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FROM THE EDITOR



Another month, another Housing Minister, this time it's someone called Rachel Maclean having a go – there have now been 15 different Housing Ministers since the Conservatives came to power in 2010, which is frankly pathetic. Why bother pretending that housing is a priority if you're not prepared to back it up with consistency of leadership at the top? Also I cannot recall, in over 25 years reporting on the sector, a Ministerial brief with a 'headline' responsibility explicitly for construction; it's almost as if they're scared of it.

There has also been a tacit admission that just perhaps, they were wrong to completely jettison the Government's then highly respected commitment to zero carbon by 2016, in Cameron's war against self-described 'green crap.' It seems that they are now keen to embrace the effluent as the legal 2050 net zero target looms. The new Department for Energy and Net Zero sounds very like the Department for Energy and Climate Change – which in that fateful year of 2016 was subsumed or perhaps 'disappeared' into the Department for Business.

Let's hope that the new Housing Minister speaks to this new Department quickly, about how to engage the whole construction sector in producing affordable homes by 2025 that are 80% more energy efficient, and 'zero carbon-ready' as the mantra goes. Without the mythical national retrofit strategy however, this will be largely meaningless, given the scale of the retrofit challenge.

I like to think that both homeowners and small builders are ready to embrace the challenge, for lower bills in the former's case, and a way around the house price volatility in the latter's. But it seems to me there's no way we will get moving on the 2025 Future Homes and Buildings Standard targets, never mind those for 2050, if we don't see some determined intervention from Government into making it happen. And small builders need to be helped up onto a level playing field to absorb the extra costs of zero-carbon ready homes which their larger counterparts can absorb.

Despite the English Government (which it is increasingly functioning as) moving to try and reinstate low carbon construction as a genuine policy aim, Scotland has somewhat stolen the march. On 10 January, the Scottish Government announced plans to introduce new minimum environmental design standards for all new build housing which will equate to a "Scottish equivalent to the Passivhaus standard." This is true devolution, or more accurately, evolution of decision-making among our constituent nations – for the better when it comes to our chances of hitting our overall energy efficiency goals. Climate change doesn't care about borders.

Lastly, we must express our horror as well as sympathy for the Turkish and Syrian victims of the recent earthquakes which have to date killed over 33,000 and left many more homeless. The dire situation is also an indictment of careless building practices, at least in Turkey, where the poor were left in homes which had no chance of withstanding such a massive, but completely predictable earthquake. So far, 113 arrest warrants have been issued within Turkey's construction sector. It's negligence on a colossal scale, and must at least be a wake-up call for other administrations.

James Parker, Editor



ON THE COVER...

The Generator Building in Bristol shows how Victorian transport infrastructure can be repurposed as modern workspace – Tom Boddy spoke to architecture and interior design studio MoreySmith and project architect The Bush Consultancy

Cover image © Fiona Smallshaw

For the full report on this project, go to page 34

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ROUND TABLE

Who is responsible for safe riser design?

A recent industry round table brought together a multi-disciplinary group from the construction sector to look at the challenging topic of designing for safety around riser shafts, and ask whether responsibility for this critical area is ‘falling through the cracks.’

Manufacturer of riser safety solutions Ambar Kelly brought together an impressive panel consisting of Lucy Craig, operations director and design leader at Mace Group, Andrew Pratt, technical director at WSP, David Wright, head of building services at Lendlease, Oscar Cerecedo, project engineer at Keltbray, Daniel Skidmore, regional director at AECOM, and ex-firefighter Andrew Furness, now managing director at Salvus Consulting. The round table was chaired by ADF managing editor James Parker.

In staging the event, Ambar Kelly was attempting to gain more insight into

industry views on responsibility for riser design, current practice, and the risks posed by perceived ambiguity around who is responsible. The firm commented this was “in part a result of differing opinion as to the riser zone’s function, meaning that there is confusion as to which disciplines hold the keys to its design.”

Service risers are one of the most complex areas of any building project, with an estimated 16 subcontractor packages interfacing in the ‘riser zone,’ crossing a range of building typologies. However, despite its importance for both falls from height and fire safety, Ambar Kelly’s director Nick Atkinson believes there is an absence of product package managers overseeing design of this critical area.

Ambar Kelly has attempted to raise awareness across the industry (including via a previous round table), with a particular

initial focus on Tier 1 contractors. Atkinson, introducing the recent round table, said “they have started to get it.” He however added that due to the lack of awareness of risks or other reasons, GRP alternatives to ‘belt and braces’ solutions (offering limited fire protection) are commonly specified as a temporary solution to deal with falls; “but these don’t get taken out.”

The round table saw debate around the issues resulting from CDM 2015 and the new Building Safety Act, such as how the roles of Principal Contractor and Principal Architect can contribute to overseeing riser specification, as well as the importance of the Contractor’s Design Portion (CDP) in accountability for designs.

This important round table, in the context of intense industry focus on design post-Building Safety Act, also heard a lively exchange of views about the suitability of GRP solutions versus other options.

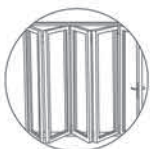


Designed to maximise natural light

Commonly thought of as a commercial product, curtain walling is becoming increasingly specified for homes to create a light and airy living space. The architect specified the Kestrel Aluminium 100mm box and plate curtain walling system incorporating Kestrel 60mm windows to maximise natural light and give a dramatic frontage to this prestigious development on the Coton House Estate, near Rugby. For more information, visit www.kestrelaluminium.co.uk or call **0121 333 3575**.



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MIXED USE

New images released of CPMG Nottingham bioscience facility

Images released by The Conygar Investment Company – the developer behind Nottingham’s The Island Quarter development – showcase what the scheme’s next phase, a new bioscience facility, could look like.

Designed by CPMG Architects, the plans include 245,000 ft² of flexible research and laboratory space, across two buildings that will be connected by a glazed link at upper levels and provide a mixture of laboratory, office and meeting spaces.

Proposals were submitted to Nottingham City Council in December and, if approved, will see the facility “boost the city’s reputation as the bioscience capital of the UK, acting as an incubator for new and growing businesses within the sector,” said Christopher Ware,



property director at Conygar.

The images showcase the facility’s rainwater gardens and medicinal planting as part of the building’s external landscaping, with an “ecology-focused” street that links the latest phase with the rest of The Island Quarter – “echoing the vision for the overall site,” said the developer.

The surroundings are “designed to



respond to the emerging wider masterplan, which is being developed in collaboration with the planning authority and is the subject of ongoing community engagement.”

These latest proposals will continue the development of the northern edge of the 36-acre development, which also features a 693-bed student accommodation block, due for completion in summer 2024.

SUSTAINABILITY PLEDGE

Pascall+Watson announces ambitious carbon targets

Architecture practice Pascall+Watson has announced its sustainability targets, which include a pledge to reduce the company’s emissions by 90% by 2040. Having started 2023 as a “carbon neutral business,” the practice has confirmed that its carbon targets have been validated by the Science Based Targets initiative (SBTi).

Pascall+Watson – which has offices in London, Dublin, Limerick and Abu Dhabi – has recently signed up to the Carbon Footprint Tree Planting Programme, which will plant 690 trees in London and the south east to offset its emissions. The architects commented: “The planting will predominantly be in school grounds, reserves and managed woodland, where the trees will live their natural lifespan, meet biodiversity targets, provide wildlife habitats and enhance the natural UK landscape.”

The practice has also invested in a new Verified Carbon Standard (VCS)



Phillip Wilson of Pascall+Watson

wind farm project, to generate “clean” electricity through renewable sources which will result in carbon emission reductions each year.

The company’s sustainability strategy contains two distinctive strands – “how it will operate sustainably as a business,

and how it will deliver sustainable design goals within its projects.” Pascall + Watson’s in-house Sustainability Leadership Team developed a strategy founded on six sustainability “pillars” – which have been influenced by the UN Sustainable Development Goals (SDGs).

The practice’s plans and initiatives have all been developed in line with both the UK Government’s commitment to achieving net zero, and the RIBA 2030 Climate Challenge.

To ensure continued accountability, the practice – which has specialist expertise in the transportation, education, leisure, hospitality, healthcare, retail and workplace sectors – will have its efforts objectively verified by organisations. These bodies include Cundall, a multi-disciplinary consultancy delivering sustainable engineering and design solutions across the built environment, and the British Standards Institute.



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CIVIC DEVELOPMENT

FCBStudios given consent for Watford Town Hall ‘sustainable’ refurbishment



Plans submitted by architect firm Feilden Clegg Bradley Studios (FCBStudios) on behalf of Watford Borough Council for a “sustainable and contemporary” town hall have been granted listed buildings and planning consent.

The design will improve the use of the Grade II Listed town hall by providing cultural, heritage and community facilities, alongside enterprise and creative industry. The new town hall will incorporate Watford Museum, a cafe and lettable workspaces for SMEs, alongside reimagined council offices, renovated council chamber, and a new state-of-the-art committee room, as well as “enhanced cultural connections” with the Watford Colosseum events facility.

The proposed changes to the Art Deco Charles Cowles-Voysey building will

“transform” its use, while retaining and protecting its original features.

Tim Greensmith, heritage specialist at FCBStudios said: “Our ambition is to reimagine the civic building as a heritage asset open to all, and an exemplar of sustainable retrofit, through bringing in new uses, culture and workspaces, upgrading the facilities to meet the challenges of the 21st century.”

Alongside the main project works, a number of interventions to improve the building’s energy efficiency have already been consented with construction currently underway on site. These include refurbishment and upgrading of the original windows with high performance ‘vacuum’ glazing, in combination with new cavity wall insulation to improve thermal

efficiency, alongside multiple improvements to building’s electrical systems including solar PV panels to the roof. These works are being in part funded through the Public Sector Decarbonisation Scheme (PSDS), which offers funding to public bodies in England to invest in decarbonisation projects.

In 2022, plans were approved to upgrade the Colosseum performance venue, which forms the other half of Charles Cowles-Voysey’s Town Hall Complex. Both projects are currently progressing through RIBA Stage 4 technical design, with enabling works having commenced in December 2022. The Colosseum project is due to complete in November 2023, while the Town Hall completion is estimated to follow in early 2024.





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EDUCATION

Ackroyd Lowrie scheme to turn student halls into school approved

Planning permission was granted last month for the extensive retrofit of a former university halls of residence – Atlantic House, St Albans Grove – into an “exemplary new junior school” for Thomas’s Day Schools within the De Vere Conservation Area in Kensington.

Architects’ Ackroyd Lowrie has worked in partnership with property design and development firm, Finchatton, planning consultant, Savills and project managers, Silver to achieve planning consent. The design “sensitively ties together the

two historic buildings,” one of which is Victorian, the other mid 20th century, and “revitalises the character of St Albans Grove,” said the architects.

The firm’s managing director, Jon Ackroyd commented: “The challenge was to provide a modern and safe learning environment, while respecting the existing character, and upgrading the fabric to achieve ambitious energy targets.”

The design will provide a five storey school comprising 23 teaching classrooms for pupils from reception to year six, soundproof music rooms, libraries, dining halls, assembly hall, reception, head’s office, meeting/administration rooms, flexible community spaces, and a planted roof garden.

A light-filled central atrium will now be the main entrance to the school, and the introduction of stairs and a lift “will change the way the buildings are navigated.” A woodland-style “quiet learning garden” has been positioned nearest the neighbouring residential properties, while acoustic walls have been specified to surround free play/sports areas.



Images © Ackroyd Lowrie

The facade facing St Albans Grove will include a low brick plinth wall with natural stone coping, and will feature decorative railing “to remain sympathetic with neighbouring properties.” Existing listed trees are retained alongside the new roof garden, resulting in a biodiversity net gain of 21.73% over the current habitat value.

Ackroyd concluded: “Our overall approach follows passive design principles and seeks to refurb the majority (93%) of Atlantic House’s existing area and retain its shell and part of the frame.”

Work on Atlantic House is expected to begin later this year with the aim for staff and students to move in for the 2024/25 academic year.



APPOINTMENT

Senior promotion tops year of growth for GT3 interiors team

Charlotte Stone – part of the interior architecture team at East Midlands architecture firm GT3 Architects – has been promoted to the role of senior interior architectural designer, working alongside associate director Michael Simpson.

The interiors team has more than doubled in size in the last year, with eight staff now working on projects for clients including Everyone Active, Police Scotland, Karbon Homes and several major universities.

Simpson said: “We’re delighted to promote Charlotte into this new role – it’s

indicative of both her own knowledge and expertise, and the growth in scale of projects we have been working on as an interiors team.”

The department’s portfolio of work incorporates leisure, hospitality and entertainment, alongside its core strength in the workplace sector.

Stone said: “Our team is made up not just of architects and interior architects, but also technologists and psychology specialists who help us focus on our core pledge of People Architecture – making spaces that are right for the people that use them.”



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ASK THE ARCHITECT

Marion Room, the new director running DMWR Architects' Manchester studio, answers *ADF's* questions on future plans to grow the practice in the north west, and her personal goals



Marion Room of DMWR Architects

WHAT MADE YOU WANT TO BECOME AN ARCHITECT?

I was good at art (I achieved a top GCSE pass grade at the age of 12) and I suppose this led people to ask me what I wanted to do for a career. From around that time, I focused on the idea of designing buildings as a structured way of using my creative visual skills.

WHAT MADE YOU WANT TO MAKE THE LEAP AND JOIN DMWR?

I relocated from London to Manchester at a midpoint in my career. I had spoken to DMWR previously about joining the fledgling Manchester team but, at that time, I felt as though I needed more exposure to the projects and clients offered by the larger, more established commercial practices in the region. Since then, DMWR has grown and I have had the chance to gain a much better insight into how the construction industry operates in the north-west, so when DMWR contacted me again in 2022, I felt ready for the challenge of heading up the Manchester studio.

HOW DOES YOUR ROLE DIFFER FROM WHAT YOU WERE DOING PREVIOUSLY?

Previously, I was part of the senior management team in a much larger company, whereas now I am

running a whole studio team with more responsibility for the overall direction of travel of the practice.

HAS WORK FULLY 'RETURNED TO NORMAL' FOR YOU SINCE THE PANDEMIC?

Although it was a difficult time, there are many positives to come out of the recent pandemic, including forcing the issue of remote and flexible working practices. While these have been normalised in other industries for decades, the construction industry has been behind the curve in understanding how to adapt to incorporate flexibility without impacting on creativity and production. Since the pandemic, we have made some giant leaps forward in resolving this issue which benefits us all in achieving a balance in our lives at work and at home. The new definition of 'normal' in the workplace is one that needs to embrace these changes in order to be successful going forward.

ARE YOU LOOKING TO FULLY EMBRACE THE POSSIBILITIES OF MENTORING AT DMWR?

I see mentoring and coaching as an intrinsic part of the post-covid culture in the architecture office environment. We will adopt an approach based on monthly one-to-ones with staff where the focus will be on strengths-based personal development,



Images: Guilden Village Student Housing, Guildford

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the outcome of which is intended to be simultaneously beneficial to the growth of individuals, the team and the wider company. The 'ongoing conversation' is now widely considered to be more beneficial than the traditional singular touchpoint of the annual appraisal.

WHAT IS YOUR PRODEST PROFESSIONAL ACHIEVEMENT?

There are several but this is one that resonates with me. When I returned to my home city of Manchester at the midpoint in my career, I became involved in the design of a new theatre and cultural arts complex, HOME, located at First Street. The brief for this building was to create a new destination for the former Corner House and Library Theatre organisations – both iconic Manchester venues and of great significance to Mancunian folk. It felt like a great responsibility to get the tone of the new venue right, and to do justice to these well-loved arts groups to enable them to grow and thrive in the future. HOME is now a key venue in the city where we attend construction industry events, and is also a favourite destination for my family at weekends. The technical aspects of working on the design development of a new theatre was definitely a career highlight for me as an architect.

WHAT'S YOUR BIGGEST CURRENT CHALLENGE?

The main challenges that we're seeing at the moment are around rising material costs which are putting pressure on the development of projects. Delays that occur early on in the programme, such as at the planning stage, can contribute towards the uncertainty. Some sectors are more resilient than others in the current climate and we hope that this positivity will carry projects through any forthcoming market challenges.

HOW DOES THE 'WOMEN IN PROPERTY' ORGANISATION HELP FEMALE ARCHITECTS?

I have become involved in Women in Property as it offers great opportunities for networking and champions the success of women in the industry – working to ensure that the industry is balanced, diverse and inclusive. There is a well-established group in Manchester that holds frequent events to enable professionals from across the construction industry to come together to meet new



“I see mentoring and coaching as an intrinsic part of the post-Covid culture in the architecture office environment”

people and to learn about business opportunities across the region.

I am delighted to share that from 1 March 2023, I will become a Women in Property North West Committee member, overseeing the Education Roadshow, Student Awards and Inclusivity Support. In addition, our DMWR London studio was one of the host venues for the 2023 WIP Student Awards assessment days which was held at the end of January. I was involved on the panel of judges reviewing the project presentations of around six to eight shortlisted undergraduate students, offering constructive feedback and nominating a winner to go forward to the national finals which will be held at a dinner at Claridges later in the year. This is a great experience for both the students and judges – and one which helps young people to begin to form their support network as they come into the industry.

WHICH SECTORS/TYPOLOGIES WILL YOU INITIALLY BE FOCUSING ON AT DMWR?

We will continue to pursue opportunities in the PBSA, residential, commercial and industrial sectors to build upon the legacy

of the team in Manchester and the work across the wider practice. The senior team has a collective range of experience across a wide number of sectors so there will be a chance to expand our targeted areas of work going forward.

HOW IS YOUR TRAINING TO BECOME A CERTIFIED PASSIVHAUS DESIGNER GOING?

Last year, I attended the Passivhaus Institute's Retrofit course looking at how EnerPHit standards can be achieved for both domestic and non-domestic buildings. Now, I am working towards the Certified Passivhaus Designer qualification. This focuses on new-build projects using a specific approach to form factor, orientation, building services and construction detailing in order to achieve a stable internal environment, resulting in very low annual energy consumption and bills.

DO YOU HOPE TO BE ABLE TO PURSUE PASSIVHAUS SCHEMES FOR DMWR IN THE NEAR FUTURE?

We would like to pursue this in our business going forward. However, the opportunities to work on Passivhaus schemes are still fairly limited. It is still considered to be costly when, in fact, there are now some Passivhaus solutions on the market that can be delivered at the same cost per square metre as traditional-build, social housing schemes. From 2025, the Future Homes Standard will deliver new homes that are 'zero carbon-ready.' This change to the Building Regulations will challenge the thinking in relation to current building methods, and undoubtedly increase the perception of Passivhaus as a viable solution.

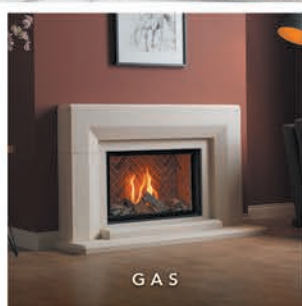
WHAT'S YOUR MAIN PRIORITY AS YOU EMBARK ON A NEW PHASE OF YOUR CAREER?

I am really excited to be heading up the Manchester office for DMWR and working with the highly talented team to continue to grow our portfolio in Manchester and the north west. I am fully engaged with the current thinking in relation to sustainability and the built environment, and also committed to the urgent need to move the debate forward for both new and retrofit schemes. We are currently working through our approach to ESG, and we are investing in creating a range of new policies. It is exciting to see where this will take us as a company going forward. ■

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SITE LINES

SENDing a message on design for better inclusivity

Catherine Ward from HLM Architects explores the key principles of Special Educational Needs and Disabilities (SEND) design and their importance for ensuring that every school pupil has a chance to thrive and reach their full potential

The past few years have seen a much needed increase in the provision of more specialised facilities for children with SEND (Special Educational Needs and Disabilities), accompanied by a growing understanding that this requires a highly tailored approach rather than following traditional school design methodology.

Many students with special educational needs can find the school environment overwhelming and face many daily challenges, whether these be social, practical, sensory, physical, communication or other challenges. While there is standard guidance and legislation for education building design to accommodate physical disabilities, other SEND needs – for example pupils with conditions such as ADHD and Autism – can be overlooked due to their more specific and complex nature.

As architects, we must consider how to deliver engaging learning spaces that better address the requirements of a much more diverse set of needs. According to a Department for Education (DfE)

report, the number of students with special education needs rose to almost 1.5 million last year (that's 16.5% of all pupils in the UK). It is therefore good to see that thinking is shifting accordingly around SEND design principles to create more engaging, inclusive places in all areas of the built environment. For instance, designers are considering the major factors that affect how young people with ASC experience their surroundings and therefore what to bear in mind when designing the most fitting education facilities for them. These include proxemics (ie space required between pupils), compartmentalisation, legibility, movement and sensory overload.

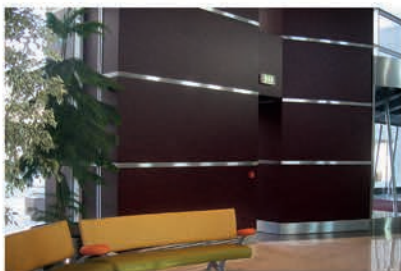
Designing for SEND goes beyond the practicalities and needs a holistic approach, thinking how school buildings can have a positive impact on health and wellbeing, boost confidence and motivation, adapt to individual learning and physical needs and provide the right support and safeguarding. Further to this, embedding sustainability is another increasingly urgent priority in every new development.



DIVERSE NEEDS

Ward believes that architects “must consider how to deliver engaging learning spaces that better address the requirements of a much more diverse set of needs”

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Different age groups and requirements

When HLM Architects was appointed to deliver architecture, interior and landscape design for a new SEND school in Somerset, we were challenged with collocating multiple age groups across primary and secondary school levels, and varying abilities and needs, in one building.

The school will provide 120 pupil places, from ages 5-16 with Social and Emotional Mental Health Needs (SEMH) and Speech, Language and Communication Needs (SLCN). The new school is to be procured and delivered through the DfE Construction Framework as part of the Free Schools Programme.

A responsible and collaborative design approach was critical, given the very specialist and multifaceted needs of this school. We started by conducting a series of engagement meetings with the DfE, Local Authority and the Trust, complemented by a detailed stakeholder and community engagement process. The vision for the school was then refined based on the feedback, concerns, questions and priorities coming out of this, alongside the original brief.

The building had to be flexible enough to accommodate varying cohort sizes in each academic year, with accessibility and inclusivity being a major focus throughout. Our team also needed to ensure the availability of ample and distraction-free breakout spaces, a high level of security for pupils, an interior layout that facilitated optimum wayfinding and maximise opportunities for passive supervision, an effective landscape strategy and, importantly, achieve this in a way that aligns with the Local Authority's ambitions to be carbon neutral by 2030.

