy. At the same time, the UK is on the pathway to achieve net zero carbon by 2050.

These are big ambitions, and clearly the construction and environmental targets are linked. So we must all think big in how to help achieve water efficiency. Using the right blend of pipes, valves and fittings, systems can not only conserve water but also be much more energy efficient in future.

Richard Bateman is product marketing manager at RWC UK



Water waste can be reduced through intelligent use of the right valves



Setting a new standard for healthcare ventilation



Research into the most effective, healthy way to ventilate in operating theatres is published by leading independent air movement specialist **Gilberts Blackpool**. It coincides with publication of new guidance – Health Technical Memorandum 03-01 – from the NHS on specialised ventilation for healthcare premises and the ramping up of Government plans to build 40 new hospitals by 2030. The findings follow in-depth testing by the company. The research validates the most effective way to ventilate within operating theatres is to use laminar flow directly above the operating table. The optimal design is to position the panels in a line, to discharge clean, filtered air directly down over the patient, washing down over the operating table for extraction by low level grilles. This optimises removal of airborne contaminants from the patient, reducing the risk of infection: 10% of inpatients contract an infection while in hospital. It also avoids the potential risk of contamination from air coming into contact with the theatre personnel, and transferring pollutants back onto the patients. Visit the website for details of the Gilberts' testing.

01253 766911 gilbertsblackpool.com/wp-content/uploads/2021/10/PGL-Selection-Guide-V2.pdf

VORTICE ventilation systems to aid learning



It is no secret that Early Years Education plays a key role in children's brain development and can hugely impact their first learning experiences. One important factor is the environment in which the children learn; including lighting, heating and ventilation. Paul Willey from Rose

Builders worked alongside VORTICE to support Lawford Green Nursery in providing a ventilation solution for its classrooms. The units guarantee high levels of efficiency and heat exchange with reduced energy consumption. The units also boast high acoustic insulation so they won't disrupt or distract the occupants within the classrooms.

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Stelrad Radiators popular CIBSE and RIBA accredited CPD programmes are still available for face-to-face presentations, but they are now also available conveniently online at www.stelrad.com. There are three CPDs available – 'A guide to heating your home with heat emitters on low temperature systems', 'The evolution of the central heating radiator with a focus on safety radiators' and 'The difference in tubular radiators, specifications and dimensions which impact the heat available'. All three CPDs take around an hour and are all free.

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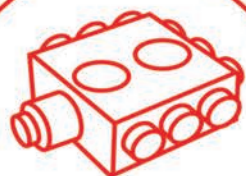
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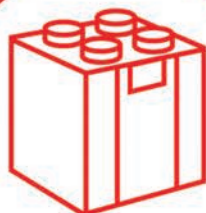
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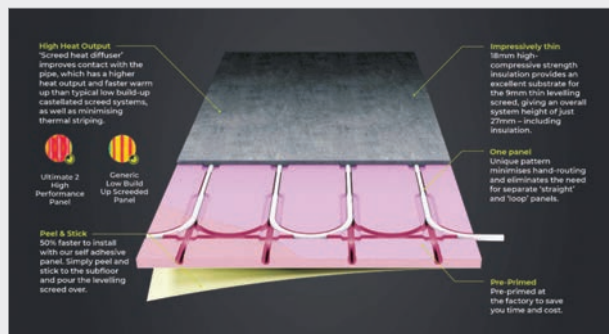


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CEILING
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OMNIE's new generation Ultimate2 system

Heating and renewables specialist OMNIE has once again developed an advanced solution to speed the installation of low build height underfloor heating (UFH), which also fits within its Tileover selection and offers significant cost savings. Further enhancing the established Ultimate system, the Ultimate2 board consists of XPS insulation – improving output while the unique 2-3 mm deep diffuser channel surrounding the multi-directional runs increases screed contact with the pipe, thus cutting the warm-up time. The overall installed depth of just 27 mm leaves plenty of room for tiles to be laid on top without the need to trim doors or skirting in retrofit situations. The upper surface is pre-primed so the RS Flex leveling screed can be directly applied to achieve a strong bond; while the pre-glued lower surface – with peel-off backing – ensures the panel can be rapidly installed across the subfloor without the need to apply additional adhesive.

