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Design Engine continue their relationship with local uni with a trio of buildings that are sensitive to the historic context, while prioritising students' wellness

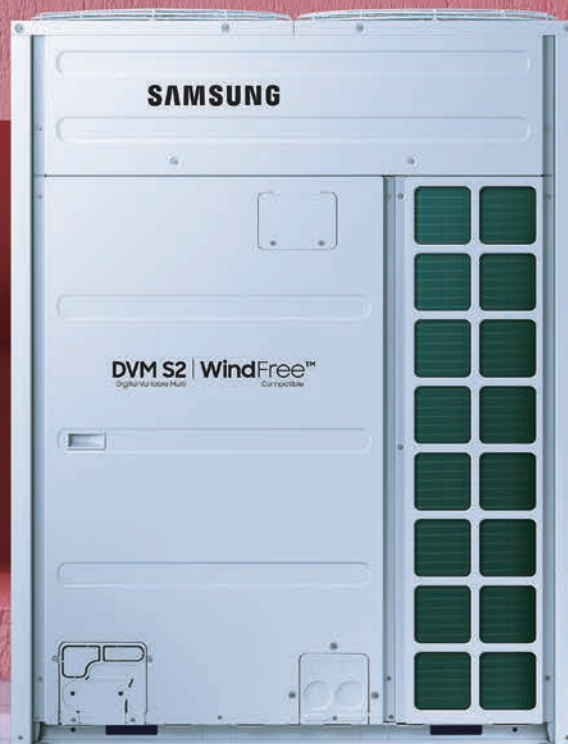


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FROM THE EDITOR



With the appalling situation that has developed in Ukraine, Covid almost feels like it's already a thing of the past, however of course its ramifications will continue for some time, including in construction. Yet Covid didn't seem to have put people off coming to Futurebuild this year, which was of course cancelled in 2021 due to the pandemic. While architects might still not be a regular sighting on all the stands, the show was definitely buzzing for good parts of the middle day. Sadly, the Tube unions inadvertently sabotaged the show with strikes on both the first and last days of the event!

There was only one hall in its 'comeback year,' but the event has cut its cloth to fit the currently challenged times, and there were a wide range of familiar, major manufacturers, as well as a lot of unusual names, such as Solar Assisted Heat Pumps, a UK business innovating heat pump technology for hot water. And, although there were only a handful of heat pumps on show at Futurebuild 2022 – something of a surprise – at the larger end of the market Daikin for one was launching a 'monobloc' pump designed for smaller homes, countering concerns around the bulky nature of some systems.

From a couple of conversations with those in the know at the show, it did seem clear that architects were increasingly taking on the mantle of M&E engineers. We are in an era where pushing towards net zero, and combatting an energy crisis now unbelievably exacerbated by war in Europe, are the new design parameters for clients. Architects might be as exercised about achieving the right size of heat pump for a building to optimise winter performance, as they are about achieving its best aspect for solar gain, or even the right aesthetic.

Sustainability has moved beyond a marketing tool, and a case of lip service to green design, to a spur that's driving architects to fundamentally integrate building design with services design. Without this approach, there's no way that most homes will even achieve the 31% reduction in emissions needed for the interim Future Homes Standard – which will be mandatory this June.

Other interesting learnings from Futurebuild included Pollard Thomas Edwards Architects' mammoth initiative with the Department for Business, Energy and Skills, and AECOM, to do post-occupancy evaluation on low energy homes across the UK. The Building for 2050 report which is soon to emerge will provide some revealing findings into the pros, but also cons, of lower emissions living for occupants.

Rehau were focusing on district heating, like several other exhibitors, suggesting that this is also moving from a marginal idea to a mainstream way to get the UK to net zero. Whitecroft Lighting were embracing full cradle-to-cradle operations, and James Latham told us that as well as working with innovative low energy modular house builders like Kiss House, they were driving their timber suppliers to provide full transparency on embodied carbon. This is an example of how the industry is showing the way, when arguably central standards have neglected this end of sustainability. All in all, a show full of purpose, in worrying times.

James Parker, Editor

**ON THE COVER...**

Design Engine continue their relationship with local university with a trio of buildings that are sensitive to the historic context, while prioritising students' wellness

Cover image © Jim Stephenson

For the full report on this project, go to page 29

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EDUCATION

Penoyre & Prasad complete UCL built environment research lab

London-based architecture practice Penoyre & Prasad has completed what's claimed to be a "unique" research laboratory in Dagenham for University College London, PEARL, whose goal is to "improve the built environment and the way we interact with it."

The laboratory will create "life-sized environments" such as a railway station, high street, or town square, all built "under controlled conditions." The architects said this will be a "first of its kind" facility, that can simulate the urban environment to test how people use infrastructure and cities, with the goal of "improving urban design, for a more accessible and sustainable future." The project will bring together engineers, architects, biologists, social scientists, neurologists, artists and the public.

With a floor area totalling around 4,000 m², a volume of 44,000 m³, and a height of 10 metres, the laboratory space has been designed and engineered with 40 metre clear structural spans to house "hugely varied" research experiments. Equipped with "indoor ambient environments" and sound systems, the



Images © Timothy Soar

laboratory will test the impact of space, colour, lighting, smell, visibility, appearance, touch and sound on people's behaviour and perception – creating as close to real-life scenarios as possible.

The laboratory's interior is black, and sound reverberation is very low – as part of the intention to "remove people's sense of being in a building," said Penoyre & Prasad. Gridded rigs, made from theatre-style trusses, are suspended from the primary steel structure, holding specialist lighting, speakers, props, cameras and sensors.

A free-standing two-storey CLT structure houses the entrance, community-facing facilities, workshops and flexible academic workspaces. Directly connected to the lab is a workshop and maker space facility for small scale testing, prototyping and manufacturing of experiment equipment, and a "sound preparation studio."

Externally, the building's form and materials relate to the site's industrial architectural heritage; 9 metre high, rusted steel panels gradually fan out across the frontage, providing shading to the entrance building. A triangular forecourt will facilitate larger experiments, including the use of tube and train carriages, and a decommissioned aircraft fuselage.

The project is thought to be the first finished building to achieve an Outstanding rating under the new BREEAM standards.



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APPOINTMENTS

Cardiff's Rio Architects grows team

Due to an increase in the number and scale of the firm's upcoming projects, Rio Architects has announced three recent management promotions as part of 13 new appointments in the past year.

Rio, which designed the Central Quay development in Cardiff, said it was "committed to nurturing emerging talent," and was employing a number of recent graduates along with several new appointments within the technical team.

Richard Davies and Martyn Hurley have both joined Rio in senior architect positions. Davies has designed and delivered many projects across the country and Hurley has a keen interest in environmentally sustainable design and has delivered large-scale projects across "multiple sectors."

In addition, Andrew Joss, David Whitter, and James Kenyon have been promoted to associates. Founding director Richard Roberts commented: "We are delighted to



be expanding our studio with more skills, ideas and passion."

"Despite the difficulties of trading through a pandemic, Rio continues to

grow due to the support of our clients, the incredible efforts of our team and the quality of our work," continued Richard Roberts.

AWARD

'People architecture' wins the day for GT3 with national award

Nottingham and Newcastle-based practice GT3 Architects has had its focus on team development recognised with a national award from Construction Excellence.

The firm was given the accolade of National Winner award in the 'People Development' category in the Constructing Excellence National Awards 2021. The awards process recognises organisations that "value their workforce and ensure they maximise their team's contribution to the business," with GT3 Architects having achieved this goal through its 'People Architecture' approach.

Alongside a new operations and flexible working policy introduced to mitigate the impacts of the Covid-19 pandemic, the practice appointed a designated 'people champion' to lead its focus on personal and professional development, associate director Liz Clarke.

Clarke commented: "For a practice

with a fundamental goal to place people – not buildings – at the heart of our projects, processes and practice-life, Covid-19 offered us an unparalleled opportunity to prove 'People Architecture' to be more than just a strapline."

The success of this approach was borne out in a staff survey, which showed that 97% of staff believed they are "supported by their colleagues and team leaders," with 89% feeling that their work during lockdown "directly contributed to practice success."

The 'workplace consultancy' team at GT3 offered consultation sessions to local businesses struggling to adapt to a Covid-19 working environment, and the practice launched its first virtual work experience offering for students, subsequently supported by both the RIBA and Speakers for Schools.

The award period also saw the firm grow its staff base by 10%, and secure new projects and R&D work – including



the UK's first 'wet and dry' Passivhaus leisure facility in Staines-upon-Thames, Surrey.

Simon Dunstan, who is a director at GT3 Architects, commented: "In a year when countless milestones, projects, and career choices were put on hold, we made a conscious effort to continually put our people first, as well as contribute to the wider industry and support our local communities. This award win is a real testament to our practice's approach and we're delighted to have been awarded the top spot."

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(Hannes K., architect)



COMMERCIAL

De Matos Ryan's design for guest accommodation saves Yorkshire pub

Architectural practice De Matos Ryan has “renovated and transformed the sustainability” of The Alice Hawthorn – a Grade II listed pub in the historic village of Nun Monkton, North Yorkshire – with the addition of 12 guest bedrooms.

Situated at the confluence of the Rivers Ouse and Nidd, the village of Nun Monkton has seen the closure of four of its pubs. Named after a famous 19th Century racehorse, The Alice Hawthorn is the village's last remaining public house. In recent years, this critical meeting point and social hub for the local community was in economic decline and had come under threat.

De Matos Ryan director Angus Morrough-Ryan comments: “Creating an innovative new economy around assets such as the village pub is essential to the health and well-being of any rural community. To become solvent long term, it needed to increase its appeal to a broader audience.”

“Close, collaborative consultations” with Harrogate Borough Council and the local community informed the project's design, said the architects. “The redevelopment has created new revenue streams for the restaurant and bar, improved visitor footfall and ‘dwell time’ and, most critically, increased propensity to spend within the local economy.”

The design reflects the character of the various informal farmsteads that surround the green. The home-grown Douglas fir



framed buildings use “authentic agricultural building materials,” said the practice, such as galvanised corrugated steel roofing, and larch cladding. A “simple and honest construction typology” ensures that the project “looks like the way it was built.”

The new timber framed buildings include the Sheds, Field Barn, Stables and Tack Room. Double member ‘cloister’ columns engage stainless steel feet sitting on cast concrete upstands.

Sustainability is “at the heart of the project's design,” said the architects. A ground source heat pump provides heating and hot water, supplied by bore holes and supported with high levels of mineral wool insulation, and airtightness to a standard

“higher than current Part L2A Building Regulations.” The timber frame buildings are naturally ventilated through use of high-level clerestory windows and rooflights on actuators. Solar gain is reduced by roof overhangs, which offer shading. LED and low energy lighting, as well as low volume water appliances, have been fitted throughout.

The sustainable drainage system includes permeable paving and surface water attenuation tanks concealed below the pub garden. A 1-hour fire resisting timber frame wall within a metre of the site boundaries was developed by employing a fire resisting sheathing internally, avoiding carbon heavy blockwork.



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PRACTICE PROFILE

Studio Fōr

Architect Fauzia Khanani uses her role as studio principal at New York City's Studio Fōr to combat inequality, including in architecture itself. However, as she tells James Parker, it was never her ambition to found a practice

Based in New York City, Studio Fōr is a young practice making its name in residential and commercial architecture, and interior design, both locally and internationally. Despite its modest size, founder Fauzia Khanani uses her firm as a platform to campaign on issues around equality and oppression, including those close to home.

She moved to the US in the early 1970s with her family after fleeing Idi Amin's regime in Uganda, and began her career working in public health, which led her to "make the connection between shelter and public health," and study for an architecture degree. Deciding to found a practice "just sort of happened by chance," when friends asked her to design a weekend house in upstate New York, but the studio is now well established, with eight staff and a varied portfolio of projects.

Fauzia leads the firm with a strongly activist approach on issues that matter to its staff; this includes being part of Design as Protest, a small collective of designers formed to "mobilise strategies to dismantle the privilege and power structures that use architecture and design as tools of oppression." The results have ranged from 'buildable memorials,' to designing protest signs, to physical participation in events. Also, through Design Advocates, established in 2020, Studio Fōr has been, and remains, very engaged in several pro bono projects helping various NYC clients get through the pandemic.

Fauzia says that having founded the studio, she saw a chance to change the paradigm: "I soon realised that I potentially had an opportunity to change the practice of being an architect for myself and eventually others from unhealthy and unsustainable expectations, to a practice where fairness, health and wellness and realistic expectations are foundational."

She explains that this more equitable approach "resonates with her public health background" as well as the awareness of spaces' "fundamental impact" on health and wellbeing. She sums her design ethos up as using architecture to "create spaces that contribute to positive public health outcomes."

Studio evolution

Beginning as a one-woman band, Khanani began to collaborate with architect friends to tackle the workload of multiple projects



MSCI Monterrey Workplace © Amy K. Boyd

underway simultaneously. In late 2014, she hired her first full time employee to do office admin and marketing "because I no longer had time to invoice clients and put a website together!" She says that most staff get to work on both "technical and aesthetic aspects," and on a variety of projects from residential to workplace to community.

She says the firm operates on the basis that "each client and their needs are unique, so the solutions they receive from us are also designed specifically for them; every project is unique." Fauzia adds that they strive to provide an equitable level of design quality across all clients, as "everyone deserves good design, regardless of project size and budget."

Studio Fōr has a handful of hospitality and "community-based" projects under its belt, and is trying to grow in those sectors. While its residential new build and renovation commissions have been generally in New York State, workplace schemes have ranged across the globe.

When it comes to tackling the pandemic, after full remote working until summer 2021, staff moved to hybrid working days through to the end of year, when the practice moved into a new office. They are currently transitioning to staff working in the office

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four days a week, and following a “slight delay” from Omicron, they are back on track, says Khanani.

Conscious values

Khanani’s approach to running a design studio is directly informed by her experience and awareness of gender and racial inequalities. “Being a woman and a person of colour has influenced how I run the firm, as both are underrepresented in the industry and often not given the same credence as others, namely white men.” She adds: “This has driven me to try to create an environment where everyone can feel supported and gain confidence in their own practice.”

Asked how the practice supports inclusivity both within its walls and in the wider profession, she points to the fact the firm, despite being small, is a “majority non-white, non-male team.” She adds that being founded by a woman of colour marks the practice out as a rarity.

“I believe for most people and especially those of us who are underrepresented, you are drawn to others with whom you share race, culture, language, etc. In the early years of my career, it was rare to see another woman of colour in a firm and so one never really quite knows where you stand in an environment like that.” She says in light of this, it’s rewarding to be leading a diverse, but also nurturing practice: “Running a firm is not easy, but one thing that keeps me going is the potential of providing someone with a place where they can thrive and feel comfortable because they aren’t the anomaly.”

Activism

With the fevered political and racial atmosphere in the US over recent years, the practice has taken a stance, such as within the post-Black Lives Matter context. Khanani sees a practice leader’s role as usefully going beyond building design to being an activist, and this in turn can inform individual schemes, producing more supportive environments. Also, how is its involvement with Design as Protest helping to address racial imbalances within the industry?

She says that the agendas of the Design As Protest and Design Advocates collectives both “resonate with our studio’s ethos,” adding, “our work with Design As Protest aligns with our own desire for the industry to be more inclusive of BIPOC [Black, Indigenous and People of Colour], and to push for changes in practice and policy to create more just built environments.”

She explains further: “We believe that design can be a tool in pushing for these shifts in power, increasing diversity and creating inclusive spaces and places that are free of oppression.” Staff

members have taken part in various Design as Protest projects such as “researching case studies of BIPOC neighbourhood displacement in US history, developing policy briefs that are based upon our Design Justice Demands, and taking part in Tactical Protest activism in NYC.” She adds: “We’re also gearing up for some new projects based in NYC, so stay tuned.”

Within the non-profit Design Advocates organisation, the practice “strives to use design as a tool to serve the public good through pro bono services as well as through research and advocacy.” During the height of the pandemic, they provided pro bono design services to small businesses, non-profits and other community-based organisations that were “struggling to continue providing services due to space constraints.” Fauzia says that due to the agile nature of the body, they were able to “mobilise quickly to provide assistance at various scales throughout the city.”

They were also heavily involved in NYC’s Open Restaurants and Open Streets programme, supporting businesses through Covid: “We were able to take part in conversations with city agencies about how these programmes are working and should evolve in the future,” she says. This is continuing, meaning the firm “has a say in how our city can evolve to be more inclusive and equitable.”

Collaboration & clients

A small studio should bring the benefit of natural collaboration both within the practice, with hybrid working, and with clients externally. Fauzia agrees with this assumption, adding that it helps to produce more innovative results. “The beauty of a small firm is that inevitably everyone on the team has to take part in all aspects of a project. This involvement ultimately fosters a high level of communication and collaboration internally and externally.”

She adds: “We want our clients, consultants and contractors to be collaborators with us throughout the process of a project. And we fundamentally believe that everyone on a project team has something to offer and contribute to the process from the beginning all the way to opening day.” She also believes that this approach helps to produce design ideas and innovations that may not have originally been apparent.

“Having open lines of communication with the entire project team, especially with the client, allows us to bring an outside perspective to their vision. It may also provide the space for us to help a client develop a vision in a way that they may not have anticipated or recognised at first.”

The future challenge

Khanani says the firm has a “strong desire to work on more community-based and public projects,” and to bring their experience from such schemes gained at other practices. However, she admits moving into this field is challenging, as “most of these projects have an RFP [Request for Proposal] process, and on paper, it’s quite difficult for a small firm like ours to compete with larger firms when it comes to qualifications, completed projects and fees.” She adds that there’s something of a vicious circle: “It often feels like an unattainable goal; how do we even attain the experience required to even make us qualified? It’s a frustrating cycle.”