A thoughtful approach

By taking a thoughtful approach, we were able to design the school so that it can be organised by age and special educational need (SLCN or SEMH) based on a personalised approach rather than defined key stage groups. The design includes separate pupil entrances to effectively manage the beginning and end of each day, with the option to divide the different age groups and needs where required. Each classroom will feature dedicated break-out spaces, while group rooms and shared sensory and soft play areas have been introduced throughout.

Safety has been a priority on the project, with anti-climb fencing – softened by hedge and tree planting – to the perimeter. Corridor ends have been left open to enable views out, allow natural light in and are supported by glazed screens into each classroom, to aid better passive supervision of common areas at all times. The simple, central corridor circulation underpins the clear and intuitive wayfinding system across the building and is appropriately sized to allow sufficient area for pupils who require increased personal space – a critical element for this particular setting.

Visual information is provided by distinguishing floors, walls, ceiling planes, doors and decorative elements, where colours and tones are carefully chosen to reflect the nature of the setting and avoid issues relating to sensory overload. Similarly, the interior spaces are configured in a way that will keep background noise to a minimum. In case of emergency, audio fire alarms will be supplemented by visual alarms for pupils with hearing impairments.

There are four dining spaces catering for the different needs, ages and key stages. Additionally, a variety of toilet facilities have been provided to ensure all pupils have access to options that suit their age and physical needs. This includes a hygiene room with a hoist, shower, accessible toilet and changing bed.



As architects, we must consider how to deliver engaging learning spaces that better address the requirements of a much more diverse set of needs

Connected to nature

The landscape, while based on a unique and dedicated strategy, was designed to allow seamless flow between interior and external areas and a sense of cohesion with the school's surroundings. All classrooms have direct and secure external access to accommodate external learning opportunities and allow 'dysregulated' pupils to utilise a safe external space to practise self-regulation skills. There are also plenty of opportunities for outdoor and nature-based learning, sport and movement, socialising, play, relaxation, and quiet reflection.

Greenery is incorporated throughout the design, not only for its well-known wellbeing and calming benefits but also as a way to encourage biodiversity. Features such as the addition of a sensory garden, for example, will provide students with a connection to the natural environment, as will the creation of a variety of inspiring and peaceful spaces including food growing and habitat areas.

A design approach that considers closer links with the environment also brings many sustainability advantages. To attain the local authority's climate goals, the new school is aiming to be net zero carbon in operation. That means that careful attention was given to making the building as energy efficient as possible from the earliest design phase, by assessing the embodied carbon of materials, using local materials where possible and natural materials such as sustainable timber cladding, incorporating green roofs and PV panels, as well as installing sustainable drainage systems.

By more closely considering the needs of all SEND students in the design process and working with the Trust to understand their operational and management requirements, our hope for the school is that it provides a welcoming, inclusive, accessible, secure, positive and sustainable environment that will have the inherent flexibility to cater for a wider array of SEND requirements, both now and in the future. Most importantly, it will enhance the learning experience to provide the best education possible for every child.

Catherine Ward is associate architect at HLM Architects

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ICÔNE, LUXEMBOURG FOSTER + PARTNERS

Foster + Partners has completed ICÔNE, an 18,800 m² office complex in Belval, Luxembourg, filled with light and greenery to encourage a “spirit of co-creation and collaboration.” Designed in collaboration with local practice BFF architectes, the building references the industrial heritage of Belval in a city quarter now combining research, education, leisure and commerce. Darron Haylock, partner at Foster + Partners, commented: “Covid has highlighted the need for healthier and more flexible urban workspaces, which is exactly what this project provides.”

The entrances are located on the main urban street and a square, with shops, cafes and restaurants at pedestrian level. The building is arranged as two wings enclosing an atrium, wrapped by an orthogonal facade and roof which emphasises the structural grid. The historic Belval blast furnace forms the central focus of the view from the atrium. The facade allows for internal column-free office spaces as well as solar shading and maximised internal daylight. The external facade benefits from a series of external green loggias, visible from both the inside and outside of the building.



SUHE CENTRE, CHINA FOSTER + PARTNERS

Foster + Partners has completed the first office tower in the newly regenerated Suhewan area of Shanghai. The 200 metre, 42-storey Suhe Centre for China Resources Land forms the centrepiece of the Suhewan East Urban Complex. The LEED Platinum-rated tower aims to draw development towards the eastern quarter of what is a predominantly residential area.

The building, situated alongside a new urban public green, reflects the “industrial aesthetic” of the historical bridge and warehouse buildings nearby. Dark glazing reduces reflective glare and contrasts with the stainless-steel structural frame, which is “pulled away from the corners” to maximise views. Every corner is a full-height glass space.

Lower levels look out over the park to the west; upper levels have 360° panoramic views. In the 11-metre-tall lobby, daylight filters through louvers above the entrance canopy. The floor plates are column-free for flexibility and there are detachable floor slabs to allow for connections between levels. The recessed middle of the west facade houses a row of lifts, maximising views and light.



ARENA DU CO'MET, FRANCE POPULOUS

Populous – the architectural design firm specialising in sports and entertainment venues – has completed its work on Arena Du CO'Met in Orléans. The arena was opened to the public in January 2023, and is the final part of a major sports and cultural complex that has been created in the city which is located on the banks of the Loire, 75 miles south west of Paris.

Designed to host the majority of indoor sports, concerts and large-scale shows, the arena has a 3,000 m² platform and modular stands – for up to 10,000 seats. A ‘ring’ of 28 boxes – each housing between nine and 30 seats – sits below a 360° LED banner screen, providing 260 linear metres for advertising, as well as an LED cube, to replay action and “enhance the event experience,” said the architects. A large range of ‘premium’ seats – such as courtside – are available, as well as a VIP area of over 1,000 m², partitionable into several lounges.

Francois Clement, senior principal at Populous and the general manager of Populous France, said: “Populous is proud to have delivered an arena that will not only play a central role in the sporting events programme for the region but stands ready to serve as a world-class performance venue for athletes training for a variety of sports at the Paris 2024 Olympics.”

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have seen the industry encounter sizeable and lasting changes and a heightened awareness of user-focused factors influencing design such as neurodiversity and wellbeing. *'The Changing World of Workplace Interiors'* explores these ideas and how technology, adaptability and the new values of Gen-Z are asking us to consider more from office design. *'The Changing World of Workplace Interiors'* can be presented remotely, at your office or at IVC Commercial's London workspace in Clerkenwell. Book your CPD presentation through ribacpd.com or by emailing IVC Commercial.

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Brick manufacturer Vandersanden has announced that its new RIBA certified CPD #7 *'Brick: Circularity, Sustainability & Innovation'* is now available to architects and all construction professionals. This new seminar is the first RIBA CPD certified seminar in the industry to explore the subject of brick and sustainability in detail. This CPD is the latest addition to Vandersanden's portfolio of learning and development tools, aimed at architects and specifiers, helping to enhance their expertise and keep them updated on new trends, techniques and innovations in brick manufacturing.

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SPECIFYING THE CORRECT LOADING BAY – CPD FROM HÖRMANN



Hörmann have announced the launch of their RIBA accredited CPD training course which covers the best practice guidelines surrounding the specification of loading bays. The new course is part of a series of presentations and seminars offered by Hörmann created to help architects, specifiers and decision makers remain compliant and up to date with the latest industry developments. The concise, 45-minute presentation has been developed to explain the key aspects of loading bay solutions and to provide a clear technical understanding of how to specify the correct individual components. It also provides a comprehensive understanding of the latest safety requirements and standards to ensure that the needs of both builders and clients are met. The CPD presentation can be delivered at the Hörmann Training Academy in Coalville or via Webinar and is available for both individual and combined audiences. To find out more about the Loading Bay CPD course or to discuss a training course designed for your specific needs please contact Marizel Le Roux.

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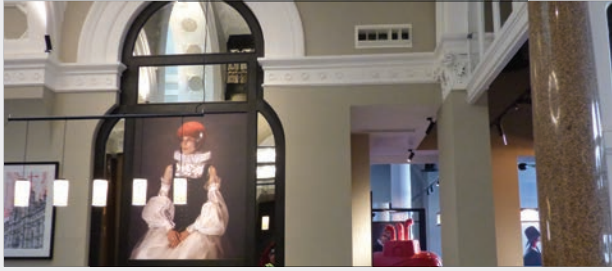


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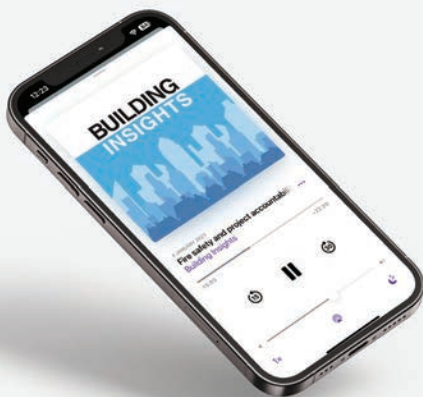


Victorian baroque grandeur and millennial aspiration at iconic hospitality venue

One of only three Radisson RED hotels in the UK has opened after a £20m refurbishment of an iconic 150-years old Grade II listed building. Helping create the perfect atmosphere for the brand's target guest base of millennials are ventilation diffusers designed and manufactured by **Gilberts Blackpool**. Gilberts worked closely with building services specialist Briggs & Forrester Group in the design and specification of the diverse options, developing bespoke versions alongside standard grilles. Now, a combination of LG linear bar grilles, GECA egg crate grilles and GSJA swirl diffusers deliver effective ventilation throughout the seven-storey former North Western Hall Hotel in Liverpool's iconic Lime St. Finished in either matt black or pure white with a 20% gloss finish, some 400+ LG fine line linear bar grilles fitted with TCB top entry plenums to deliver a balanced, continuous airflow have been fitted predominantly in the 201 bedrooms.

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THE GENERATOR

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Generating collaboration

The team behind a sensitive restoration in Bristol speak to *ADF's* Tom Boddy about how they made the most of historic Victorian infrastructure to support workspace wellbeing and collaboration on a desirable riverside site

The historic Grade II Listed Generator Building that once supplied electricity to Bristol's tram system has been restored into a unique and dynamic workspace as part of a wider regeneration scheme in the city.

Situated in the heart of Bristol's Waterfront Quarter, the six-level, 30,611 ft² scheme on the banks of the River Avon has been designed in a collaboration between London-based interior design and architecture studio MoreySmith, and Bristol architects The Bush Consultancy.

As well as providing modern flexible office space for Bristolians, a strong emphasis was placed on preserving as much of the building's historic character as possible, while infusing the area's nautical aspects. The interior arrangement and design are a carefully considered mix of original and contemporary features – and prioritise occupant wellbeing by focusing on natural light and views of the waterways below.

The project is part of the Finzels Reach Development, one of the largest and most significant mixed use regeneration schemes in the south west. The scheme has been in the works since the mid-2000s and has seen the emergence of waterside apartments, new and affordable homes, modern sustainable offices, a new hotel, and a leisure quarter, transforming what was once a derelict industrial area into a

vibrant neighbourhood.

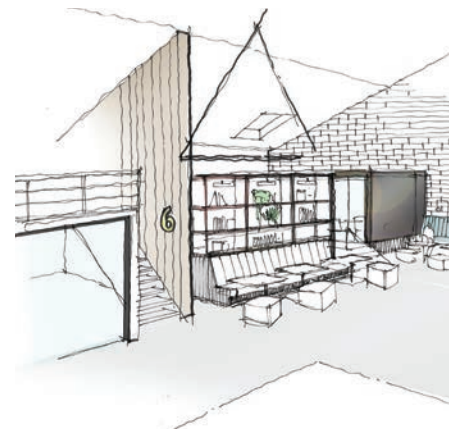
The Generator Building is one of the most recently completed projects on the Finzels Reach site. Located on the south east corner, it is the tallest structure in the scheme – overlooking Counterslip, the main public highway through the site, and Bristol's famous Floating Harbour.

The Bush Consultancy were responsible for the external fabric, the extension, and the internal structural alterations, while MoreySmith undertook the fitout and internal design.

History & brief

Built in 1899, the building housed the equipment that powered the first electric tram system in the UK. Containing four steam engines coupled with four generators, it supplied electricity to the trams until 1941 when a bomb struck the nearby bridge and severed the power lines – signalling the end of trams in Bristol.

The building's original Victorian design comprises a red brick cladding while its columns, arches, and doorways are picked out in Bath stone. The south facade has a “narrow form,” which “serves to emphasise the height of the structure,” asserts Tom Partridge, project architect for The Bush Consultancy. To the front elevation, a grand Venetian window sits over the main entrance with a row of four Ionic columns on the second level. At the top of the south





NEW LEVELS

The project introduced two new levels including a 'floating' mezzanine at level three



facade is a triangular pediment with a tiny window, ornamented in the Baroque style with further large Venetian windows to the side elevations.

Following its fallow period, the Generator Building briefly re-opened as a brewery as well as being repurposed as offices during the 1980s. To serve these varied functions, the internal arrangement has seen significant alterations over the years. Initially a four-level building with two floors and a basement level, its evolution over the years included the insertion of two additional floors, plus infilling areas at upper levels to provide complete office floor plates. A further floor was later added between the original first and second floor.

While it has periodically been in use for short periods, the building has also seen long stretches of dormancy. "Very little development has been produced

based on how the space could be used efficiently," explains Zoe Bailey, associate at MoreySmith.

Cubex, the developer who acquired the Finzels Reach site in 2013, has collaborated with The Bush Consultancy on several of the projects within the development. Including the design of Castle Bridge over Bristol's famous floating harbour from Finzels Reach to Castle Park, the Premier Inn, and Aurora (a 100,000 ft² BREEAM Outstanding office building).

Cubex approached Bush again for an extension and internal alteration of the Generator Building for a speculative development, and in 2018 obtained planning. But in 2019, developers Castleforge Partners bought the building with a view to adapting the consented scheme and creating a unique coworking space for their Clockwise brand.



Their brief was to incorporate shared desk facilities, with offices varying in size from three to 12-person, and communal facilities such as tea points, meeting rooms, and a club lounge with cafe bar servery.

With an abundance of relevant knowledge from working across the wider site, the Bush Consultancy was retained by Castleforge, and MoreySmith was taken on to tackle the building's interior. The clients wanted to bring in "a designer with a vision," says MoreySmith's Zoe Bailey.

The firm's Michael Kieck continues: "It's exciting to be given a blank box, but it's even more exciting when it has so many layers to it – it makes the design so much richer." One of the designers' key ambitions was to avoid the solution being restricted to "number crunching" desk space. Keen to make the most of the building's historic character, their concept was to implement three guiding themes for the interior.

These were 'waterways,' 'electricity,' and 'industrial,' as part of "celebrating what the building means to the area," says Bailey. She adds that she became "obsessed with the building," and was committed to "do whatever was best for it."

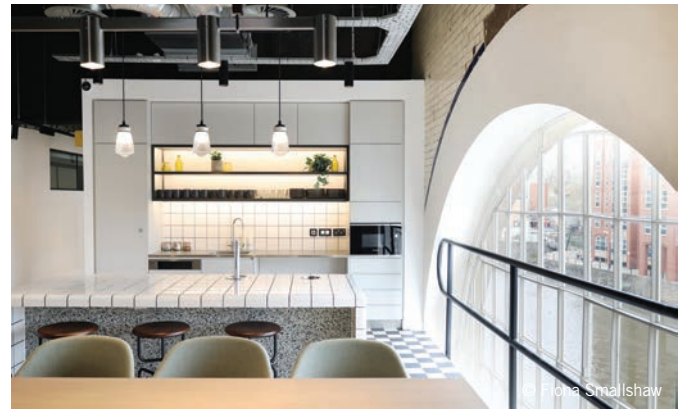
Retaining walls

With the building's exterior making it a highly recognisable part of the Bristol Harbourside, it was imperative that as much of the building's 120-year-old structure was retained as possible. However, due to years of neglect, parts of the original facade's stonework had deteriorated, and needed updating.

With the restoration of this listed building being particularly sensitive, Bush collaborated closely with Historic England and the BCC Conservation Officer. Over time, due to the nature of the structure and the surrounding masonry fabric, the steel

Zoe Bailey says she became "obsessed with the building" and was committed to "do whatever was best for it"





frame had corroded in some areas, and had cracked the masonry inside and out. In areas where cracking was more severe, whole brick sections were replaced with heritage bricks to match the original design with isolated replacement stonework. However, most of the cracking was able to be restored without wholesale replacement.

One “major intervention” into the facade that Partridge describes was the reinstatement of the original grand entrance, which had been blocked off with a matching stone plinth. The reopening of the main entrance has been a “significant improvement to the building, and its place within the street scene,” he adds. Before the works were carried out, the architect said it was “easy to pass by the building.” However now that the glazed entrance has been reinstated, “people walking along Counterslip can see into the thriving hub of the Clockwise Office operation.”

The historic 120-year-old windows have also been reinstated – from the ground to the fourth floor. Covered with several layers of (lead-based) paint, a careful strategy was required to refurbish them insitu. Partridge details the windows’ restoration work sequence: “removing the putty,

deglazing the panes, sand-blast the frames (ensuring waste was captured and did not enter the adjacent harbour), make good any frames, prime the frames, paint the frames, reglaze with new panes, and finally, apply mastic sealant to the perimeter of window assemblies.”

Although elements of the original structure were replaced, the teams put the overall emphasis on retaining the original finish while making the building as safe as possible – rather than producing an ‘as-new’ look. Partridge explains the intent to keep the finish as “raw” as possible as “a conscious decision, so that the progression of The Generator Building through time could be retained.”

As a result, most of the core structure was left unaltered. However, the north gable wall was an exception, with new openings created into the new extension. This wall had been subject to “numerous alterations during its life but there was still some original structure – varying between 750 and 900 mm thick – that required new openings to be formed,” says Partridge.

An extension to the north end of the building has been purposely designed by Bush using different materials to the



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“It’s exciting to be given a blank box, but it’s even more exciting when it has so many layers to it”

Michael Kieck, MoreySmith

original structure. It further defers to the original building by being set back from both of the latter’s long facades, and its dark-coloured materials “keep it in the shadow of the Listed structure,” asserts Partridge. With the Generator Building being located within the flood zone of the adjacent floating harbour, Staffordshire blue bricks were required from the ground to the first floor with the remainder of the extension using a dark grey cladding.

Internal interventions

As well as updating the building’s envelope, The Bush Consultancy were consented to alter the internal arrangement while MoreySmith worked on the interior design in line with Clockwise’s and Castleforge’s ambitions. Partridge explains that “a key consideration of the consents was that our additions can easily be removed without affecting the original structure.” For example, the sixth floor has been created from a stand-alone steel frame that sits on the fifth floor slab and fixed to the external walls, and studwork to new partitions have

minimal fixings into the glazed brick. The fourth floor mezzanine extension was to an existing 1980s intervention, namely the added floor which it largely replaces.

The ground floor boasts meeting rooms, event space and a bar, with an adjacent cafe lounge area which Michael Kieck of MoreySmith describes as the building’s “social heart space.” The atrium adjacent to the main entrance required Bush to remove part of the first floor. This alteration was to a structure provided as part of the 1980s development, and so didn’t affect the original layout.

Starting on the first floor, dedicated work sections with breakout tea zones with kitchenettes and soft seating encourage cross collaboration and interaction, which continues on the upper levels. “It’s like a small market space for businesses. As there is so much transparency, you are aware of who’s in the spaces, and you can ‘tag team’ projects or clients,” says Kieck.

While there is access to a lift at the rear, the raw metal staircases are located in areas that mean occupants generally have to



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circulate on foot through the spaces. The second floor, which is “quite contained,” features a wrap-around office space with “a track for circulation” with further tea points and breakout zones.

The third and fourth floor is a double-height space which now has a central, floating mezzanine. This area occupies a more flexible desking system where people can book a desk for as short a period as a day. The double height windows fill the space with natural light, and offer views of the water and boats below.

One of the main architectural interventions by MoreySmith was the insertion of another mezzanine level – on the fifth floor. What was a “big open hangar space feeling more like an aviary for pigeons,” says Bailey, now houses pod structures placed between the existing roof trusses to maximise volume and create a second level within the space. To maximise natural light, the Bush Consultancy installed a rooflight along the entire length of the ridge, and the large porthole windows offer further views of the city.

In the shared spaces, alongside the teapoints and breakout zones, individual phone booths allow users to shut themselves away for a private call without disturbing other users – an “important feature” to the client, says Bailey.

The space offers “so many different work settings” which allows people to choose “how and when they work,” says Kieck. The different variety of spaces such as the private offices, teapoints, and cafe space “cater to different styles of companies.” Also, some of the deep windows create nooks, which provide users to “grab a cushion and sit and work in there for a couple of hours,” says Kieck.

Materiality

While the overarching objective was to create a space that catered for modern working, being sympathetic to the building’s rich history was key. MoreySmith’s strategy was to sensitively incorporate new elements to the interior without compromising the original architecture. “We wanted to create a contemporary version of what

ECLECTIC MIX

The furniture that MoreySmith chose for the spaces is “an eclectic mix of vintage and contemporary”



RAW & REFRESHED

The interior designers MoreySmith wanted to keep some finishes 'raw' to maintain their character, but others also required 'freshening up'
Photo © Fiona Smallshaw



the building might have been if it had been designed now,” asserts MorleySmith associate director Etienne Sharp.

Inside, the original glazed brick walls have been retained with spots popping up sporadically on the perimeter of the building. While the broken (and unsafe) bricks were replaced, some of the worn down and crumbled bricks were left untouched.

Although MoreySmith wanted to keep sections of the interior ‘raw,’ some areas needed “freshening up” and so required some modern insertions. “We tried to make sure there was a balance between contemporary and original elements,” asserts Bailey.

The architects grouped floors with each one having its own specific palette: the first and second floors are blue, the third and fourth floors green, and fifth and sixth floors a mustard yellow. The ground floor boasts an industrial feel, featuring corrugated metal and mosaic flooring to reference the original Victorian architecture of the space. The furniture throughout the levels is an “eclectic mix” of vintage and contemporary, and was about “blending the neutrals with occasional pops of colour.”

The electricity, waterways, and industrial themes are emphasised by the building’s lighting. For example, as part of the waterways theme, rope lights designed by New York-based Lindsey Adelman feature in the ground floor ‘clubs space,’ subtly referencing the nearby canals. Encircling the

bar on the ground floor, a bespoke ring light has been installed to mimic “the flow of electricity,” referencing the building’s original function, while in the atrium, ‘Noctambule’ pendants have been installed. To “add warmth” to the upper levels, the architects incorporated timber into finishes.

Where they could, MoreySmith used repurposed industrial fittings extracted from derelict or demolished buildings. The avoidance of using new materials wasn’t just about “creating a circular economy,” says Kieck, it was also to give “a bit more of a context” for building users.

Response

With the project now complete, the new coworking space has reportedly received an “amazing response,” says Bailey. The historic, but neglected building has been brought back to life as a characterful and thoughtfully restored space for local businesses to engage with each other in a wellness-focused workspace. The resulting spaces are lively, creating a desirable location for businesses. Kieck enthuses: “It is a striking building that has such an amazing opportunity to flourish again.”