01392 363605 www.omnie.co.uk

Sanifos makes Glamping possible



Galley Hill Farm in the Lincolnshire Wolds has recently expanded from five to 10 pitches plus two sizeable glamping pods complete with bathroom, bedroom, kitchen and living room thanks to the Sanifos from Saniflo. The proposed space did not have sufficient gravity fall to reach the septic tank, which was 70 m away, and required a pump to discharge the waste. A Sanifos 610 underground lifting station provided the perfect solution; with sufficient capacity to accommodate more units in future. The Sanifos 610 has a 612-litre tank and is offered with a choice of one or two pumps.

020 8842 0033 www.saniflo.co.uk

Introducing Midas™ 220 mixer shower range



Bathroom specialist Aqualisa has announced an additional series within its premium Midas™ 220 mixer shower collection, featuring an elegant black metal finish. The Midas 220 in Black makes a bold, contemporary statement, and satisfies the growing demand for black bathroom products and accessories. Manufactured to

exceptional standards, the Midas 220 in Black series is equipped with a thermostatic brass body and brass handles, and each model complies with Water Regulations Advisory Scheme (WRAS) criteria for quality.

01959 560010 www.aqualisa.co.uk/midas-220-black

Changing places & accessible showers



Horne shower panels employ inclusive design for effortless operation. Low torque (fist only) levers are well-marked & shaped for easy identification and control. The ingenious design, using fishing-reel technology, of the handset holder carriage provides excellent grip yet is extremely easy to adjust, with added pull-tab for wheelchair users.

Matching grab rails provide additional support and are suitable for pairing with shower, accessible bath, basin or WC. Available in white or deep orange (optimised contrast/colour for ageing eyes), Horne grab rails accommodate a maximum load of 150 Kgf.

01505 321455 b.link/Included

EDITION 90 SQUARE by KEUCO



EDITION 90 SQUARE fittings and accessories by KEUCO make a striking addition to any bathroom, with strong contours and continuous architectural lines, combined with a delicate, fine almost filigree design. Innovative technology is combined with traditional manual expertise; the art lies in the precisely detailed grinding and polishing of each individual element before they are electroplated. The range includes three different sized single-lever mixers for washbasins, a wall-mounted spout mixer in various lengths and a bidet fitting, plus high-quality accessories including towel rails and tumbler holders.

01442 865 220 www.keuco.com

ADF is now on LinkedIn

[LINKEDIN.COM/SHOWCASE/ARCHITECTS-DATAFILE-ADF](https://www.linkedin.com/showcase/architects-datafile-adf)

Geberit lifts the lid on... sustainability

With a greater focus on sustainability throughout supply chains and increased consumer awareness of eco performance from brands, it is more important than ever to support sustainability through innovation. Sophie Weston, channel marketing manager at Geberit, looks at what the manufacturer is doing to reduce its environmental impact through product innovation.

At Geberit, we believe that sustainability starts with product design. By placing sustainability at the heart of design, factoring in everything from raw materials and production processes to packaging and recyclability, manufacturers can help to drive sustainable performance throughout the entire supply chain.

All of our products are developed in line with eco-design principles, ensuring that each product is better taking into account the best raw materials, the right suppliers, local production and green logistics, in order to develop products that are made to last, repairable and recyclable.

Sustainable sanitary solutions

We have developed a comprehensive range of products that are regarded as sustainable sanitary solutions, and that contribute to increased quality of life with low energy and water consumption and with ecologically friendly materials.

For example, the Geberit urinal system offers major water saving opportunities thanks to the different operation modes and the associated low operation and maintenance costs. An integrated urinal flush control can be operated using three power supply variants, whilst flushing out the urinal ceramic appliance with 0.5 litres per flush



ensures compliance with EN 13407, the European standard for wall-hung urinals. Additional opportunities for saving water are made possible thanks to different operation modes, including dynamic flushing time adjustment (hybrid) and waterless operation.

Revised flush technology

One innovation helping to drive the sustainability of toilet installations is new flush and fill valves for ceramic cisterns, made with more than 50% recycled material.

These new valves are made from more than 50% recycled plastics, recovered from high-quality plastic waste from the electronics industry, with no impact on quality or functionality. Insourcing has also reduced transport distances by up to 50%. In total,

around 1,000 tonnes of CO₂ emissions are saved as a result of the changes.