Despite the challenge of gaining more public projects for the studio, Khanani is undaunted and says her “long view goal” for the firm is to grow the size of the practice, by winning commissions for large schemes in the city it is based in. She wants her business to be delivering the “large-scale public projects in New York City that are directly impacting the lives of our community members, and actively creating positive and just change through design.” ■



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VIEW POINT



Russell Pedley of Assael Architecture looks at how the humble beginnings of build-to-rent has led to a new design sector and an investor's dream, but also challenges for project teams from out-of-date standards



Blackhorse Mills, a build-to-rent scheme in London by Assael Architecture

The history of build-to-rent (BTR) in the UK – conceived just over a decade ago – has been a story of steady growth. Carried over from the US, the early days of BTR in the UK were about demonstrating how it is different from other residential stock. As more and more successful schemes are delivered, it has become increasingly obvious that there is a genuine renting alternative to private landlords or potentially dodgy old-school agents.

Proving its potential, the last quarter of 2021 saw over £1.4bn worth of deals in the UK build-to-rent sector, pushing year-end investment volumes to a record £4.3bn,

according to Knight Frank research. With a total pipeline at 230,000 units currently, the growth of BTR – across both multi and single-family housing – continues to drive investor interest.

The early days of BTR were about establishing a new asset class that appealed to investors through various initiatives such as the Government's PRS taskforce to the Urban Land Institute UK Residential Councils' Build to Rent: a best practice guide, considered by many to be a 'bible' for the industry. Now it appears we have transitioned into the era of the amenity arms race. Investors have come to realise that it is in their interest to invest in

those amenities, kick-start a community, and entice residents to stay for the long term. While this can go on to attract developers to build more homes, it's the regeneration aspects, creating desirable and professionally managed places to live, work and play, that add value.

The design priorities of BTR are based around creating and fostering a sense of community – this is usually based on amenities, but the customer service levels, and ease of operations are also crucial. The ultimate design goal is creating a place to live, where residents feel they are renting the whole building – not just their apartment – and that their building is



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Blackhorse Mills, a build-to-rent scheme in London by Assael Architecture

connected with the local community.

The architects' role in the evolution of BTR has been to craft an ideal design standard and approach that brings together quality and flexibility. This encompasses health and wellbeing, safety, acoustics, lighting and beautiful architecture –

sometimes competing components which, if substandard or poorly maintained, can mean that residents will simply leave. As amenities will be managed by the onsite operations team, the architect should also design for future maintenance and refurbishment, to keep areas looking unspoilt, and enable staff to offer a high level of service.

Other forms of rental accommodation such as co-living have also seen a rise in popularity in the past few years, with multi-family investors like Greystar investing in their urban living concept. There is also a notable interest in creating purpose-built later-living communities as a rental offer to try and combat the significant undersupply of this type of housing. As different BTR styles (co-

living, later living, single-family housing) come together, they bring with them more and better amenities, and further expand the bandwidth of BTR.

As we explore further opportunities for BTR in inner-city and suburban areas, the design conundrum appears to be planning legislation, which is lagging behind. Current housing standards around home design were established in the 70s, 80s and 90s to ensure that affordable

housing was built to a good standard, and this has migrated to market sale housing. They do not recognise tenure and mobility, or the ways people live ergonomically, with less 'stuff,' and wanting to live more sustainably. They are also largely still focused on car ownership and don't consider walkability or cycling, especially relevant to BTR single-family housing.

Government guidance on BTR is clear in that this sector requires a flexible interpretation of these standards, but on the design 'coal face,' while there are signs of movement, there is still more to do.

With the sector now drawing in the likes of Lloyds Banking Group and John Lewis Partnership, there is an opportunity to solve the housing crisis without relying on housebuilders and housing associations. The big players have finally figured out that housing has always outperformed every other sector, and its resilience means it's fit for purpose for current, but also future markets. BTR played a huge role in lifting the United States out of their housing crisis, and we're hoping to follow that lead and see the same happen in the UK.

Russell Pedley is director at Assael Architecture



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Rocco Design Architects Associates's Performing Arts Centre – the “flagship” of the Bao'an Cultural Complex in Shenzhen, China. Overlooking Quanhai Bay and the South China Sea, the building anchors the southern end of the cultural complex. It houses Shenzhen's first performance hall to be scaled and equipped for international operas, as well as a 600-seat venue and rehearsal facilities. The 28,000 m² building will host opera, dance, symphonies, and dramatic performances. The design takes inspiration from the long and narrow waterfront site; the base is “a low-slung, wave-like volume that carries a sense of rhythm and movement along the campus's axis,” said the architects. A delicately perforated facade recalls ancient Chinese wood and ivory carving and produces “dramatic visual effects.” The ‘scrim-like’ envelope “modulates transparency according to the spaces it encloses, creating openings at the public lobbies and gathering areas and becoming more opaque at the theatres and rehearsal spaces.” While “formally and technically innovative,” said RDA, the facade concept is “rooted in traditional Chinese building screens and shadow walls.” A fly tower tilted 15-degrees off the vertical aids orientation, and sky-bridges offer views over the bay. Gathering areas and elevated porticos line the base of the building, and a restaurant sits at the end of a sloping volume that extends into the plaza, “weaving the building into the larger campus.” The triple-height lobby has a grand curving staircase, and walls finished with wooden slats continue the character of the exteriors. Natural light from above filters in through the perforated facade, “creating a lively play of shadow across the space.”



OSTRAVA TOWER, CZECH REPUBLIC

CHYBIK + KRISTOF

Chybiak + Kristof (CHK) has unveiled their design for Ostrava Tower – a mixed use skyscraper in Ostrava's city centre. Plans for the 56-storey, 98,000 m² building “respond to the rejuvenation of the city and its social needs,” say the architects. With an intended completion date of 2027, it is expected to be the tallest skyscraper in the Czech Republic, at 235 metres. The design of the building will comprise a “complex set of alternating walls and glass facade, providing stunning vistas of the city and the surrounding landscape,” while also providing privacy and “substantial” living space. The building's form expands outward to a sky garden offering extensive views. A ground level lobby connects to a new square, “activating the building's public space.” The new plaza is designed to correlate to the scale and purpose of the inside spaces. Purposely, the architects designed the two widest spaces (the lobby and sky garden) to be used as recreational areas. Additional public spaces include offices, a conference centre, retail services, and hotel. The rooftop includes a cafe, restaurant and bar open to the general public. “The studio's intention was to create a simple but powerful form that acts as a beacon into the city centre.” commented Michal Kristof, CHK co-founding architect.

CPD FOCUS

The latest CPD courses, seminars and documents for architects

ALIAxis UK LAUNCHES ACTIVE DRAINAGE VENTILATION CPD



Aliaxis UK is pleased to announce the launch of a new CPD, which focuses on Active Drainage Ventilation. The new CPD from Aliaxis UK focuses on a number of key areas associated with this important topic. The CPD discusses the types of systems used to manage water and air, ways to manage trap seals and the effect of loss, as well as the benefits of Active Drainage Ventilation. For specifiers, contractors and MEP engineers, the presentation also provides detailed guidance on Positive Air Pressure Attenuator and formulas to produce space-saving calculations.
www.aliaxis.co.uk/contact-us

M-AR CPD PROVIDES INVALUABLE OFFSITE INSIGHT



Offsite contractor, M-AR has launched a new CPD module focussed exclusively on modern methods of construction (MMC) and exploring how best to maximise the benefits of offsite. The CPD is designed to provide insight on the offsite manufacture and installation process as an alternative to traditional build. Guiding participants through the range of MMC solutions, M-AR's first public CPD presentation looks to address questions such as how to get the most out of MMC, what options are available, and how to deliver the best end result in the most effective and efficient way.
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SPIRAL AND HELICAL STAIRCASE CPD WEBINARS



Staircase experts, Spiral UK, offer architects a live bespoke staircase CPD presentation on Microsoft Teams or Zoom free of charge at a time that suits them. The session covers: staircase design, stair regulations ADK, ADB, ADM and specifically BS5395 Part II (which relates to spiral and helical staircases), the design, manufacture and install process, materials and finishes and case study examples. The session is 30-40 minutes depending on questions and can be tailored to the interests of the practice. Certificates of attendance can also be issued.
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www.spiral.uk.com

OPTIGRUN LAUNCH NEW RIBA APPROVED BLUE ROOF CPD



Optigrun has launched a new RIBA approved CPD seminar, 'Understanding blue roofs – From design to application'. Increases in our urban population, the density of urban development and the effects of climate change are all placing additional pressure on public surface water drainage systems. A blue roof can provide a successful surface water management solution for modern construction projects. The session discusses the principles of a blue roof, their environmental and ecological benefits and the importance of the specification process.
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Working outside the box

Architect@Work returns to a physical format at the Truman Brewery in London for 2022; the event on 13-14 April is themed around design for outside space as well as buildings themselves, with the focus on health and wellness

Visitors are invited to attend Architect@Work in the flesh this year, and meet 72 companies showing their innovations to the architecture and specifier markets, as well as enjoy the “stellar line-up of talks” which the organisers have promised.

They have decided that the theme for the 2022 edition is Air & Architecture, “which allows the talks programme to explore a range of different projects, places and experiences.” Different sessions will “touch upon how we breathe and what that means for our wellbeing, as well as the lungs of cities themselves,” said the show organisers.

Show highlights

A key highlight of the talks programme will be a session on health and wellbeing that takes a look at air, space, materials and biophilia; “considering how they are key to comfortable experiences that encourage better interactions within workspaces.” This talk will feature Morris + Company director Joe Morris, alongside Francesca Brady of AirRated, “rising star” Anouska Anquetil (who runs design studio Aterre), and Rachel Edwards of Lendlease.

The organisers commented: “With climate change now making a bigger impression on every design project, it’s clear that the relationship between architecture and landscape can play a huge role in making the built environment more inhabitable and kinder to the environment.” Methods of “retrofitting our cities” to achieve this will be discussed by Eleanor Brough of Sarah Wigglesworth Architects, Katherine Erne from HTA, Joanna Simpson of Simpson Studio and Sanaa Shaikh from Native Studio.

Je Ahn from Studio Weave and Adam Scott of Freestate will focus on “public space projects,” and how good design is used to “enliven places, creating character and a focus for activity.” Under discussion will be the opportunity to “reconsider what we want cities to look like, with a greater emphasis on greenery, accessibility and inclusivity.”

With many innovations in architecture being found in the design for sports and leisure – ranging from the recent Olympics, to climbing centres in skyscrapers, and running tracks that weave through new developments. Peter Karn of MET Studio, Guy Hollaway from Hollaway Studio and Zoe Adeline-Lindop of AHMM will discuss how design can be used to promote exercise to counter the advances in digital technologies that cause us to be more sedentary.

Join the presenters of Open City’s smash-hit podcast ‘the Londown’ for a live recording of their topical show, which covers breaking stories in London’s architecture and built environment. The Londown is produced by Open City and the London Society in partnership with the Architects’ Journal.

Lastly, while architecture offers many opportunities for enclosure, the organisers have posed the question “why aren’t we better utilising the air space on top of buildings to create new homes and landscapes?” Emily Erlam of Erlam Studio, Nile Bridgeman from Gatti Routh Rhodes and Julia Barfield of Marks Barfield will give their answers, and look at how designers are using sophisticated engineering and new materials to “take in our surroundings like never before.” ■



Architects can register to attend the show free via architect-at-work.co.uk using code 1640



Mapei UK to showcase polyurethane waterproofing at Architect@Work

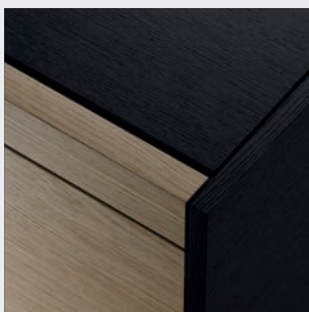


This spring, Mapei UK is returning to Architect@Work. Hosted at The Truman Brewery on new dates – 13 and 14 April – the annual event is renowned for its stellar line-up and ‘lounge-like atmosphere’. Having previously showcased floor and wall systems, Mapei will be demonstrating its basement-to-roof expertise with the presentation of its latest roofing Innovation – Purtop Easy – at Booth 50. Purtop Easy is a ready-to-use polyurethane waterproofing product. Highly elastic and durable, the system is ideal for balconies, flat roofs and terraces, as well as foot traffic areas, in old and new builds. Resistant to UV Rays, foot traffic, root penetration and high/low temperatures, the waterproofing membrane provides total impermeability, even in the presence of standing water. Functional and aesthetic, Purtop Easy is available in grey and red. Celebrating its 85th anniversary this year, Mapei offers a free, expert specification service for all project stages, from design to delivery. Its dedicated Specification Team will be on hand at the event to provide supporting information, and at Mapei’s London Specification Centre in Clerkenwell. For more information about the event, please visit www.architect-at-work.co.uk

info@mapei.co.uk www.mapei.com/gb

ARCHITECT@WORK STAND 50

A more sustainable oak finish to debut at Architect@Work London

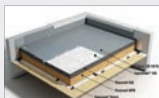


Visitors to Architect@Work London will be treated to the impressively authentic Master Oak from UNILIN Panels. These decorative HDF panels made with an industry first 100% recovered wood for a more sustainable oak look. Master Oak sets a new benchmark in authenticity for decorative finishes, presenting lifelike decors that look and feel just like genuine oak. Hardwearing, scratch and UV-resistant and easy to clean, UNILIN Master Oak is suitable for a wide range of interior applications, including doors, shelving, furniture, desks and walls. With UNILIN Master Oak panels, projects also benefit from decorative finishes made with HDF from 100% recovered wood. UNILIN Panels has invested to develop a process that allows it to use 90% of wood from post-consumer sources such as unwanted furniture and building timber without compromising the quality or integrity of its products. Through advanced sorting and cleaning processes, it removes all impurities for a high-grade wood fibre suitable for products. This process gives more life to more than 1,000,000 tonnes of waste wood every year. UNILIN Master Oak is available in six colours – Brown, Natural, Double Fumed, Light Natural, Everest White and Elegant Black.

info.panels@unilin.com www.unilinpanels.com/en-gb/interior/master-oak

ARCHITECT@WORK STAND 44

Soprema's new insulation solution



Soprema announces the new Pavarof bio-based and carbon storing insulation solution for flat roofs. Combining cork and wood fibre, this patented insulation system is a unique solution for summer overheating, providing improved interior

comfort for building occupants. Suitable for all types of unshaded flat roof areas on residential, education and commercial buildings that are constructed from load bearing wooden decks. The build-up includes the Pavatex Isolair and Pavaflex wood fibre insulation, made from waste wood which is collected, heated and then pressurised. The Pavatex range of insulation brings numerous advantages to the environment.

0330 058 0668 www.soprema.co.uk

ARCHITECT@WORK STAND 11

Marshall's creates first class detailing

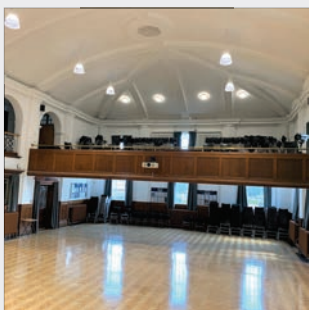


Projected brick detailing using Marshall's concrete bricks forms the contemporary architectural focus of the Timpson UniverCity. Brick expert and LBT Brick & Facades Ltd Commercial Manager Steven Leggott, specified Marshall's Castleton Stock facing bricks, he explains:

“Originally the architect was looking to specify a white clay brick. I proposed some alternative options and the Castleton Stock brick came out as the preferred choice. It provided a competitive clay alternative – it’s a concrete brick that met both aesthetic and technical requirements.”

info@marshall.co.uk www.marshall.co.uk

Charon at Chatham Grammar School for Girls



Charon, a decorative high lumen LED pendant luminaire from Luceco has been installed by Carter Services Group based in Basildon, at Chatham Grammar School for Girls located in Gillingham. Charon was chosen for its contemporary appearance and longevity, offering 100,000 hours of maintenance free operational life as well as variants of up to 10,000lm with an efficacy up to 133lm/cW. Installed at the school’s main hall, Charon is suitable for many environments including commercial and hospitality and is available as fixed output, digital dimmable, emergency back-up variants and Luceco’s Wireless Lighting Controls, Platform and Elevate. Finished in a contemporary silver grey with polycarbonate gear cover and a 60° prismatic refractor, Charon is available in 3000K or 4000K CCT, supplied with a ceiling rose with 1.5 m suspension. The main hall was also lit with Celeste, an attractive circular LED luminaire from Luceco featuring a ‘corona’ backlight effect with a direct / indirect light distribution. Other luminaires installed at the school included LuxPanels and Academy, a linear fitting benefitting from an opal prism diffuser with screw secured endcaps, which can be surface mounted or suspended.

01952 238 100 www.luceco.com

Eventim Apollo's stage refurbishment by Harlequin Floors



Experts in stage building and performance floors

Last year one of the UK's largest original theatres, the Eventim Apollo in Hammersmith, went through a complete stage refurbishment carried out by the expert installation team at Harlequin Floors.

Harlequin supplied and installed a bespoke stage system covering 277m² and finished it with a Harlequin Standfast vinyl performance floor.

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eventimapollo



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University of Edinburgh installs first-class fire protection

The University of Edinburgh, one of the UK's most prestigious educational establishments with a history stretching back to 1582, is now protected by industry-leading intelligent fire panels from Advanced.

Edinburgh is the sixth oldest university in the English-speaking world, with the Old College building being opened in the early 19th century as a school for anatomy and surgery. The original campus was expanded in the 1880s with the addition of the New College, and the university now occupies six sites throughout Edinburgh.

The new fire system installed at the main campus by long-term Advanced partner FMS Fire and Security Limited, covers the entire university campus. It comprises of multi-loop Advanced MxPro 4 and MxPro 5 panels, connected using fault-tolerant network cards.