Evidencing the success of this complex, sensitive project, the building has picked up a clutch of awards including Frame magazine’s Coworking Space of the Year 2022, as well as being shortlisted for Dezeen’s Large Workplace Award 2022 and the 2023 BCO Awards for Refurbished/ Recycled Workplace. ■

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INDUSTRY VIEWFINDER

A new era of energy efficient buildings

Meeting the new Building Regulations – Parts L, F and O

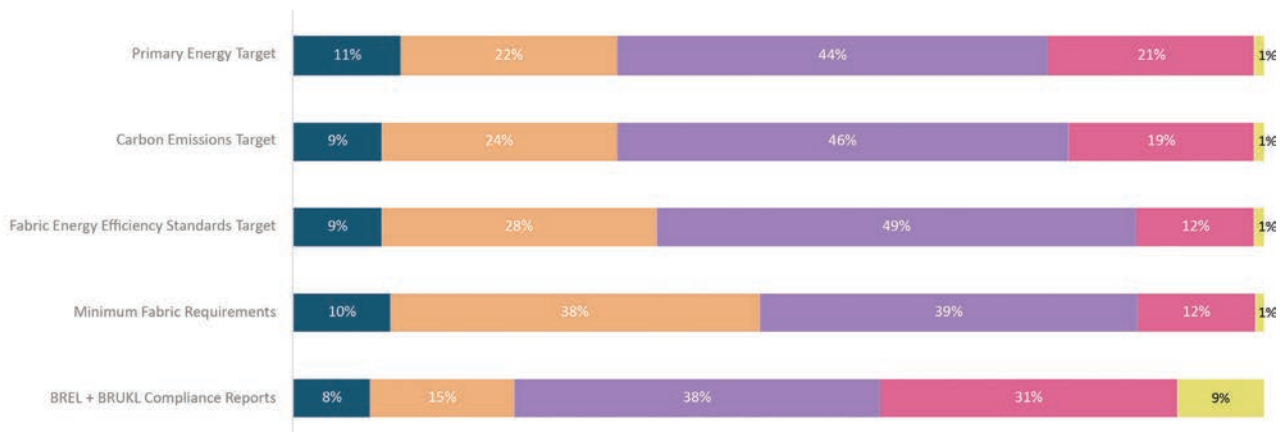
Executive summary

The UK has the oldest – and arguably most inefficient – housing stock in Europe. But in terms of new homes, construction practice has been a widespread issue in recent decades, and performance has been hampered as a result. The Government has gradually increased pressure on Building Regulations, with a legal 2050 goal of net zero carbon emissions. The latest update, encompassing Parts L and F, and the new Part O, raises an array of challenges for the industry.

The Future Buildings Standard 2025 will require all new homes to produce 75-80% fewer emissions than current levels, and the interim 2022 uplift to Regs is an interim step towards that

demanding new level. The major change for the whole supply chain to grapple with is the de facto banning of gas heating for most new homes (although the Government's Heat and Buildings Strategy in the end ducked the challenge of an explicit ban).

Along with changes to Part L, Part F (covering ventilation) is being updated too, to ensure that tightening energy efficiency doesn't adversely affect air quality. The new Regulations will bring significant improvements to the performance of homes (and non-residential buildings in the Future Homes and Buildings Standard which encompasses the Future Homes Standard), but also come with serious challenges for the industry, in particular housebuilders.



"How well do you understand the following areas of Part L?"

Very Good Good Acceptable Poor Very Poor

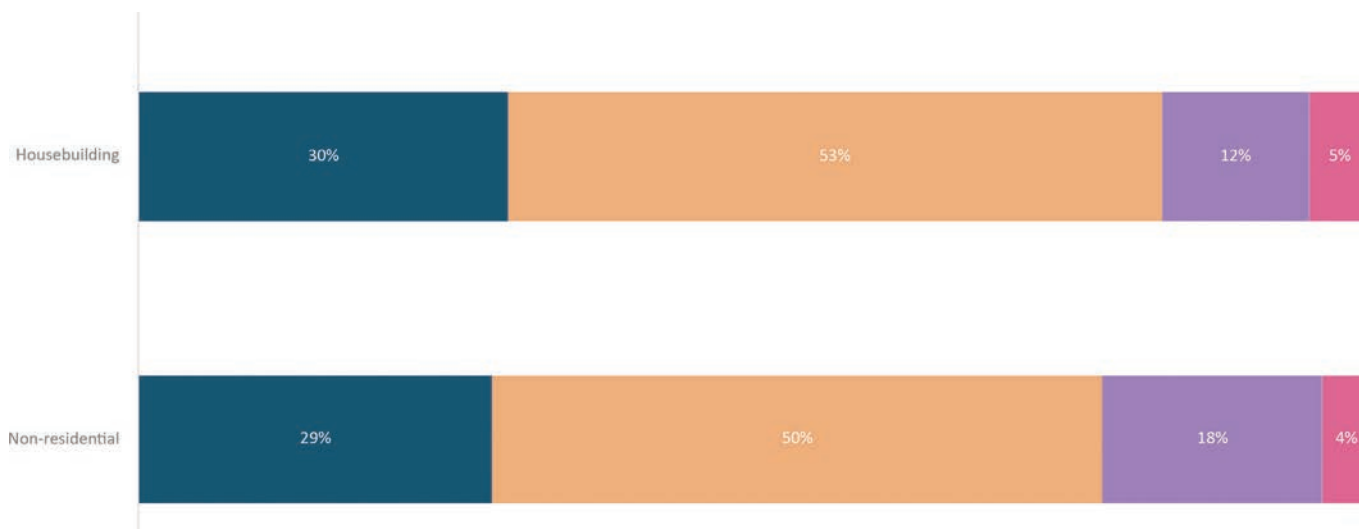
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"How difficult do you believe it will be to achieve the new carbon emissions targets in Part L 2021?"

Very Difficult Slightly Difficult Not Very Difficult Not Difficult At All

We surveyed our architect readership to discover their views on these important changes to the Building Regulations, with the majority of respondents being currently involved in the residential sector. The findings – in terms of respondents' levels of understanding of the new Part L, F and O, were a mixed bag.

We also looked at their views on specific challenges within the new regs. These included Primary Energy (the new metric for measuring buildings' energy use), and the Fabric Energy Efficiency Standard (FEES) – both of which produced very different findings. The new reporting methods which are currently confronting housebuilders were also explored, as were respondents' choice of building technologies and materials.

Introduction

The Future Homes and Buildings Standard

In 2019, the Government launched its first consultation on strengthening the Building Regulations to increase energy efficiency, which would pave the way for the 2025 Future Homes Standard (later to be renamed the Future Homes and Buildings Standard). As well as fabric improvements, this looked at how to phase out certain gas boilers and other fossil fuel heating systems in new homes.

The resulting 2022 interim uplift in energy performance requires new homes to reduce emissions by 31% (against Part L 2013), based on the premise of helping the industry achieve the 2025 standard. Projects were required to produce a building notice or submitted plans with local authorities before 15 June 2022 to avoid needing to comply with the uplift, and the new regulations

will apply to all projects from 15 June 2023.

Arguably it will not be architects who will be the most challenged, but contractors who have been accustomed to doing things a certain way for a long time. The move to a much more robust audit trail on sites, a core part of the new Regs, is – together with the move away from gas – the biggest change in the new Part L. It's also likely to be the most challenging aspect of all for the industry to adapt to.

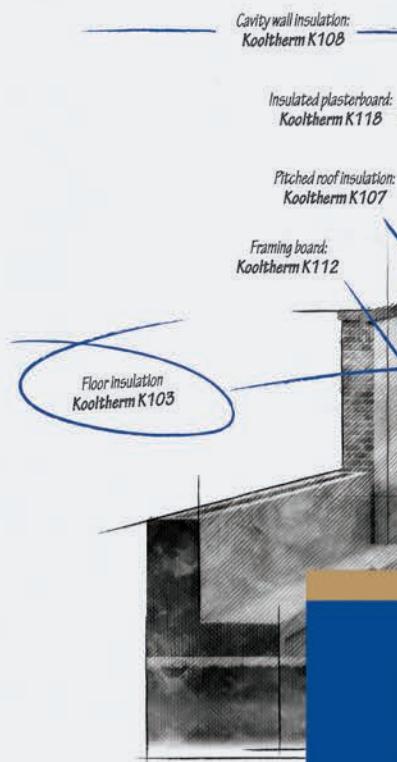
Key changes

In Parts L, F and O 2021, the key changes for new builds are:

- 31% fewer carbon emissions (non-domestic 27% reduction)
- Maximum U-value for windows and doors (new build) in SAP10 – 1.6 W/m²K (was 2.0 W/m²K in SAP12)
- Notional building U-value target for windows and doors .2 W/m²K (was 1.4 W/m²K)
- Maximum 0.18 W/m² for walls
- Non-domestic U-values 0.26 W/m² for walls and 1.6 W/m² for windows
- New and replacement heating systems maximum flow temperature of 55°C
- Part L minimum air supply rate of 0.5 l/s.m²
- 'Full fabric specification' adopted for Fabric Energy Efficiency Standard (FEES).

Part L remains as two documents – Approved Document Part L1A, covering new homes, and Part L1B, covering requirements

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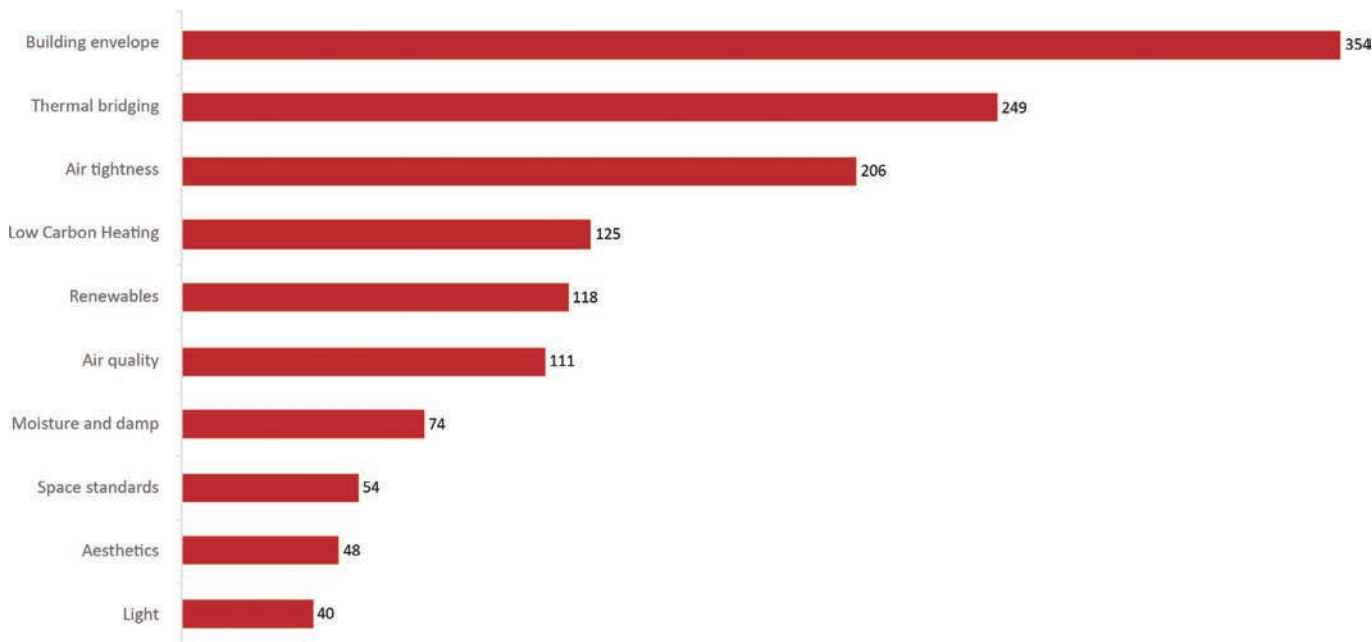


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Image credit: Photography - Jack Hobhouse. Architects - Alma-nac.
Note: Product annotations are indicative examples.



"What are the most critical areas to focus on when designing to the new Part L in residential properties?"

for renovations and extensions to existing buildings. Part L1B states that if a 'thermal element' (roof, wall or floor) is replaced or renovated, it must be done to Part L1A standard.

Part L changes for domestic refurbishment include a max window U-value of 1.4 W/m²K, new roofs and extensions to have no higher than 0.15 W/m²K, and refurbished roofs no higher than 0.16 W/m²K. In extensions, it's a maximum 0.18 W/m² for walls, and 1.4 W/m² for doors, windows and rooflights. Primary energy and FEES are to be used for whole house energy use calculations in extensions, and SAP compliance is required.

SAP & the notional building

New homes will now be assessed under a new Standard Assessment Procedure (SAP) calculation – SAP10. This sets requirements for higher levels of insulation, as well as a new Primary Energy metric. The main change within the new SAP (10.2) is that the carbon weighting within the TER (Target Efficiency Rate) is now different so that electricity now has a lower 'carbon factor' than gas. The new 2021 Part L also added the 'Primary Energy' rate to TER and TFEE (Target Fabric Energy Efficiency) to make up a fuller picture of the building's energy use within the overall 31% emissions reductions target. There were however other, more challenging jumps to make for architects, clients and contractors and the whole supply chain in terms of design and workmanship, as our survey bears out.

The notional building is a hypothetical dwelling used in

SAP to calculate the TER and TFEE, and based on the same geometry and orientation as the proposed 'real' building – but with default 'reference values' for various build elements. There is scope for design flexibility under the new Parts L and F; as long as the required TER is achieved, the ratios of how it is achieved within the various elements of the building are down to the project team in each individual case.

Assessing the problem

Levels of understanding

In surveying our architect readership, we wanted to initially discover their levels of understanding on all three new regulations (the updated Parts L and F, but also the new Part O). A healthy 9% believed they had a 'very good' understanding of the Part L changes, however 12% said their understanding was 'poor.' Part F fared less well, with 6% saying they had 'very good' understanding, and 3% describing their level as 'very poor.'


Unsurprisingly given it being introduced in 2022, Part O was only seen to have 'very good' understanding by 5%, with 7% admitting their understanding was 'very poor.' The majority of respondents however graded their understanding as 'acceptable' across all three standards.

When it came to specific key areas of Part L, level of understanding ratings varied somewhat. The new reports required to show onsite compliance ('BREL' for residential

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and 'BRUKL' for non-residential) represent a major change for housebuilders at least in showing comprehensive compliance including photographic evidence. However, they were only well understood by 23% of our survey respondents (rating themselves as 'good' or 'very good'). By contrast, 31% said they had poor knowledge of them, suggesting that architects aren't as engaged with this part of the compliance process as others in the supply chain.

The factor with the greatest understanding level was the new Primary Energy metric to be used as the measure of a building's energy use (11% said they had 'very good' knowledge, however 44% said it was only 'acceptable'). The carbon emissions target within Part L was well understood by 33% of respondents, and the FEES target by a decent 37%. Minimum fabric requirements were well understood by 48%, and the 'notional building' by only 30%.

The notional building is a relatively 'involved' concept but requires understanding due to its importance in potentially driving designs, but also its potential to create problems. Industry commentators believe there are issues with simply adopting the default values within the notional building, which is theoretically possible as a design approach to comply with the new Part L. The contention is that default values are formulated around energy loss, rather than a more holistic assessment of thermal bridging, and that if the 'minimum temperature factor' is not included, condensation and mould remain a risk.

Key Part L challenges

We asked readers to rate four crucial areas within the new Part L framework on how challenging they were for designers. These were: the new U-values, the CIBSE TM23 method of air-tightness testing now adopted as the standard method by Building Regs, primary energy being the 'Principal Performance Metric,' and lastly, the use of the notional building.

The 'leading' challenge picked by our survey respondents overall was the maximum U-values in Part L. A total of 60% of the architects and technologists we asked picked this factor as 'moderately' or 'very' challenging.

Primary Energy being the 'Principal Performance Metric' received the same rating as the TM23 air testing method (67%) in terms of its level of challenge, and the notional building was cited as challenging by 61% of respondents. Overall, each of the four factors were rated as more challenging than not by our respondents, and many commented on the various challenges for the industry.

'Cost' was the stand-out factor in terms of being chosen as the most 'significant' obstacle to overcome to achieve compliance with the new Part L. 66% picked it as a 'significant' barrier, and only 2% said it presented no difficulty. 'Competency and quality of install' was next, 52% saying it was 'significant' followed by 'technical knowledge' (34%) and 'availability of suitable technologies' (28%). An overwhelming 83% believed that the 31% emissions reduction

would be difficult to do in housebuilding, and not far behind was a 79% score for non-residential.

Part F

Part F, covering the ventilation aspects of buildings guidance, is a fundamental adjunct to Part L, with the need for adequate ventilation becoming proportionally more important as buildings become more thermally efficient. While Part L tries to minimise air 'infiltration' through a wide range of air leakage paths in the building structure, Part F relates to 'purpose-provided ventilation' i.e. the controlled air exchange between the inside and outside of a building using natural and/or mechanical devices. If a building is designed with an air permeability level below 5 m³ (h/m²), a fixed amount of purpose ventilation – natural, mechanical or hybrid – is required under Part F.

We asked our readers who in their experience was responsible for ensuring compliance with Part F – architect, M&E engineer, main contractor, or another party? Perhaps surprisingly, 54% of our respondents said that this was under the remit of the architect, whereas 29% said it would be the M&E engineer, and 11% saying the main contractor. The 'other' category was picked by 6%, with comments clarifying this may 'depend on the contract,' 'could be a combination of all three,' or could be an architectural technician, technologist, subcontractor or energy consultant.

Part O

This main intention behind the newly-introduced Part O is to limit excess solar gain in new build residential schemes, and remove the excess heat from the indoor environment. The new regulation breaks from previous Building Regs, by evaluating the overheating impact of designs on a room-by-room basis.

The new regulation asks designers to pick a 'simplified' method of calculating the overheating risk on a building, versus a more complex 'dynamic thermal modelling' method. Understanding of the relative qualities of these methods for Part O compliance was poor among our cohort of architects and technologists – 75% said they did not have a good level of understanding.

Our respondents believed that they would be more likely to be asked to use the dynamic method to estimate overheating than not (63% versus 37%). The simplified method would however be called for by even more projects, according to 86% of respondents, with 40% saying it would be 'always' or 'frequently' used.

Of our respondents, 37% (the top figure) said that minimising glazing in houses would be 'very difficult,' followed by 32% for apartment blocks. 32% believed that cross-ventilation to offset overheating would be 'very difficult' in apartment blocks. A resounding 81% said that avoiding mechanical cooling in apartment blocks would be difficult to some extent, and mitigating overheating in homes and apartment blocks would be 'very difficult' for 25%.



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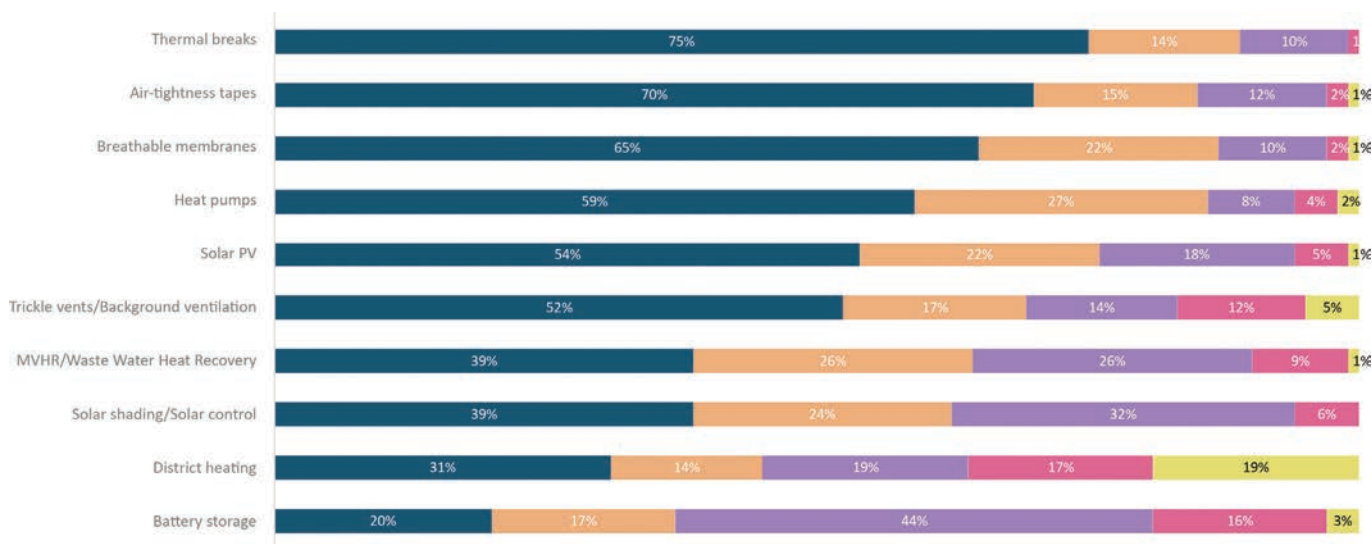


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"What 'eco' technologies/approaches do you expect to use to meet the new requirements within Part L 2021 in domestic/residential projects?"

■ Will Definitely Use ■ Will Probably Use ■ Potentially Will Use ■ Unlikely To Use ■ Will Not Use

Solution advantages

Key areas to focus on

In our reader survey, we asked respondents to choose and rate their top five construction factors in terms of their importance for designers to focus on to meet the new Part L in new homes. The list included building envelope, thermal bridging, air tightness, low carbon heating, renewables, air quality, moisture and damp, space standards, aesthetics, and light.

For our respondents, by far the top aspect of design and construction to focus on for Part L, was the building envelope with 354 ratings, ahead of thermal bridging with 246) would be a probable result, given the tightened new U-values. However air tightness was still rated by 206 respondents (somewhat related to the building envelope) therefore these figures may be correlated.

Low carbon heating was next, with only a relatively modest 125 ratings, followed by renewables, air quality, and moisture and damp, with a lowly 74. Perhaps concerningly, few among our respondents picked aesthetics or light as key factors to focus on in designing to meet Part L (receiving 48 and 40 ratings respectively).

Closing the performance gap

Part of the new regime under Part L is resting on contractors, to provide a proper audit trail within the BREL/BRUKL reports that demonstrates that they have achieved the necessary quality of construction onsite, in order to close the stubborn Performance Gap that exists currently between design and construction.

The reports will need to show such factors as continuity of insulation (avoiding heat losses through gaps), in design drawings

but also in the as-built construction. Thermal bridging needs to be minimised, to provide an insulation layer that's as continuous as possible, and details will have to be provided to demonstrate this. The new regulations state that opportunities should be considered to reduce thermal bridges, and any product substitutions should be reflected in the SAP calculation and documented to ensure they are still compliant.