Plastic regrgranulates

This is just one example of using plastic regrgranulates to improve the sustainability of plastic-based products.

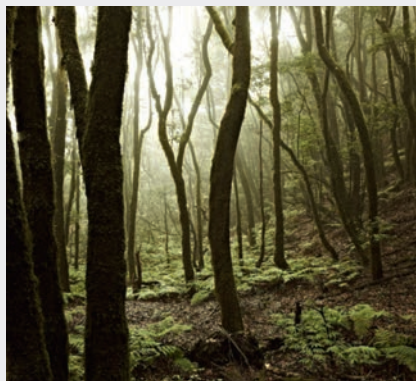
Not all plastic is the same. The quality of Geberit products is defined by their environmental friendliness, durability and conservation of resources. This principle also applies to the use of plastics and we increasingly use plastic regrgranulates, or recycled plastics.

At present, this is primarily ABS (acrylonitrile-butadiene-styrene), which has been recovered from electronic scrap such as plastic cases from home appliances and computers. In 2020, we processed 940 tonnes of this material worldwide.

Long-term look

Good sustainable performance is now a requirement of success, promoted by governments and demanded by consumers worldwide. Leading manufacturers should view product development process through the entire life-cycle – and we must all work in partnership to look beyond the obvious and consider the value of sustainable performance at every stage of the supply chain.

enquiries@geberit.co.uk
www.geberit.co.uk/sustainability



VitrA honoured with design award for new London flagship showroom



The new display of Liquid, the VitrA collaboration with Tom Dixon

VitrA Bathrooms has secured a further prestigious industry award, this time for its stunning new flagship showroom in Clerkenwell, London – VitrA London.

The Designer Awards held this year at The Connaught Rooms, London, celebrates

the best in residential and commercial design with numerous categories for design and innovation. VitrA has won Bathroom Show Space of the Year, a recognition for its new 5,500 ft² showroom which was completed during the pandemic.

VitrA London is a creative hub for architects, designers, and thinkers. In addition to a wide range of product displays, the showroom has dedicated spaces for product specification, events, and workshops.

Margaret Talbot, European and UK marketing manager for VitrA said: “We are delighted to receive this award for VitrA London. We are all thrilled with the response to the showroom. I must take this chance to thank everyone who has made it a success, particularly to tpbenett who designed the space, and to thank The Designer for this recognition.”

Please visit www.london.vitra.co.uk to find out more about the showroom and the events programme.

01235 750990 www.VitrA.co.uk



Margaret Talbot receives Bathroom Show Space of The Year from Tom Reynolds, CEO of the BMA and TV's First Date's, Fred Sirieix



VitrA London's event space

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For more information visit saniflo.co.uk



Immerse yourself in a sensory experience for doors

When we talk about interior doors in the context of sensory experience, the obvious topic is to think about looks and general appearance. However, in our hopefully soon to be, post-pandemic world, a more immersive experience is sought in our future daily lives.

Innovative door design can often be limited to visual perception. In other words, does it turn heads and stand out in its surroundings? A not unrealistic aspiration, although seldom achieved these days. This is especially true given the humdrum and quite frankly tired result presented by the ubiquitous white painted moulded skin doors you see at every turn. The use of colour and wood grain pattern can elevate interior doors immeasurably. This is something Vicaima have been perfecting for over 60 years, with their factory finished decorative door portfolio. However, now they take us on a new journey of sensory experience with the introduction of doors that invite you to feel in every sense of the word.

Two of Vicaima's very popular ranges have recently been extended to provide doors with something more than just great looks. Both ranges are from the Dekordor® collections and include: Dekordor 3D presenting a pronounced embossed grain effect finish, which although rippled to the touch; is very durable. The horizontal designs in Grey, Black, Washed Oak and Dark Cedar have been extended to encompass new vertical Oak inspiration with Glacier and Silver finishes. The second door range offering something more, is Dekordor SD Touch. Here its subtle grain effect foil and highly realistic wood look, blurs both the visual and textural line between technologically advanced materials and original real wood veneer. Available as a vertical grain pattern, in a rich hue of Coffee Oak or for the perfect alternative to plain white; Pearl Oak SD Touch offers a tactile head-turner that adds chic to any room without stretching the budget.