Dominic Rea, Director for FMS Fire and Security, said: "The new panels installed at the University of Edinburgh are the latest in a long line of installations we have undertaken throughout the university Campus, all using MxPro components. The Advanced panels installed are not only flexible and reliable but are also compatible with the existing systems already installed."

MxPro is the industry's leading multiprotocol panel and offers customers a choice of two panel ranges, four detector protocols and a completely open installer network that enjoys free training and support.

Ronald Kerr, spokesperson for the University of Edinburgh, commented: "The safety of our staff and students is paramount



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and they are now protected by the best fire panels on the market. The university has been shaping history since it welcomed its first students in 1583 and has played a large part in the scientific and literary development of Scotland. Our buildings are a big part of that history and, thanks to Advanced, they will be protected for many years to come."

MxPro 5 offers high performance fire detection and alarm control across multi-panel networks and multiple sites. MxPro 5 panels are EN54 parts 2, 4 and 13 approved. They can be used in single loop, single panel format or easily configured into high speed, 200-panel networks covering huge areas. Advanced's legendary ease of installation and configuration make MxPro customisable to almost any application and the panel is fully compatible with MxPro 4.

Neil Parkin, Advanced Sales Manager for the North, said: "The University of Edinburgh is the latest in a long line of educational establishments protected by Advanced panels, including Sheffield University, Herriot Watt University and a number of leading independent schools. Our MxPro range offers

the performance and reliability required by a site such as the University campus and the system is flexible enough to be expanded and upgraded as technology evolves."

Advanced is a world leader in the development and manufacture of intelligent fire systems. The legendary performance, quality and ease-of-use of its products sees Advanced specified in locations all over the world, from single panel installations to large multi-site networks. Advanced's products include complete fire detection systems, multi-protocol fire panels, extinguishing control, fire paging and false alarm management systems. More details can be found on the website.

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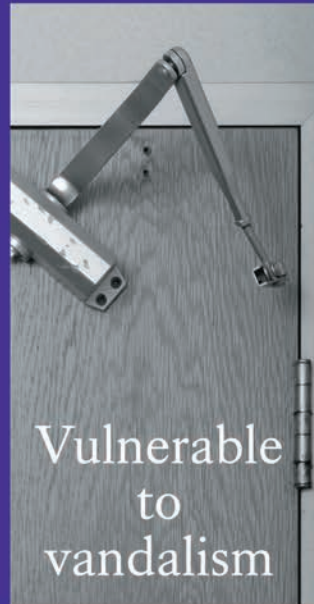


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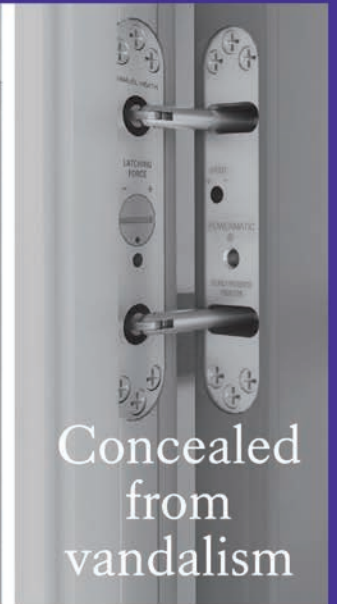
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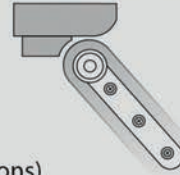


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**BUILDING
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WEST DOWNS CENTRE UNIVERSITY OF WINCHESTER

Learning from context

When Design Engine designed a trio of buildings for the University of Winchester, they used corten steel to emulate the local built heritage, while creating spaces that supported students' wellbeing. Roseanne Field reports

Located on one of the main routes into the centre of the city, the West Downs Centre is a major new scheme for the University of Winchester, finished in eye-catching corten steel. Completed in September 2020, it's the work of Winchester-based architects Design Engine, with the project having been driven by

practice cofounder Richard Jobson.

The practice have a good relationship with the university, having worked with them on several projects previously. It was while working on one that Jobson spotted the potential of an empty site in front of a halls of residence.

Design Engine put forward a proposal for



There were several design iterations before settling on the final composition, in part due to the complexities of accommodating a variety of requirements in a complementary way

a new building to decant students and give more “breathing space” at the King Alfred Quarter, next to the historic, Grade II listed West Downs building. After the university approved the concept, the practice were enlisted to undertake feasibility studies, including developing more detailed ideas and establishing a potential budget.

With the estimated cost overstepping the OJEU procurement threshold, the university had to go out to tender. Design Engine were among five firms to interview, which Jobson says was a “pretty fraught” process; “we were in danger of losing a job that we’d created.” Thankfully, their existing relationship with the university continued, when in 2015 they were appointed to take the project forward.

Project evolution

Following their appointment, Jobson says “a number of things came forward” that the university were keen to include. It was always the intention to include a 250 seat auditorium, but as the project evolved, so too did the university’s ideas. Tentative discussions were had about relocating part of the library, which expanded into a plan to bolster the law faculty. It was also decided to include a food hall for student residences behind the site, as well as several teaching rooms, and a new Digital Technologies department.

Part of the reason for the project was that the university’s existing buildings, were

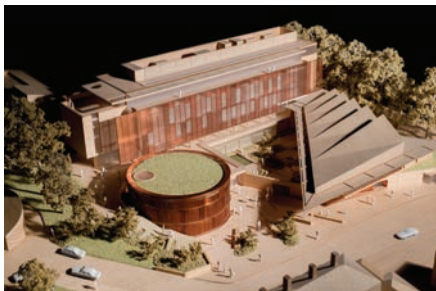
says Jobson, “hidden away.” The governors were frustrated that the institution wasn’t adequately recognised for its role in the city’s built environment, so the design “was very much about creating something which had the sense of a gateway building,” Jobson explains. He says it was designed not to be a “shrinking violet,” but to be a striking signal that “this is the university.”

Design inspiration

There were several design iterations before settling on the final composition, in part due to the complexities of accommodating a variety of requirements in a complementary way. The final design comprises an auditorium rotunda, a triangular library; and connected to it and the largest of the three, a rectangular building housing a range of spaces to the rear. The library’s design in particular took a lot of time to get right, having a “very complicated” roof geometry, which was “challenging – structurally and architecturally,” says Jobson.

The practice were focused on being respectful to the adjacent, listed West Downs building, and “didn’t want our building to be jarring,” says the architect. They approached the design by including the West Downs building within their scheme, viewing it and their buildings as one entity.

Placing the largest building at the back of the site “reduced its dominance,” says



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What Jobson describes as a brise soleil “canvas” was created using corten steel

Jobson; “we could play around with perspective to make it kind of recessive to the site.” The auditorium/lecture theatre was seen as “almost like a piece of sculpture,” he explains, whereas the library provided an end point to the whole composition.”

The site’s topography enabled the landscape to ‘wrap’ around the rotunda building – there’s a four metre drop from the West Downs building side, which allowed the building to sit within the bank. The architects were also then able to manipulate the rest of the site to improve access for users with disabilities, which had previously been an issue with the halls of residence.

The materials chosen were strongly influenced by the surroundings. The West Downs building features flint as well as brick, which is common to the halls of residence. The architects specified the same brick on the rectangular building which faces the halls – albeit with a different, grey coloured mortar.

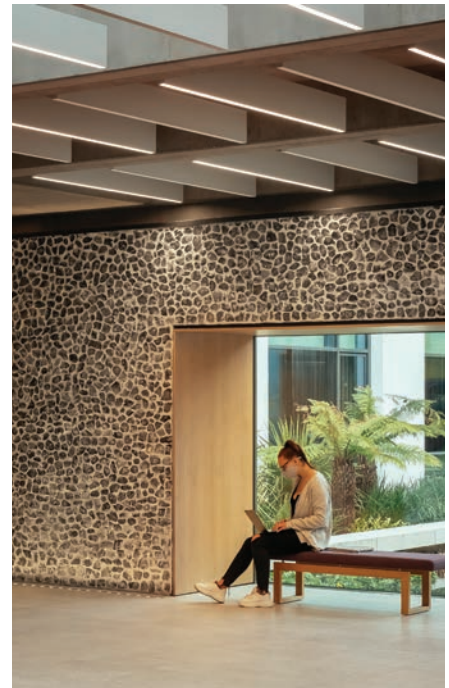
The south-facing front facade is glass, so solar gain needed to be controlled. What Jobson describes as a brise soleil “canvas” was created using corten steel, to match the colour of the West Downs building’s brick. The architect explains that they took the opportunity to “treat it not just as a facade, but also a piece of artwork,” he says. “We played around with the textures of it using different blade depths, widths and gaps where we could.” The final design

was a product of around 30 different computer models: “We chose one that had that lightness of touch but also a sense of backdrop, an artistic element.”

The architects decided to continue the corten on the rotunda auditorium, but in a different way. “Because it’s an auditorium space on the main road you can’t have any windows; acoustically it had to be pretty much a sealed box,” Jobson explains. Angled corten fins were specified to offer something “quite textural” to enliven what’s essentially a windowless form.

Another key element is noticeable when approaching the site – a flint wall, which echoes Winchester’s history as a fortified city – parts of the old flint city wall are still visible. The architects’ concept was to create a new wall which actually felt like it “existed before we got there, like a found object,” Jobson explains, thus helping “connect to the old city,” although in a “very contemporary take.” This is one example where the architects’ strong relationship with the university was crucial, with the high cost of building a hand ‘knapped’ flint wall. Luckily the university “were keen on having that sense of history.” Corten elements such as window frames were incorporated, suggesting rusty metal objects often found in stone walls.

A final, and subtle, element is the use of glass reinforced concrete panels using a pure white stone aggregate around the entrance, a “slightly poetic” move, says





Jobson. It refers back to the chalk found when digging anywhere around Winchester, again tying the building back to its landscape.

Environmental considerations

The project team settled on an MVHR system to provide the right air quality internally, with warm fresh air brought in from the roof. The difficulty with introducing this sealed system, says Jobson, was that lecturers “don’t like not being able to open windows,” so the architects included individual openable windows among the majority non-opening windows.

Acoustics were naturally crucial to get right; the architects worked with specialists Sandy Brown, who used 3D modelling on a room-to-room basis, compiling a schedule of the reverberation or absorption levels needed. The teaching rooms were reasonably straightforward, but the food hall, library, and auditorium required careful acoustic treatment. The food hall has glass and concrete surfaces, plus ceramic flooring, so acoustic rafts were integrated into the coffered concrete soffit to absorb sound.

By contrast, timber over a quilted acoustic fleece fabric was used heavily to line the major public areas, the library features a timber slatted acoustic ceiling, and the material was also used in the auditorium, assisted by a curtain on the

upper level to vary reverberation. Both low reverberation, for speech, and higher reverberation – for music recitals, were required, explains Jobson. The curtain on the first floor can be pulled back to reveal timber panels which help to diffuse sound; and permanently-exposed triangular acoustic reflectors also contribute to achieving the desired acoustic for the particular use. “It’s been designed to ensure there aren’t any awkward reverb times, or ‘flutter’ echo,” he says.

The other key material used throughout was concrete. While the architects are very conscious of its environmental impact, Jobson says it’s “very difficult to deliver such a flexible building using timber structures.” He adds: “I think it’s something we can advance in the future, but at that point it wasn’t going to work.” Concrete offered important benefits to the project: it was finished to a high standard and left exposed to maximise its thermal mass, as well as offering inherent fire protection. Ceramic flooring was used throughout most of the public areas, also for robustness, while the quieter areas – the library, auditorium, and teaching spaces, have carpet made from recycled material.

From the outset the university wanted to achieve BREEAM ‘Excellent’ – the practice encourages all its clients to aim for such certification, while accepting it isn’t easy to achieve. Measures taken to provide

“It’s ok to sit around, you don’t need to be under pressure to be working”

Richard Jobson



the necessary credits included rainwater harvesting and the inclusion of a green roof on top of the auditorium.

Layout & student wellbeing

The buildings' layout was designed around the concept of what Jobson calls "procession in architecture" – i.e. the movement of people into and through buildings. "It's quite interesting if you start analysing buildings in that way," he says. Usually with large public buildings, the architects would design a large opening but here that. Instead, they "made it obvious" where the opening on the main building was, "not by how big it is, but by how the walls and buildings direct you to the front door." Near the main entrance, a section of the base of the rotunda was cut away, and features an artwork consisting of concrete letters, that signals the "front door."

The practice also wanted an element of surprise, following entry, so included a large bay window that overlooks the garden. "This sequence of moments happening as you come in through the buildings is really key," Jobson says. "It's an experiential process."

How people navigate and move through the building was a major driver for the specification of materials. The staircases, for example, are timber clad to guide people up through the building. "The materials and colours were chosen to try and help people move from one space to the next," he says.

The university focuses heavily on student wellbeing, so with this in mind the practice wanted to give students a space for reflection. With the requirements of a multi-faith room proving too complex, the thinking evolved into creating a 'collaboration' space, and then finally a 'contemplation' space – a place for students to escape from the outside world. "It's a combination of a space in which students can gather together – in the central circular area – and where they can sit, in little soft-furnished pods around the edge." These are "integrated into the architecture," says Jobson, and have controllable music and lighting levels – some are two-person, some single, and one is accessible. "It's right at the heart of the university, and says 'it's ok to sit around, you don't need to be under pressure to be working.' It's a key space."

The design discussions around the contemplation spaces sparked further conversation about wellbeing aspects, which is where the idea for the project's central courtyard garden came from. Located between the three buildings, with a lot of water, it's visible from most public areas, as well as having dedicated space for students or staff to sit. "It has become a tranquil hidden garden, full of fantastic flora fauna and wildlife," says Jobson. "It goes to the root of the way the university thought about the buildings – the type of spaces they wanted to create."

Illustrating the client's confidence in the wellness aspects of the building is the fact that it has submitted the centre for WELL certification, one of the first university projects in the UK to do so. As part of this, the university's food outlets focus on healthy food options.

The finished product

Following some construction delays from Covid, as well as other factors, the university finally opened the buildings in September 2020. Although there were at times worries from the university – notably nervousness over the use of corten, and about the overall cost of the building – it's a project they're now incredibly proud of. "From the university's perspective it was a big call, they hadn't built something of this scale and budget before," Jobson says.

The practice are hopeful that over the next few months the building will be fully used, as the pandemic eases. Despite not being fully utilised yet, the building has been very well received: "I don't think we've ever designed a building that's had so much positive support," says Jobson. ■

PROJECT FACTFILE

Client: University of Winchester

Architect: Design Engine Architects

Landscape architect: Land Use Consultants (LUC)

Structural engineer: Heyne Tillett Steel

Facade engineer: Thornton Tomasetti

Transport engineer: Ridge & Partners

M&E consultant: Mecserve

Quantity surveyor: Jackson Coles

Lighting consultant: Michael Grubb Studio

Acoustic consultant: Sandy Brown

Main contractor: Osborne

Start date: September 2017

Completion date: September 2020

Gross internal floor area: 7,500 m²

Cost: £40m

A renewed resilient surface – at half the cost of replacement!



Images: Biddle Sport Ltd

Flooring specialists, Biddle Sport Ltd, renovated an old vinyl sports floor at Bishops Walsh Catholic School, Sutton Coldfield, using the new Bona Resilient Floor Solution. The renovation represented a saving of around 50% against the cost of a new floor.

After working through the program of deep cleaning, wet sanding with Bona Diamond abrasives, removing the sanded slurry from the floor and then neutralising with clean water, the surface was ready for the first coat of Bona Pure Colour. Two coats were applied, followed by sports line markings and a final transparent coat of Bona Pure to seal the surface.

A particular challenge was how to replace a floor in such a busy school environment with minimal downtime for the facility. The floor was worn and had already been repaired

on numerous occasions. Using the new Bona Resilient Program, Biddle Sport team totally renewed and transformed the look of the surface in just 5 days, using environmentally friendly products – and at around half the cost of replacing the old floor with a new one.

The Bona Resilient Floor Solution uses safe, waterborne formulations to seal and protect the surface. The result is a hygienic, hard wearing surface that avoids the need to remove and dispose of the old floor.

John Carroll, the facilities manager at the school, said: “The flooring system installed at Bishop Walsh Catholic School has transformed the whole look of the facility. The building that was nearly 25 years old now looks brand new and has had a positive effect on the users of this school facility.

For the pupils of the school it has had a positive effect on their behaviour and attitude

to look after the facility. To the outside hirers of the school they have done nothing but praise it and I am sure this will increase the popularity of the hire of the facility over the next 12 months.”

When renovating a resilient surface using the Bona Resilient Floor Solution, clients can also use the opportunity to totally transform the look of their floor using new colours (the coatings are available in any RAL colour) and textured effects using the Bona Creative Chips. Logos, graphics and sports lines can also be applied below the final protective coats. The Bona Resilient Floor System includes a full range of cleaning and maintenance products for ongoing care of the surface and is ideal to treat LVT, Linoleum, Rubber, Vinyl and Marmoleum floors.

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The world performs on Harlequin floors

Harlequin is the world leader in advanced technology floors for the performing arts. Established in the UK over 40 years ago, Harlequin remains the industry choice for the world's most prestigious dance and performing arts companies, theatres, venues and schools, production companies and global events.

Harlequin's experience and reputation are founded on the manufacture and supply of a range of high quality portable and permanent sprung and vinyl floors chosen by the world's leading venues – from the Royal Opera House to the Bolshoi Theatre, the Paris Opera Ballet to the Royal New Zealand Ballet.

With a growing interest in the provision of spaces suitable for dance, for professional performance and rehearsal, for private dance schools and throughout the education sector, there is increasing focus towards specifying dance floors that meet both performance aspirations and conform to increasingly stringent health and safety requirements.

Harlequin has led the way in developing and evolving the modern dance floor and has been involved with extensive research into reducing dancer injury. We place innovation at the heart of everything we do which is why Harlequin has become a brand that dancers and performers depend on.

