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FROM THE EDITOR



Several articles in this month's issue pinpoint some innovative methods – backed by distinctive thought processes – for investing in the capacity of the staff in your practice. This is something which all architecture firms focus on, but the current spread of challenges – from increasing IT, to increasing diversity and tightening regs to address climate issues – mean it has never been more important.

On page 16, ADF's Laura Shadwell looks at how Space Group (incorporating architecture, BIM and digital twin business streams) has put strong emphasis on how technology can upskill and engage staff to solve complex problems for clients. The word 'innovation' gets bandied about a lot, but Laura reveals how this practice is genuinely pushing the envelope to take its offerings to the next level. The proof of bringing staff along with them is in the pudding, and Space Group has been accredited for having 'outstanding' commitment to workplace engagement.

And on page 20, architecture studio Ackroyd Lowrie explains how it is actively recruiting a broadly diverse range of designers, based partly on a pragmatic belief it will ensure that its designs for future cities reflect their needs. Another part of this strategy is a realisation that architecture remains something of a cultural ivory tower, restricted to only certain strata of society. Ackroyd Lowrie asserts this stark truth: "architecture is not taught in schools...and it's not seen as an obvious career route for young people. They can't be what they can't see."

This practice has really run with the idea of investing in the new cohort of staff, forming an Alex Ferguson-inspired 'academy' to try and produce the next global star of architecture. They are teaching graduates via an extensive, online-based curriculum which sits outside the traditional model.

Lastly, the report on our first 'Building Insights LIVE' round table in this issue looks at how architects as well as housebuilders are upskilling for a different, specific set of challenges – tackling the trade-offs around Parts L, O and F. With 2021's Part L update driving U-values harder, it means a big overheating challenge to address with window sizes in certain buildings, such as medium-rise housing.

The recommendations that our panel of experts produced (and reported on in this issue from page 26 onwards) provide a concise look at what practices have been, and now need to focus on. We hope this and future similar events we are planning will provide useful knowledge and insights including some you may not have already had, to help you navigate the tricky path to compliance.

James Parker, Editor

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**ON THE COVER...**

NBBJ and HKS join forces to provide a major intervention in the heart of Liverpool, with a landmark hospital that has more ensuite single rooms than any other in the UK. Cover image © Matt Livey. For the full report on this project, go to page 32.



COMMERCIAL

Barr Gazetas completes transformation of Grade II listed Kodak House

London-based architecture practice Barr Gazetas has completed the transformation of the former European headquarters of The Kodak Company at 65 Kingsway, for client Clearbell. The Grade II listed building was originally built in 1911 and is one of the earliest examples of a purpose-built open plan office block in London.

Celebrating the rich heritage of the building, the refurbishment comprises the modernisation of the office block into 70,440 ft² office space across seven floors, bringing it up to modern workplace standards including CLT floor slabs and high sustainability benchmarks.

Renamed The Kodak, the building's original facade has been sensitively restored, isolating the facade stones to remove corrosion on the existing steelwork, while minimising impact on the building's heritage features. "Reorientated towards a new public space, the entrance on Keeley

Street, another original feature that has been reinstated, enhances the arrival experience," said the architects.

On arrival, guests are greeted by the new reception space where different elements recall the former headquarters building, including castellated steel beams with 'film strip style' perforations, wall moulded timber panelling, and photographic style light fittings.

The historic first floor reception area has been refurbished as office space. The centralised historic features including marble columns, ceiling details, coving and stair have been restored with finishes tied to those used in the main reception for continuity. Natural timber flooring was chosen to complement the historic reception, extending on the central stair.

A key element of the refurbishment included rebuilding the top two mansard storeys in a complementary style to the

original using Portland stone, white glazed bricks and the historic bronze. New windows, carefully replaced and designed to match the historic frames, provide views of the local streetscape, enhancing the open plan CAT A office space and highlighting the innovative structure. All occupiers have views of the outdoors and natural environment both from their workstations and from the new roof terrace.

At basement level, employees have access to new showers, changing facilities and bicycle parking, encouraging more sustainable ways to travel.

The refurbishment has earned a series of ESG accreditations, including BREEAM Excellent, WELL Gold, WiredScore Platinum, and EPC 'B'.

The project team includes Savills as planning consultant, structural engineer Heyne Tillett Steel, and M&E engineer Watkins Payne.