Both these sensory ranges are manufactured and suitable for a variety of applications and



sectors, be it homes, hotels, education, or commercial spaces. Products can be supplied as 'door only' or as part of a complete door kit for rapid assembly on site. All with UK tested and certified fire, security, and acoustic performance where applicable. Vicaima can even offer larger projects the option to select matching wardrobes or wall panels, for the complete room package.

Last but by no means least, is the attention to environmental responsibility. Dekordor 3D and SD Touch, like all Vicaima products, are manufactured to ISO 14001 standards and are FSC certified. So, you can be sure that your choice of doors is not only good for you, but also good for the planet.

Don't just take our word for it, request a sample so you can see and feel for yourself.

01793 532 333 www.vicaima.com

BLANCO's showroom training back on!



Craig Condie, BLANCO's national sales manager

Now that most doors are back open again, BLANCO is running bespoke customer training programmes in the impressive showroom at the UK headquarters in St Albans. Of course, these programmes can also be held remotely, or at a customer's premises depending on requirements. BLANCO's bespoke sales and business development training programmes have always been popular with customers and the past 18 months have proved no different – even though they were conducted remotely for obvious reasons.

www.blanco.co.uk

Altro package for holiday park revamp



A comprehensive package of Altro floors and walls has been used throughout the new restaurant, bar and reception area as part of an ambitious revamp at a thriving Cornish holiday park. In the kitchens, a tried and tested combination of Altro Crete™ resin floor and Altro Whiterock™

wall sheet delivers a robust, resilient and hygienic HACCP approved solution that meets HSE standards. In the toilets and throughout the back of house, Altro XpressLay™ adhesive free safety floor was quick to install, with no compromise on durability or slip resistance.

01462 489 516 www.altro.co.uk

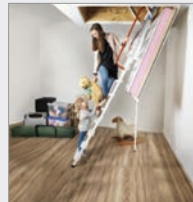
Keep dirt at the door with Forbo



Forbo Flooring Systems has refreshed its Coral entrance flooring collection which can stop up to 95% of dirt and moisture from entering a building and can reduce cleaning time by up to 65%. The update comprises two new products, a new adhesive free construction, as well as a colour refresh for the existing ranges. This means there is now a Coral solution to suit every entrance flooring requirement. Forbo's Coral collection consists of four existing products: Coral Brush, Coral Classic, Coral Duo and Coral Welcome, as well as the two new solutions: Coral Grip and Coral Interior.

01773 744 121 www.forbo-flooring.co.uk/coral

Premier Loft Ladders announce new policy



Premier Loft Ladders is proud to work with the very best suppliers in the world to build premium quality loft ladders, loft eaves doors and flat roof access solutions that architects, developers and project managers reliably trust will meet the highest energy efficiency and sustainability standards. Now Premier Loft Ladders is pleased to announce its own sustainability policy – which conveys their commitment to create loft access solutions that help improve the lives and health of future generations and the planet we share.

0345 9000 195 www.premierloftladders.co.uk/sustainability

Rare beauty – CTD Architectural Tiles' wood-effect collections



Celebrating the beauty that wood has to offer, with all the practical benefits of porcelain, CTD Architectural Tiles' latest wood-effect collections will bring an organic touch to interior schemes. Ideal for hospitality settings, where stunning design meets superior performance, the Ultramod, Aspenwood and Nordic ranges will provide specifiers and architects with exceptional surfaces that will add a statement finish to any manner of space. Showcasing imitations of some of the rarest cuts of wood, the Ultramod collection boasts extreme splendour in a range of different formats. A choice of Rosewood, Zebrawood, Walnut, Bostamarinde and Ziricote colourways in the classic plank size of 200 x 1s020 mm provide an elegant surface option for both walls and floors. Exuding elegant luxury, the Aspenwood collection (pictured) conveys the natural rawness of wood in a beautiful selection of modern colourways. The Nordic collection offers a similarly luxurious finish, with three stylish wood-effect options in Grey, Soft Grey and Cream. The Scandi-style tiles will transform spaces into luxury retreats with ease, offering all the exquisite charm of natural wood with the practicality of porcelain.