A recent example of this is our new Harlequin Cascade dance floor with BioCote Antimicrobial Protection, which has helped



to ensure that dancers can perform safely through the recent pandemic.

Bob Dagger, founder and chairman of the Harlequin Group says: "When I launched my company over 40 years ago, I aimed at designing floors for theatre and dance using new, advanced materials. I am pleased to note that today, nearly all of the world's most prestigious dance companies, along with many of the world's largest venues, recognise the advantages of Harlequin floors."

Harlequin work collaboratively with principal contractors and architects in the government, commercial and education sectors to design and specify the optimum performance environment, from the new headquarters of the English National Ballet in London finished at the end of 2019, to the Thomas Dixon Centre in Brisbane, Australia, the new home of the Queensland Ballet which will be completed in 2021.

We offer a turn-key one-stop solution for all performance spaces, from initial design and build through to completion, offering advice and guidance every step of the way. All enquiries are handled on a one-to-one basis by our expert technical team and with over four decades of experience of working across a wide range of projects and venues across the world, Harlequin's in-house project management and installation teams can be relied upon to deliver on time and on budget.

Harlequin operates globally from offices in Europe, the Americas and Asia Pacific delivering the same high-quality products and personal service anywhere in the world.

For more information and advice visit Harlequin's website or contact the UK technical team.

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Decorative casings – in a class of their own

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

Primarily specified to conceal structural steelwork and building services, column casings and wall linings combine these practical benefits with the ability to provide a more aesthetic finish that can blend in or contrast with interior decor. Also, where column casings are used to conceal exterior features, they are often used to enhance building entrances through the use of colour or material choice.

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

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

The ability to understand and meet these demands from architects, educational design teams and specifiers have been key factors that have influenced the Encasement range. Its column casings range is ideally suited for use on both new-build projects and refurbishment schemes and includes six individual products offering a wide choice of materials and finish options dependent on whether the casings are for exterior or interior use.

Both Circa and Quadra casings are manufactured from pre-formed plywood, while the Forma range is fabricated from metal. Alongside these, the Polyma and Gypra products are moulded, respectively, from glass reinforced plastic (GRP) and glass reinforced gypsum (GRG). The specialised Metza casings, specifically



Luton STEM – Forma – ©Hufton+Crow

designed for mezzanine floor supports completes the range.

Forma metal casings and Polyma GRP are widely used in educational buildings, where their toughness and choice of finishes make them an ideal solution. Forma, particularly, provides an exceptional scope of options and can be specified in a range of shapes including circular, square, rectangular, hexagonal or bespoke forms. They can also be stacked to reach extended heights.

As well as installations at Bishop Vesey's Grammar School's STEM building, and Winchester College, projects at Liverpool University's Donnan Laboratories, the University of Bedfordshire's STEM laboratories and Birmingham University Dental School, all exploit the diverse practical and decorative properties of Encasement's Forma range in both interior and exterior applications.

Where casings are needed for interior use only, then the plywood Circa and Quadra ranges allow circular, square and rectangular profiles to be specified while also providing a wide range of finish options with the most popular being decorative laminated finishes. In addition to resisting damage, scuffs and

scratches, laminates provide specifiers with a diverse palette of finishes including plain colours, wood grains and metallics, as well as textured and real wood veneers. Although Gypra GRG is also an interior only product, it is rarely specified for educational projects due to the need to resist damage, as moulded gypsum is comparatively soft.

The Dame Kelly Holmes Sports Centre and Farnborough Sixth Form College are typical examples of how Quadra casings effectively conceal structural steelwork while their colourful and durable finishes enhance the interior design.

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

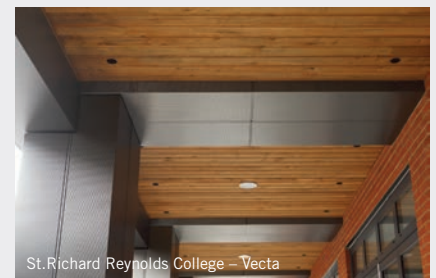
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Bishop Vesey's Grammar School – Forma



Dame Kelly Holmes Centre – Quadra



St. Richard Reynolds College – Vecta

An ever-growing package of street furniture



The PROTECT range from Bailey Street Furniture Group is an ever-growing package of street furniture that features a reinforced structure to provide enhanced urban protection including litter bins, seating, and planting elements, all available in a variety of finishes and materials. Each piece in the range has been tested to withstand impact from a 1.5 Tonne vehicle, traveling at 30mph. Further 2.5 Tonne vehicle tests have taken place on our modular planter system Inspira Protect. The aim of this range is to offer discreet protection without compromising on the aesthetic values of our urban areas.

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Cast iron certainty from Stelrad



The latest addition to the Stelrad Radiator Group portfolio is the new Cast Iron Column range. In the past few years, cast iron column radiators have come back into vogue again and Stelrad has added a selection of Cast Iron Column radiators to its ever-widening range. These radiators are floor standing with in-built feet for extra stability as they are significantly heavier than their steel counterparts. They are available in two heights and a wide variety of widths – a total of twenty sizes available. And as you would expect, they come with a cast iron ten-year warranty.

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Back to school



When it comes to specifying for education environments, there is a greater need than ever for durable, easy to clean, comfortable and attractive surfaces – and thankfully plenty of smart solutions to meet those demands. Altro has worked through the decades to develop solutions to age-old issues; safety floors to prevent slips; sustainable adhesive-free floors to reduce downtime; shoe and barefoot flooring for safer changing rooms; floors that reduce impact sound reduction for quieter working spaces; and walls and doors that impress, yet don't compromise on hygiene and easy-maintenance.

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Latest news, views and more



If you like to be kept informed of all the latest news, views, and promotions for the architectural community, the ADF email newsletters can offer you regular updates straight to your inbox. The weekly Editor's Choice newsletter includes top news stories curated by the ADF editorial team, while the monthly CPD Focus and fortnightly ADF Newsletter offer updates on products, services, events, and learning opportunities available from a wide variety of manufacturers and suppliers.

www.subscribepage.com/adf

Gilberts helps deliver an ideal environment for world-leading chemistry research



Providing a pioneering working environment for a Regius professor and his team has been assured at University of Liverpool through state of the art ventilation. Central to the new facility is the ventilation, to create a safe working environment. M&E consultant Steven A Hunt worked closely with A & B Engineering and Gilberts Blackpool to ensure efficient removal of internal air and supply of fresh air, balancing the air requirements of staff with effective extract of fumes arising from the research work. As the new laboratory was being created within an existing building, VAV (variable air volume) system was chosen with new air handling units delivering filtered and conditioned air into the laboratory with centralised extract at roof level, all controlled by a BMS. Gilberts' Series PGL laminar flow panels – each 1,200 x 600 – were selected to strategically deliver the local fresh air into the workspace. The Gilberts diffusers had to deliver adequate air for the lab staff without interfering with airflow around the 22no fume cupboards, of which three were interconnected creating a single unit 6m long. Dave Norcross, Projects Manager at Steven A Hunt, said: "The teamwork we received from A&B Engineering and Gilberts was exemplar."

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Pods designed for wellbeing, adaptability and sustainability



To engage, focus and inspire collaboration between employees, workplaces require quiet and private spaces to be solitary and captivating places to collaborate. Komfort is excited to introduce their unique Kube+ pod and booth range to encourage a more agile and functional work environment. With Komfort's specialist understanding of acoustic control, the pioneering Kube+ range offers enhanced performance through intelligent glazing and door design, with single- and double-glazed options available. Sound insulation and ambient noise levels influence privacy in busy open-plan environments. Komfort is launching their range with the Kube+ Solo pod system to offer escapism, a place of quiet and concentration for individuals in these spaces, achieving acoustics ratings of up to 37 dB (DnT,W). This system focuses on adaptability, wellbeing and technology-enabled innovation to accommodate future change. The robust structure and materials make it safe and quick to install and easy to disassemble and relocate. LED lighting and air circulation fans operated through passive infrared sensors are included as standard and interior and exterior acoustic lined side panels are available in a wide choice of fabric colours.

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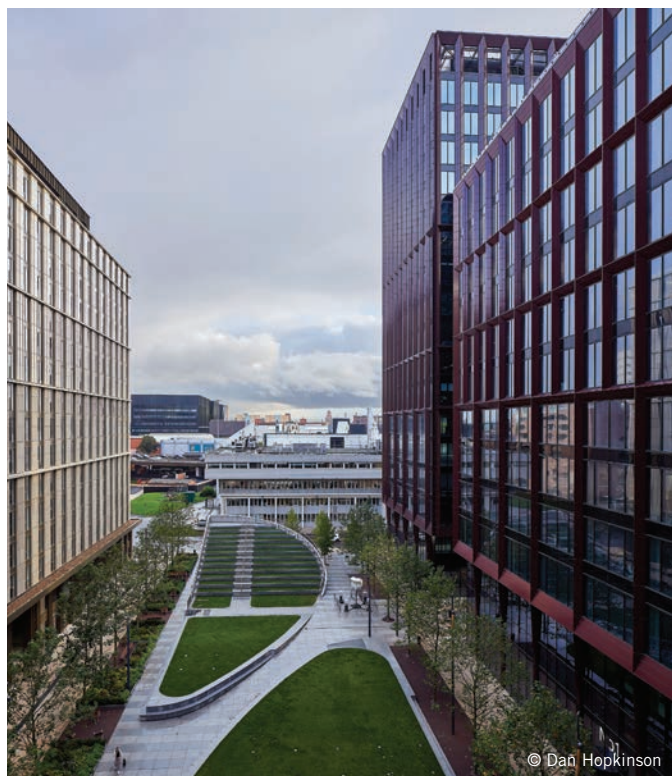


BUILDING
PODCAST

1&2 CIRCLE SQUARE MANCHESTER

Different ways of working

James Parker spoke to the architects behind an evolving 10 year scheme to provide flexible offices framing rare green space in the heart of Manchester, as part of a wider masterplan to create a new urban quarter



The elevation design has been developed as a contemporary interpretation of the classic ‘base, middle and top’ proportions of the mid-rise 19th-century commercial buildings of the adjacent Whitworth Street Conservation Area

With staff beginning to return to city centre offices post-pandemic, one practice has seen the completion of a scheme in a key Manchester site which provides an attractive urban environment to welcome them, as well as the flexible futureproofing commercial building owners need. 1 & 2 Circle Square, designed by Feilden Clegg Bradley Studios (FCBStudios) for developer Bruntwood, is a new workplace scheme in the heart of Oxford Road Corridor, designated as Manchester’s ‘innovation district.’ The scheme provides 400,000 ft² of high quality office and coworking space at a cost of £75m, alongside 100,000 ft² of retail and leisure, surrounding new green space.

The two workplace buildings, at 14 storeys and 17 storeys tall, form part of a new 2.4 million ft² “neighbourhood,” being developed by a joint venture between Bruntwood and Select Property Group. The latter are developing two residential buildings for Vita, one student residence of 16 storeys, and a further PRS tenure tower rising 36 stories and creating a landmark in the area.

The new workplace is located on a former BBC site, surrounded by leading institutions in art, dance, culture, science and technology. The brief to the architects

was for workspaces which would “help creative, digital and technology businesses to form, scale and grow.” The team worked to provide “fully flexible and adaptable” office space for 1 and 2 Circle Square, plus retail at ground and first floor.

The buildings act as a ‘gateway’ to the Circle Square development, and face onto Oxford Road, with its ranks of substantial red brick and industrial heritage buildings. They also create a new “active” frontage thanks to the ground floor retail, as well as a clearly defined pedestrian route into the green space of Symphony Park.

When FCBStudios was appointed by Bruntwood to take the office buildings (plus the central public space and two partially underground pavilions containing a gym and a Hello Oriental food court) to detailed design, they had already been working on the masterplan for many years. Architect Joya Zaman explains: “We were working on an outline planning application with landscape architects Planit IE, and tested various storey heights, and the mix. The quantum required by the client were then worked through, which established the distribution of volumes across the site.

Despite the fact that separate teams across the architects’ offices in Manchester, London and Bath were all working on different aspects of the



scheme, Zaman says that because there was one overall contractor (John Sisk & Son) across the whole project, “there was a lot of overlap, and that worked really well, there were lots of advantages in dealing with site constraints.” Being a central Manchester site, the council’s planning department was also kept involved throughout the process, and was a “constructive” presence, adds Zaman.

Density & efficiency

With the site being tight and central, space was at a premium, and so the architects had to produce what Whittington admits is a “fairly dense,” but efficient composition of floorplates, however she says this is contextually apt, as “the local area is fairly densely built anyway.”

Zaman explains further that they “looked at the core configurations” across the site, and did the necessary weighing up of net to gross internal area (NIA to GIA) which is crucial to optimising commercial workplace projects’ efficiency. The design originally had two cores, however the project team finally opted to install ‘superloos’ (self contained WC and sink units) which “help with the efficiencies,” says Zaman; “even though you need more of them, they take up less space, and can be combined.”

Whittington even pinpoints a general move to these facilities among commercial sector clients as being “one of the major post-pandemic things that’s happened,” with the emphasis now on floorplate efficiency more than ever. She says that while the original brief required separate toilets for male and female users, the shift shows how “everything can change in five years.”

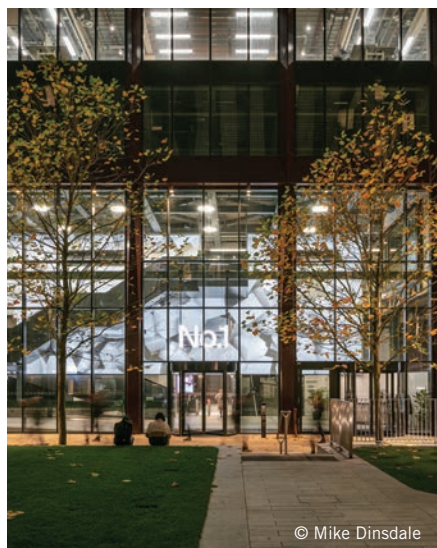
However, in achieving a very efficient footprint, the architects have released 250,000 ft² of public realm, including the first new park in central Manchester for generations – ‘Symphony Park.’ Sitting between the buildings as a communal amenity, it includes amphitheatre-style raised seating, and will host a variety of community and cultural events.

The architects produced many different studies for the masterplan, says Zaman, “trying different block configurations, including looking at winter gardens as well as placing of receptions and meeting spaces.” She adds: “Even how we oriented the cores and how you walk onto the floorplates – all of it has been thought through in terms of how potential occupiers are going to be fitting out those spaces.”

The two buildings are designed to have two distinct characters, number one for more corporate entities, and number two

BREEAM

The workspaces’ design helps contribute to the project’s BREEAM Excellent credentials, with floor-to-ceiling windows providing copious daylighting



© Mike Dinsdale

more for potential startups, including coworking. Its design enables each floorplate to be “broken up potentially into three different spaces.”

Facades

The elevation design has been developed as a contemporary interpretation of the classic ‘base, middle and top’ proportions of the mid-rise 19th-century commercial buildings of the adjacent Whitworth Street Conservation Area. Cantilevered frontages “define much of the ground and first floor and create an articulated base,” say the architects, and this produces covered walkways around the perimeter as well as views through to the central green.

The windows are framed by projecting horizontal and vertical fins formed as triangular prisms, which add character and provide shading to the interiors. The cladding has been designed to carefully blend with the existing brick vernacular but also to “create a dynamic piece of new architecture,” says Amanda Whittington, with the result being a uniform dark red ceramic exterior throughout, apart from the curtain wall sections, which marks out the scheme from the proliferation of glass facades in similar commercial districts.

Whittington sums up the effect: “It creates a dynamic frontage with a bit more depth than just having a glass block, gives it its own character. It says ‘I’m not your average office building,’ and sits within the context it comes from, but also has its own language and personality.” She adds: “Using natural materials, you get colour articulation across the facade that gives it a real USP.”

The only use of aluminium in the facades is at the lower levels where there could be damage, with even the window surrounds being in the red glazed tile (from Buchtile in Germany). The ceramic tiles run across the new residential blocks too, but with different colours and profiles chosen to delineate the different uses. Zaman says that they obtained “a lot of samples,” and the project team visited the manufacturer to talk to their colour experts.

She believes that a mix of solid and glazed facades is much more practical in energy efficiency terms than an all-glazed alternative, even going as far as to say that all-glass facades may have become obsolete in the context of climate change and net zero. “All glass is just not the way forward, with the thermal values that you want to be meeting, especially with the performance criteria that are coming in.”

With ceramic facades comes the inevitable question of carbon footprint, and FCBStudios have investigated the carbon implications of a variety of materials with its own ‘FCBS Carbon’ evaluation process. The practice has used similar facades on several recent projects, and while it has carbon impacts like any material, they have established where these can be minimised, such as that its clay is recyclable fully until the point it’s fired. Also with the tiles being clipped to the structure, they can be taken off and reused in future. They worked closely with specialised terracotta facade manufacturer NBK to explore suitable profiles, and worked with the contractor to ensure that loss of tiles during construction was at a minimum to reduce the cladding’s footprint.

The architects did an embodied carbon study across the project, which led to a rationalisation of the buildings’ steel frame so that it changes in thickness throughout the project according to use, which minimised the use of materials. And, as part of applying the NABERS Design for Performance approach to achieving performance efficiency, the architects provided additional M&E and riser space which would allow easy retrofit as M&E and technology changes, for example as more processes become cloud-based, and other aspects of infrastructure grow in size.