Conclusion

Given the challenges posed for the industry by the much tighter regulations, the architects and architectural technologists we surveyed said they needed more help from a range of sources in complying with the newly updated Regs. The spread of votes were similar across Parts L, F and O for the factors we proposed (government incentives, other grants, government advice and regulation, advice from manufacturers, technical guidance, and advice from third parties). Part L saw the most ratings for the former two, i.e. greater funding, likely a result of it being a more comprehensive, and therefore more cost-intensive, set of requirements.

Building Control is now in the hot seat. The credibility of the new regime for ensuring low energy buildings for the future, constructed according to their design promises, rests on them being able to rigorously monitor the process. Beyond the design challenges for architects, will they be able to fulfil their end of the bargain?

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Futurebuild has been championing sustainability for almost 17 years, and as time to act gets shorter, it is inviting all those involved in the built and natural environment to take part in our conference discussions based on looking forward, changing and taking action.

This well-respected UK construction conference has a heritage of tackling the big issues and presenting the latest information in both best practice and research to enable the construction sector – as one of the largest contributors to global emissions – to operate more smartly and sustainably. Achieving net-zero carbon, let alone zero carbon, will require collaborative working across a wide field, not just construction, which is why the conference is relevant across so many disciplines both within the construction industry and beyond.

The Conference Programme is sponsored by SNRG and HUB Brussels and curated by the Edge, a multi-disciplinary built and natural environment think tank, which has identified 12 key propositions to be discussed and debated with very welcome input from the audience. Featuring a line-up of compelling industry speakers and thought leaders, they will use this conference to ‘take a stand’ to tackle the biggest issues.

Be inspired

The aim of the conference, as with the whole Futurebuild knowledge programme, is that attendees should leave feeling



more empowered and inspired to make changes to support the environment in their own work.

There will be a big debate to open each day, with subjects based on a survey carried out after the last show – the big issues being energy, behaviour change and our contract with nature for a nature positive world.

While the conference focuses on what needs to be achieved here in the UK (getting our own house in order), we are delighted that Pascal Smet, Secretary of State, Brussels-Capital Region will be at the conference to give us an update on the ground breaking work being undertaken by Brussels as a laboratory for circular construction.

Futurebuild's conference programme also sees the return of the Big Innovation Pitch. Closing out Day Two of the conference, the six finalists will battle it



out Dragon's Den-style, pitching live in the conference arena to a panel of industry experts chaired by Dr Oliver Jones, research director at Ryder Architecture.

"This is a truly fantastic opportunity to be a part of one of the UK's largest construction innovation forums," said Jeya Sivasubramaniam, director of growth and commercial strategy at SNRG. "Futurebuild

is a great space which brings together some of the brightest and most committed minds enabling fantastic collaboration, some of which now serve as exemplars within our sector. The energy crisis of both cost and provision grid constraints, and the path to net zero all pose significant challenges today in terms of both cost and programme. These challenges are expected to scale with time, and we're delighted to join the discussion and contribute with how we can support developers in the transition."

Remember, the audience is invited to join the collaborative engagement needed to address the severity of climate and ecological breakdown – so, let's come together, learn together, change together and, most importantly, act together. Starting now!

Futurebuild 2023 will take place from 7-9 March at London's ExCeL. For more details and exhibitor enquiries, visit www.futurebuild.co.uk

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FUTUREBUILD STAND E42

Retrofit continues to expand at Futurebuild



The Retrofit Academy CIC will be returning to Futurebuild 2023, 7-9 March, curating the Retrofit Seminar programme, and at the heart of the thriving Retrofit Zone. The first day will also culminate in the prestigious Retrofit Academy Awards, which will take place on the main stage at 6.30pm. As well as increasing credibility, the awards set out to recognise the rising stars in the industry and showcase the hard work and dedication going into outstanding retrofitting projects across the UK.

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FUTUREBUILD STAND B20

JACKON by BEWI showcases the future of building at stand F08



JACKON by BEWI will be at Futurebuild this year and will be promoting its ICF building systems. These are ready for the rigorous new u-value targets for new-builds, when these come into effect in 2025 as part of the Future Homes Standard. JACKON's THERMOMUR® ICF and JACKODUR® ATLAS ranges already meet or exceed the new targets for thermal insulation. The THERMOMUR® 350 Super range – currently the company's best-selling range in the UK – already achieves 0.15 for walls with no added materials, and the JACKODUR® ATLAS insulated raft system can be designed to achieve 0.11. Visitors to the company's stand at the Show will be able to find out more about the benefits that JACKON by BEWI's 60 years' expertise in XPS and EPS manufacturing can bring to construction projects. JACKON by BEWI building systems make a positive contribution to the construction of highly energy-efficient buildings due to very low energy inputs required for heating or cooling. THERMOMUR® and the insulated concrete raft system JACKODUR® ATLAS allow for fast construction with premium air tightness and acoustic insulation.

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FUTUREBUILD STAND F08

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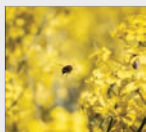


With both an energy and a housing crisis looming large across the UK, it is appropriate that Marmox has opted to dedicate its stand F02 at this year's Futurebuild – taking place at the ExCel from 7-9 March – to showcasing a product offering a ready solution for the issue of thermal bridging. Well proven in practice, Marmox Thermoblocks are widely recognised by specifiers as providing a means of achieving compliance with Part L, by addressing the challenges of cold-bridging at the floor/wall junction or beneath parapet walls. In fact the growing emphasis on improving energy efficiency as well as the speed and quality of construction is making Thermoblock mainstream for both traditional and modern methods of building. Thermoblocks are available in widths of 100, 140 or 215 mm and are formed from sections of XPS (extruded polystyrene) encapsulating two rows of high strength, epoxy concrete mini-columns. These are attached at either end to the top and bottom layers of glass-fibre reinforced polymer concrete, to ensure a good bond with the rest of the structure.

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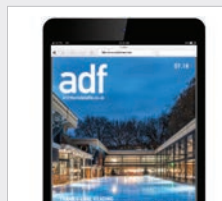


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Glidevale Protect collaborates with Bellway Homes and The University of Salford

Glidevale Protect is putting its specialist range of energy efficient building solutions to the test by providing a range of products for use at the new Energy House 2.0 development and embarking on a collaborative research partnership with the University of Salford and national housebuilder Bellway Homes.

Energy House 2.0 is a unique £16m research facility, part-funded by the European Regional Development Fund (ERDF), enabling SMEs to innovate and develop low carbon technologies for the built environment.

Glidevale Protect is working alongside Bellway Homes by supplying its specialist construction membranes for use on The Future Home@The University of Salford, one of the two detached timber frame houses that are currently being constructed within the Energy House 2.0 energy performance test facility, with the structure having been manufactured offsite.



Glidevale Protect's reflective, low emissivity Protect TF200 Thermo breather membrane and Protect BarriAir air and vapour control layer have been used on the innovative eco home. To provide high levels of thermal efficiency, the Protect TF200 Thermo breather membrane has been installed to the external walls, while the Protect BarriAir membrane has been fitted to the internal walls with the

company's universal reinforced sealing tape to eliminate air leakage and energy loss. Also installed is the Protect FCM 750 floor cassette membrane to maintain the integrity of the airtightness system at the floor junction and to provide condensation control at the edges of the floor cassette.

Once complete, The Future Home@The University of Salford will be subjected to various weather conditions within the Energy House 2.0 environmental chambers, which utilise state-of-the-art technology to test how well the specified building products and systems perform even under the harshest of environments. The research from the Energy House 2.0 project will provide a greater understanding of how energy efficient and low carbon building techniques can reduce the environmental impact of housebuilding and the wider construction industry.

0161 905 5700 info@glidevaleprotect.com
glidevaleprotect.com

Passivent strengthens its technical expertise



Passivent, one of the UK's leading manufacturers of natural ventilation solutions, has appointed Huw Poppy to the role of business operations manager. Huw joins Passivent with over 25 years' experience, including specific expertise in the design and development of natural ventilation systems, filtration and evaporative air cooling systems. A key part of

Huw's role will be supporting Passivent's in-house estimating team to provide architects, consultants, engineers and contractors with the technical calculations and advice they need to create compliant and cost-effective natural and hybrid ventilation strategies.

01732 850 770 www.passivent.com

Latest news, views and more



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on products, services, events, and learning opportunities available from a wide variety of manufacturers and suppliers.

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Schüco Excellence Awards open

Aluminium systems company Schüco is this year celebrating the 10th anniversary of its industry-renowned Excellence Awards and is delighted to announce that entries are now open. The Schüco Excellence Awards, held in partnership with Architecture Today, celebrate the creativity, innovation, technical skill and collaboration behind the most successful building projects using Schüco aluminium and steel systems. This year a new award category has been added, the Major Project Award, for buildings with at least 1,000 m² of Schüco facade. This is in addition to the existing ten categories covering project types including education, cultural, health and leisure buildings; commercial and mixed use; residential developments; individual houses; sustainability, steel, and refurbishment and adaptive reuse projects. Winners will be announced from the shortlisted nominees at a celebration lunch to be held at the Cutty Sark, London on 29 June 2023.

excellence-awards.awardsplatform.com www.schueco.com/uk

Covering the angles with Quadra column casings

As a key product in Encasement's extensive column casings range, Quadra four-sided casings offer a highly versatile solution for concealing interior structural steelwork and building services, while also providing a stylish and durable finish to each project.

By using square or rectangular casings to conceal steel columns, it allows floor space to be maximised, as they can be fitted more closely to the shape of interior structural supports whilst allowing the maximum design flexibility in terms of size and finish options.

Quadra casings are manufactured from 8 mm thick preformed plywood using UKTR compliant and sustainably sourced

timbers and are available in a wide range of high pressure laminate (HPL) finishes to contrast or blend in with interior design schemes while also providing a durable scuff resistant surface.

The range is available in standard sizes from 300 mm to 1,000 mm square, but their versatility also allows them to be



casings suitable for a wide range of interior applications that demand a combination of decorative finishes with practicality and durability, including projects with high pedestrian traffic, such as schools & colleges, as well as the retail, leisure and commercial sectors.

Quadra casings have already been installed in a diverse range of projects from Workshop Bus Terminus and Blackburn Indoor Markets' café to Farnborough Sixth Form College and the Dame Kelly Holmes Sports Centre.

01733 266 889
www.encasement.co.uk



specified to bespoke dimensions in square and rectangular shapes to meet the specific needs of individual projects. Available in maximum lengths of 3,000 mm, Quadra casings can also be stacked to reach extended heights where required. This design flexibility and adaptability makes Quadra

Join Parkside for the Festival of Sustainability



Parkside is bringing another instalment of its highly successful Festival of Sustainability event series this March. With a chance to hear leaders from environmental charities, industry bodies and suppliers give their diverse perspectives on how to build sustainable specifications, the Parkside Festival of Sustainability is back for 2023. Taking place on Thursday 30th March at Clerkenwell's Crypt on the Green, it's an evening not to be missed. The night is an exclusive opportunity to hear from Planq sustainable furniture, Envirobuild, World Land Trust and the Natural Environment Research Council. Speakers will be tackling a range of issues and the festival will conclude with an informal panel Q&A session answering your questions from the night. The evening will round off with a lively Q&A, giving the opportunity to have your burning sustainability questions answered by the panel. As always, the Festival of Sustainability will conclude with post-session networking and refreshments. To register early and secure your place at the Festival of Sustainability please email hello@parkside.co.uk

0116 276 2532 www.parkside.co.uk

BG's SyncEV Chargers at Lace Fields



BG's SyncEV Chargers have been installed at Lace Fields, one of the latest housing developments by William Davis Homes. Lace Fields when completed, will enjoy around 800-character homes nestled in the historic village of Ruddington, offering the best of both town and country living. BG SyncEV (part of the **Lucoco PLC Group**) offers a range of EV charging products for the home or the workplace that are smart, powerful, and packed with technology and a three year warranty for complete peace of mind. The EVS7G charger was selected for Lace Fields, a Type 2 socketed dynamic 7.4 kW wall charger with WiFi and Smart! Functionality – OCPP 1.6J connectivity. The charger has integrated earth fault protection (RCD) + PEN protection system so an earth rod is not required. As part of the WiFi connectivity, free lifetime software updates over-the-air are available and the SyncEV easy to use app shows usage and cost, the Smart technology optimising home EV charging selecting the cheapest, greenest energy possible. BG SyncEV chargers are fully compliant with current standards and 3rd party approved by DEKRA.

01952 238 100 www.lucoco.com

Saniflo 110 wins Build It Award



Saniflo was delighted to finish 2022 on a high by winning the Build It Awards for the Saniflo 110 lifting station in the 'Best Plumbing or Drainage System or Product' category. Tim Pestell, managing director of Saniflo, was very pleased to receive the news from the Build-It team: "The Saniflo 110 is a highly appealing product for self-builders and renovators because it offers the ability to build in places that might otherwise not be considered. Our thanks to the judges who chose this product from Saniflo."

020 8842 0033 www.saniflo.co.uk

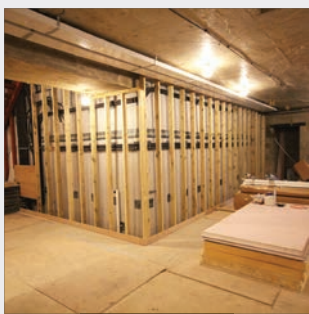
A recreational and educational paradise



Volunteer group The Friends of Blair's Loch, looked to transform the Loch of Blair into a place for enjoyment and recreation by extending the network of footpaths and transforming the dilapidated buildings into a field study facility for local schools. The floors of the Boat House and Bothy were rebuilt using West Fraser's SterlingOSB Zero boards as a solid substrate onto which the final floor covering was applied. The Stable Room's frame was built and covered in SterlingOSB Zero with a larch skin applied externally. The scheme also features a metal profile roof mounted on a SterlingOSB Zero substrate.

uk.westfraser.com/resources/architect-support

Triton Waterproofing range looking good for 'beautiful basements'



A Leicester based company which specialises in waterproofing and the construction of high specification basements, as well as the upgrade of existing sub-structures, has made extensive use of products from the range of Triton Systems in creating a complex new extension to an old farmhouse in Northamptonshire for a private client. Careful consideration of the water-proofing and damp-proofing detailing is always essential when constructing a basement, but in the case of the Northamptonshire project the situation was made even more challenging due to a very high water table and persistent bad weather during the work. As an approved installer of the Triton Systems, Beautiful Basements employed half a dozen of the well-proven products to create a large-scale, fully waterproof sub-structure that offers a ten year guarantee along with insurance backed guarantee. The products include TT admix incorporated into all of the waterproof concrete mix at the batching plant, Tri-Cream for the injected DPCs, three variants of the Platon drainage membranes, a pair of sump pumps and one of Triton's high level alarms.

01322 318830 www.tritonsystems.co.uk

Procheck® A2 high-class protection for major regeneration scheme in London



Procheck A2, the high-performance fire-resistant vapour control layer system from the A. Proctor Group has been selected as part of a £6bn regeneration project that will create over 10,000 homes in Enfield, London, over the next 20 years. Sam Bennett, commercial director at SCL LONDON, a Structural Framing Systems and Drylining specialist, commented: "Procheck A2 was selected because it has a Class A2 performance and excellent vapour-controlling properties. In addition, the membrane comes with a high vapour resistance and is airtight, allowing its use as an AVCL. This means that Procheck A2 provides high levels of airtightness which ensures the thermal efficiency of the building. Procheck A2 has an A2-s1,d0 fire classification to BS EN 13501-1, is considered limited combustibility and minimal contribution to fire, and therefore, conforms with the requirements for high rise construction (18 metre)." The superior performance of Procheck A2 from the A. Proctor Group is the perfect solution, delivering significant benefits to the combination of in-factory manufacture and onsite housing construction.

01250 872261 www.proctorgroup.com

New from Hörmann: ThermoSafe Decoral aluminium entrance doors



Hörmann UK have launched a new addition to their range of aluminium entrance doors, the ThermoSafe Decoral, a range developed to provide discerning customers and specifiers with the combination of a high quality, secure aluminium door together with a selection of new modern decor finishes and door styles. Manufactured to the highest quality standards, the Hörmann ThermoSafe range of aluminium doors feature a solid 73 mm door leaf within an aluminium frame. The door is robust yet elegant, providing high levels of security, long life, good acoustic insulation, and excellent thermal properties with a U-value of 0.87 W/m²K being achievable. The addition of the Decoral version further enhances the ThermoSafe range and adds to an already extensive selection of door styles, finishes and colour options. The Decoral finish is applied to the powder coated surfaces of the ThermoSafe door using a patented coating method which results in a beautiful, colour fast and detailed appearance. The range offers five new innovative finishes – Cement, Rusty Pantina, Wild Oak, Barnwood and Barnwood Grey, together with eighteen exclusive door styles.

01530 516868 www.hormann.co.uk/home-owners-and-renovators/doors/front-doors

Kemper System prescribed for multi-million-pound hospital building

Kemper System's cold-applied liquid waterproofing solution has been specified for a multi-million-pound extension at St John's and St Elizabeth (HJE) Hospital in London. The £35m new build development has created six, hi-tech theatres and a day case suite which is one of the most modern in the UK.

A total of 9,060 sqm of Kemper System's Kemperol 2K-PUR solvent-free and odourless waterproofing membrane has been applied beneath the building's green roof, onto a pedestrian trafficked walkway, the lower roof area and a plant roof area. The cold-applied solution was installed by London-based Ridgewell Flat Roofing Ltd.

Because of the location of the new build extension, adjacent to an occupied hospital building at HJE, the solvent-free and odourless qualities of the Kemperol system meant minimum disruption at the hospital throughout the application process. No hot works were required as part of the project,



further reducing potential health and safety risks, and meaning no wait times were needed between applications of resin.

Once cured, the system forms a seamless, elastomeric waterproof membrane that cannot delaminate, is UV stable, and creates a sturdy bond directly to the substrate.

Additionally, the plant roof area had a number of complexities with many ventilation outlets and air conditioning units, and because Kemper's waterproofing system

is roller-applied, operatives could easily install the resin underneath the units and around the complex roof structure.

Ben Ridgewell, managing director of Ridgewell Flat Roofing, said: "We have used Kemper System for many years, and the cold-applied solution was perfect for this prestigious project because it is so versatile. We could apply the system to each of the different roof and walkway areas with ease without having to switch roofing materials. Kemper System once again delivered on such a complex project, which presented winter working challenges, specifically with high winds at times. Large expanses of sheeting material would have not have been practical or safe on site, so a roller-applied liquid waterproofing solution was the best for this project. We were extremely happy with the results, and so is the end client."

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www.kemperrol.com

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New fixing for securing cables added to SWIFIX range

SWIFIX are delighted to announce the addition of a new fixing to their range, for securing cabling and trunking for Satellite dish installation and small pipework, back to external wall insulation systems. Sky originally approached SWIFIX after they had seen the newly developed Sky bracket fixing a few years previously. Since then, Sky's engineering department (TPAS) and

SWIFIX have worked together to develop a surface fixing to provide a secure connection, that also remains water tight, as they were dissatisfied with the existing solution. Two years in development, both the bracket and cable fixing have been rigorously tested by Sky, with samples produced prior to full production. The new spiral cable connector is an innovative way of securing cabling back through EWI without affecting the integrity of the EWI system and protects guarantees and warranties.

As with all SWIFIX fixings, the spiral cable connector is suitable for all system finishes from textured and rough-cast/dashing and through all types of insulation types and thicknesses of 50 mm to 300 mm.

As well as the bracket and cable connectors being approved by Sky, other fixings have NHBC approval, as well as being recommended by numerous EWI system designers and installers for securing any item from bird netting, external lights and



rainwater goods to air source heat pumps and canopies.

Products are manufactured in the UK using recycled materials and are available in black and white as standard; however bespoke colours are available to compliment the finished render if required. The new spiral cable connector is available direct from SWIFIX and approved outlets.

01884 560477 www.SWIFIX.co.uk



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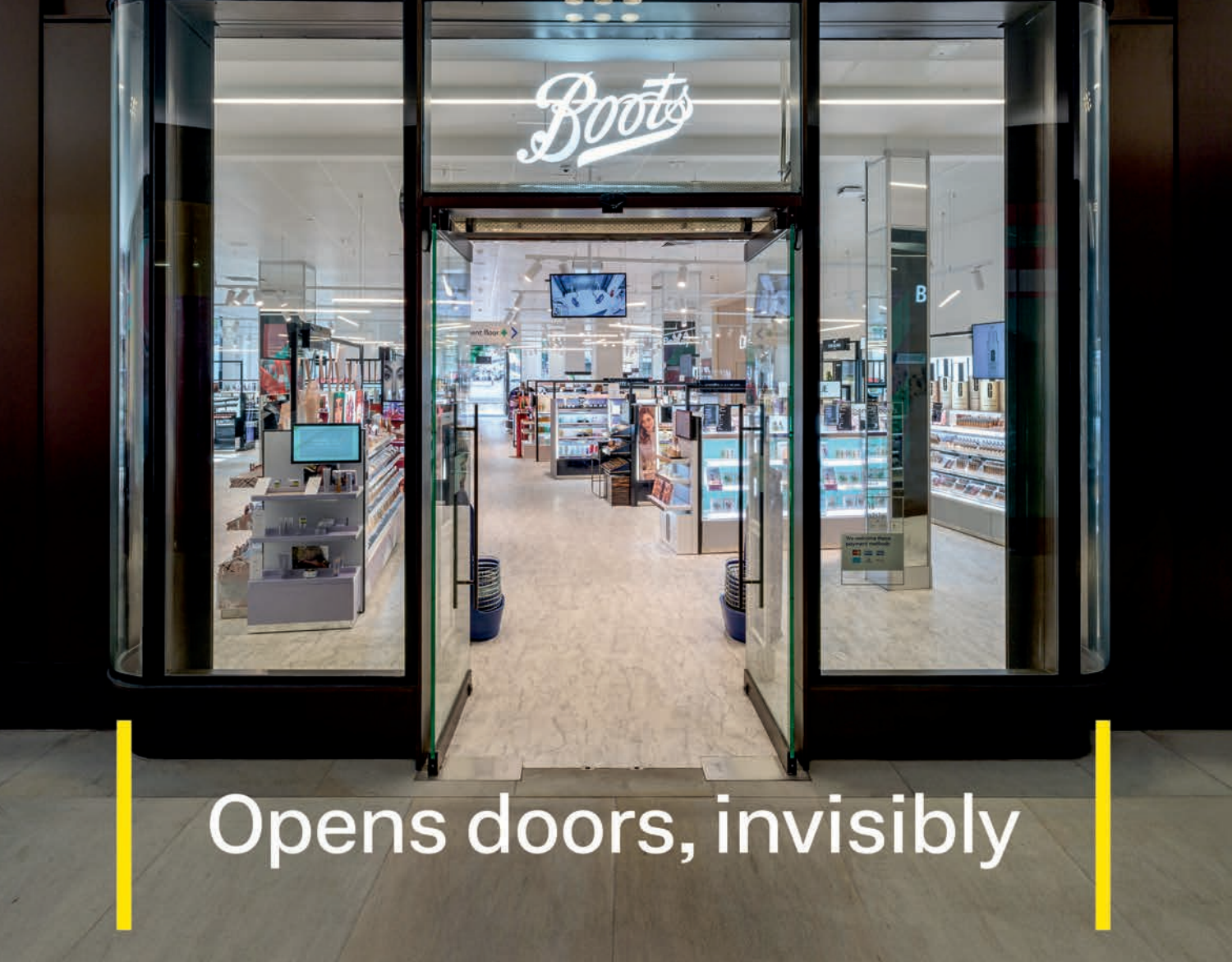
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The versatile, efficient UFO NT automatic swing door operator is completely hidden from view – perfect for glass facades, historical or listed buildings, or where maximum transparency at an entrance is demanded.