0800 021 4835 www.ctdarchitecturaltiles.co.uk

Glorious St Swithin's



After extensive refurbishment, The Salt House, a former Co-Op Hall, has now become the new home for worshippers of the Church of St Swithin's, and Axis Mechanical & Electrical Consulting Engineers based in Nottingham, specified luminaires from Luceco. The principal luminaires specified included suspended LuxFrame fittings, Ice Linear and recessed Platinum downlighters. Dimmable 3000K suspended LuxFrame luminaires were used in the main area. LuxFrame is a minimalist LED luminaire designed for ceiling grid applications or suspended as a pendant luminaire as at Salt House, enabling the creation of imaginative and contemporary lighting designs. Office and administration areas were lit with Ice Linear. Contemporary and stylish, Ice Linear is a transparent optic pendant luminaire providing both upward and downward light distribution. Supplied complete with adjustable wire suspensions, Ice Linear delivers an enhanced lit effect, the sleek transparent design complements modern interiors. IP rated LuxPanels were installed in the Kitchen with Surface and Recessed Platinum 3000K luminaires fitted in the servery and reception areas.

01952 238 100 www.luceco.uk

Studio Moods wins at the SBID International Design Awards



IVC Commercial's Studio Moods modular vinyl design floor has won another award, this time in the Flooring and Floor Coverings category in the SBID (Society of British & International Interior Designers) International Design Awards. The prestigious accolade joins Studio Moods' Reddot and Mixology awards.

Alison McLaughlan, head of marketing, IVC Commercial says: "Studio Moods is an example of our approach to design and how we think differently to produce concepts that let designers explore the creative potential of flooring for commercial interior projects. We're delighted that this has been recognised by the panel of judges and greatly appreciate the votes we received from those in the industry too."

IVC Commercial's Studio Moods is a vinyl floor that's available in a variety of precision-cut geometric shapes and a range of wood, stone, material and colour effects. It allows designers to create a custom floor design easily and affordably. The floor is made in Belgium using renewable energy and up to 50% recycled content from IVC Commercial's own recycling facility.

01332 851 500 www.ivc-commercial.com

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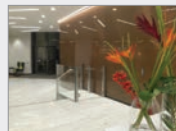


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Clients are the focus



Lyfthaus has a well proven team of experienced and innovative design engineers and creative thinkers who deal solely with the stylish and refined tastes of architectural clients. Placing their clients' needs at the heart of every design, the Lyfthaus objective is to exceed clients'

expectations by providing an individual and unique service that delivers an uncompromisingly high standard to every project. Lyfthaus is one of the industry's foremost creative designers providing architects with an unparalleled freedom of choice and the source of the very best architecturally inspired platform lift design solutions.

01440 731111 www.lyfthaus.com

Platform Lift Company at YOTEL

An internal and external platform lift was required for YOTEL, a stylish new modern hotel situated on Clerkenwell Road, London. The Platform Lift Company was engaged to provide a solution which blended in with the prestigious development.

The construction of the 8-storey building plus an additional basement level provides a unique design and tech led hotel environment with multi-functional space designed to create a sense of community. A disability access solution was needed to overcome the steps

leading up to a separate entrance to the hotel on Clerkenwell Road and inside within the split-level restaurant bar area.

Instead of using a fully enclosed lift, the Platform Lift Company recommended using its through car open platform lift which can accommodate changes in level from 600 mm up to 3,000 mm and is suitable for both internal and external settings. This model would also provide ease of installation without having to make major alterations to any existing building work.

Both platform lifts were successfully installed by the Platform Lift Company's qualified engineers before the grand opening of the hotel using a no pit integral ramp system. The black and stainless-steel finish of the open style platform lifts match the contemporary design of YOTEL. In line with the hotel's inclusive ethos, every guest can now freely access both levels of the Komyuniti restaurant and bar, which features cosy booths, sofas and social tables.

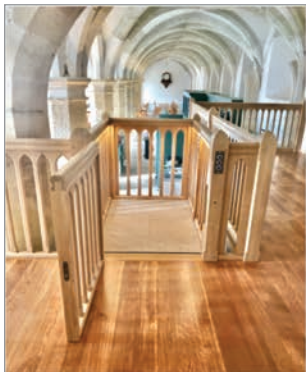
Externally, the unobtrusive appearance of the platform lift fits in with the overall



scheme of the YOTEL development which has been sympathetically designed to act as a contemporary backdrop to the surrounding Grade I & II listed buildings within this conservation area.

For more information, please contact The Platform Lift Company.