A flexible programme

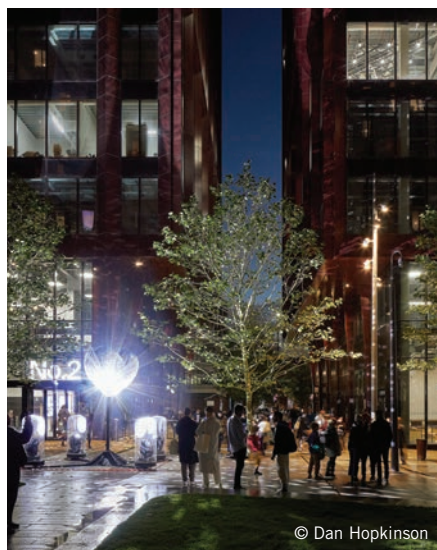
As well as being designed to BREEAM ‘Excellent’ standards, the offices have generous floor to ceiling heights, giving them a “high end” feel, and a decent amount of natural light for occupants.

Due to the highly competitive nature of commercial building development, producing a design that would be able to flex to unforeseen client requirements would be crucial for futureproofing, including against the arrival of potential rivals nearby in the coming years. One of the design’s key flexibility components is the grid, which means that if required in future, the building could be turned to residential use.

Zaman explains further: “We allowed the possibility of each floor being let, but also at clients possibly wanting to put two floors together, so they can share, as long as everything is accessible.” She said that ‘flex’ was emerging as a key maxim in such projects, and also that clients are “moving away from BCO standards” when it comes to building dimensions, to achieve a variety of spaces where needed.



© Mike Dinsdale



© Dan Hopkinson

The shell and core approach has been straightforward Cat A, so the stacked floors have been left “basically as a blank canvas for the tenants,” and they have tended to take very different approaches. Amanda says that she has enjoyed being able to view the various fitouts happening from outside, particularly when lit up at night – and this has added visual variety to the facades. “It’s a testament to why we do flexible spaces, everyone makes it their own – you walk onto one floor and realise it’s the same floorplate as one below, but a completely different experience.”

Zaman says that having visited the offices since completion, it’s “really interesting how the different operations are working on each floor; seeing how the spaces are being broken into different elements.” She says tenants have created “fun breakout spaces,” as well as some “very comfy booths,” especially on the co-working floors. “The number and variety of spaces is amazing.” Also, the client’s intention is that the public will be able to wander in on the ground floor and use the pleasant open circulation space, with several cafes off it.

Conclusion

The building is now occupied, with office workers enjoying the green space of Symphony Park as a fully-accessible amenity, as well as users across the wider masterplan – such as people using the food court – being able to benefit from it on a 24 hour basis. With a rich, closely clustered mix of office, residential and students, enjoying food and beverage offers as well as retail, this will be a lively area of the city. Amanda says that as soon as the park opened, people were gathering and sitting in it, “even in the cold!”

Despite the pandemic’s emergence, a range of tech companies and startups have taken space in 1 & 2 Circle Square, demonstrating the credentials it offers, as well as the demand for central office space in the city. Major business tenants include Hewlett Packard in no. 1, and Accenture and Bosch in No. 2.

Although this building was designed as a workplace before the pandemic hit, and completed at the beginning of 2020, its space-efficient, as well as flexible design helps to futureproof it against the economic constraints now forced upon city offices. So without knowing the pandemic would be a factor post-completion, FCBSTudios ensured it would be more resilient in an uncertain post-pandemic future. According to Amanda Whittington,



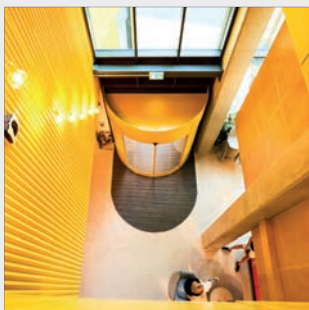
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the general consensus from clients was that people are “still looking for office space, but perhaps with lower occupancy densities,” to minimise risk.

She concludes that the design needed to fit the business climate of a workspace in Manchester. And she believes the result is “a testament to what you can do in an emerging environment to actually push the limits and do something really good, within a realistic budget.

However, despite its many design benefits and qualities, and the delivery of some precious public green space in the city centre, it may be this building’s inherent flexibility that is the factor that will give it resilience over the long-term. ■

Automatic Entrance Pods Welcome Brighton Coworkers



Delivering flexible workspace facilities for freelancers seeking coworking space, through to corporates on more traditional leases, Plus X Brighton helps drive member productivity and positivity through innovation, world-class support, connectivity, and curated collaboration. Providing welcoming access to this busy innovation hub, TORMAX was contracted by JPJ Installations Ltd to provide eye-catching, curved-sliding automatic entrance pods to the main east and west access points. Chic and contemporary, yet intensely practical, the pods each consist of a double set of curved glass doors that move independently, creating an opening space up to 40% greater than could be formed using linear sliding doors. Ensuring a long working life with minimal maintenance, the doors are powered by technologically advanced TORMAX iMotion 2202.A operators. With sustainability as a key driving force, the building has been designed to achieve a BREEAM Excellent and EPC B Rating. Contributing to the green solution, the TORMAX entrance pods can be programmed set to create an effective airlock during inclement weather, helping reduce heat-loss from the foyer.

sales@tormax.co.uk

Dorma's Low VOC emissions set new standard for moveable walls



Responding to a growing awareness of the importance of indoor air quality, Style's manufacturing partner, Dorma Hüppe, is pleased to announce that their Variflex moveable wall system far exceeded expectations in a recent emissions test carried out by the independent laboratory, eco-INSTITUT. Volatile organic compounds (VOCs) were analysed and evaluated, delivering reference values of only 0.021 mg/m³. This is an outstanding result given that the recommended maximum level, according to AgBB (Committee for Health-related Evaluation of Building Products) is ≤ 1 mg/m³. The result is particularly significant for architects, contractors and end-users choosing moveable walls for sustainable buildings, as not only were the individual parts tested, but also a complete Variflex 100 movable wall with an opening height of 2,800 mm. "These test results show just how far advanced Dorma Hüppe is with its strategy to develop highly sustainable moveable wall solutions," said Julian Sargent, Style's group managing director. Style, through their exclusive UK partnership with Dorma Hüppe, were the first ever UK supplier of EPD certified moveable walls in accordance with ISO 14025 and EN15804.

www.style-partitions.co.uk

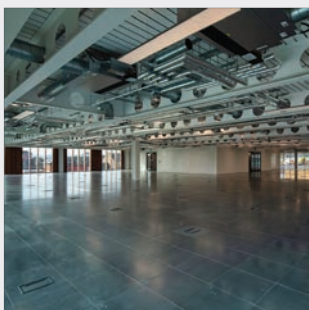
Adding the homely feel at SKA Gold Rated Offices



Studio Moods and Luxury Vinyl Tiles from IVC Commercial have added a homely atmosphere to the SKA Gold rated offices of Gama Healthcare, a leading sterile products manufacturer. Gama Healthcare recently called upon design and build company Oktra to transform its 1,860 m² Hemel Hempstead offices into an environment that supported its workforce with a homelike feel. The answer saw a design inspired by bright and bold colours with an open space to encourage collaboration. At the heart of the scheme is a flooring layout to support the zoning of the space, using IVC Commercial's Studio Moods and Moduleo 55 Luxury Vinyl Tiles to ground the interior in nature and to add a calming and restful influence. The team at Oktra went on to use Studio Moods in a Sierra Oak wicker pattern, combining it with IVC Commercial's Moduleo 55 Impressive Sierra Oak planks laid herringbone. Both floors deliver an authentic wood-effect, with Moduleo 55 Impressive also featuring EIR, a surface technology that perfectly recreates the texture map of its wood-effect design for a true-to-life feel. Studio Moods and Moduleo 55 Impressive also helped Gama Healthcare's offices to achieve SKA Gold status.

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Architects needed, now!

Wastewater treatment specialists Graf UK are calling on architects to help improve ground water quality throughout the UK; the firm's David Stagg explains why it's critical for designers to get involved

Asking architects to become more involved in wastewater treatment is a big deal. They might not want to get their hands dirty; however they are major influencers when it comes to the two factors that are driving this increasingly contentious issue.

One is that Natural England is increasingly "advising" local authorities to halt the determination of planning applications unless the developments can prove they will be nutrient (nitrogen and phosphate) neutral. High levels of these nutrients, which come partly from wastewater treatment discharges, cause excessive growth of green algae – which smothers rare habitats and wildlife.

The other is an update to the General Binding Rules of January 2020. This is a bid by the Environment Agency to reduce the level of sewage pollution in the nation's watercourses, so is particularly relevant to architects designing properties off the mains sewage network. Under the new rules, anyone with a septic tank discharging into a watercourse must replace it, or upgrade the foul water solution.

These rules do not apply in Scotland – here the regulations governing foul water management are much more stringent. SEPA (the Scottish Environment Protection Agency) requires wastewater treatment systems for up to 15 people to be registered on a public database so they know what system a property is running, and where the effluent discharges to. A system catering for more than 15 people requires a licence and must meet a quality standard determined by SEPA so this can dictate the type of system installed. Here, again, is an area where architects have an influence.

While architects are required to specify solutions for foul water drainage and disposal to Building Regulations Approved Document H, until such time as there is a national governing body for wastewater treatment monitoring, the Environment Agency, SEPA and NRW (Natural Resources Wales) are the individual organisations setting effluent quality

Architects might not want to get their hands dirty; but they are major influencers

standards. These governing bodies have hundreds of regional offices which generally operate independently, so are not set up to monitor this situation.

In addition, approval for a sewage treatment plant is usually via a local authority's building control department, which could be the most obvious body to take on the registration and monitor of such plants. But as all local authorities operate independently and already have large workloads, that's an unlikely solution.

So, without Government legislation it would be very difficult to implement a national scheme to deal with this issue, and even then, it would be difficult to implement and monitor. Which is where architects come in.

Architects' roles in specifying quality

As well as specifying a sewage treatment system that is appropriate for the level and regularity of use and the ground conditions, architects need to ensure it is installed, commissioned and maintained properly to avoid effluent issues down the line. This isn't a decision anyone wants to get wrong!

Septic tanks do not require regular servicing, but should be monitored and emptied regularly. Sewage treatment plants, which involve mechanical parts, are more complex. These must be emptied at the right time (too late or too early can affect effluent quality), which only a competent contractor can advise on and carry out to avoid damaging the internal workings.

There are literally hundreds of thousands of septic tanks and wastewater treatment systems in the UK and unfortunately a high percentage of them are not 'MOT'd' correctly. Then you have the rapidly increasing number of new systems being installed – potentially adding to the





problem. The quality of discharged effluent can vary greatly, with many instances of it not being treated at all.

Many homeowners will not have been advised that sewage treatment plants need to be commissioned after installation and then regularly serviced – annually for a domestic scheme but two or more times a year for larger commercial applications. In addition, systems may have been installed incorrectly by a non-qualified contractor, and as a result are unlikely to function efficiently.

Taking responsibility

While the haphazard monitoring of sewage treatment – in England and Wales at least – looks set to continue for the foreseeable future, it has fallen to some manufacturers to take on more responsibility for the systems they sell.

These manufacturers have become self-monitoring, working more closely with, and even training and providing technical back-up to the specialist contractors who install, commission, service and maintain their systems.

Ensuring these are installed correctly by competent contractors greatly reduces the potential for sewage treatment plants

“Don’t always go for the cheapest option as it could be much more expensive in the long run”

Gareth Boyd, 2020 Architects

to develop issues which could affect local water quality, and if they do, for the issue to be nipped in the bud by knowledgeable technical staff and contractors.

The biggest winner is the environment, with improvements to the quality of groundwater throughout the UK. But there are benefits to everyone – the householder, contractor, manufacturer and architect who influenced the system’s specification.

Gareth Boyd, a director with 2020 Architects in Ireland, who specified a sewage treatment plant over a septic tank for his own self-build, advises: “Don’t always go for the cheapest option as it could be much more expensive in the long run. Speak to your architect and builder for sound advice.”

David Stagg is a wastewater treatment specialist at Graf UK

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Special commendation for HD Services



After a turbulent 2 years, the awards season is again upon us. This year HD Services Ltd entered the National Energy Efficiency Awards for the first time in the categories of Renewable Heat Installer of the

Year and Business Development Manager of the Year and were lucky enough to have been shortlisted in both categories! HD Services kept their fingers crossed for the awards event which took place on the 18th February 2022 at the Hilton Birmingham Metropole, and were very pleased to receive a special commendation for its renewable heat project.

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Newton continues to drive sustainability



Despite a year of challenges and changing circumstances, increases in the cost of materials, and greater pressure on suppliers, Newton Waterproofing, a leading independent designer and supplier of guaranteed waterproofing systems, has kept sustainability at the top of its agenda.

Now in its fifth full year, the award-winning and free Newton Recycling Service is still pushing sustainability best practice in UK waterproofing. This includes the biggest development in 2021, expanding the service to also recycle plastic and metal bottles and containers through a new partnership with a leading specialist in hazardous waste management.

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Garador offers perfect fit



With modern house designs, many garages are taller, wider or have individual specifications. This is why leading UK garage door manufacturer **Garador** offers an extensive range of both standard and purpose-made garage door sizes all the way up to 5,000 mm wide, to ensure a perfect fit whatever the size of the opening.

With a comprehensive range of purpose-made up & over garage door sizes, you can specify a garage door that fits perfectly every time. No need for adjustments, no need for infill. This can offer a real saving in time and cost as well as ensuring a perfect finish too. Furthermore, when using a quick-fit steel frame the door can go straight onto the brickwork, saving time and effort constructing a timber sub-frame.

Garador also offer an extensive range of standard sized up & over garage doors, which includes new heights of up to 7'2" in its popular Carlton and Horizon models. Find out more about Garador's complete range of garage doors.

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Save energy with technical support



Leading aluminium fenestration solutions provider **Senior Architectural Systems** is committed to saving specifiers both time and energy by working with them to create cost-effective and compliant designs.

Senior has invested heavily in its technical department to ensure that fabricators, installers and specifiers have all the help and advice they need to be able to meet the new regulations head on. Specifiers can also benefit from early engagement with Senior's experienced team of architectural advisors who can help project teams gain a greater understanding of U-values and thermal calculations.

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Steel windows meet aesthetic aspirations



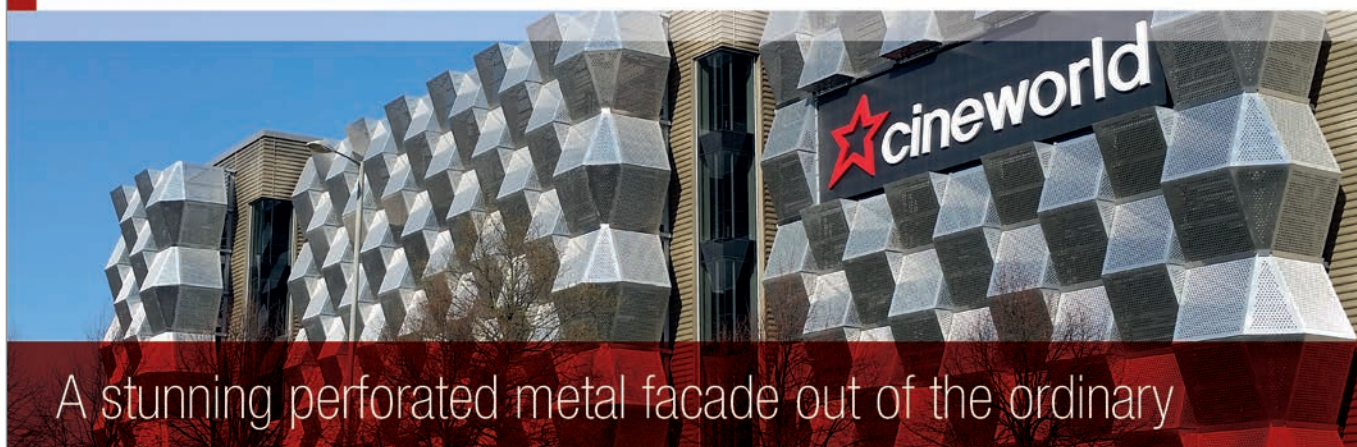
Connecting the grade I listed cathedral building to its 1980s chapter house, the new welcome centre at St Albans Cathedral provides a visitor entrance, retail space, interpretation and exhibition areas and other facilities. The architecture is respectfully understated with steel windows by **Steel Window Association** member, Steel Window Services and Supplies helping to achieve the overall aesthetic. Eight W40 composite windows and one W20 standard metal window were supplied. All the windows were hot dipped galvanised and finished with a factory applied powder coating in RAL 7016, anthracite grey.

steel-window-association.co.uk



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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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New connectors for timber & masonry construction catalogue

Introducing the 2022 Connectors for Timber & Masonry Construction Catalogue from **Simpson Strong-Tie**, leader in engineered structural connectors and building solutions. Alongside the UK's widest range of construction connectors for new build, refurbishment, renovation, and extension of buildings, sit brand new product innovations, including: The versatile universal Engineered Wood Hanger (EWH), designed to fulfil a wide variety of joist to joist/ panel configurations. The innovative Engineered Post Base (PWBS): a single-piece, non-welded post base for connecting timber to concrete. The high strength HTT Hold Down tension tie provides a timber to concrete, or timber to masonry, tension connection. The SSH Structural Connector Screw for installing connectors where high load capability is required, coated with Impreg®+ for suitability to exterior applications. "Our new catalogue brings together our full collection connectors and connector fastenings, complete with technical information and installation guidance" says Jon Head, Sales Director, Connectors.

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Straight Reveal? Checked Reveal?



Turn the Cavitycloser. The Type V Cavitycloser from **Cavity Trays of Yeovil** is supplied with its own securing ties, and delivered with its faceplate flat, ready for immediate building into a straight reveal. However, the flat faceplate also incorporates a hinged section, permitting part of it to be turned 90 degrees. By so doing, it is transformed into

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The sustainable option for failing frames



Dealing with damaged or neglected old metal windows can be a genuinely daunting challenge for property owners or their maintenance teams, but replacement – especially using modern alternatives – is rarely the only answer as specialist contractor **Associated Steel Window Services (ASWS)** can attest. In work across the

South-East and further afield, the London-based company carries out a wide variety of contracts, addressing everything from heritage steel windows in listed buildings, to the maintenance of more modern W40 section and aluminium frame fenestration and curtain walling.