Yet it still ensures access for all and complies with the Equality Act and Building regulations.

Suitable for internal and external doors, and for retro-fitting, the UFO NT can even be used manually thanks to the Smart swing function – all-in-all an innovative operator, just a shame you can't see it.

More information:
info.uk@geze.com
www.geze.co.uk

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Hörmann high speed sectional doors keep things moving at Audi

Helping to accelerate the movement of vehicles through a busy handover bay, six high speed sectional doors from Hörmann UK have been installed at Audi in Bradford. The installation was carried out by Hörmann partner Crucial Engineering and formed part of a retrofit programme, with the new doors being chosen specifically as they provide high speed operation, security, and excellent thermal efficiency.

Replacing a previous complex installation of a sectional door plus a high-speed door fitted to each entrance and exit, the installation of the Hörmann doors solved the operational issues created by this set up and provided Audi with a simple, fast solution.

Three ALR F42 aluminium glazed doors were installed at the entrance to the handover bay, with three SPU F42 sectional doors being fitted to the exits. Constructed from a lightweight, yet strong, aluminium framework the ALR F42 glazed doors consist of large,



clear glazing panels bringing maximum light into the working environment and creating an unimpeded view. The glazing panels include the unique Hörmann DURATEC coating which protects the panes from scratching and damage caused by cleaning over the long-term, providing a permanently clear view.

The SPU F42 sectional doors have a hardwearing Stucco textured interior finish, with a micro grain exterior creating an elegant surface finish to complement the

buildings modern facade. The doors are all coated with RAL 9006 White aluminium. All six doors are fitted with the new Hörmann WA500 operator which enables the doors to operate at an impressive, market leading door travel speeds of up to 1 m/s, helping to speed up operations and retain heat within the building. Optimised track radii and enlarged rollers result in quieter door operation together with improved stability leading to low wear and smoother door travel.

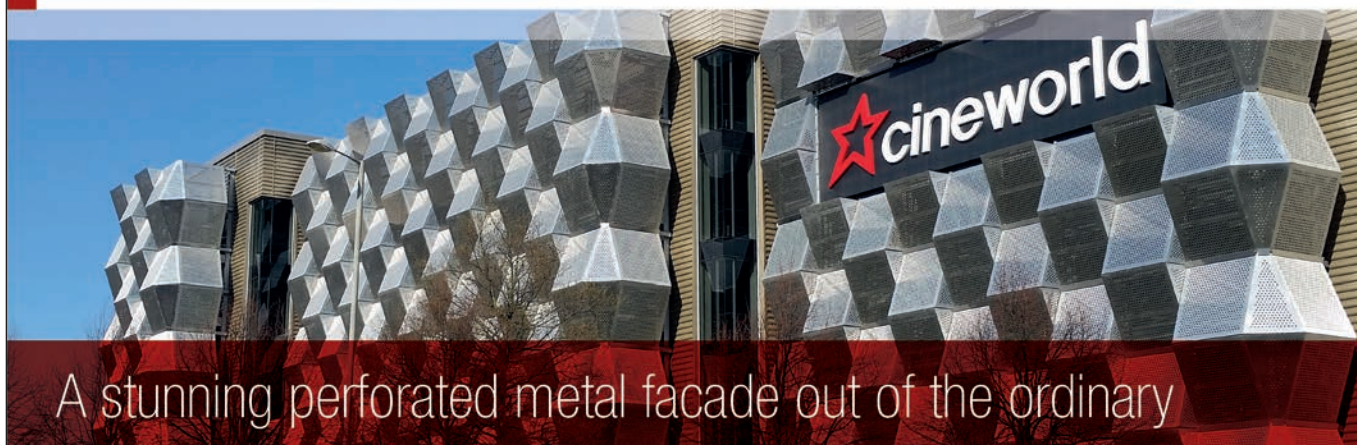
Paul Van Heeswyk, managing director at Crucial Engineering comments: "A key factor for the specification of the Hörmann sectional doors for this project was speed. There is no other sectional door on the market that operates at these speeds, so it was the obvious door of choice. For Audi being able to have clear vision panels was also a factor as natural light in the handover bays is a must."

01530 516868 www.hormann.co.uk



RMIG City Emotion

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A stunning perforated metal facade out of the ordinary

The Cineworld New Mersey Retail Park is a multi-million pound complex, comprising 11 cinemas, including one with Super-screen, as well as six restaurants. Located on a major access road into Liverpool, this building looks set to become a landmark. The bold design gives a 'sci-fi' feel to this unusual

facade that is made up of more than 3000 m² of perforated sheets manufactured and supplied by RMIG. As the building is situated only a few miles from the River Mersey, the stainless steel sheets provide the perfect solution, creating a facade that is durable and resistant to the coastal environment.

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Timeless Nordic Brass Weathered



A new commercial building in Stockholm is defined by its carefully detailed facades of Nordic Brass Weathered pre-oxidised copper alloy from Aurubis.

In the Nattugglan neighbourhood on the island of Södermalm, developer Vasakronan has replaced an inefficient and outdated office block with a new, 'LEED Platinum' certified modern building. The new Folkungagatan 44 project provides 22,000 m² of space, largely for offices but also including conference spaces, plus retail outlets and a restaurant on the open, street-facing ground floor. Equator Stockholm Architects' design for the new building reinvestigates

its pivotal location. Its massing comprises a five-storey block with two further storeys, each stepping back to generate 'living roof' gardens. The building's strong presence in the city is defined by its almost classically structured facades of fenestration and Nordic Brass Weathered cladding with a natural colour that complements its surroundings. Carefully detailed and executed flat panels, 'fluted' mullions and horizontal mouldings between windows, copings and other details align clearly expressed vertical joints throughout.

The Nordic Brass Weathered copper alloy provides a rich, naturally varied brown surface with a high quality,

timeless character. The surface is created by burnishing at the Aurubis copper mill, providing straightaway the same oxidised brown surface that otherwise develops over time in the environment.

The Nordic Copper alloy cladding also adds to the building's 'LEED Platinum' certified sustainability agenda. Nordic Copper architectural products and alloys are manufactured using 100% recycled raw material, and copper's ability to be recycled repeatedly – without any loss in performance – is an important sustainability benefit.

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- Profilen Premidoor 88 LUX / 76
- Rehau Genio / Synego
- Salamander evolution Drive / ID
- Aluplast HST 85

Senior creates a classic at the YMCA

Senior Architectural Systems, one of the UK's largest privately owned aluminium fenestration solutions manufacturers, has delivered the glazing package for the new YMCA Community and Activity Village in Newark, Nottinghamshire.

The project saw Senior work alongside Rayner Davies Architects and main contractor R G Carter Construction to design and provide suitable aluminium doors, windows and curtain wall solutions which were fabricated and installed by Acorn Aluminium.

Close collaboration and early engagement within the supply chain was key to the

successful delivery of this multi-purpose building, which is the first of its kind to be constructed in the UK. The innovative community and activity centre provides a mix of facilities from sports and hospitality to training and childcare.

The striking main entrance of the building has been created using Senior's SF52 aluminium curtain wall system which incorporates SPW501 thermally broken doors complete with automatic swing operators. A key feature of the north elevation entrance is the extra-large PURE® commercial door measuring 2,920 mm x 3,045 mm. Across the remaining elevations, Senior's curtain wall system has been further complemented by the incorporation of SPW600e aluminium windows, specified as both insert vents and fixed light windows. Senior's versatile SPW501 commercial doors have also been used throughout and on the west elevation, Senior's patented PURE® SLIDE aluminium doors provide additional access.

The landmark building spans ranges in height from two to three storeys and comprises some 59,000 ft² of usable



space. The core services available have been separated into three distinct zones – hospitality, education, and activity. The first area includes a cafe and function room, with the educational facilities available including classrooms and teaching areas for both adults and children. The activity zone features a gym and multi-purpose activity space as well as the Climbing Hall. This includes a 15 metre Olympic standard climbing wall that rises to the full height of the three-storey building and is the largest of its kind in the UK.

01709 772600 www.seniorarchitectural.co.uk

Yeoman Rainguard launches new Aluminium Rainwater Systems Brochure



Yeoman Rainguard, renowned throughout the industry for the manufacturer, supply, and installation of quality rainwater products, has launched its new Aluminium Product Brochure. Showcasing the highly commended XL and SL range of Aluminium gutters and downpipes the brochure introduces, new to the market, Yeoman Rainguard Aluminium Flush Fit Downpipes and Aluminium Security Downpipes. Another new addition is the Squareline range of Aluminium Fascia, Soffits, Copings, and Cills, already proving popular in the commercial market. With a recently expanded colour range, which can accommodate options from RAL and BS ranges along with contemporary shades from Farrow & Ball and Little Greene for example, Yeoman Rainguard's comprehensive Aluminium range can offer that perfect finishing touch for all styles of buildings. A printed version of the new Yeoman Rainguard Aluminium brochure is available on request or can be downloaded from the website. As always Yeoman Rainguard takes great pride in the expertise gained over 40 years in the market and customer services provided.

0113 279 5854 www.rainguard.co.uk

GEZE UK publishes latest Product Guide

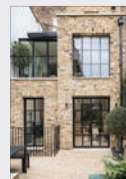


Architects, architectural ironmongers and specifiers will be able to choose the right product for the job thanks to the updated Product Guide and Price List from GEZE UK. The detailed, illustrated guide is divided into five product sections – overhead door

closers; floor mounted door closers; fittings for toughened glass doors; sliding door systems; and window technology – and a comprehensive index to ensure specifiers can quickly find all the information they need. New for 2023, is the F 1200+, a window drive for large and heavy, turn and tilt, bottom hung windows.

01543 443015 info.uk@geze.com

Renaissance for tried and trusted windows



Member companies of the Steel Window Association (SWA) have been enjoying a boom in business. This is thanks to the general upturn in activity across the housing market, with the focus on the acquisition and refurbishment of rural properties having resulted in higher than usual demand for the replacement of the traditional W20 style windows.

The W20 closely replicates the appearance of the older universal suite of sections and can therefore be found providing reliable service from country cottages to dockland warehouses and in commercial, as well as industrial buildings.

www.steel-window-association.co.uk

A core range that always meets your needs

Kestrel Aluminium Systems has been supplying aluminium fenestration products for more than 30 years, and prides itself on its excellent customer service and reputation for high-quality, reliable products. Kestrel's core range of window and door systems sit at the heart of the UK fenestration industry, and their customers trust them to provide exactly what they need, when they need it.

Kestrel's window systems are designed to create a contemporary look for any building, with stylish options to suit any window configuration. The 60 mm and 70 mm systems are thermally efficient and will complement both residential and light commercial buildings such as homes, schools, offices and leisure facilities. Each system is available as either side or top hung, with parallel opening options available on 60 mm systems.

They can also be used in conjunction with Kestrel's Curtain Walling and Thermal Framing Systems to create a complete glazing solution for newbuild and refurbishment properties. All the windows in the range can



be either single or dual-colour powder coated to match any building style, and customers can rest assured that the systems are secure and energy efficient, complying with all relevant Building Regulations.

Kestrel also offers a comprehensive range of door suites for both commercial and residential properties. The established shopfront system has sections available to create both flush and bead glazed frames to suit all applications. The main framing sections are 100 x 45 mm to ensure

straightforward and robust fabrication that can be easily glazed on site, making it easier for installers and fabricators to complete their projects quickly. There are a wide choice of sections available to form any style of door leaf, including auto swing, manual and automatic sliding, folding and rebated.

Kestrel's residential door systems lends a touch of luxury to any newbuild or property extension, bringing much-needed light into people's homes. The popular Sliding Patio Door is supplied with narrow profile faces to provide uninterrupted views to the outdoors through an impressive removable wall. The Folding Sliding Door product completes Kestrel's core range, enabling the doors to fold flush back against each other for maximum visibility into any garden or outside space.

Also available from Kestrel are Glazing Bars, Rooflight Systems and Curtain Walling products, with a wide range of profiles and complementary products to enhance any commercial space.

0121 333 3575 kestrelaluminium.co.uk

Sto system specified for Kent apartment



Two new apartment buildings in Kent have been given a thermally-efficient and visually-striking facade thanks to the use of an external wall insulation system from Sto. The two new blocks in Ashford – Stour Heights and Somerset Heights – have a single-skin construction, comprising a reinforced

concrete frame with concrete block infill, and they benefit from the installation of StoTherm Mineral external wall insulation, with a StoCleyer B mineral brick slip and StoSilco render facade finish.

0330 024 2666 www.sto.co.uk

Sto system specified for new hospital



Sto has supplied the StoTherm Mineral K external wall insulation system with StoLotusan render for the new Day Case and Eye Unit building at Chorley and South Ribble Hospital. The StoTherm Mineral K system combines impressive insulation with excellent fire protection characteristics. With an A2-s1, d0 reaction to fire classification in accordance with BS EN 13501-1, the non-combustible mineral fibre insulation is fully bonded to the substrate and therefore no additional firebreaks are required.

0330 024 2666 www.sto.co.uk

Domus Ventilation expands HRXE MVHR range with ZEUS



Domus Ventilation, manufacturer of market-leading ventilation systems that save energy and improve indoor air quality, has expanded its HRXE range of Mechanical Ventilation with Heat Recovery (MVHR) units with the launch of HRXE-ZEUS. HRXE-ZEUS has been introduced to meet ventilation requirements for large residential properties, which require a more powerful system to deliver the airflow required to meet Building Regulations Part F. HRXE-ZEUS high performance MVHR system combines supply and extract ventilation in one system. Using an advanced heat exchanger, up to 95% of the heat typically lost in waste, stale air is efficiently recovered and used to temper the fresh air drawn into the building. The filtered, pre-warmed air is distributed to areas of the home such as living rooms and bedrooms, effectively meeting part of the heating load in energy efficient dwellings. The system features two independent fans which have full-speed control for background and boost ventilation rates. There are four HRXE-ZEUS models to choose from, available to meet different specifications and different on-site requirements.

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

Cheers! Crittall boosts Brewery transformation

Described as Dorchester's most iconic building, the Brewery – once the source of the much-vaunted Eldridge Pope ales – has been transformed into a high-end residential setting with Crittall windows playing a central role in retaining the heritage aesthetic of this historic structure.

For nearly a century and a half the building, with its tall chimney, towered above the Dorset town as a symbol of local industry and prosperity. Designed by architect WR Crickmay the brick building was completed in 1880. At a staggering 13% the brewery's Thomas Hardy Ale once featured in the Guinness Book of Records as the strongest commercially brewed beer in the country.

The brewery eventually closed in 2003 and the site remained unused until, in 2007, planning permission was granted for a new public square overlooked by the impressive building, restored to its former glory containing 29 one, two and three-bedroom apartments.

LMA Architecture of Bournemouth has retained many of the unique features of

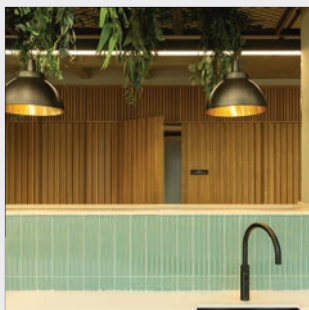


the original building including riveted steel beams, cast iron columns and exposed brickwork. Crittall Corporate W20 steel windows and doors were a natural choice,

glazed in small panes to replicate the original configuration of the tall brewery windows.

01376 530800 www.crittall-windows.co.uk

(Lunch and) learn how to optimise healthy, flexible workspace



Changing trends in workspace design mean a growing need for technology that balances the demands of developers and occupants. AET Flexible Space – a global leader in underfloor air conditioning – UfAC – is responding by introducing a knowledge feast programme for specifiers. The scheme – lasting just an hour – will cover the key considerations and Regulations affecting indoor air quality for today's sustainable, flexible, healthy office environments, and how UfAC plays a role in delivery on those criteria. Explains Karl Strauss, head of sales at AET Flexible Space: "Time is precious, but in these changing times, we need to take the time to keep abreast of technologies that can help deliver. In return for your time and your ears, we will feed your stomach and your brain. We will open your eyes to freedom of design that feeds the soul of everyone involved in the office space you are designing- the developer, the contractor, the workers." AET Flexible Space is a global leader in, and undisputed authority on, UfAC, being the first company to take the system to market worldwide some 30 years ago. The UfAC knowledge feast can be booked by contacting AET Flexible Space.

01342 310400 www.flexiblespace.com

Facility gets a little help from Saniflo



The former headquarters of Woolworths located at 242 Marylebone Road is being transformed into homes, offices and retail premises. The contractor has installed site welfare facilities, including several WC blocks, for the construction workforce. Initially, the

WCs relied on gravity drainage to discharge the waste to a soil and vent pipe. However, blockages occurred. An enquiry for a solution was lodged with the Saniflo technical team who recommended a Zehnder Kompaktboy Duplex lifting station. The unit was able to installed below the WC blocks, allowing for optimum gravity fall.

020 8842 0033 www.saniflo.co.uk

New Tyneham Heat Pump brochure



Hamworthy Heating, a trusted British manufacturer and supplier of commercial heating and hot water products, has released a new Tyneham Heat Pump brochure, which highlights its latest monobloc air source heat pump offering,

developed to meet the market demand for energy-efficient heating products. The new Tyneham heat pump range is the latest product offering from Hamworthy Heating. One of the lightest commercial heat pumps on the market, the range features a coefficient (COP) rating of up to 4.85 to provide efficient, low-carbon heating.

01202 662 552 www.hamworthy-heating.com

Delta Membrane Systems launches new Groundwater Sump Pump Stations

Delta Membrane Systems Limited, an innovator within the waterproofing industry is proud to be launching the new 695 Sump Pump Chambers, pushing the boundaries of what's possible in sump pump applications.

With a unique design, impressive storage capacity, and exceptional durability, the 695 is the new generation of sump pump chambers suitable for ground and surface water collection.

Advantages of the 695 Sump Pump Chambers

- New unique design
- Finite Element Analysis (FEA)
- Channel locators for ease of installation
- Cable duct height option
- Sealing lip
- Compatible with the Delta V3, V4 and V6 sump pumps
- Enables interchanging of V3, V4 & V6 pumps when site situations change from those planned
- Simple internal pipe work arrangement for ease of installation & servicing
- New slim lid able to withstand pedestrian traffic

New unique design

The Delta 695 chamber's compact new size doesn't compromise of capacity or durability. This specially designed sump chamber has many advantages over previous models. The versatility of the Delta 695 chamber is unmatched, it's compatible with all Delta V3, V4 and V6 sump pumps.

Not forgetting the all-important cost savings, the Delta 695 chamber may be smaller in size, but has big benefits – less excavation costs, less labour costs, less waste disposal costs, less requirement for concrete/steel (when housed).

Delta understands the need for project specifics which is why the Delta 695 chambers are supplied with a preformed choice of height for cable duct/vent pipe.

Reducing Risk – Delta has added an external sealing lip to the 695 chambers. This sealing lip will allow installers to apply Delta AKTI-VO 201 (swellable mastic) to the entire external lip locator of chamber. Once the sump chamber is



backfilled this seal will offer a continuous waterproofing approach.

If you need consistent, reliable performance the Delta 695 chamber will not disappoint. The Delta 695 chamber is fully compatible with the Delta V3, V4 and V6 submersible pumps. Saving on storage, handling costs and packaging whilst enabling installers to maximise on installation depths – as there is one standard size required for all.

The Delta 695 chamber has been designed to accommodate all varying pump heights of the Delta V3, V4 and V6 sump pumps. It is common for basements to be lower than mains drainage pipes and sewers serving the structure. Any drainage from a basement or below ground structure will need to be

pumped up. The term “pumping height” “lift” is used to indicate the vertical height the pump is required to pump up.

The new Delta 695 chamber not only has a slimmer lid to previous models, it's also able to withstand pedestrian traffic, mitigating any follow-on trade accidents.

To explore the new range of Delta Pumps, visit www.deltamembranes.com

Whatever the needs of your project, you can rely on Delta's Technical Team to ensure you get the right advice, support, and practical help at exactly the right time its required. Contact Delta today.