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LEISURE

'New model' community leisure hub opens its doors in Morpeth



A £21m mixed-use leisure scheme designed by GT3 Architects has opened its doors in the historic market town of Morpeth, Northumberland. Constructed by Willmott Dixon and funded by Northumberland County Council, Morpeth Sports & Leisure Centre combines sport and leisure with community facilities in a high street setting.

The scheme was awarded planning permission during the pandemic, as one of the first schemes given the go ahead via a virtual planning committee meeting. Construction started in Autumn 2020, with

the doors opening to the local community in April 2023.

Located on Gas House Lane, at the edge of the town centre conservation area and sitting beside the River Wansbeck, the centre incorporates a new community services hub, which includes a double height community library, a customer service centre, plus a brand-new adult learning facility with classrooms for a number of courses.

There is also a six-lane swimming pool with spectator gallery, flexible learner

pool, spa facilities, a variety of fitness spaces, a multi-use sports hall and large studio space designed to hold community events and a cafe, with connections to a poetry garden and outdoor terraces that act as an important social space for families and tourists alike.

The complex is now open and run by Active Northumberland, the charitable trust that manages leisure services across the county on behalf of Northumberland County Council.

APPRENTICESHIP

First Scott Brownrigg apprentice qualifies as chartered architect

Amy Allwood is Scott Brownrigg's first architectural apprentice to complete the Level 7 Architect Degree Apprenticeship course at Oxford Brookes University and become a fully qualified architect. She is among the first cohort of students in the country to qualify through the architectural apprenticeship route, after joining Scott Brownrigg's pilot apprenticeship programme in 2018.

During five years at Scott Brownrigg as an apprentice, she has collaborated with different sectors and services including interior design, while working primarily as part of the practice's Education and Advanced Technologies teams.

Recognised by both the RIBA and ARB, the apprenticeship programme

aims to create an equal alternative route to qualification for those interested in a career in architecture, allowing them to achieve RIBA Part 2 and 3 while earning a salary in practice. The course is funded through the Government's Apprenticeship Levy which requires all large employers operating in the UK to invest in apprenticeships and means that apprentices themselves pay no fees and can avoid student debt.

As a founding member and sub-lead of the Architecture Apprenticeship Trailblazer Group of 20 practices – Scott Brownrigg has committed significant time and resources to developing this important new route into the profession.

Apprenticeships at Scott Brownrigg



are open to people of any age, including existing employees, who are looking to pursue qualifications in architecture.



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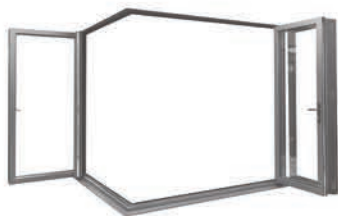


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Weston-Super-Mare's Revo Kitchen & Terrace Restaurant has received glowing praise from customers for its alfresco dining.

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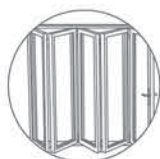
The seafront position means that the restaurant is often subject to severe atmospheric conditions. To ensure long-lasting protection all the aluminium frames were Marine Grade anodised. The doors are double glazed throughout, achieving a U-Value of 1.6W/m²K and have high-level PAS24 security with multipoint locking systems.

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REBRANDING

Herts-based data centre specialist practice rebrands as studioNWA

Architectural practice NWA has revealed its rebrand to studioNWA, reflecting the company's "growth and evolution" over the years. As well as the shift in name, the company also has a new logo and website design to "complete the contemporary refresh to a modern, confident, and experienced brand," said the practice.

Originally founded by Nicholas Webb in 2002, the practice has been at the forefront of data centre design over the subsequent two decades. "The practice's team has a knowledge of the data centre sector that is second to none and the firm works alongside data clients to produce cutting-edge designs for projects in the UK, Europe and Asia," the firm commented.

The workforce of studioNWA "share a collaborative approach that helps cross-functional learning." The practice is also proud to comprise staff from around the world, "fully understanding that having a diverse team brings wider perspectives to projects."



It added: "Sustainability is integral to studioNWA, adding value and demonstrating a commitment to tackling climate change and caring for the communities it operates in." Its ISO 14001 certification, BREEAM / LEED knowledge,



and carbon management tools "provide a solid base from which to advise clients on the most sustainable options." The practice said it is also "committed to forming partnerships and sharing research and knowledge more widely."