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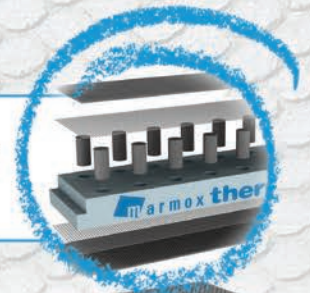


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Elephant Park balcony order provides 'jumbo' logistics challenge

Sapphire is bringing residents of two major apartment buildings in a new London development their own bit of 'open space' with offsite-manufactured balconies. Part of Lendlease's massive Elephant Park redevelopment at Walworth, south of the Thames, buildings H4 and H5 were built to designs by architects Alford Hall Monaghan Morris.

Designs for H4 and H5 included balconies – 235 and 184 respectively – to be manufactured offsite. The chosen specialist manufacturer was Reading-based Sapphire Balconies, whose products incorporate the best in materials and technology with minimal environmental impact. The project brought interesting challenges that sparked fresh thinking and led to new solutions.

Delivering more than 400 balconies – mostly to a standard specification, but some with variations – to two installation subcontractors working on the adjacent buildings, meant Sapphire had to adapt its

usual central London delivery strategies.

To comply with the site's traffic management plan – and to minimise difficulties on congested local roads – Sapphire prioritised manoeuvrability over capacity and switched from articulated lorries to smaller rigid vehicles. This had the added advantage of reducing pressure on site space for holding the balconies ahead of being craned into position.

For these two buildings, Sapphire manufactured a total of 419 Glide-On™ aluminium Cassette® balconies, all featuring a new extruded handrail profile and vertical bar balustrades to the architects' specification.

Most of the balconies had controlled drainage, with rainwater channelled down 400 mm soffit trays to discharge on the outer edge – preventing staining of the facade or flooding of balconies beneath. However, some of the balconies had gutters along the front to avoid splashing passers by. They were all designed originally without soffits,



but some of these were added later where necessary to ensure compliance with updated fire safety regulations. Some balconies were also provided with privacy screens. Inset balconies were provided for a single stack on one of the buildings.

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Petrarch celebrates with photo competition



Petrarch, one of the first engineered stone rainscreen facades, celebrates turning 50 this year! Since 1972, over 1,000,000m² of this aesthetically striking panel has been specified for more than 1,000 buildings across commercial, residential, education, healthcare and transport sectors worldwide. To mark the anniversary, Architectural Panel Solutions (its manufacturer) is holding an architectural photo and drawing competition with chances to win three special golden tickets throughout the year. The prize consists of a hot air balloon ride for two.

01424 852 641 petrarchpanels.com

Alleviating traffic problems at Herlev Hospital



To alleviate the traffic problems at Herlev Hospital in Denmark, a multi-storey car park has been constructed with more than 500 parking spaces, primarily for hospital staff. The facade of the car park has been constructed from more than 3,000 m² of expanded metal, manufactured and

supplied by RMIG. The expanded metal has been anodised and with its dark bronze nuance, fits in well with the surrounding hospital buildings. The panels have been staggered to create a variation on the facade.

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Accidents will happen

James Fildes of Berry Systems discusses how protecting car park cladding against inevitable accidental collisions is becoming more important with the rise of EVs

When it comes to driving, most accidents happen in car parks – they account for 20 percent of all insurance claims the AA receive. The RAC reports that around two-thirds of UK drivers have experienced some kind of damage to their vehicle in a car park.

While the vast majority of these accidents are relatively small ‘prangs,’ the question that needs to be asked is ‘what’s the worst that could happen?’ Cladding is a non-structural component of a car park, and therefore must be protected from the potential impact of an accident; failure to do so could lead to severe consequences.

Car parks really benefit from creative use of cladding, and we’ve seen impressive examples of how architects have utilised it over recent years. However, it’s vital that cladding’s interior protection is also given careful consideration. With car parks by their nature high-traffic zones, the importance of combining the design of the cladding with vehicle safety barriers should not be underestimated.

Vehicle barriers in car parks need to fulfil the requirements of Building Regulations Part K and BS EN 1991-1. This is based on a vehicle impact assuming a 1.5 tonne vehicle travelling at 10 mph and a 90-degree impact. The vehicle restraint method must be designed to not fail, while containing the vehicle within the car park.

These parameters are likely to be reviewed in the near future due to the increasing popularity of electric vehicles, which are usually much heavier than their conventional counterparts due to the weight of the battery packs.

If an accident was to spill out beyond the car park’s footprint, the potential for serious implication to people, property and premises is much higher. The worst-case scenario would be a pedestrian being struck by falling debris.

In order to achieve the highest standards of safety therefore, the guidance and recommendations from The Institution of Structural Engineers states: “The barrier must not deflect by more than the clear distance between the original position and

any cladding made from a brittle material,” adding, “Deformation of the barrier beyond repair is acceptable providing it does not lead to progressive collapse. It must be replaced if damaged.”

It also says: “Bolts into the slab or columns for barriers and cladding fixings etc are similarly at risk. The choice of details for barrier and cladding fixings should take into account the ease with which such elements can be removed for inspection and replacement if there is a risk of deterioration.”

Using a single anchor fixing on spring steel posts designed to be easily accessible, in front of the barrier, allows inspections to be carried out without removing the system. Also, column-mounted barriers remove the need to drill into concrete slabs.

Legal obligations

Ongoing maintenance is vital for safety of car park users, and failure to do so can lead to very serious issues. There is a legal obligation on car park owners/operators to maintain safe conditions. This requirement also extends to the immediate perimeter of the building to protect people from falling concrete, or from vehicles which may accidentally cause the failure of the edge protection barriers or dislodge the cladding.

In order to ensure that a car park project is not under threat from failing to meet these safety requirements, architects are advised to work closely from the very start of a project with a single provider that has expertise in all aspects of design and safety.

Utilising a contractor that can provide a full surveying service along with comprehensive testing facilities – as well as offering input and products that adhere to all the above criteria in a single package solution – can ensure that any project will meet the most stringent standards of compliance. And working with a company that is an expert in the field means the ability to benefit from a total turnkey solution for car parks.

James Fildes is bid and proposals manager at Berry Systems



These parameters are likely to be reviewed due to the increasing popularity of electric vehicles, which are usually much heavier



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The Building (Amendment) Regulations, SI 2018/1230 came into force on 21st December 2018. The amendment implements the promised ban on combustible cladding by prohibiting the use of combustible materials anywhere in the external walls of high-rise buildings over 18m above ground level, containing one or more dwellings.

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Yeoman Rainguard crowning glory on high end development

Property developers Golden Eye Group, augmented their latest residential development with a high-end exterior finish incorporating a rainwater system from Yeoman Rainguard.

With a mantra of “a quality finish that will stand the test of time” Golden Eye ensured that quality was reflected not only internally but for all parts of the external building envelope too.

As part of the function and design criteria of the house facade, Yeoman Rainguard

were able to provide a sophisticated, quality rainwater system to fulfil technical and aesthetic requirements.

To dovetail into the contemporary look, Yeoman Rainguard SL Aluminium gutters and downpipes were chosen. The 75 x 75 mm flush-fit SL Aluminium downpipes provided a modern clean line coupled with 125 x 100 mm MOG gutter.

Aluminium Fascia and Soffits from Yeoman Rainguard’s new Squareline range were fitted to complement the sleek lines. All were finished in a smooth RAL 7022 Grey colour to perfectly match the shade of the windows and doors.

The aluminium products give a hardwearing, maintenance free lifecycle of 30 years or more, making this recyclable material both an ecologically and economically sound choice.

The rainwater system was installed by Yeoman Rainguard’s experienced installer, ensuring the perfect finish.



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EASY MEG is currently available in 6 colours and 10 woodgrains in 2080 x 3050 mm



Camp Cohen designed by Parkhill Architects
Photography: Keith Talley; Talley Photography

planks manufactured using sustainable FSC certified high-pressure laminate. The 8 mm thick boards are certified to a fire rating of B-s1-d0 and come with a comprehensive 10-year warranty.

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Guidance on new Building Regulations



National Ventilation is offering expert advice and support on the new Building Regulations, published in December 2021, to assist architects, developers and builders on their projects. The company has a wealth of ventilation design experience and can update clients on how the new Building Regulations affect ventilation in their individual developments. Boasting a free ventilation design service, National Ventilation can provide a full whole-house ventilation design ensuring the system meets the latest legislation. The new Part F and Part L of the Building Regulations are set to help the UK deliver Net Zero including a reduction of almost a third less carbon for new homes.

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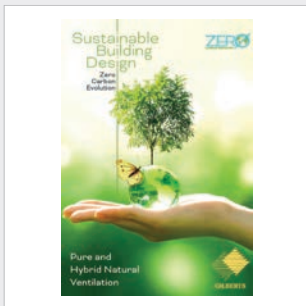
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Gilberts outlines how it can help UK building & construction in the zero carbon evolution



With new Building Regulations on ventilation and energy efficiency coming into force later this year, to help achieve zero carbon by 2050, Gilberts Blackpool is ahead of the game in advice and support. As the UK's leading independent air movement specialist with more than half a century delivering natural and mechanical ventilation for commercial and public environments, the company has published "Sustainable Building Design & the Zero Carbon Evolution". The guide aims to help architects and consultants deliver significant energy consumption reduction in new build ventilation designs, through selection of natural ventilation. The guide gives an overview of the diverse ventilation options available. The guide clarifies how the systems differ. It covers how each can be digitally engineering at the design stage to validate the design and performance criteria and ensure reduction in the building's carbon emissions. "Building services- heating, cooling, lighting- account for 28% of carbon emissions in building and construction," states Ian Rogers, Gilberts' sales director. The Guide can be downloaded free of charge at gilbertsblackpool.com/wp-content/uploads/2021/12/Mistrale-Concepts-Dec-2021.pdf

01253 766911 info@gilbertsblackpool.com

Vent-Axia supports new White Paper



Vent-Axia, a leader in low-carbon ventilation, is delighted to support BEAMA's updated Ventilation White Paper. Launched on 16 February 2022, BEAMA's 'Better Ventilation, Better Homes, Better Health' White Paper sets out a 4-step policy pathway for the future to deliver effective ventilation and improved indoor air quality (IAQ) inside UK homes in order to help protect health and wellbeing. Vent-Axia fully

supports this White Paper as it aligns with the company's commitment to improving IAQ through ventilation to protect public health.

0844 856 0590 www.vent-axia.com

Domus Ventilation releases CPD courses



Domus Ventilation has released three RIBA accredited CPD courses on residential ventilation. Each RIBA accredited CPD covers the basic principles of ventilation and why it is so important to provide adequate ventilation in modern energy efficient homes, not only for the health of the occupants but also for the fabric of the building. The first addresses recent changes to Part F – Ventilation of the Building Regulations; the second looks at Mechanical Ventilation with Heat Recovery system design; while the third focuses on how to successfully integrate mechanical ventilation into a project.

megan.bennett@domusventilation.co.uk

Waterloo supplies air distribution products for historic Rusacks St Andrews hotel



The refurbishment of the historic Rusacks St Andrews hotel, which overlooks Scotland's hallowed Old Course Links and is a monument to golf and its founders, has benefited from Waterloo's stylish, high quality air distribution products. The hotel's guestrooms, which have taken inspiration from the local golfing history and surrounding landscape and coastal positioning, have been fitted with Waterloo's Airline Linear Bar Grilles (ALM), wall-mounted Exhaust Grilles (3HF) for return air to the fan coil units and Exhaust Valves (VB) for the en-suites. For the hotel's inspiring collection of diverse restaurants & bars and reception areas, Waterloo's CS-F continuous Linear Slot Diffusers were selected to provide optimum indoor air quality and comfort for guests and staff. The external fresh air intake and exhaust system is delivered by Waterloo's YG-A Small Format Fixed Blade External Louvres, which are ideal for systems where space is at a premium. Crucially for a project where presentation is all, Waterloo was able to supply these lightweight, weather resistant louvres in a finish matched to the RAL7016 anthracite grey walls.

01622 711500 www.waterloo.co.uk

East Midlands heating company winning new work with CIRCOFLOPRO



Northampton based JD Plumbing and Heating has been growing its business in recent years after discovering the multiple benefits of buying the ready-to-install underfloor heating systems offered by CIRCOFLOPRO, part of the Ridgespear Group. Founder and Director, John Drew explained: "I have been using CIRCOFLOPRO for all of my underfloor heating installations for the past three years, after a builder I do some work for was using it on a job and I was just really impressed with the flexibility of the approach. It appeals because you can't always put pumps or manifolds where they should be ideally and CIRCOFLOPRO makes things easier in a lot of circumstances." The most recent project where JD Plumbing and Heating has chosen to employ CIRCOFLOPRO is an old farmhouse at Brigstock in Northants that had been substantially refurbished following a flood, where another underfloor heating system was installed, but hadn't performed well. With a new 40 kW gas boiler already in-situ, John measured up for laying CIRCOFLOPRO ClipRail across the whole of the reconfigured ground floor. "The client is very happy with the way it is all working and we're hoping to do a lot more jobs with CIRCOFLOPRO in the future."

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Wood Stove Filter from exodraft

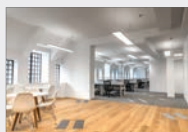


The beloved wood-burning stove has come under attack recently because of its particle emissions. An **exodraft** filter will reduce the number of particles in the wood smoke by as much as 95% as well as reducing the total particle mass by 75%. The particle filter, is designed to filter out the harmful ultrafine particles from the flue gas of wood-burning stoves. To remove the particles from the flue gas, the electrostatic particle filter

is installed on top of the chimney where it uses a high-voltage electrode to charge the particles and trap them inside the filter.

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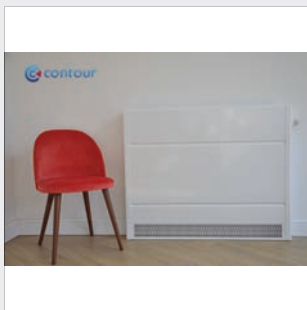
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Contour Heating launches brand-new Low Surface Temperature Radiator



Safe heating product provider, **Contour Heating**, has launched a brand-new low surface temperature radiator that is set to provide the education sector with a cost-effective alternative to their current heating solutions. Covora Lite launches alongside a range of other new for 2022 safe heating products as part of the all-new brochure made available earlier this year. Aimed at helping school and nursery refurbishments working to tight budgets and timelines, its launch is in line with specification for summer projects. "Covora Lite is our most affordable low surface temperature radiator to date" said Commercial Director Robin Mansell. Including bullnose corners for added safety precautions and with BioCote, helping protect against 99.9% of bacteria, Covora Lite low surface temperature radiators are available with a much shorter lead time than other Contour products, helping get projects get completed far quicker. On top of this, spilt delivery is also available, helping you optimise your projects and work more streamlined with other trades. Contour Heating's complete product range also includes other low surface temperature radiators as well as a variety of anti-ligature solutions, helping provide safer heating to a wider range of industries.

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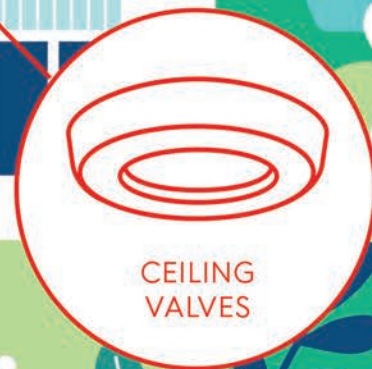
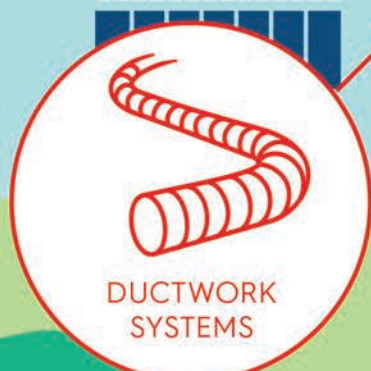
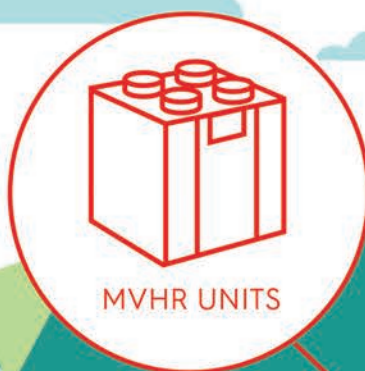
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Ultra-efficient MVHR: from room to roof

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An air of improvement

Tyson Anderson of Titon outlines the main impacts of revisions to the Building Regulations, intended to strike the balance between energy efficiency, air quality and overheating in domestic settings

Revisions to Part F of the Building Regulations in England were released in December (the documents for Scotland and Wales are still under review) and there are a number of implications for specifiers of ventilation in dwellings.

It is the intention that the updates ensure adequate ventilation of all types while simultaneously improving the energy efficiency of new housing. The new Part F works in conjunction with Approved Documents on energy efficiency, and for the first time, overheating. As the saying goes, ‘ventilate when you insulate.’

This is all part of the Government’s proposals for the Future Homes Standard, which provides a pathway for highly efficient buildings that are “zero carbon ready,” i.e. better for the environment and fit for the future. Implementation of a full technical specification to comply with the standard is scheduled for 2025.

The Approved Document for Ventilation (Part F) includes a number of changes from the previous iteration, and becomes effective in June 2022. With the move towards more energy efficient buildings, some required ventilation levels have been increased to ensure sufficient air changes in dwellings.

In all instances, the revised Document redefines what airtight and less airtight levels are, which has a bearing on the type of ventilation system that should be incorporated.