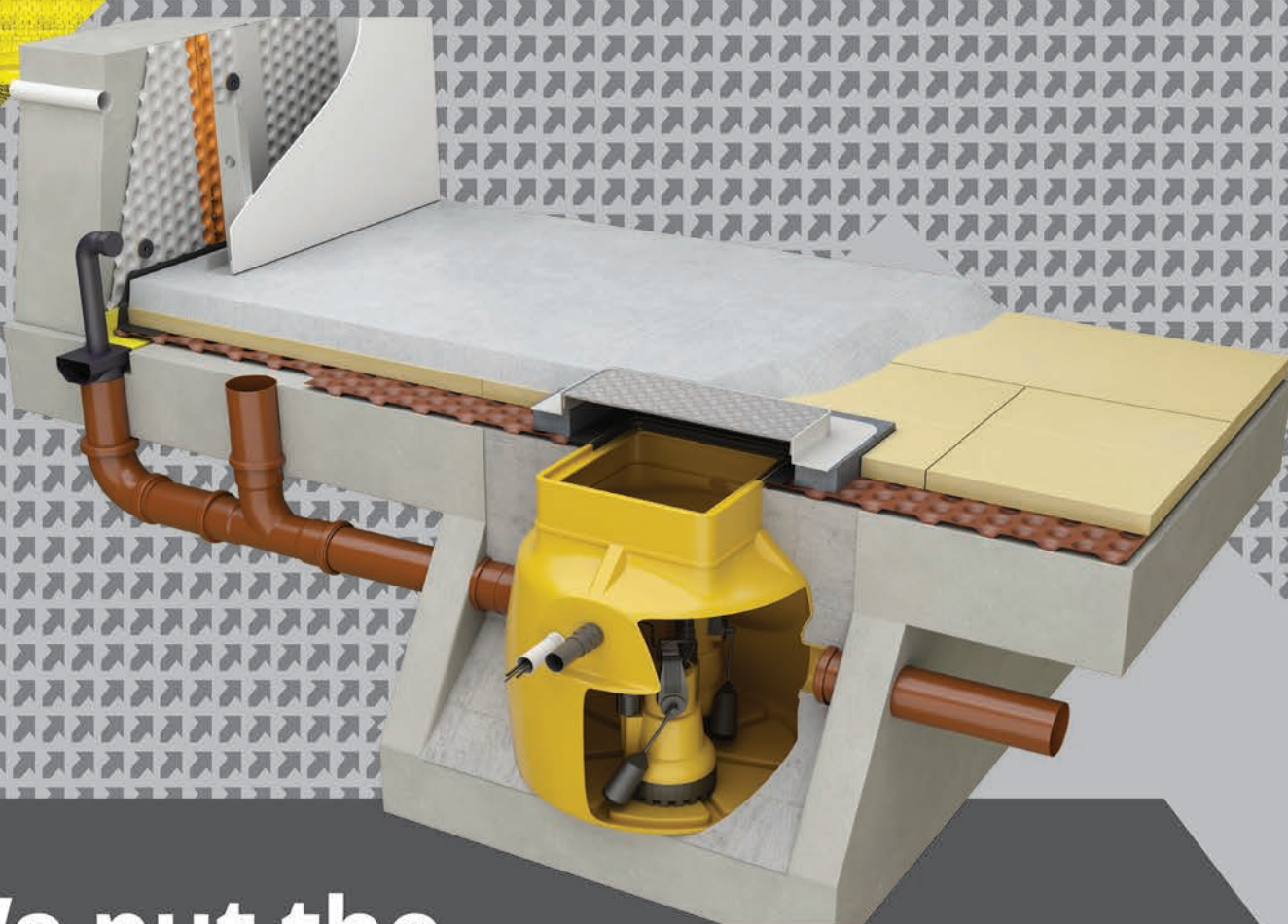
01992 523 523

info@deltamembranes.com



DELTA

PUMPS & DRAINAGE

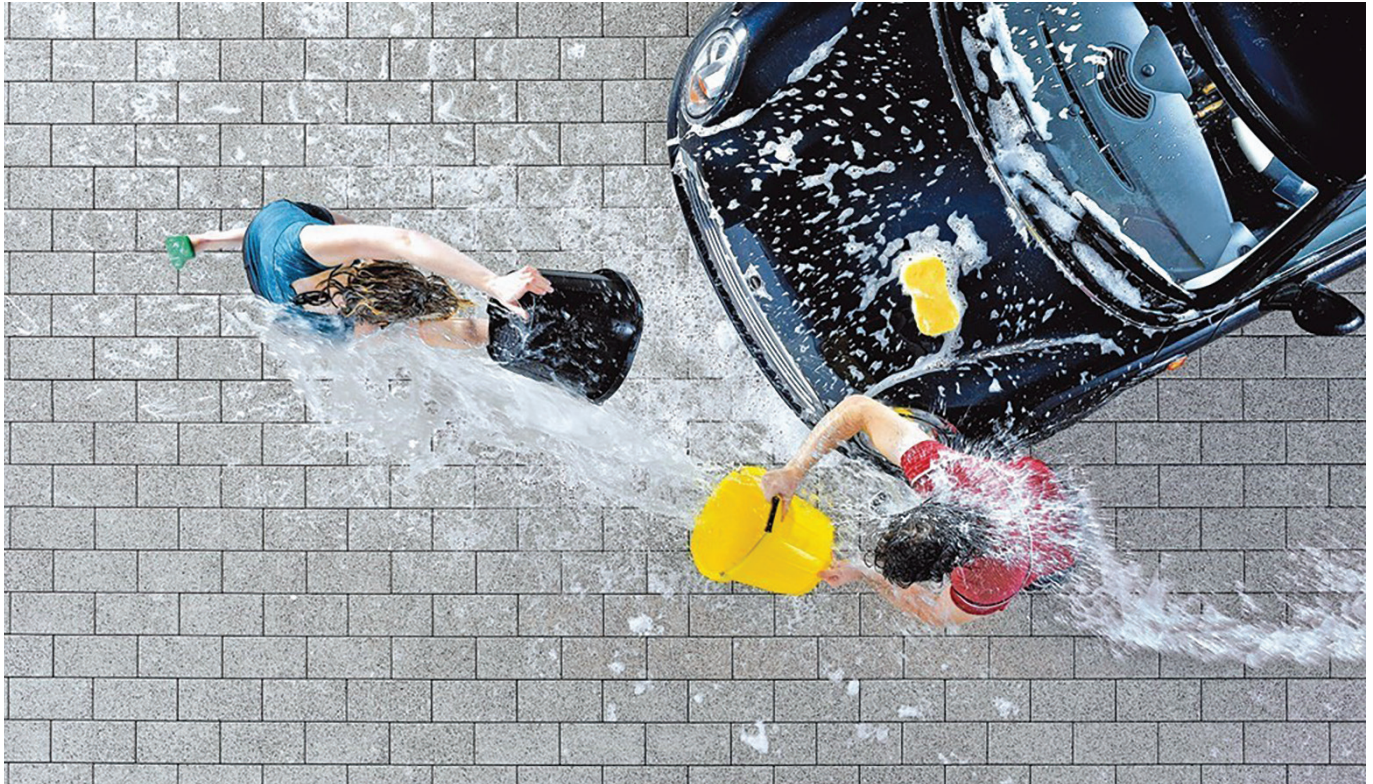


We put the Innovation in Structural Waterproofing



Paving the way for change

With demand for new build housing increasing, Michael Davies from AG explains how new legislation will add leverage for architects to benefit from specifying SuDS



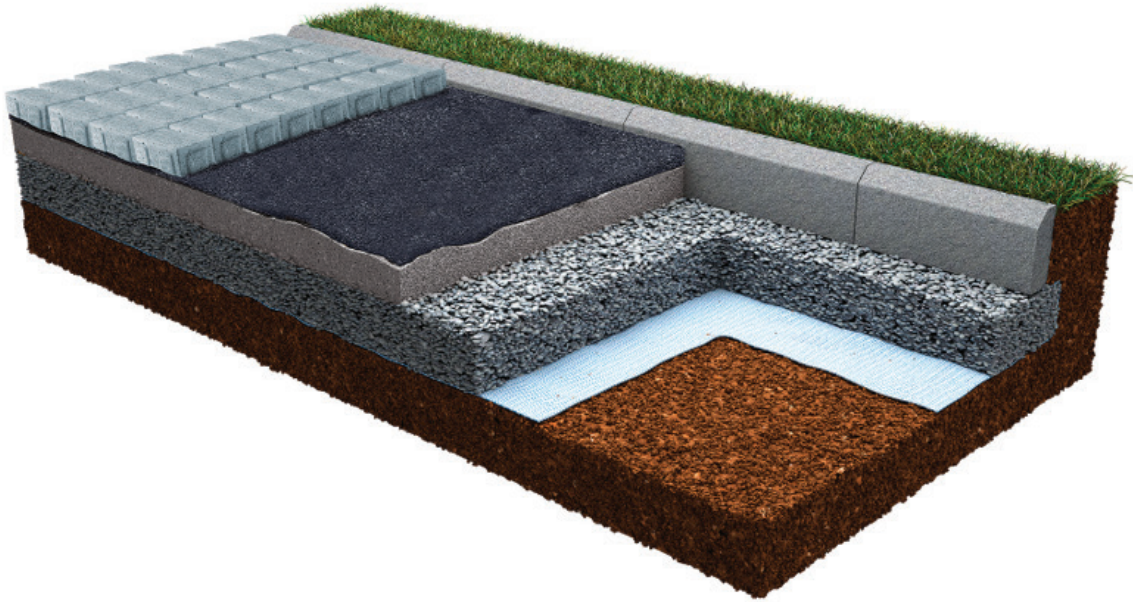
This new focus on SuDS can be used to an architect's advantage, with a well-designed SuDS system likely to speed up the approval process

SuDS represent a collection of strategies, management practices, structures, and design solutions that drain surface water-reducing flood risk – efficiently and sustainably from development sites. Flooding and flash flooding have been all too prevalent over the last few years in the UK and mitigating flood risk is becoming even more important, as is water conservation, meaning architects, developers and housebuilders are facing tighter planning controls than ever before. This has led to many domestic and commercial projects calling for new and innovative ways to manage water runoff that arises from developments and drainage.

Sustainable drainage systems (SuDS) can contribute to both of these necessary needs while simultaneously improving water quality as well as presenting an opportunity to add value to a project – making them a key tool in every architect's toolbox.

Since 1961, the number of three consecutive days of rainfall (API 3) has risen 50%. This, coupled with the fact that we are building more than ever, has led to an increase in water-stressed areas where the conservation of water is a critical challenge. This has put architects under an intense spotlight – facing unprecedented pressure to introduce more sustainable elements into their designs.

There is often little warning when it comes to surface water flooding and although weather forecasting is improving all the time, it is not always possible to forecast intense rain. The severe flooding seen over the last few years has no doubt influenced people's perception of climate control, and subsequently we are seeing the government raise SuDS higher up in their agenda – forcing architects to seriously consider the role of SuDS in their next project.



The advantages of SuDS

Products like AG's Xflo Permeable Paving solution, can enhance the landscape and encourage local biodiversity, playing a key part in sustainable drainage systems. The product is designed to remove surface water rapidly and safely at a rate of over 50 times the expected rainfall of a se100-year storm.

This new focus on SuDS can be used to an architect's advantage, with a well-designed SuDS system likely to speed up the approval process – delighting builders and homeowners alike. As well as improving the aesthetics of a development, creating a better and more desirable place to settle, quality SuDS which incorporate open spaces – such as ponds – can increase land value and house prices as much as 10% – providing a new opportunity to increase capital.

SuDS are becoming more prevalent in the construction sector, which is perhaps no surprise. As it stands, Wales is the only country in the United Kingdom with legislation in place that requires all planning applications to include SuDS. However, this month, a new approach to sustainable drainage has been announced by the UK government, following pressure from the industry to act now and implement schedule 3 of the Flood and Water Management Act 2010.

Schedule 3 of the Act established a process to ensure that any new development includes high quality SuDS. The legislation will, according to the government, “reduce

the risk of surface water flooding, pollution and help alleviate the pressures on our traditional drainage and sewerage systems.”

Consequently, architects are beginning to set aside more land for green areas, increasing the landscaping and the number of trees taking carbon out of the atmosphere – therefore resulting in a more positive environmental impact.

There is no doubt that SuDS are here to stay. After all, we must continue to be able to control and mitigate flood risk – improving water quality while significantly contributing to the UK's carbon-neutral goal. Right across the construction sector, we should focus on incorporating them into schemes from the beginning right through to the end. However, it is also important for architects to know that SuDS is not a case of one-size-fits-all. Therefore, careful consideration should take place to determine the most appropriate system for each project.

Manufacturers are keen to support architects, builders and developers in the development process, allowing them to properly implement SuDS from conception through to completion. We are seeing a wide range of projects starting to specify SuDS solutions, and with legislation continuing to change, we predict SuDS being an even greater driving force, paving the route to sustainability within the industry.

Michael Davies is technical manager at AG

Architects are under a spotlight to introduce more sustainable elements into their designs

Futureproofing our heritage

The restrictions that apply to alterations to listed buildings can be significant and challenging, particularly when it comes to balancing energy efficiency and condensation control, as Callum Anderson from A. Proctor Group explains



In listed buildings, this priority will need to be balanced against retaining architectural features, maintaining the character of the building and aesthetic qualities, and ensuring the internal spaces remain large enough to be fit for purpose

Protecting listed buildings is about more than celebrating buildings of special architectural or historic interest. The world is facing enormous challenges from climate change and the need to reduce CO₂ emissions, to the threat of energy security and scarcity, coupled with the impacts of rising inflation and a cost-of-living crisis.

Increasingly, there is recognition of the urgent need to improve buildings' energy efficiency. In doing so, national, and global strategies for retrofitting existing buildings are crucial. In addition, the efficient use of resources, minimising waste, and preserving and extending the life cycle of buildings is equally important.

Work to a listed building that involves alterations, extensions or demolition, and which will effect its character externally and in some cases internally, requires listed building consent. The restrictions that apply to alterations can be significant and challenging, particularly concerning energy efficiency and condensation

control. Strategies to upgrade the energy performance of existing buildings must be considered carefully and holistically, as actions affecting one area may have unforeseen consequences elsewhere.

For example, we must recognise that we cannot simply upgrade thermal insulation without addressing the balance of moisture movement and air leakage.

Airtightness

While not factored into U-value calculations, air leakage through cracks, gaps, holes, and improperly sealed elements – such as doors and windows – can cause a significant reduction in the performance of even thermally insulated envelopes. The industry is increasingly turning to air barrier membranes as an essential part of the process in achieving the most effective means of controlling and reducing air leaks.

Modern new build homes typically have wall U-values of around 0.2 W/m²K, while traditional older properties with solid walls will be more like 2.0 W/m² K, which will have a significant effect on the heating bills of the property and the quality of life of the occupants. This has substantial impacts where occupants are in fuel poverty or belong to a vulnerable social group such as the elderly.

In listed buildings, addressing this needs to be balanced against retaining architectural features, maintaining the character of the building and aesthetic qualities, and ensuring the internal spaces remain large enough to be fit for purpose.

Refurb choices

There are some challenges when evaluating the choices for refurbishment projects of listed buildings. Traditional building materials used in older properties such as lime-based mortar and plaster have very different hygrothermal properties from their modern equivalents. Adding insulation of low permeability, such as rigid foam, can

result in damaging moisture problems for two primary reasons.

Adding any internal insulation will reduce the temperature of the existing wall masonry, making it more likely that condensation will occur to the inside as there will be less heat penetrating from the living spaces to warm up the masonry. Secondly, some insulation types – such as rigid foams – can further exacerbate the problem. If not adequately accounted for in the design, this moisture accumulation can continue unchecked, increasing issues with dampness and mould over time and, in extreme cases causing the masonry to degrade due to freeze/thaw cycles.

Permeable insulation prevents moisture from being trapped in the construction and minimises disruption of the established balance of moisture flows within the building fabric to the same degree. However, traditional moisture vapour permeable insulation, such as mineral fibre, tends to be very bulky, causing a challenging for preserving interior space.

External or internal insulation?

Protected historic listed buildings are often solid wall construction, and a commonly held perception is that it isn't possible to insulate externally and not practical to insulate internally.

Preserving the external features of the property excludes the traditional approach to solid wall insulation. A traditional external application would be achieved through insulated boards being secured to the external face with a render finish. The drawback of this method is the change in the overall appearance of the dwelling.

Internal approaches typically include the application of insulated plasterboard fitted to the walls of each room and then a subsequent plaster finish. The materials suitable for internal insulation can result in an overall reduction of floor space, and therefore the use of these traditional methods can often be impractical due to space constraints.

Spacetherm WL is a high-performance laminate specifically intended for use where improved thermal performance is required with limited space. It is fixed to the internal surfaces of existing solid walls without the need for mechanical fixings. At only 13 mm thick, there is often no need to remove skirting boards and cornices, saving time and cost. Typically, a solid wall will have a U-value of around 2.1 W/m²K,



however using the product this can be reduced to around 0.8 W/m²K, depending on the wall material and thickness.

An internal insulation system using materials such as mineral fibre, wood fibre or natural wool has a relatively high thermal conductivity, and therefore requires a significant depth of insulation to achieve modern thermal standards. Due to the depth required, these materials are typically installed within a freestanding frame, with a cavity to isolate them from the masonry – often resulting in a system depth of over 200 mm. Although this system typically won't achieve thermal performance in line with Building Regulations, even a small upgrade in thermal insulation can raise the internal surface temperature enough to avoid condensation problems.

For example, a solid masonry wall could be prone to surface condensation, particularly around window interfaces. If insulation is added to the main wall surface but omitted from window reveals, although the walls' surface temperature increases, the reveals' surface temperature drops, leading to increased condensation risk. Even adding a minimal amount of insulation to the reveals will elevate this temperature enough to mitigate this condensation risk, highlighting the importance of a continuous envelope of thermal insulation.

Callum Anderson is technical advisor for A. Proctor Group

Protecting listed buildings is much more than preserving the heritage of the past



Banking on Acoustics

The Business Garden Wrocław is a remarkable 17,000 m² development in the heart of Wrocław, Poland. Comprising nine offices and service buildings along with retail units, this LEED Platinum development includes the new headquarters of Santander Bank, designed by architects Workplace Solutions.

The headquarters is a remarkable bright, lively and inviting environment for both staff and visitors, a world away from the stuffy banks of old. With large open spaces, break-out areas and conference rooms, the designers needed to find a way to control the acoustics. As a result, they specified over 600 m² of Troldekt's acoustic panels across large parts of the building from Modern Classic, Troldekt's local partners in Poland.

Troldekt is the perfect choice for this kind of application because it provides the twin benefits of superior acoustic performance and sustainability. Here, Troldekt ultrafine panels are used in both natural wood and white to break up the ceilings and create an interesting mosaic effect.



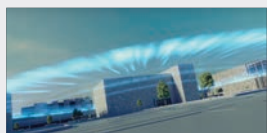
Founded on the Cradle-to-Cradle design concept and recently attaining Gold certification, Troldekt's natural and inherently sustainable panels are available in a variety of different surfaces and colours and contribute positively to a building's BREEAM, DGNB and LEED ratings. In addition, panels which incorporate Futurecem™, the patented new cement from Aalborg Portland, have a significantly reduced CO₂ footprint. Overall, over the entire product life cycle, the CO₂ footprint is 26.4% lower than for Troldekt

based on gray cement and a whopping 37.7% lower than for Troldekt based on white cement.

In addition to their high sound absorption and attractive tactile surface, Troldekt acoustic panels offer high durability and low-cost lifecycle performance. Available in various sizes and in four grades, from extreme fine to coarse, the panels can be left untreated or painted in virtually any RAL colour.

01978 664255 Troldekt.co.uk

Kingspan unveils new QuadCore LEC



QuadCore LEC has been developed specifically to help reduce the carbon footprint of the buildings it is used on. Using comparative Lifecycle Assessment Data (LCA) data to the EN15804-A2 standard,

this breakthrough in insulated panel technology demonstrates a 41% reduction in embodied carbon in modules A1-A3 (product stage) for QuadCore AWP in a 100 mm thickness. The first products in the QuadCore LEC range will be available in Q1 2023 in the UK and Irish markets. Contact **Kingspan** for more information.

quadcore.technology@kingspan.com www.kingspanpanels.co.uk

Aqualisa extends Mian™ mixer shower series



Shower specialist **Aqualisa** has expanded its premium Mian™ shower collection with the introduction of six new models designed specifically for the housebuilder, contract and hospitality sectors. With a choice of contemporary square or round styling, plus single outlet, dual outlet and bath shower mixer options, each model features a high quality chrome finish, brass body and metal handles with cool touch surface technology, and a temperature override for added safety. The Mian range is backed by the Aqualisa five year guarantee on registration.

01959 560020 www.aqualisa.co.uk/spec

Quantum Flooring's Q-Awards 2023



In 2022, **Quantum Flooring** launched the Q-Awards, in which architects and flooring contractors enter their projects using Quantum products into three categories: Design, Safety Improvement, and Full Installation. The Q-Awards are back for 2023, with winners to be announced at the end of every quarter of the year. Each category winner will receive a special Q-Awards trophy and a bottle of Moët Champagne. At the end of the year, all 12 winners throughout 2023 will be entered into the final round of judging. The overall first, second and third Q-Award Projects of the Year will then be decided, with £1,000 in travel vouchers for first place, and £250 in Love2shop vouchers for second and third places. Many congratulations to Glenn from G Harding Flooring for taking the top prize in 2022. Well done also to Steve from Steven Holland Flooring and Dave from Midlands Flooring for taking the second and third overall prizes. Visit the Quantum Flooring website to submit your project details for the first round of the year. Good luck to all Q-Awards entrants in 2023!

0161 627 4222 www.quantumflooring.co.uk

Check out our new look



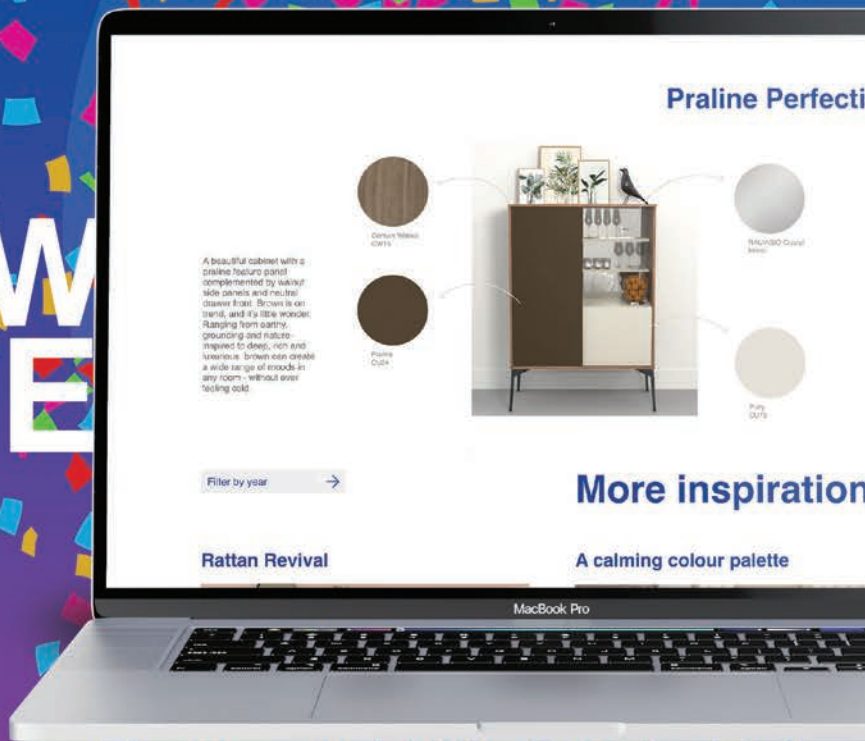
its official!

OUR NEW WEBSITE

is Live!

Discover a range of new features and content

We are excited to announce the launch of our new and improved website. With a sleek and modern new look and a layout made easy for you to navigate, check it out and see for yourself all the great new features and improvements we've made!



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Team spotlights



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Scan me to view our new Website!



Stylish fittings enhance Glasgow's award winning visitor attraction

Delabie fittings specified for Glasgow's tripadvisor award-winning Kelvingrove art gallery and museum

Today's visitors expect a tourist attraction to have quality toilet and washroom facilities. Indeed, for many people it's a deciding factor in rating a destination. When it came to updating the facilities at Kelvingrove art gallery and museum, one of Scotland's most popular visitor attractions, the specifier and installation team chose Delabie for the taps, liquid soap and paper towel dispensers.

With over one million visitors each year, Kelvingrove is the most popular free-to-enter visitor attraction in Scotland and the UK's most visited museum outside London, making it to the top of tripadvisor's best rated art museums in 2018.

Appreciating the key role washroom facilities play in ensuring visitor satisfaction, Glasgow Life, the charitable organisation which manages Kelvingrove among many other facilities in the city, wanted the washroom refurbishment to embody the latest in technology, styling and safety.