01256 896000 www.platformliftco.co.uk



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Beautiful spaces made beautifully accessible

Access best practice

Alastair Stannah from Lifts Distribution & Service (UK) discusses best practice specification for making public buildings fully accessible for all users

Driving best practice for accessibility in commercial and public buildings are the legal framework; the Building Regulations, Part M Vol. 1 and Vol. 2 for England and Wales, or Section 4 of the Technical Handbook (Scottish Part M Equivalent), and design guidance BS 8300. These all outline the requirements when considering which lift to install in a new building and the preferences and guidance on ensuring an accessible lift. The latter two highlight specific lift requirements and priorities between the different types of passenger moving lifts, which also have different standards depending on the type of lift.

Sometimes, a physical feature of a building can make it more difficult for a person with impaired mobility to access. The Equality Act 2010 states a legal duty to make reasonable adjustments to not put anyone at a substantial disadvantage.

It is possible to install one or more disabled access lifts in most buildings that have two or more floors or to provide a ramp or step lift where there is a short flight of stairs.

Building Regulations

Approved Document M gives direction on enabling a public access building to conform to the Equality Act. This document states that reasonable provision must be “made for people to access and use the building’s facilities.”

Fire Safety: Approved Document B covers all fire safety matters within and around buildings, and further detail on firefighting and evacuation passenger lifts. It is worth mentioning the focus is increasing on evacuation lifts; the new London Plan (currently in pre-consultation draft) includes a minimum of one evacuation lift per core (or more subject to capacity assessments) in policy D5.

Part M states that the preferred solution to disabled access is a passenger lift, with the number of lifts depending upon the application, but it also recognises that it may



not always be possible for a building to accommodate one, so proposes the next best alternative is a platform lift.

Like its English counterpart, Section 4.2 gives direction on enabling a public access building to conform to the Equality Act. Most of the requirements of Section 4.2 are identical or closely similar to Part M. However, the requirements do differ and require larger platform lift minimum sizes.

Design guidance

For both new and existing buildings, we look to Building Regulations but also BS 8300:2018 ‘Design of an accessible and inclusive built environment...’ which strongly recommends that at least one lift (of sufficient size) must be made accessible to wheelchair users in multi-storey buildings. An accessible lift will need to be found easily, be large enough for a wheelchair to rotate 360° inside, and have enough space outside to manoeuvre safely.

Additionally, there are recommendations for visibility and operation, such as large illuminated buttons, audible and visual signals, adequate lift car lighting levels and

BS 8300:2018 strongly recommends that at least one lift must be made accessible to wheelchair users in multi-storey buildings



level entry to enable smooth entrance and exit. The relevant standard will ensure compliance to much of these but consideration should be given to landing entrances as part of the specification.

Passenger lifts

These lifts can range in size from three to 33 person capacity and beyond, though eight-person is the most common, as it is specified in Part M. There are different types of passenger lifts, depending on the environment such as firefighting and evacuation lifts used in case of an emergency, or heavy duty or vandal resistant lifts for more demanding environments.

Passenger lifts fall under the Lifts Regulations 2016, meaning they travel faster than 0.15 m/s, allowing for relatively rapid movement of people through a building – typically, a journey takes around 18 seconds between floors. The installation of a passenger lift requires a lift shaft to be built to house a passenger car and mechanism.

They can be designed to fit most sizes of lift shafts and structures and are best suited for new buildings, where pre-construction makes it easier to fit, or where there is an

existing shaft. Of course, there will be a requirement in a building where the lift will get extensive use – either due to the building size or because the lift will be the primary means of travelling between floors, or one that demands better management of high traffic flow of people and large capacities.

Platform lifts

Platform lifts are best suited to smaller passenger numbers travelling shorter distances. These access lifts can range in size from one person/wheelchair user to up to five people. There are many variants within the platform lift ‘family.’

Due to a slower speed, they are designed to provide vertical movement between floors in a low rise building – typically between two to four floors. A platform lift’s speed is limited to 0.15 m/s or less (they fall under the Supply of Machinery (Safety) Regulations, so travel time between floors averages around 22 seconds). Platform lifts can be used indoors or out for both vertical and inclined travel and are good for low rise buildings or where space is tight.

Alastair Stannah is managing director at Lifts Distribution & Service (UK)

Platform Lifts

Our range of platform lifts includes the **Commercial Platform Lift** (right) – a premium quality enclosed platform lift with a customisable finish, and the option of glazing on 3 sides.