The ventilation systems that are typically utilised in the UK have been labelled slightly differently (see table 1), and are no longer numbered. Passive stack ventilation has been removed.

As before, other system designs are allowable but need sign off and proof of compliance that they achieve the ventilation rates set in the document.

Mechanical ventilation has been affected, with a large increase in per bedroom rate (see table 2). Buildings that are classed as “less air tight” will require the natural



2013 (current)	2021 (effective from 15 June 2022)
System 1 - Background ventilators and intermittent extract fans	Natural ventilation with background ventilators and intermittent extract fans
System 2 - Passive stack ventilation	Removed
System 3 - Continuous mechanical extract (MEV)	Continuous mechanical extract ventilation
System 4 - Continuous mechanical supply and extract with heat recovery (MVHR)	Mechanical ventilation with heat recovery

Number of bedrooms	1	2	3	4	5
2013 - Whole dwelling ventilation rate (a.b.) l/s	13	17	21	25	29
2022 - Minimum ventilation rate criterion 1 – by number of bedrooms	19	25	31	37	43

ventilation and background ventilators and intermittent fans, those buildings that are ‘highly air tight’ will require either continuous mechanical extract ventilation or mechanical ventilation with heat recovery.

For background ventilation, which is the continuous change of air that should be occurring in addition to extract ventilation and rapid ventilation – e.g. opening



In new build situations, the amount of background ventilation can now be calculated in an easier way and is based on a certain amount being provided per room

windows – the document shows an uplift in the amount of ventilation needing to be provided when windows are being replaced. The contractor should now be fitting background vents, usually trickle vents in the windows, whether the previous windows had them fitted or not.

In new build situations, the amount of background ventilation can now be calculated in an easier way and is based on a certain amount being provided per room, rather than based on a total amount for the whole property. This currently means someone having to add this up and allow for certain additional criteria, such as floor area, number of bedrooms and airtightness level, before calculating whether the overall number of vents comply with the total required.

When whole-house ventilation systems are being installed, there is an increase in the amount of background ventilation required when used with continuous mechanical extract systems. As before, mechanical ventilation with heat recovery (MVHR) does not need background vents, as it is a balanced, controlled ventilation system.

The current Approved Document F also worked alongside a Domestic

Ventilation Compliance Guide (DVCG) document, which was designed to help contractors work to certain guidelines and then sign off their work and hand over a compliance checklist to the end user. The revised regulation does away with the DVCG, but instead includes checklists as appendices within the document, although these are still expected to be completed and handed over to the dwelling owner for their records.

Even though these changes may seem more involved, Approved Document F is much reduced in terms of page count, particularly if you were to include the DVCG too, as many of the approaches and explanations have been simplified to make compliance easier.

These revisions are all designed to continue the ongoing improvement of the quality of the UK housing stock. The increased emphasis on ventilation in both new and existing dwellings is essential, especially in the current climate where indoor air quality and the build-up of pollutants and airborne viruses is of concern to everyone more than ever.

Tyson Anderson is sales and marketing director at Titon Hardware

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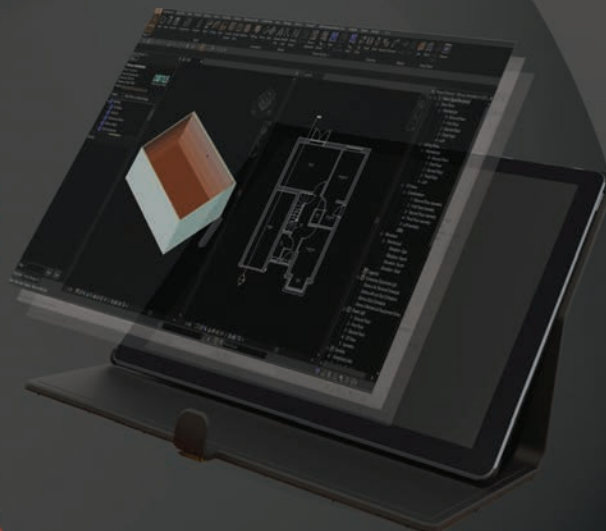
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Thermal efficiency, cost-effectively

Actis Insulation's Thomas Wiedmer says that while many specifiers continue to struggle to maximise energy efficiency in dwellings, low carbon results are achievable without adding significantly to the build cost

It is a truism that the fabric of a building is the key to its thermal performance. But it is perhaps surprising that, despite the fact that everyone in the construction industry is fully aware of this, many still struggle to achieve maximum energy efficiency to achieve the required SAP rating on houses.

Once the key criteria in achieving an efficient thermal envelope are mastered, there really should be no reason why all new builds from now on (including those that fall under the more stringent Building Regulations Part L requirements coming into force in June) are not as thermally efficient as humanly possible – without costing much more than building a 'heat leaching' alternative.

The key to attaining this state of nirvana is in avoiding thermal bridging; indeed this is an explicit directive in the current Part L, which states: "Insulation should be reasonably continuous over the whole building envelope. The building fabric should be constructed so that there are no reasonably avoidable thermal bridges in the insulation layers caused by gaps within the various elements, at the joints between elements such as those around the window and door openings. Reduction in thermal performance can occur where the air barrier and the insulation layer are not contiguous, and the cavity between them is subject to air movement."

Using flexible insulation, vapour control layers and breather membranes can go a long way towards addressing this, as they help reduce the margin for error, making the chances of thermal bridging very slight. This sort of product, due to its flexible nature can be guided into place rather than having to be cut accurately, can be installed in a continuous layer, thus providing a seamless air barrier and creating a better performing building envelope.

New Part L regulations extend the emphasis on thermal bridging further and propose that drawings should be provided for junctions and that before elements are concealed, an onsite audit should be

undertaken to confirm that the designed details have been constructed, with particular focus on product substitution. Recognising that construction detailing is one of the biggest issues causing the performance gap. Tying projects up with specific details used is important to close the gap between designed and expected performance.

This might sound onerous, but there is help at hand; You can use junction details from a reputable non-government database containing independently assessed thermal junction details, such as Local Authority Building Control's Registered Construction Details Library (at www.labc.co.uk). They offer a combination of specific detail, good practice and points to watch, together with a range of modelled psi-values using different build ups. The LABC RCD are freely available and also accessible on the go and drawings and documents can be fed into specifications for projects.

The key to attaining this state of nirvana is in avoiding thermal bridging

Build tight – insulated right

While specifiers are given an element of flexibility on how to balance the efficiency of the building fabric and building services – two elements which are crucial for the SAP rating – the Target Fabric Efficiency Rate (TFEE) limits the U-values of thermal elements, ensuring that an efficient envelope provides the backbone to an energy efficient house.

A 15% leeway given under the FEE is aimed at ensuring developers can't build homes whose envelopes are inefficiently constructed and make up the deficiency with excessive use of renewable technologies. It doesn't have to cost any more to insulate a house to an impressively low U-value than to insulate it to the minimum required thermal efficiency. Some insulation materials are easier and quicker





to install than others – so those which take less time obviously mean fewer man hours and therefore less outlay on labour.

The more thermally efficient the building, the less needs to be spent on renewables to achieve the required energy efficiency targets. The motto is 'fabric first' – that is, look to making your building thermally sound as a priority rather than finding ways to warm a constantly cooling, poorly insulated internal environment – which, as well as being a nuisance, is a waste of time and money.

Vapour control layers & breather membranes

The most usual places where thermal bridging can be found are at angles, where one element joins another – the eaves, for example. Basic science dictates that if you use something solid and inflexible to insulate a roof with all its many various shapes, there's a greater chance of gaps, which then need to be infilled with compressible tape or expansion foam. Using a flexible, stretchable, forgiving product, on the other hand, means that the gaps can be eliminated. Its edges can be overlapped and taped together to ensure an airtight seal and a continuous insulation layer.

A breather membrane is designed to control moisture, and like vapour control layers, some also act as insulation

Vapour control layers, used on the warm side of any insulation material – behind the internal finish in roofs, walls and ceilings – can massively reduce the risk of interstitial condensation and provide air tightness. Some also act as an insulation, which means the thickness of the main insulation can be reduced to achieve the same U-value.

A breather membrane is designed to control moisture, and like vapour control layers, some also act as insulation. Reflective and watertight, yet vapour permeable, breather membranes are used on the cold side of roofs and walls. Because water vapour molecules are smaller than those in water droplets they let moisture out, but not water in, and add air tightness and boost 'thermal resistance,' by keeping heat in.

Thomas Wiedmer is UK technical director at Actis Insulation

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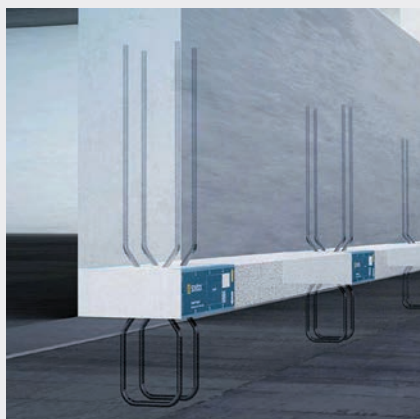
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New Schöck thermally insulating wall connection in a class of its own

Minimising linear thermal bridges at the wall connection to the floor, or floor slab, has been a perennial problem with reinforced concrete construction. However, a dedicated new solution – the Sconnex type W – has now been introduced by Schöck. A high-profile project involving the new Schöck thermally insulating wall connection is Haberdashers' Aske's Boys' School, at Elstree in Hertfordshire. Recognised as being one of the leading independent boys' schools in the country, it sets exemplary standards, not just in educational terms, but in its facilities as well. As demonstrated by the new extension to the Preparatory School.

A two-storey contemporary extension

This is a standalone building within the campus and Hampshire based cube_design architects were commissioned to produce a concept design for three additional classrooms, along with the relocation of changing facilities. Jane Lock-Smith, the founder of cube_design and RIBA Client Design Advisor within the BSF programme, takes up the story: "The design is respectful to the style of the existing building, but offers a contemporary twist through the use of full height glazing and charred timber cladding. The use of a colonnade minimises the buildings footprint. In our detailing we took into account that around 40% of all thermal bridges in a building are caused by walls and supports. The Schöck solution offers an application-friendly, high-quality solution that contributes to a permanently sustainable building concept".



A serious source of linear thermal bridges

The construction of the Preparatory School extension is of reinforced concrete; and traditionally wall connections to the floor, or floor slab, have been a major source of linear thermal bridges. The result being not just serious energy loss, but also the high risk of condensation. This can easily lead to mould growth, resulting in possible structural damage and worse, posing a health risk to the occupants. As the market leaders in the development of Isokorb structural thermal breaks for balconies and other cantilever constructions, Schöck has now used this expertise to produce a thermally insulating wall connection that

combines outstanding insulation performance with dependable load-bearing capacity.

Sconnex is a unique solution

This new thermally insulating connection for reinforced concrete walls is unique in a number of ways. It minimises the thermal bridge between the exterior wall insulation and the insulation above the floor slab, increasing the energy efficiency of the entire building. Thermal losses are greatly reduced and the surface temperature in the room increases to considerably more than the critical dew point temperature. Heating costs are lower and the PSI of the connected reinforced concrete wall is reduced by up to 90 percent. The outstanding insulation performance is combined with an excellent load bearing capacity, which transmits very high pressure, tensile and shear forces, both in the longitudinal and transverse direction. Made possible by the use of a pressure buffer consisting of ultra-high performance fibre reinforced concrete which achieves compressive strength levels in excess of 175 N/mm². A further important benefit is the significant cost reduction achieved when compared to installing insulation beneath the floor slab.

For further information on the new Sconnex type W product; contact Schöck.

01865 290 890
www.schoeck.com



Spray foam insulation chosen for the transformation of abandoned industrial buildings in Cumbria

Spray foam insulation from Huntsman Building Solutions [HBS] has been used in the transformation of a collection of derelict industrial buildings into a stunning, architect-designed self-build home in rural Cumbria.

The buildings dated back to the late 18th century and once formed a mill producing blacking, a material used to coat the insides of casting moulds for a range iron goods, made at a nearby foundry.

Architect Robert Glass and his partner Ruth Grimshaw who now practice at Tape Design in Ulverston, had decided to move back to the South Lakeland area of Cumbria following years in the city. Robert had known about the site since his early 20's and had always wanted to build a home there. In January 2015, they approached the owner and after finally gaining planning approval, bought the site in November 2017.

The site was challenging with narrow, single-track access. A fast-flowing beck which originally provided power for the mill ran through the site and the surrounding land was completely overgrown, almost reclaiming the tumble-down stone structures that had laid abandoned since the 1950's.

None-the-less, the potential was clear to Robert and Ruth and plans were drawn up to transform the buildings into one stunning,

four-bedroom home of 218sqm with a further 90sqm of workshop and office facilities. A 90sqm roof terrace was incorporated into the main house structure, providing recreational space and views over the surrounding woodland canopy.

High performance insulation to minimise heat loss

A key criterion in the construction of the buildings was control of the internal environment to minimise heating costs, so achieving a high degree of air tightness and the incorporation of a mechanical ventilation and heat recovery system [MVHR] into the finished structure was required.

It is estimated that around 40% of a building's heat loss is caused by air leakage – essentially draughts – so an insulation system that works to prevent air leakage, effectively creating a sealed environment was essential in order to minimise heat loss.

Following detailed research, an open cell spray foam insulation solution from Huntsman Building Solutions [HBS] was chosen. Their H2 Foam Lite product not only promised outstanding levels of air tightness and thermal efficiency but also allowed the building to “breathe” and move with the timber framed inner structure.

Huntsman supplies its products exclusively

through a trained and authorised contractor network and the spray foam installation was handled by Preston based contractor Heatlok Insulation.

Greg Raby of Heatlok explained that HBS spray foam insulation systems were developed in Canada to cope with their severe winters and are now widely used in the UK in both the residential and commercial sectors.

He also explained that spray foam insulation is an inherently elastic material so it moves with the building without cracking and causing gaps. It's also able to fill the small voids in the structure where conventional rigid board insulations are almost impossible to fit effectively.

Minimal environmental impact

Unlike the urethane foams of 20 years ago, modern spray foams such as HBS H2 Foam Lite uses water as the blowing agent. This means that the reaction between the two components produces a small amount of CO₂ which causes the foam to expand. Cells of the foam burst and the CO₂ is replaced by air.

According to Huntsman Building Solutions, H2 Foam Lite E is currently the only spray foam insulation system to carry the prestigious BBA [British Board of Agreement] Certification.



The original stone buildings had almost been reclaimed by the landscape



The site runs through a steeply wooded valley with a fast-flowing beck that provided water power to the mill



Huntsman H2 Foam Lite was sprayed to a depth of 230mm in the timber frame external wall and roof structure and 300mm at the roof/wall perimeter area.



A completed section of the building prior to trimming back of the breathable foam insulation to accept plaster boarding

From an environmental perspective, H2 Foam Lite claims a Global Warming Potential of 1 and an Ozone Depletion Potential of 0 [Zero]. Furthermore, it doesn't emit any harmful gases once cured, another important factor in the choice of insulation. "Ruth is very sensitive to chemicals in the air, the fact that H2 Foam Lite becomes inert after a few seconds, with little or no off-gassing after installation, made it the perfect choice for us" said Robert Glass.

Thermally efficient structure

H2 Foam Lite was used in the external wall and roof areas to create a highly thermally efficient structure. External walls are a combination of 250 mm outer leaf of Lakeland stone facing with 140 mm thick timber frame inner leaf with spray foam filling. Inner 50 mm thick battening allowed an extra 90 mm thickness of foam insulation

giving an overall thickness of wall insulation of 230 mm.

Where timber cladding was used to visually soften the exterior appearance, wall sections comprised 22 mm thick larch cladding, facing a 140 mm thick timber frame supporting structure with foam insulation infill. Similarly, 50 mm thick inner battening allowed an extra 90 mm thickness of foam insulation giving an overall thickness of wall insulation of 230 mm.

Roof areas also received high level of insulation. Pitched roof areas are timber clad over a glass fibre water-proofing layer that overlays 18 mm OSB [oriented strand board] fixed to 145 x 50 mm rafters with foam infill. Foam filled 50 mm thick inner battening gives an overall thickness of insulation of 230 mm. Flat roof areas beneath the roof terrace received additional treatment with 300 mm thick

foam sprayed around the perimeter where the roof and walls meet, to fully seal any potential gaps.

Robert and Ruth acted as both designers and main contractors for the reconstruction process, a huge task whilst continuing to run their Architectural Practice, engaging and managing trades as required over the Covid disrupted build programme.

Grand Designs project

The mill transformation began in January 2018 and is due to be completed in the spring of 2022. The four-year project was the subject of a Channel 4, Grand Designs programme lead by Kevin McCloud and was broadcast in autumn of 2021.

01485 500 668

www.huntsmanbuildingsolutions.com



The Mill reconstruction gradually comes to life – the 90 sqm roof terrace will provide recreational space and stunning views over the surrounding tree canopy



The external combination of Lakeland stone and larch cladding blends beautifully with its surroundings.

Four Good Design Awards 2021 for Vitra



VitraA receives four Good Design Awards including one for its innovative Vitra V-Care Smart Panel and V-Care Prime – the digital flush plate and multifunctional shower toilet.

Established in 1950, Good Design is one of the world's best established and prestigious design competitions. The Good Design Awards is organised jointly by The Chicago Athenaeum: Museum of Architecture and Design and The European Centre for Architecture Art Design and Urban Studies. With these four new awards, Vitra now has a total of 44 Good Design Awards.

Vitra's winning designs for 2021 included Vitra V-Care Prime and V-Care Smart Panel. Vitra also won an award for its Atelier 01 tile collection and Archiplan bathroom collection, launching later this year.

Vitra V-Care Prime shower toilet is the highly specified showering toilet in Vitra's comprehensive showering toilet collection.