Andy Taylor, facilities manager at Glasgow Life and responsible for 168 properties within its estate, explains: "The toilets were in need of some TLC and the scheme was undertaken for tourism awareness. While quality was

the main driver, our priorities were infection prevention, efficiency with water savings and user-friendliness. We were also looking for a long product guarantee.

"We specify the look and the feel, the warranty, the scope of the scheme," said Andy. "It's then passed to capital projects. The main builder was City Build, who handle the projects for Glasgow Life. They specified products that matched the requirements from plumbers' merchants."

Andy adds: "The Delabie team are helpful and proactive in approach. There's been no issues around the performance or durability of the products installed. Delabie have also been specified for the Gallery of Modern Art and Scotsun Leisure Centre."

The washroom fittings chosen for Kelvingrove's refurbishment were Delabie's BINOPTIC electronic taps, coupled with PREMIX NANO thermostatic mixing valves, together with wall-mounted liquid soap dispenser and wall-mounted paper towel dispenser. All the products have Delabie's 10-year warranty.

Winner of the German design award in 2019, BIOPTIC is a sleek and stylish electronic tap with a timeless design. Offering

total hygiene, it requires no manual contact as an active infrared movement detection sensor at the end of the spout optimises detection. BINOPTIC delivers an impressive 90% water savings compared with a conventional tap. It has an independent IP65 electronic control unit.

A duty flush limits bacterial proliferation. The adjustable duty flush may be pre-set to flush from 60 seconds to every 24 hours after the last use. BINOPTIC's spout has a smooth interior and low water volume, limiting bacterial niches. The tap has a chrome-plated, solid brass body, a scale-resistant flow straightener and a flow rate pre-set at 3 litres pm at 3 bar. This can be adjusted from 1.4 to 6 litres pm.

To ensure user safety, the tap is teamed with a PREMIX NANO thermostatic mixing valve. Delivering a safe, stable temperature, with an automotive thermo-reactive cell, the brass-bodied PREMIX NANO has an automatic shut off if hot or cold water fails. The non-return valve and filters are easily accessible. Temperature is pre-set at 38°C and can be adjusted by the installer from 34°C to 60°C. Thermal shocks are possible. The wall-mounted liquid soap dispenser has





a 1 litre capacity. Ergonomic with soft touch operation, it is vandal resistant and designed to ensure anti-blocking, delivering a single dose per press, even if the button is pressed for prolonged periods. It has a no-waste, non-drip (waterproof) pump dispenser. Manufactured in bacteriostatic 304 stainless steel with a polished satin finish, it is easy to clean with a one-piece hinged cover for improved hygiene. The tank is easy to fill from large containers. A window allows monitoring of the soap level.

The wall-mounted paper towel dispenser holds 500 sheets, dispensing one sheet at a time. Manufactured from 304 stainless steel to reduce bacterial development, it has a polished satin finish which is easy to clean.

Both wall dispensers are vandal resistant, with a lock and Delabie key.

Commenting on Kelvingrove's attractive washroom facility, Dean French, Delabie's regional sales manager – north, explained: "The higher the level of commitment to design and aesthetics, the lower the level of vandalism. Today's users are more environmentally aware and more demanding; have higher aspirations and habits."

"Washrooms are now better equipped, with design-led products, and are now evaluated by the users. Attractive, highly rated washrooms have a positive impact on the visitors' mood. A smart, clean, quality facility all adds to giving a good customer experience."

A spokesperson for Glasgow Life added: "Kelvingrove Art Gallery and Museum is tripadvisor users' top-rated attraction in Glasgow and is regularly among the most visited in the UK. The experiences our visitors have at the museum are shaped by the magnificent building, the outstanding collection and its interpretation, and by their opinions of the ancillary services offered onsite."

"Visitors expect modern, fresh and usable services and providing them are key to maintaining their positive impressions of visiting Kelvingrove."

In keeping with Delabie's energy and water saving credentials, Kelvingrove hosted an exclusive dinner for world leaders from across the globe to mark the opening of COP26 in 2021, as part of the ongoing United Nations Environmental Challenge.

Itself a multi international award-winner, Delabie is an expert in design and manufacture. A family group of four generations, exporting to 90 countries, Delabie has total control of the manufacture of its products, guaranteeing delivery times are kept to a minimum.

www.delabie.co.uk



Vicaima unveils the main decor trends for 2023

Comfort, exquisite details and technology lead the world of architecture and decoration in the transition to a new year of potential challenges and possibilities.

Forecasting what 2023 holds for the world of architecture, construction and interior design is a demanding challenge, but history proves that in a period of metamorphosis corresponding opportunities present themselves for growth and renewal. Faced with a multitude of possibilities, in times that evoke beginnings, comfort and energy, Vicaima outlines the main trends that could be incorporated and inspire new projects in the year ahead.

Well-being, above all

Following a remarkable pandemic period, the desire for large spaces and open decor settings, in which natural light and innovative elements flourish, has become increasingly popular. Today, the aim is not merely to conceive a unique design, but to blend the aesthetic focus with maximum functionality and adaptation to different daily needs, in which the rooms are suited to the recovery and rejuvenation demanded by daily life.

As one of the largest European players in the design and production of cutting-edge solutions for interior doors, technical doors, frames, wardrobes, panels, and furniture items, Vicaima provides models that improve the accessibility of spaces and functional design, such as the Portaro® Sliding Door solution, which integrates door, frame and accessories in a single piece. The company also features complements that promote the perfect harmony between the aesthetics of interiors and a welcoming environment, as demonstrated by the glazing options, reflecting the physical comfort in the emotional wellbeing of each resident.

Bold details ruling spaces

In a highly globalised and interconnected world, interiors now incorporate increasingly unique and customised accessories and



identity traits, in an organic approach, with the addition of details that define the personality of projects, appealing to different audiences. Through a wide selection of models, coatings, and finishes, the Vicaima solutions are the ideal match for balanced and contemporary spaces.

Viva Magenta: A fusion between this new Pantone colour and the identity of Vicaima

A symbol of the increasing presence of bold and exquisite details, which put in evidence the freedom of self-expression and nonconformism with restrictions, is summarised by Pantone. The colour elected by Pantone as the “colour of the year” and the visual identity of Vicaima, evident in its logo, meet in their similarity as the summary of everything that 2023 anticipates.

Vicaima options allow the achievement of a distinctive personality through finishes such as Naturdor®, Dekordor® and Lacdor, whose palette of tones allow a synergy with the Pantone colour of the year for an ideal blend. Viva Magenta, in all its grandeur, reveals the optimism and vigour that drive a unified demonstration of strength.

Alongside these attributes, Viva Magenta is a shade rooted in nature, capable of driving a design that portrays a better future, a key feature in a period of growing environmental awareness. For the sustainable conservation of ecosystems, all Vicaima products are FSC® (Forest Stewardship Council®) certified.

The symbiosis of tangible reality with the virtual universe

With the development of home automation and technological innovations, 2023 promises

a greater incorporation of digital elements in interiors, adapted to the current lifestyle pace and the frequent use of mobile devices. A trend proven by the choice of Pantone, which explores the dynamic between Artificial Intelligence and human creativity, by creating a hybrid colour that portrays a balance between warm and cold, reminiscent of our multi-dimensional world.

Mindful of the latest developments in the sector, Vicaima offers the Infinity concept, that shapes the virtual into the tangible through an avant-garde style, employing high-end technology and a mix of innovative production processes that allow the creation of customised designs and coatings in essential elements such as doors, panels, wardrobes, and furniture pieces. Characterised by enabling infinite possibilities in any project, Vicaima Infinity defines creativity as its only boundary, aimed at sectors such as hospitality, housing, health, offices or commercial spaces.

As 2022 shaped architecture and design through Nature, minimalism and sustainability, 2023 heralds new dynamics and methodologies. Faced with volatile periods, Vicaima reaffirms its continuous renewal of styles and its firm commitment to quality, displaying this avant-garde attitude on its international presence in projects of excellence and in a close involvement with construction industry professionals everywhere.

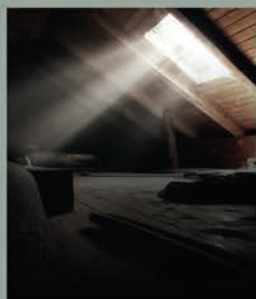
For further inspiration, visit the Vicaima website at www.vicaima.com

01793 532333
info@vicaima.com





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Going with the MMC flo

Amanda Mills from Saniflo discusses how pumps can facilitate water discharge from bathrooms and washrooms in a modular building when gravity drainage is not possible – or commercially viable

Modular buildings have never been so popular. For domestic, commercial and public purposes, adopting offsite constructed buildings is a trend that looks set to stay. Even the NHS has got in on the act through its Shared Business Services modular construction framework. Its scheme culminates in July 2023 after four years and will – most likely – be extended given the backlog in patient care and the pressures on the health service's finances.

Modular offers solutions for many situations, including where there is limited onsite space, squeezed budgets and pressing deadlines. Given that offsite construction is typically 50% faster than standard onsite construction and up to 35% cheaper, as well as the fact that buildings can be rented rather than bought, not only can the modular route help to alleviate financial pressures for the health service, but also for other public sector services – such as education – who have access to the same scheme.

Waste water pumping solutions

There's no compromise either on the fixtures and fittings. It's possible to kit out a modular building to the very same level as a traditional building. Thanks to the availability of waste water pumping solutions, it's possible to install bathrooms, washrooms, kitchens – any space requiring a water discharge – even when gravity drainage is not accessible.

The choice of pumps today is so vast that there is a solution for the most complicated drainage challenges. During the Covid pandemic NHS Trusts installed welfare cabins into many hospital car parks as changing room facilities for staff to use before and after shifts; ensuring scrubs were clean on entry to the wards and packed in bags ready for washing at the end of the day. These temporary modular units were equipped with bathroom facilities, including



shower cubicles, WCs and lockers for staff belongings. Wastewater was discharged through light commercial macerators neatly installed into store cupboards at the back of the units to mains drains.

Surface mounted lifting stations

Modular buildings are typically raised off the ground which makes it easy to deploy surface mounted lifting stations as the waste can easily flow into the stations under gravity. These stations are powerful enough to take waste from the whole building with the potential to pump hundreds of metres away to the most convenient sewer entry point. In addition, the ground does not need to be excavated meaning installation is not only faster and more cost effective, but the lifting station can easily be removed once the project is finished – without causing damage to the outside ground surface.

During the pandemic a number of

The ground does not need to be excavated, meaning installation is not only faster and more cost-effective, but the lifting station can be easily removed after the project



The choice of pumps today is so vast that there is a solution for the most complicated drainage challenges

temporary Nightingale hospitals were erected around the country in anticipation of huge demand. As well as exhibition centres being converted, onsite modular buildings with full bathroom facilities were installed on hospital sites using surface mounted pumps as the temporary drainage solution.

Permanent modular buildings for multiple public sector applications have been well adopted since the introduction of the NHS Shared Business Services model. School classrooms, clinics, wards, staff accommodation with full ensuite bathroom facilities will now often be constructed off-site and craned into position. And very often it is an underground pumping station that will be servicing any water discharge. With multiple connections, an underground pump can be unobtrusively installed outside the building and connected through small bore pipework to the sewer. A manhole-style cover flush to the ground offers access to the pump for routine maintenance and servicing. Similar units are being used with high degrees of success to take waste from the bathrooms and kitchens of modular buildings in the glamping and leisure sector.

In many cases, the use of all-in-one

shower cubicles in the bathrooms is no coincidence. In the case of the NHS, space saving and time-saving shower cubicles were widely used as the most rapid solution to install a working shower in just a few hours. An integrated tray, internal panels that slot over the tray upstands, external panels and all shower fittings were supplied in a single package; minimising procurement time. Installed off-site, the cubicles are labour-saving during the installation process and provide an easy clean, minimal maintenance solution. The leak-free units have no tiles, grout or silicone to maintain; instead, all water runs off the internal panels, which are coated with anti-limescale treatment, into the shower tray and out through the integrated waste.

Cubicles are particularly suited to modular buildings thanks to ease of installation, but also if the building is constructed in timber the shower cubicle has an element of give, enabling it to move with the timber – which naturally warps and shifts over time.

Amanda Mills is marketing manager at Saniflo

VitrA launch new shower toilet training module following research findings

VitrA Bathrooms has launched an online training module for retailers and specifiers of its comprehensive range of shower toilets – V-Care and Aquacare.

Margaret Talbot, marketing manager for VitrA, explains: “In Japan and much of the East, shower toilets are an everyday, popular product. Yet market sales and awareness are both low here in the UK.”

VitrA offers visually aesthetic and cost-effective shower toilets and was keen to understand consumer hesitation. Working with Trend Monitor, VitrA Bathrooms, based in Oxfordshire, commissioned a comprehensive piece of research to understand the drivers and hurdles for the sales of shower toilets in the UK.

The research showed that, out of 16,740 people, only 0.01% had a shower toilet in their home – clearly illustrating that there is little awareness of the product in the market.

“96% of bathroom purchasers were not offered a shower toilet as part of their bathroom design. Yet 77% of respondents who had used a shower toilet said they would consider one for a bathroom or cloakroom. These findings indicate there is enormous potential for shower toilet sales,” Margaret explains.

Secondary research, which targeted consumers within the AB socio-economic groups who had bought and installed a new bathroom or cloakroom within the past three years, showed that 38% of homeowners



VitrA V-Care Prime: This top-of-the-range shower toilet offers many personal hygiene benefits – yet it is still one of the most cost-effective intelligent shower toilets on the market

hadn't heard the term 'shower toilet'. A further 74% had never used one. This demonstrates the opportunities available to educate, with consumers having little idea of a shower toilet, how it works, or the vast range of benefits.

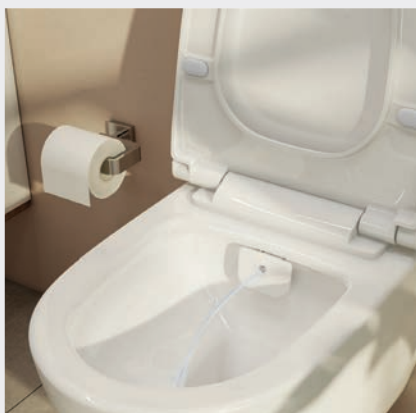
VitrA's research also showed that there are two primary buying personas. Firstly, those aged 50+ with limited mobility who have been alerted to the benefits of shower toilets by a hospital therapist. Secondly, those aged 30-50 who are more affluent and well-travelled and have used a shower toilet before and appreciated the health and well-being benefits. Both groups showed that promoting the benefits of a shower toilet instead of the features is more effective. Price point was a common barrier in the research, particularly when factoring in installation costs. Many only suggest a shower toilet to those with a renovation budget of over £10,000.

Nonetheless, with increasing consumer interest in hygiene, sustainability, wellness and smart products, there is enormous potential for the shower toilets market. Globally it is expected to reach USD 6.78 Billion by 2027, an increase of 1.85 billion (Source: Blue Weave Consulting).

To help its retailers communicate the numerous benefits of shower toilets and washing with water, VitrA has launched an online training tool. The tool educates retailers on using the product and its myriad benefits and features. The training module is hosted on the VitrA Academy, VitrA's platform for different training modules.

Margaret Talbot explains: “Shower toilets offer a huge growth potential for retailers in the UK. Just like with dishwashers in the kitchen 30 years ago, consumers feel shower toilets are a costly, unessential luxury. Today, many households would not consider a home without a dishwasher – it's no longer a luxury but a hygienic, environmentally-sound decision. Similarly, over time the shower toilet will become a UK bathroom must-have as it has in many countries worldwide. This research has added to our understanding of opportunities and challenges. Our shower toilets are feature-rich and price-competitive; our training academy is designed to support our retailers in understanding and communicating the benefits.”

www.VitrA.co.uk
review.cortexa.co.uk/Live/VitrA/VIT06M



VitrA Aquacare offers a built-in bidet function for added comfort and hygiene without needing an electrical connection

Cleaning up with Pendock cubicles and washrooms



Classic Plus cubicles at St. Stephens Shopping Centre, Hull

This year sees the coming of age of Pendock's washroom range, as it has been 18 years since the first products were launched. Since then, the range has continued to evolve and over the past 12 months, the Pendock Washroom brand has developed still further.

In addition to its range of cubicle solutions, covering different material types, colour options and ironmongery, Pendock has implemented the use of zero carbon compact laminates and introduced a new range of solid surface wash troughs.

Already used in several sectors, including education, retail, health, leisure and public buildings, five cubicle systems are available in the range, as well as dedicated vanity units and accessories for each cubicle type, in addition to the new wash troughs.

Downloadable technical information is also freely available on the Pendock website, with no need to pre-register or provide details before downloading.

The following overview helps identify the key specification options for single and multi-cubicle projects under the Pendock Washroom brand.

Pendock Washroom

Starting with the latest addition to the range, Pendock solid surface wash troughs are bespoke manufactured from a purpose-designed high specification acrylic composite. Designed primarily for commercial washroom projects they are ideal for high-traffic applications, such as hotels, shopping centres, workspaces and public toilets.

Also, as Pendock can provide a dedicated installation service through Pendock Contracts, this can help simplify the process further, as a managed solution from initial specification, including site survey and manufacture, through to project completion.

Robust cubicles are one of two ranges that are manufactured using 12 mm thick BioCarbon zero carbon compact laminate (CL), with BioCarbon decorative facings to each side. Designed for high traffic and wet areas, including zones with increased humidity, Robust cubicles are extremely durable and suitable for general washroom applications, as well as more demanding environments, while having the advantage of being manufactured from carbon neutral and sustainable materials.

Durable

The Ultimate cubicle range is bespoke manufactured and allows specifiers a wide range of options including the choice of either BioCarbon compact laminate, for wet and high traffic



Robust BioCarbon® compact laminate range

applications, or high pressure laminate (HPL) incorporating a UKTR compliant moisture resistant core for medium traffic and dry washroom environments. Ultimate cubicles can be specified with any finish or colour combination to meet exact interior design or project requirements.

Versatile

Classic Plus cubicles use tough and decorative HPL surfaces bonded to a UKTR compliant moisture resistant MFC core, giving a nominal overall thickness of 20 mm, and incorporate a 2 mm PVC edging strip. Designed for use in dry washrooms only, this method of manufacture makes Classic Plus ideally suited for medium to high-traffic applications that demand a more durable, impact-resistant finish.

An exceptionally wide range of HPL finishes can be specified including decorative laminates from leading suppliers, such as Formica; Polyrey and Abet, making Classic Plus one of the most versatile options in the range.

Economic

Pendock's Classic MFC range is designed primarily for use in low traffic and dry washroom schemes where economic considerations and simplicity are key factors during specification or installation.

Manufactured from UKTR compliant 18 mm thick moisture-resistant MFC (melamine-faced chipboard) with 2 mm PVC edging, Classic MFC features a range of standard finishes and ironmongery, to provide a versatile solution for single and multiple cubicle installations.



Education range cubicles at Leegomerry Community Centre

The Education cubicles range covers washrooms from nursery through to further education and as education washrooms can be demanding environments, they can be specified in 18 mm HPL with PVC edging, as well as 12 mm BioCarbon CL giving the option of high durability in both dry and wet washroom applications.

IPS duct panel systems can also be specified in HPL or BioCarbon CL, and the range includes 'Duct panels', capable of supporting surface-mounted sanitaryware, as well as 'Back panels', for decorative cladding on the rear walls of cubicles. Every aspect of the range can be specified, including core material, finish colours & graphics, as well as the panel dimensions.



01952 580590 www.pendock.co.uk

The new OSMO™ T1 concealed cistern



The new OSMO™ T1 concealed cistern from TYDE is a top access, concealed reversible cistern with AXIS Technology™ creating multiple inlet options from the same unit. Perfectly designed to be mounted behind IPS, within compact voids or on timber and steel frames. Featuring WRAS approved Dudley Niagara pneumatic flush valve and Hydroflo AirGap Compact brass tail inlet valve, the cistern has excellent water saving qualities and is fluid category 5 compliant. The uniquely reversible body creates multiple inlet and outlet options as standard from the same unit, reducing installation time.

0121 530 7000 www.thomasdudley.co.uk/tyde

Office refurb for Strand Hardware



Strand Hardware has given its company headquarters a radical make over – improving its energy efficiency, work space and creating a welcoming new hi-tech reception. It has used products from many of its suppliers and customers for the project including new windows, fire doors, electricals, plumbing, furniture, decoration, carpeting and signage, along with some of its own ironmongery products. The refurb in the second change project to take place at Strand Hardware in recent months. It has resulted in a more modern, open plan work space for its expanding team.

01922 639 111 www.strandhardware.co.uk

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BAL Micromax3 ECO: performance, control, sustainability

With all the qualities of BAL Micromax2, the new BAL Micromax3 ECO grout delivers enhanced product performance, improved usability and added eco-benefits.

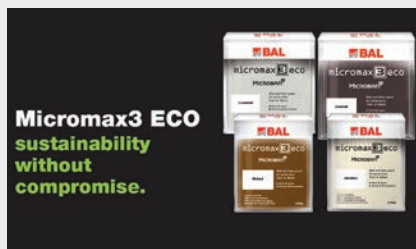
Available from 6 March, BAL Micromax3 ECO grout provides everything an architect or specifier needs for a perfect tiled finish.

Available in 36 colours, with a range of matching silicone sealants it contains longer-lasting and improved Microban® antimicrobial protection providing non-hazardous protection against black mould and mildew, as well as an efflorescence-free formulation and locked-in colour consistency.

Sustainability without compromise

The world is changing and that means we must reduce our environmental impact.

Produced in recyclable packaging, Micromax3 ECO is manufactured with over 25% recycled materials with no loss of performance. With an EC1 Plus EMICODE



designation, Micromax3 ECO achieves the best classification under the EMICODE system. BAL Micromax3 is also non-hazardous, whilst also providing excellent anti-microbial protection.

OPC-free for a reduced carbon footprint, BAL Micromax3 ECO also has a two year shelf life in 2.5 kg and 5 kg sizes (with all packaging 100% recyclable) and grouts can be part mixed for multiple use. This ensures less waste on-site for the fixer, while being better for the environment.

Setting in two to three hours for fast-track project completion, the new grout is now also suitable for swimming pools and can be used up to 30 mm joints widths with no shrinking or cracking.

Alex Underwood, head of marketing at BAL said: "The next generation of grouts, BAL Micromax3 ECO provides the leading technology to ensure a new benchmark in grout performance, with guaranteed long-lasting results and added eco-benefits."

"Micromax3 ECO delivers market-leading solutions, with all the benefits of Micromax2 including the use of >25% recycled raw materials; a superior smooth finish, high flexibility and durability time and time again."

"Tilers demanded and we listened, delivering advanced technology with greater usability including easier clean-off and less haze."