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We also offer stair platform lifts and a range of platform lifts for both internal and external use.



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Advanced reaches new heights at Manchester Climbing Centre



A QuickZone conventional fire alarm system from UK manufacturer, Advanced, has been installed at BlocHaus Climbing, Manchester's newest bouldering wall.

Newly opened, BlocHaus Climbing boasts an array of facilities at its East Manchester site, including 130 climbable boulders, routing roof and on-site cafe.

As part of the active fire protection for the site, the 4-zone QuickZone conventional fire panel from Advanced has been installed alongside Hochiki conventional heat/smoke detectors, Apollo conventional call points and Roshni conventional sounders.

Responsible for the design, installation and commissioning of the fire system at BlocHaus Climbing were Manchester-based, Surefire Protection Ltd. Surefire installed the QuickZone panel alongside music shutdown integration to ensure clear audible notification for all building users in scenarios where the system goes into alarm.

Michael Rouse, fire alarm supervisor at Surefire Protection Ltd, said: "As long-term partners of Advanced, we've worked with its solutions for many years and are confident in their capability to deliver high standards of protection throughout sites large and small. We only specify Advanced fire panels due to their quality, reliability and standard of technical support, and we firmly believe they offer the best solutions available for open protocol systems."

QuickZone is the conventional and twin-wire fire system from Advanced that is quick and simple to install and manage and ideal for installations that have less complex programming and configuration requirements. Offering eight panel variants across the QuickZone and QuickZone XL product lines, the panels will support 2 to 32 zones, are approved to EN 54 parts 2 and 4 and support comprehensive false alarm management.

Neil Parkin, sales manager for the North



of England and Ireland, said: "Surefire's installation of Advanced at BlocHaus Climbing demonstrates our solutions' versatility. Not only will you find our panels installed throughout airport terminals, hospital complexes and university campuses, but also smaller, less complex sites, such as offices, retail outlets and activity centres. Whether you opt for the simpler QuickZone panel, or the feature-rich QuickZone XL, Advanced can deliver the conventional system you need."

0345 894 7000 www.advancedco.com

Fire Stopping Standard Details Guide



ROCKWOOL® has released a significant update to its Fire Stopping Standard Details Guide, the specifier's go-to resource for the performance parameters of ROCKWOOL passive fire stopping product solutions according to certified installations and applications. The guide has

been re-launched in an enhanced interactive format that makes accessing standard details for the FIREPRO range quicker and easier than ever. The guide simplifies navigation so that specifiers can instantly access the information they need. Download the Fire Stopping Standard Details Guide by visiting the ROCKWOOL website.

01656 868 490 www.rockwool.com/uk/fire-stopping-guide

Edenbrook Village sealed with Resiblock



The 'Legendary' Resiblock '22' has been specified as the paving sealer solution for Edenbrook Village. Located just two miles from Fleet, Hampshire, Edenbrook Village is a 600-home development from Berkeley. Resiblock were able to

show Case Study successes at The Greenway in Didcot, and even closer to home for Berkeley, the Alexandra Homes development also in Hampshire, where Concrete Block Paving had been successfully sealed for a number of years with just one application of Resiblock.

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ADD LIFE TO YEARS

Stunning solar powered Park & Ride goes green

Green-tech has made a significant contribution to the UK's first fully solar powered Park & Ride facility on the outskirts of Leeds in West Yorkshire. Designed by Mott MacDonald in partnership with main contractor BAM Nuttall, the brand new Stourton Park & Ride heralds in a new era of clean, green public transport.

The Park & Ride will help towards a net-zero carbon economy for the city by lowering carbon emissions, improving air quality, and reducing congestion.

A photovoltaic solar canopy covers a third of the site, which powers the terminal building, street lighting and vehicle charging points, and feeds excess electricity back into the local grid. The site provides 1,200 parking spaces along with 26 fast electric vehicle charging ports and four rapid chargers.

Care was taken to reduce the visual impact of the site from all directions, and over 11,000 trees have been planted in and around the park & ride site with an impressive

54:1 replacement ratio. The main central area includes raised Corten steel planters, shrubs, hedges, specimen and evergreen trees to provide year-round coverage, creating a soft, open and welcoming environment.