V-Care Prime, designed by Arik Levy, is available in both wall-hung and back-to-wall models. It is sleek and compact and can be controlled via an app or through the handheld remote-control unit. Additional intelligent features include sensor ambient lighting, adjustable drying, multi-washing function and auto air purification.



Vitra V-Care Smart Panel uses digital sensor technology for the most hygienic and efficient WC flush available. The black glass flush plate with anti-fingerprint finish is easy to wipe clean. The panel has a Smart Flush feature which tracks WC contamination and then flushes using the appropriate amount of water which saves water. Vitra V-Care Smart Panel uses learning algorithms to find the optimum flush cycle. A useful eco mode also allows the user to select the volume of flushing water.

Margaret Talbot, marketing manager for the UK and Europe said: "The Good Design Award is terrific recognition of the work of Design Studio Vitra and the international designers we collaborate with to create products that consumers and specifiers really understand and appreciate."

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A striking finish with Schlüter-Systems



An increasingly popular trend in recent years, matte black accessories within a bathroom design ensure a striking finish. Whether this colour is paired with clean whites for a classic look or combined with opulent marble, it creates a modern aesthetic which is perfect for that luxurious touch many homeowners and hospitality industries are after.

Schlüter-Systems have a selection of products that come in matte black for a coordinated bathroom design, including protective tile trims, storage shelves and shower drain grates. Whether you are planning a completely monochrome look, want to use black elements for bold contrasts or are choosing accents sparingly, there are plenty of options to suit your needs.

For both style and substance, pick a tile trim in one of the many variants Schlüter have to offer, including JOLLY, RONDEC and SCHIENE. The matte black provides a sleek finish alongside the expected protection that Schlüter tile trims give.

Storage shelves in matte black create a practical solution whilst also working within the design parameters of the bathroom. If you choose to add a shelf to a complete bathroom or wetroom, the corner shelves can easily be installed within the grout lines. If you want more space within the shower area, you can add a niche. Using the black tile trim to protect the corners of the niche



and adding a matching shelf will create an eye-catching feature, effortlessly blending form and function.

Lastly, the slimline linear drain grates present a minimalist look alongside being extremely versatile. The optimally matched components of the Schlüter-KERDI-LINE system create linear drainage in floor-level showers whilst offering a stylish finish.

Pairing this beautifully rich tone with the

renowned reliability of Schlüter's products means that not only will the bathroom be sleek and welcoming, but you will also have the peace of mind that the installation will stand the test of time.

For more information about the matte black product range, visit the Schlüter website.

01530 813396 www.schluterspecifier.co.uk

BLACK IN

MGS

Matt Graphite Black

As a timeless classic of interior design, elements in black are a great way to make a statement. Whether in monochrome bathroom design or to create colour contrast to tiles, the various Schlüter-Systems products in the TRENDLINE coating matt graphite black offer numerous design options in combination with premium ceramic tile or natural stone coverings. Match your shelves, tile edge trims and drainage channels for a bold and contemporary finish.

To find out more, visit www.schluter.co.uk

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DRU Polo gas stoves bring warmth and comfort to Cornish hotel suites

DRU Fires, in partnership with leading Cornwall fireplace dealer Kernow Fires, has supplied five DRU Polo balanced flue gas stoves for the new beach lofts at one of Cornwall's leading hotels.

Watergate Bay Hotel on the north coast of Cornwall, originally designed to be a railway terminus hotel, has been developed into an inclusive year-round destination. Its spectacular clifftop setting and location just a short hop from Cornwall Airport Newquay makes it a primary choice for travellers from all corners of the UK and beyond.

The recent closure of Jamie Oliver's Fifteen restaurant on the site paved the way for the £1.4 million development of the seven new beach lofts by contractors GSI and interior designers Dynargh Design, right above the beach.

Described as 'surf-in surf-out' accommodation, the lofts have floor-to-ceiling windows with panoramic sea views. All have been designed to feel like modern city lofts, with warm textures and sustainable materials.

High energy efficiency

The DRU Polo gas stoves were chosen by Dynargh Design for their contemporary design, fitting in with the overall design and aesthetic of the beach lofts. In addition, they were selected for their A energy rating, 92% efficiency and the convenience of gas with



easy remote-control operation. They have all-year-round use and are suitable for chilly autumn days and cool summer evenings.

Their balanced flue system offers flexibility of installation, as they require no chimney and only need proximity to an outside facing wall. This enables them to be installed in the living space, bedroom or bathroom subject to the design of each individual suite.

The beach lofts were completed in time for Cornwall's peak 2021 tourist season, which

has been hugely successful due to many more people taking their holidays in the UK during the Covid 19 pandemic.

Impressive outlooks and sustainability

Kernow Fires owner Simon Breckon commented: "We're pleased to have contributed to the success of the beach lofts and have seen strong growth in Cornwall's domestic and commercial fireplace markets this year."

Watergate Bay Hotel CEO Will Ashworth said: "The beach lofts are our best rooms. They are sized very generously and the interior design represents our new approach to contemporary Cornish beach living."

Dynargh Design director Matt Hulme said: "The lofts have some of the most impressive outlooks of any hotel in Cornwall. But the interiors also needed to have enough appeal in the winter, when it's dark at 5pm, that it feels warm, natural and enticing."

Sustainability was also an important factor in the design. "Getting active in the beautiful natural environment is at the heart of the Watergate Bay experience, and we're committed to minimising the environmental impact of our design choices," adds Will Ashworth.



drufire.com
kernowfires.co.uk watergatebay.co.uk

An Industry exhibition on your doorstep



After the last two years, with new ways of working and the growing climate crisis, you may be reconsidering the benefits of visiting a two-day industry exhibition halfway across the country. There's the time out of the office, and the dreaded catch-up. Perhaps, there's also an early start for a long drive, or journey on crowded public transport. You might find that the number of exhibitors has greatly reduced and the value of its offering diminished. There's the risk, too, that the associated conference is mostly delivered over Zoom!

To keep ahead of product developments and innovations, however, there is no substitute for seeing, touching and assessing the real thing. The **Horne Roadshow** can effectively and efficiently meet these needs, in an hour or less, on your office, client's or project site doorstep. Although a small exhibit, it has been cleverly devised; in 5 carefully-selected shower panels, a range of 130+ models (all sectors/applications covered) is represented, as is the award-winning Optitherm thermostatic clinical hand-wash tap, patented In-line Thermal Disinfection Unit, and Horne thermostatic mixing valves, DN15-DN50.

01505 321455 b.link/roadshow

Versilia Marble is a class act



Timeless elegance is guaranteed with Versilia Marble from **RAK Ceramics**, a porcelain tile that will bring an air of luxury to any setting. Inspired by the natural, effortless beauty of marble, with all the practical advantages that porcelain brings to interiors, Versilia Marble

displays striking grey veining set against a neutral white backdrop for instant attention. This revised classy marble surface is the ideal choice for worktops, wall surfaces and floor coverings. Versilia Marble is 9 mm thick and in measurements from 60 x 120 cm per tile.

01730 237850 www.rakceramics.com/uk

Intelligent integration in the kitchen



BLANCO UK has launched a new concept for the busiest area of the kitchen with a new direction, style and brand campaign – designed to help customers create feature-rich, creative kitchen hubs; and to help retailers with sales opportunities.

BLANCO UNIT combines sinks, taps, in-cabinet waste and organisation systems into innovative and flexible solutions for modern kitchen life. Everything needed in the busy space is all in one place with the new **BLANCO UNIT** which creates a space-saving, timesaving, creative hub at the heart of the home.

blanco.co.uk/blancounit

Forbo's Allura Flex impresses at Cafe GEC



London's leading workplace caterer, The Good Eating Company, has opened its first commercial Cafe in the city. Requiring an interior design that reflects its core values, the sophisticated charm of **Forbo Flooring Systems'** Allura Flex Wood luxury vinyl tiles, along with its ease of installation and maintenance, has helped to

complement the stylish and relaxing dining environment. Recognised as being easy to install and easy to maintain, Allura Flex is particularly suitable for flooring in retail, leisure, hospitality and offices. The GEC Cafe was awarded 'Commended' in the Fly Forbo 2020/21 competition.

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

Closet fascination



Now that homeowners can enjoy socialising indoors once again, the downstairs cloakroom will be taking centre stage in terms of a Spring spruce up. It is the one intimate space in which guests spend time – and judge! **Thomas Crapper** has launched a new range of beautiful closet suites to answer the demand for imagination in this special place. Pictured is the Bentham basin and high-level 814 cistern

WC set to whet your appetite. For further information on Thomas Crapper, please visit the website.

www.thomas-crapper.com

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Doors open for office to home conversion in Woking

Vicaima doors have been selected by a Surrey based contractor for new apartments in central Woking town location, converting former office space into smart contemporary living.

The trend for re-imagining unwanted commercial and workspaces into modern homes offering flexible rental opportunities, has seen substantial growth over the past few years. One such example is the newly refurbished Conerstone development in the heart of Woking town centre, where 94 new apartments from compact studio design to 3 bed living have been created.

The adaptive reuse in such developments often present both functionality and safety considerations which must be addressed. This is one of the reasons why the extended scope and certification compliance offered by the Vicaima range, provides so much appeal to contractors and developers looking to address design and technical challenges.

Surrey based specialist contractors Buxton,

chose Vicaima Easi-Fit interior doorkits for apartment entrances, internal room division and corridor areas, offering as it does a rapid installation with easily assembled door and frame. In compliance with leading regulatory standards, apartment entrance doors supplied by Vicaima, not only provided third party fire certificated assurance, but were approved to Secured by Design, for added peace of mind. To enable a flexible colour scheme to be accommodated throughout the project, all doors were supplied in Vicaima's revolutionary Primed 2 Go finish. With their ultra-smooth polymer faces that don't require either face sanding or priming, excellent surface decoration can be consistently achieved.

Easi-Fit door kits and Primed 2 Go finish are just two examples from an extensive selection of imaginative ideas from the Vicaima Collections, with performance and decorative solutions for a multitude of project types.



marketing@vicaima.com
www.vicaima.com

Discover a new look in the Angles of Architecture



The new Contour carpet tile collection from IVC Commercial applies the principles of architectural geometry to carpet tile design in two styles to mix and match with other collections. In Perspective, biomorphic principles express the structural integrity of honeycomb, while View is a design of intersecting lines that explores geometrical projection. Both Perspective and View are available in an eight-strong palette of universal and energetic combinations that coordinate with other collections, including the popular Rudiments and colours of Creative Spark. Contour can be used to create inspiring layouts in offices, using the subtle tonal pattern to mark out zones while retaining a coordinated feel or by adding a burst of contrasting rich colour to other mix and match carpet tiles. The carpet tile uses 100% solution-dyed nylon for a quality that's suitable for use in a range of environments including schools and colleges, universities, public sector projects and commercial offices. Stain and fade-resistant, Contour is certainly ready for the challenge of bustling spaces, providing a comfortable and lasting finish that's easy to maintain. With the proprietary EcoFlex™ Statera backing, Contour is dimensionally stable for reliability in installation and use.

01332 851 500 www.ivc-commercial.com

TBA Firefly system sub-divides supermarket roofspace



During the recent pandemic supermarket chains have had to continue with property maintenance and improvement programmes to ensure the safety of their premises, including a store in Staffordshire where the APOLLO Lite 30:30 barrier, manufactured by TBA FIREFLY™, was installed within the roof-space as part of a major refurbishment project. All of the APOLLO Lite 30:30, together with the heavy duty stainless steel staples and other ancillary Firefly products, have been supplied by distributor, CCF. The APOLLO Lite 30:30 has been developed for use in vertical separation or compartmentation situations, offering 30 minutes integrity and insulation thereby exceeding the minimum requirements of the Building Regulations. It is widely specified to form fire barriers within roof voids and floor voids in many different property types, including tower blocks and other HMOs. The flexible woven and non woven glass fibre material is easy to cut and fix and is treated with a proprietary coating to improve its fire performance properties and therefore prevent temperatures rising in adjoining areas. The system has been fully tested to BS 476 Parts 20 & 22 and is third party certified by IFCC.

01706 758817 www.tbafirefly.com

Yeoman Shield fire door services offer assurance to clients

Yeoman Shield Fire Door Services division continues to go from strength to strength with the addition of a new team member and new personnel accreditations.

Technical Advisor, Richard Bingley and Technical Supervisor, Shaun Stevenson, already have the Diploma in Fire Doors. Both have now increased their portfolio of certification, having recently sat for, and to

their credit, achieved the FDIS Fire Door Inspection qualification.

"The FDIS Fire Door Inspection qualification assures our clients that our Fire Door Services supervisors have the essential skills to carry out fire door inspections with the knowledge to identify non-compliant issues," commented Contracts Director, Richard Good.

With an in-depth understanding of the regulations, components, compartmentation, and function, Richard and Shaun can also advise on remedial work required to bring damaged fire doors back to an acceptable standard under best practice guidance.

Offering accepted repair techniques can help reduce the cost of remedial work to non-conforming fire doors whilst a regular Fire Door inspection and maintenance routine will ensure that problematic issues can be dealt with before they get to the point of total fire door replacement.

Yeoman Shield Fire Door Services has been



further enhanced by the internal promotion of Gemma Batley to the team.

Richard Good explained, "Gemma has worked within the company for many years as a Senior Sales Coordinator and has great understanding of our fire rated door protection products and will certainly be an asset to the division."

Gemma has been appointed as a Fire Door Supervisor and will undertake training to achieve both the FDIS Fire Door Diploma and Fire Door Inspection qualifications as she progresses.

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Concrete Channel with Basalt Fibres – New Era Begins for Hauraton

Hauraton makes concrete material even more efficient for modern drainage technology by enhancing the formulation with natural basalt fibres.

The addition of mineral or textile fibres increases maximum stability, strength, and impact resistance. By amplifying the impact resistance, the more robust and durable the product. This is particularly important for components that are exposed to considerable dynamic stresses, in this case, drainage channels subject to vehicles at high speeds or regularly trafficked by heavy loads.

Basalt Fibres: Natural and Sustainable

Hauraton's new era in concrete production by utilising basalt fibres has not only created a durable building material, but also one that is 100 percent natural. The basis of basalt rock is available all over the world in large quantities which is formed naturally on the earth's surface. By combining basalt fibres with the well-known material concrete,



both the structure and the service life of the product is increased.

Mineral Mixture: Easy to Recycle

Since the end product is a purely mineral mixture, there is no need for material separation during disposal. This protects the environment as it is simply fully-recyclable at the end of the product's life cycle.

Convincing Strong Properties

Basalt fibres have outstanding properties. They can withstand temperatures of up to

800°C and are highly resistant to alkalis, acids, salts, oxidation and radiation.

The effects of adding basalt fibres to precast concrete elements gives even more of a dimensionally stable, resistant and durable structure. Drainage systems made of basalt-reinforced concrete will assure longer performance.

Basalt Fibres are Versatile and Climate-Friendly

Basalt fibres are mineral fibres that have a higher melting temperature, better resistance to water, acids and alkalis, and more positive flexural strength. All this makes basalt fibres attractive in drainage technology, but also numerous other applications in construction.

Given the stricter climate targets, the energy consumption during production also clearly speaks in favour of basalt fibres, as basalt it has the lowest CO₂ footprint.

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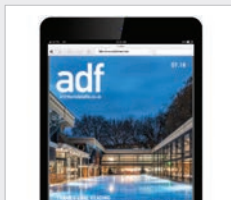
Seaburn Seafront Sealed with Resiblock



As part of a £1 million package of improvements, Resiblock and the '22' A.F product has been specified for use on the walkways outside Stack Seaburn and the Seaburn Inn, to provide long term stain protection and to prevent paver destabilisation. The improvements, which saw repaving works carried out to replicate the look of the eastern promenade, complements an overall £10 million project that was completed in 2021. Resiblock have established their success in cases across the North-East at Port of Tyne and Sea Road, South Shields, and this latest installation goes to show the trust that Local Authorities place in the Resiblock name.

www.resiblock.com

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Silicate Masonry Paint for all surfaces



A newly formulated Bonding Primer from Earthborn can now be used alongside Silicate Masonry Paint for exterior masonry surfaces that do not need to breathe. Bonding Primer provides a mechanical bond between a 'sealed' wall and the paint, allowing Silicate Masonry Paint to 'stick' to the pre painted surface.

And in places where there is a mix of painted and unpainted masonry, you can now spot prime the patches where the previous paint cannot be removed with Bonding Primer and prime the rest of the unpainted area with Silicate Primer. The updated Earthborn product range means that Silicate Primer used on uncoated masonry with Silicate Masonry Paint will create a highly breathable and permanent chemical bond.

This new primer means the 48 beautiful shades can be used on an even wider range of buildings, including those with a mix of previously painted and bare masonry.

01928 734 171 www.earthbornpaints.co.uk

Style up swimming pools with Aquatechnica



For tile solutions that deliver enhanced durability and slip-resistance for swimming pools and spas turn to Aquatechnica™. Available exclusively through **Strata Technical Tiles**, Aquatechnica's system-based approach lets you develop a unique tile specification that meets the necessary requirements of pools and spas while upholding aesthetic principles and delivering on cost. The Aquatechnica portfolio includes everything needed to deliver a tile specification that works hard for swimming pool or spa projects. With pool tank, surround, changing room, wet area, circulation, outdoor and complementary area tiles, profiles, movement joints, adhesives, epoxy grouts, renders, screeds and waterproofing; Aquatechnica delivers a total answer from design to installation. A range of specialist tile solutions for competition and diving pools ensures that sports and performance centres can benefit from pool tank and edge systems for high and low water swimming pools. Metric formats are suitable for short course and Olympic standard pools, and Aquatechnica provides anti-slip solutions across a wide collection of different styles and designs. Aquatechnica delivers a fast-track solution that meets the demands of swimming pools.

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