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www.bal-adhesives.com

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Välinge supplies flooring for fashionable London bar venue

Välinge Innovation has been causing a stir for the past year in the UK commercial flooring market with its unique hardened wood flooring range. Now it has been specified on a stunning refurb job in Central London, which highlights both the functionality and the outstanding aesthetic qualities of the Välinge range.

Modelled on the vibe of a popular street market, Market Halls Canary Wharf features two bars and seven creative kitchens. It is easy



therefore to see where the priorities of this venue lie and also appreciate the nature of the clientele – and why the recently completed refurb had to be implemented with only the best materials.

Working with Wood and Beyond, the specialist London-based importers and suppliers of hardwood products, Välinge were able to supply 450 m² of hardened wood flooring, which fully meets the requirements of this most discerning of customers. They were looking for maximum durability, in view of the high footfall through Market Halls, a strong position on sustainability and the most aesthetic stylish flooring available.

With its patented technologies of Woodura® and 5G® Dry™, the Välinge Flooring brand is fully able to meet all these requirements. Woodura® technology involves the fusing of a thin sheet of real wood with a wood fibre core through a powder mix layer. Compared to traditional wood flooring, the durability of the wood wear layer is massively increased.

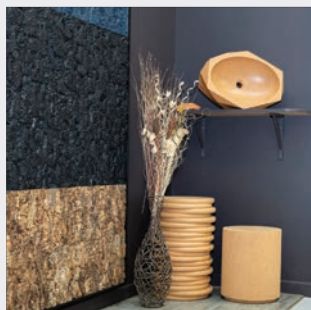


The new hardened wood floors on this project comprised: Oak Nature Earth Grey Lacquered, Oak Nature Misty White Lacquered and Walnut Nature Terra Brown Lacquered – all in XL sizes. The timber comes from sustainable sources with FSC certification, while the unique Woodura® technology makes the manufacturing process much more efficient and environmentally friendly in terms of timber usage than traditional processes.

The 5G® Dry™ technology incorporated into the products means that the flooring is impervious to the kind of spills and splashes which are inevitable in a venue such as this.

www.hardenedwood.valingeflooring.com
markethalls.co.uk/venue/canary-wharf

Granorte marks a year of showroom success



The beginning of 2023 marks a year since the opening of Granorte's first UK showroom for its range of cork floors, walls and furniture. Providing some 10,000 ft² of warehouse space, as well as a sample centre, showroom and offices, Granorte's Telford headquarters provide retail and commercial clients with the best in service and support. Giving high stock levels across the company's range of cork walls, floors, furniture and design objects, the facility is centrally located for efficient distribution across the UK. Since opening a year ago, Granorte's headquarters have become an important hub for the growth and awareness of cork's potential as a design material across the country. Delivering faster samples across a broader range of products than ever before, it has helped to position Granorte as one of the premier cork products suppliers in the country. The showroom has proved hugely important in the growing awareness of Granorte's innovative cork solutions, welcoming architects, designers and specifiers wanting to embrace the natural, renewable and recyclable material into commercial and residential projects.

01785 711131 www.granorte.co.uk

Elegance, style and functionality



Combining the trend for sophisticated matte black on glass hardware, with the convenience and practical advantages that sliding glass doors offer in terms of partitioning, CRL Brooklyn makes a stylish yet functional impression. The matte black framing system for sliding doors has been used on commercial and residential applications, acting as a focal

point in interiors such as living spaces, offices, restaurants and bars. This innovative, style-led sliding door frame system allows practical room partitioning, while still retaining a sense of space.

01706 863600 www.crlaurence.co.uk

Fit door handles faster with latest line-up



Leading specialist trade supplier IronmongeryDirect, has added the Urfic Easy Click door handles to its range of over 18,000 products. Offering easy and quick installations of under one minute, these simple, sleek and reliable lever handles are suitable for a variety

of applications, especially where convenience is a must. Thanks to a distinct patented fixing system, the Urfic Easy Click door handles are an ideal solution to save time on site and can be installed in just under one minute (after the lock has been fitted).

03003 038 821 www.IronmongeryDirect.co.uk

DRU announces new Spartherm Lean series of compact wood fires and stoves



Spartherm Lean Triple 68x28x48 RLA

DRU is the exclusive UK distributor for Spartherm, one of Germany's largest manufacturers of wood burning fires and stoves.

January 2023 sees the UK launch of the Spartherm Lean series of built-in and freestanding wood fires and stoves with compact dimensions suitable for homes with limited space. The first model to be released is the built-in Lean Triple 68x28x48

RLA. It is Ecodesign ready with external air connection, a vertically sliding glass door for easy maintenance, 81% energy efficiency and manual or remote controls. The freestanding Lean Saphir RLU wood fire and the larger Trico S and L RLA wood stoves will follow later in 2023.

Commenting on the launch, DRU UK general manager Niall Deiraniya said: "We are responding to the huge current demand

for wood burning appliances with this new, slimline selection of fires and stoves that are tailor-made for British homes, where superior design, compact dimensions and high energy efficiency are major priorities."

To find out more about the range of DRU Fires visit the company's website.

info@drufire.co.uk
www.drufire.com



Spartherm Lean Saphir RLU



Spartherm Trico S White RLA

Riverside apartments feature a-rated Magply boards for kitchen fit out



An acclaimed new residential development in a Thameside location is currently being fitted out, with four of the apartment buildings featuring the use of 18 mm **Magply** boards, manufactured by IPP Ltd., being used in all the kitchens due to their unique range of physical benefits. With the design of the structure prioritising the use of non-combustible materials in response to recent changes to the Building Regulations, the A1 rated Magply boards were chosen to form pattresses within the external walls on the basis of the material's unique combination of strength and fire resistance as well as the product's past performance in similar applications. Riverscape is a joint development involving international redevelopment specialists, Ballymore and Oxley, with Reddy Architecture + Urbanism leading the design team. The first four blocks, which rise to eight, 10 and 14 storeys, will create a total of 249 dwellings of different sizes and specifications, for social housing tenants and shared equity ownership. Meanwhile S & R London Ltd – responsible for all of the internal partitioning – is using the 18 mm Magply boards to form pattress boards across the outer walls.

01621 776252 www.magply.co.uk

How assistive technologies from Pressalit help Leuchie House guests gain independence



Advanced assistive products from world leading manufacturer and designer **Pressalit** have been installed in Leuchie House, a national respite charity that provides transformational care for its guests. INDIVO worktop and cupboard lifters have been installed in a new kitchen where guests are able to attend regular therapy sessions, enabling them to benefit from the independence technology can provide. With a simple press of a button, worktop heights can be adjusted to suit standing and seated users, and wall cupboards brought within easy reach. Tasks from washing up, cooking and preparing food, to sharing a meal at the table, can be carried out in an environment that is safe, comfortable and inclusive. Julie Orr, co-head of enabling technology at Leuchie House says: "The ability to use the new kitchen at Leuchie House for Occupational Therapy sessions with our guests has been transformational for their emotional well-being." Using these technologies has given many people back choice in their lives and allows them to maintain control in their own environments.

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Mapei joins specification at aquatic centre

Mapei systems have been used to complete an extensive waterproofing and tiling project at The Sandwell Aquatic Centre in Smethwick, near Birmingham – venue of one of the largest international sporting events in 2022. The installation throughout the three pool areas, changing rooms and atrium was completed by P. Plunkett Tiling Contractors Ltd for main contractor, The Wates Group. The Mapei specification will also be continued for legacy phase works, before the centre opens as a community facility this summer.

Mapei's specification spanned the main pool, diving pool, studio pool, changing rooms and atrium area. Over 35 tiles designs were installed, totalling in excess of 9,000 m², with over 6,500 m² of screed specified. Throughout the project, Mapei attended the site on a fortnightly basis to provide technical support.

Three preparation products were used throughout the centre's pool areas: fast drying Topcem special hydraulic binder was applied to pool bases and Nivoplan smoothing mortar, with the addition of Planicrete



Synthetic rubber latex admixture, was used to render the pool walls. Mapelastic Turbo – a two-component, quick-drying elastic cementitious mortar incorporating Mapenet 150 alkali-resistant glass fibre reinforcing mesh – was used on the pool and surrounding floors to reduce installation waiting times. To tank pool walls, the specification included Mapelastic Smart – a highly flexible, cementitious waterproof membrane, also incorporating Mapenet 150.

Throughout the pools and surrounds, floor tiles were installed with Keraquick S1 – a quick-setting, deformable cementitious adhesive which features a very low VOC

formulation – and Kerapoxy two-component, acid resistant epoxy grout. All wall tiles were installed using Adesilex P9 cementitious adhesive and Kerapoxy grout.

Topcem, Nivoplan and Planicrete were also used to prepare floors and walls throughout changing areas. Surfaces were then tanked with Mapeguard WP 200 alkali-resistant waterproofing and anti-fracture membrane, Mapelastic AquaDefense ready to use, flexible, ultra-rapid drying waterproofing membrane and Mapeband alkali-resistant rubber tape. Floor tiles were installed with Keraquick S1 adhesive and walls tiles with Adesilex P9 adhesive. The changing room installation was completed with Ultracolor Plus grout – an anti-efflorescence, quick-setting and drying polymer-modified formulation, featuring water-repellent DropEffect® and mould-resistant BioBlock® – and Kerapoxy grout was used in the shower areas. Tiles throughout the centre's Atrium were also installed with Keraquick S1 adhesive and Ultracolor Plus grout.

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Top marks for Resiblock at Imperial College



As part of the South Kensington Masterplan, the new Dangoor Plaza and Queen's Lawn area will include new landscaping and space for a new piece of iconic sculptural art, created by Andrew Gormley. Concerns were raised that the natural weathering of the steel structure would lead to staining and rusting of the pavers that would surround the artwork. Furthermore, the possibility of joint destabilisation caused by high volumes of footfall traffic were also raised. Following consultations, Resiblock Resiecco was specified to provide both joint stabilisation and long-term stain resistance against rust.

www.resiblock.co.uk



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Aesthetic access control: a balancing act

Daniel May of Consort Architectural Hardware explains why architects and design teams need to find the right balance between aesthetics, functionality and security when specifying access control systems on projects

Following innovation and integration over the past decade, access control has developed into an ever-prominent facet of building design. Where systems were once rudimentary, modern user requirements have led to several operational and technological advancements, resulting in a versatile selection of options that move beyond the limited capabilities of ‘centralised deployment architecture.’

The push for smarter buildings has played its part too. In fact, according to a 2022 Insider Intelligence report, the number of smart buildings worldwide is projected to climb from 45 million to 115 million by 2026, with global market size estimated to hit \$201.16bn by 2031 – and this growth shows no signs of slowing down (assuming there isn’t another global pandemic!).

In order to meet growing market demand, manufacturers continue to modernise access control solutions, introducing the use of mobile credentials, cloud control and even biometric systems. As such, the specification process for access control hardware continues to become more nuanced. For architects in particular, there’s an increasing challenge to ensure all design objectives are met. With this in mind, how can professionals strike a balance between seamless integration and design?

Aesthetic choices

For many decision makers, access control is viewed as an efficient and flexible route to securing their building. But more than that, it has become critical to optimising the performance of our built environment; from residential settings to commercial space, the use of interconnected systems is further boosting accessibility, functionality and security.



Take hotel environments for example. According to Oracle Hospitality’s 2022 report ‘Hotel 2025,’ 56% of hospitality consumers said that locking and unlocking rooms using biometrics and facial recognition would enhance their experience. From Wi-Fi infrastructure to cloud services, technology has become synonymous with many guests’ experience, being designed to improve their stay. Where digital access control systems are adopted, guests can interact with the premises independently, streamlining their access to essential entry points while safeguarding rooms against unauthorised visitors. Similarly, hotel operators benefit from enhanced building security and increased traceability, not to mention improved business efficiency and higher guest ratings.

In a 2022 report, 56% of hospitality consumers said using biometrics and facial recognition would enhance their experience



40% of architects find incorporating security measures into new developments without impacting aesthetic appeal a key design challenge

However, while security and accessibility are frequently top of the agenda when it comes to specifying hardware, from an architectural perspective, the aesthetic is just as valuable, and plays a crucial role in the decision-making process. Often, door hardware can feel like the finishing touch to a design project, so careful consideration must be applied to achieve consistent design choices that make a positive impact on the building's aesthetic.

Again, hospitality is a case in point, where hotels must ensure their environment is visually pleasing as part of the service quality offered to their guests. However, an ATG white paper 'The Future Of Urban Design' revealed that 40% of architects find incorporating security measures into new developments without impacting aesthetic appeal a key design challenge. With this in mind, architects and design team can be forgiven for past frustration towards the unattractive and cumbersome access control systems that were once common. In reality, today's systems offer a much more seamless design, and with end users placing value on accessibility and functionality, it's now possible to incorporate a solution that works for everyone.

Combining value & visuals

Upon recognising today's access control systems promote functionality and seamless installation without compromising aesthetics, there's a growing demand for comprehensive, single-package solutions across many contemporary projects. As a

result, architects are increasingly met with questions on door hardware and access control, and must keep up to date with the latest solutions that are available.

With this in mind, the initial design stage is the time for architectural teams to consider the needs of the end user in relation to access control systems. From a building's security elements to its circulation flow, there are various objectives to reflect upon, and architects must look to develop their knowledge on access control solutions to ensure all end user objectives are met, and all while considering the final aesthetic.

In many cases, manufacturers now offer bespoke access control solutions as well as useful advice. Through greater collaboration and the use of tailored solutions, architects are given the ability to choose consistent finishes and materials that fit the planned aesthetic, removing the need to try and match across various suppliers later down the line.

Access control will continue to play a larger role in building design as the industry progresses. While the adoption of new technology may continue to mean an element of uncertainty for some, by introducing tailored solutions with seamless integration at early stages in the design process, architects can rest assured that their proposals address all security and functionality challenges while keeping their aesthetic vision intact.

Daniel May is director of Consort Architectural Hardware



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The Government is investing in a series of hubs to better deliver public services as part of its levelling up strategy, and drive to improve resilience, productivity and efficiency. One of the first to become operational is Fletton Quays in Peterborough, where 1000+ staff will be kept safe by advanced smoke evacuation technology from **Gilberts Blackpool**. The seven-storey office development Sand Martin House provides 8,000 m² of flexible workspace to address emerging working practice. Energy efficiency has been a key design feature, to the extent that even the smoke evacuation system uses minimal energy to function. A 1.5 m² BRE natural ventilation smoke shaft rises the full height of the building, to provide effective ventilation of smoke in the event of a fire. The approach optimises natural buoyancy principles where the hot smoke rises and fresh air inlets drive the smoke upwards for extraction/exhaust. Gilberts' innovative Series 60 smoke evacuations dampers have been chosen and installed to channel smoke into the riser. With low air leakage when closed, a motorised actuator opens the dampers to drive the smoke into the shaft in the event of a fire.

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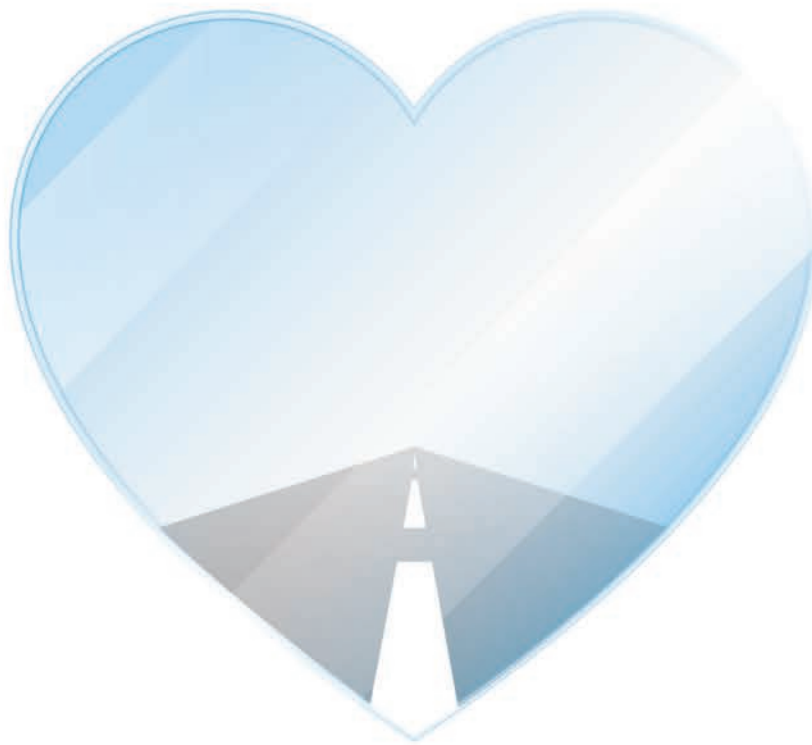
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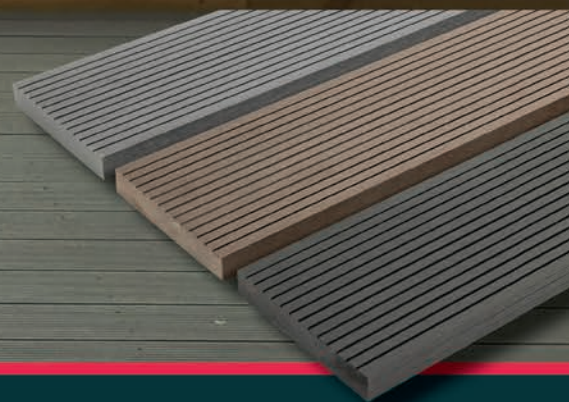
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Better safety by design

Ben Meek of the Smoke Control Association (SCA) looks at significant upcoming changes to building codes with respect to design for smoke ventilation

The British Standard code of practice BS 9991:2015 – ‘Fire Safety in the design, management and use of residential buildings’ is to be updated, with a new BS 9991:2021 version of the standard in the works. BS 9991:2021 is currently available in ‘draft’ format while comments from the public consultation are reviewed.

Prior to BS 9991:2021, it was common to build tall residential buildings above 18 metres with a single communal escape stairwell. The buildings adopt a ‘defend in place’ evacuation strategy (also known as ‘stay put’), based on the premise that each dwelling is constructed as a ‘fireproof box.’

In a ‘stay put’ building, the occupants of the fire affected apartment are expected to evacuate, while the remaining building occupants should be safe to remain inside their apartments while the fire service tackles the blaze. The National Fire Chiefs Council released a statement in December 2022 noting that designers often misinterpret the definition of ‘defend in place’ by assuming that only the fire affected occupants escape, whereas recent data suggests this is not always the case.

The ‘defend in place’ procedure fails if the apartment fire compartmentation is breached, allowing fire to spread between dwellings. Fires affecting multiple floor levels overwhelm active fire protection systems such as corridor smoke ventilation systems because these systems are designed to handle a single fire on one floor.

If a stairwell becomes smoke logged and it is the only escape route, then the occupants of the higher floor levels find themselves trapped inside the building. In light of this, BS 9991:2022 provides stricter guidance for the use of single stair residential buildings above 18 metres.

Under BS 9991:2022, tall single stair residential buildings above 18 metres are allowed only if certain conditions are met:

- The escape stairwell is separated from the apartment corridor by a dedicated lobby which is not accessed by any dwellings or ancillary accommodation



but may contain the lifts. (The stairwell and stair lobby should be pressurised in accordance with BS EN 12101-6:2005);

- The structural elements must be 90 minutes fire rated for buildings up to 30 metres, and 120min above 30 metres
- All load bearing elements must be Class A1
- Stairs must be at least 1.2 metres wide
- The building must have a BS 8629: 2019-compliant alert system
- The single staircase should terminate at ground floor level and should not directly access any stairs to floors below – unless certain provisions listed in Clause 13 of BS 9991:2022 are met.

Stairwell lobby

At present, a typical apartment building has a naturally or mechanically ventilated corridor which directly accesses the communal escape stairwell. This means that the dwelling is separated from the stairwell by no more than two fire doors.

Under these rules, a poorly designed building could have an apartment entrance door directly opposite the stair door, with the two doors only a corridor’s width apart. It’s not difficult to see the challenge this creates for the smoke clearance system to maintain a smoke free stairwell when both doors are open for occupant escape or firefighters.

Including a pressurised stairwell lobby between the apartment and stairwell adds an additional degree of fire separation between the fire zone (dwelling) and the

The National Fire Chiefs Council released a statement in 2022 noting that designers often misinterpret the definition of ‘defend in place’

The inclusion of a pressurised stairwell lobby between the apartment and stairwell adds an additional degree of fire separation



escape route. Furthermore, pressurising the stairwell and stair lobby should provide tenable conditions within the stair lobby for the fire service to use it as staging point/fall-back position.

Stair & lobby pressurisation

Pressurisation works by using supply fans to pump fresh air into the protected areas in order to direct airflow away from them when doors are opened and thus repel any smoke and hot gas. However architects need to consider the following provisions in the concept design.

The corridor layout must be designed to include the stair lobby, which does not directly access any dwellings or ancillary accommodation. An air supply shaft (riser) is required to serve the stairwell – this could be of the order of 1.0 m² cross sectional area. Openings are required in the stair core wall at every third floor level for the air injection points. A second air supply shaft of similar size is required to jointly serve the stair lobby and lift.

Suitable plant space is required at ground floor or roof level for the supply fan sets. If they are at roof level, twin intakes should be provided extending to different roof facades to mitigate contamination of supply air. The fans must have a secondary independent power supply.

Air release vents must be provided in the apartment access corridor – natural facade vents or a smoke shaft riser with AOVs at each level. Finally, if the escape travel distance from the furthest apartment door to the stair lobby door exceeds 15 metres then a dedicated smoke control system is required in the corridor to maintain suitable conditions for occupant escape, which could be two smoke shafts at either end of the corridor. A total of four builders' work shafts

could be required for a typical residential tower with a long corridor.

Evacuation lifts

BS 9991:2022 provides clearer and more detailed guidance on evacuation lifts, which facilitate vertical escape for people with disabilities or requiring assistance. While BS 9991:2015 recommended that they be installed if an assessment deems that there are sufficient people requiring assistance to evacuate vertically, BS 9991:2022 says that in all developments where passenger lifts are installed, at least one lift must be an evacuation lift. Also, buildings in excess of 18 metres should be provided with more than one evacuation lift. It also states that evacuation lifts should be located within protected lobbies; with direct access to a stairwell and be served by a smoke control system.

Conclusion

To comply with BS 9991:2022, a single stair residential building above must have a pressurised stair and stair lobby. The apartment access corridor must – as a minimum – have air release vents, or a smoke control system if travel distances exceed 15 metres.

The location and sizes of builders' work shafts, plant space requirements and power supply requirements requires specialist design, therefore a Smoke Control Association member should be engaged at an early design stage in order to assist the design team. The SCA website provides a list of suitable smoke control contractors with mechanical smoke ventilation and pressurisation design capabilities.

Ben Meek is design manager for Group SCS (members of the Smoke Control Association)

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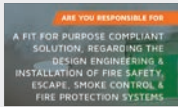
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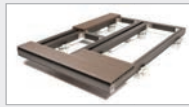
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