Green-tech involvement:

Green-tech has a good working relationship with both Mott MacDonald and BAM Nuttall, and supplied all the stakes and crossbars, canes, tree belting and blocks to support the trees in the central area. All Green-tech square-sawn softwood and machine round stakes are FSC Certified and available from stock.

To protect the new perimeter planting from browsing animals and the elements Green-tech supplied 6,000 recyclable tree and shrub shelters, 450 m² of 100% recycled jute Ecomatt mulch matting, as well as 275,000 litres of ornamental bark for the planters and beds. The Ecomatt allows air and water to pass through the layers while



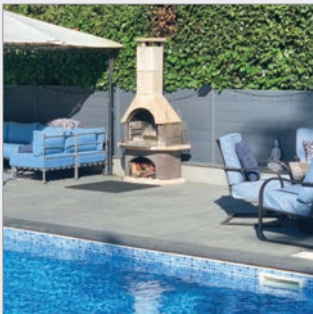
suppressing weed growth and acting as valuable insulation around the root area.

To ensure the best chance of successful establishment, Green-tech supplied 200,000 litres of soil improver to help optimise the structure and fertility of the soil, as well as over 300 sets of irrigation pipes with Aria inlets and Mona reservoir tanks. On the more exposed trees, Green-tech DropMan anchor systems were used, holding the tree stable without the risk of soil contamination from sleepers or kerb stones.

Finally, 1,000 m² of impermeable gtRootBarrier® 325 was used where there was a need to deter roots from spreading too far.

01423 332100 www.green-tech.co.uk

Rinato ramps up with two new polymer fence board ranges

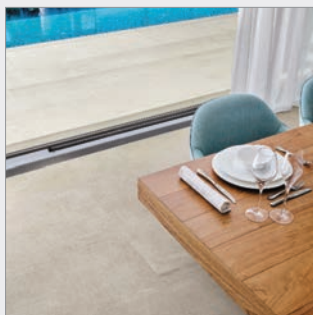


F.H. Brundle's successful Rinato polymer fencing range is expanding with the addition of two new acoustic board types. The wrapped range comes in three authentic finishes, golden oak, anthracite and rustic oak, and all feature a decorate wood-effect laminate wrap perfect for situations where fences need to look good.

The new embossed range is more cost-effective, but still provides a realistic heat-embossed woodgrain finish with a choice of four colours – black, grey, brown and green. Both work with the F.H. Brundle's innovative post and channel system, that allow boards to be fitted to virtually any post, and the polymer to naturally expand. These latest additions strengthen the company's already popular Rinato decking boards range, which offers a choice of durable, stylish and weatherproof products made of quality recycled polymer. With their authentic wood aesthetics and easy maintenance, Rinato boards are the ideal solution for anyone who wants the look of timber without the hassle.

01708 398 048 www.fhbrundle.co.uk

A total outdoor tile solution



The Parkside Outdoor Collection helps designers, specifiers and developers to fully realise the potential of outside space. Whether a natural extension of internal bar and restaurant areas, or a seamless flow from indoor to outdoor living in housing, the Outdoor Collection provides porcelain tiles and supporting ancillaries designed to cope with the rigours of all-round external use. The collection features porcelain tiles that are ideally suited to outdoor use. Not only more durable than their ceramic counterparts, porcelain tiles are also UV and weather resistant. Delivering stability in sub-zero and high temperatures, they are the only tile option for prolonged external use on terraces, balconies and outside living spaces. In stone, wood, concrete, marble, terrazzo and slate effects, Vista can work to transform outside space. Whether a traditional stone effect or the modern look of terrazzo, Vista provides a finish that is hard-wearing, frost, mould and stain resistant. Dawson is a modern concrete effect UV-resistant porcelain tile, available in five sizes to suit a range of outdoor floor requirements. In Smoke and Tarmac colour options, Dawson features a minimum 20% recycled content.

0116 276 2532 www.parkside.co.uk

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www.onlevel.com/en_GB

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info@bafsa.org.uk
www.bafsa.org.uk

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www.envirograf.com

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National Green Specification
www.greenbuildingcalculator.uk

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The Brick Development Association is the national authority on clay bricks and pavers. Our membership accounts for almost 100% of the sector's productivity here in the UK. Our role is to communicate the collective interests of our members and to ensure their products remain the material of choice in the UK's built environment.

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