RESIDENTIAL

Historic Nottingham cinema to be converted into city centre apartments

Designed by local firm CBP architects, the Grade II-listed Picture House building in Long Row, Nottingham will be given a new lease of life after receiving planning permission for its conversion into nine, one and two-bedroom flats at the heart of the city – with the help of heritage specialists at Nottingham planning consultancy Marrons.

Market Square Developments will be funding the conversion of the self-contained flats, which will include subdivision of the old main auditorium, the conversion of the first, second and third floors of the front section of the

building, and the conversion of the original projection room and reel store.

Previously dubbed the "most luxurious cinema in Nottingham" the building – which ceased being a cinema in 1930 – has seen a variety of occupants, including an arcade, a nightclub, and various retailers. A betting shop currently occupies the ground floor, while the upper floors have lain empty and unused for the past decade.

The apartments are due to commence refurbishment this month and will be brought to the market to sell in January 2024.



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APPOINTMENTS

DLA architecture announces senior promotions in Leeds and London

DLA Architecture has announced two senior promotions in Leeds and London.

Iain Jones has been promoted to become associate director in the Leeds office. Iain, who sits on the CIAT national project taskforce reviewing and commenting on proposed new legislation, has been with DLA for over 18 years. He is an integral part of the team delivering technical excellence across high-profile projects that have included Trinity Walk in Wakefield, Headingley Stadium, Vanguarde in York, Central Square Leeds, and more recently, Oak House in Leeds.

DLA has also promoted Mitesh Dabasia to become associate in the London office. Dabasia joined the practice in 2015 and has since played a vital role in the success of the commercial office team, particularly within complex retrofit projects. He has overseen the development of Portsoken House, Nash House, and most recently 26 St James's Square and is also providing technical



advice on refurbishments for 21-25 Burton Place for Berkeley Square Holdings, St Bride's House on Fleet Street, and the £15m Kirby Street for Morgan Capital.

The announcement follows a series of promotions made earlier this year with Laura McGregor becoming an associate in Leeds and Andrew Salt an associate in Manchester. Adam Atraktzi, Alejandro Carrajo and Charles Jabre were also promoted to become associates in the London studio.

Chris Levett, group board director



and head of the London studio at DLA Architecture, said: "These well-earned promotions are a key part of our future success with each one bringing a strong skill set that will help shape the future of the company in years to come."

DLA Architecture has been established for more than 40 years and employs 91 architectural staff across its offices in Leeds, Manchester, and London. Its expertise covers a broad range of sectors including learning, sport, industry, care, workplace, housing, retail, conservation and re-use.

ANNIVERSARY

DMWR Architects celebrates practice's 60th anniversary

Founded in 1963 by Douglas Haig Marriott, Leonard Phillip Worby and Derek Leonard Robinson, DMWR has now grown significantly with three studios in London, Manchester and Hertfordshire and a team of over 65 working across eight sectors.

"Known for its strong reputation in architectural design and delivery, the practice has been involved in some iconic buildings over the past six decades," the firm said. From the 35 storey Millbank Tower that kickstarted the practice in 1963 (at the time was the tallest building in London, surpassing St Paul's Cathedral by seven metres) to the International Maritime Organisation HQ on Albert

Embankment opened by Queen Elizabeth II. Other memorable buildings include the twin towers of Pan Peninsula in London's Millharbour to the 100,000 m² Columbus Tower in West India Quay; Moonraker building for Unite, Sainsbury's Whitechapel and Holloway Road and Barbican Conservatory.

Barry Harper-Smith, managing director of DMWR Architects comments, "Reaching this significant milestone gives us a chance to look back and reflect on the fantastic work we have delivered over the decades as a team and to also celebrate and look forward to the exciting projects we are working on as we continue to grow."



John Neale, senior director of DMWR Architects, joined the practice in 1986 as a Part 2 Architecture Graduate. He comments, "Over the past 60 years we have seen many changes in our business with a steady growth into new sectors including high rise mixed use development, PSBA, BTR and industrial."



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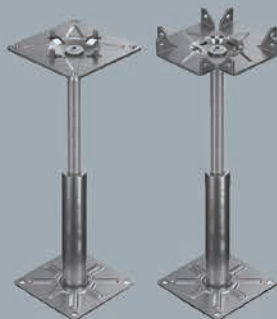
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PRACTICE PROFILE

Space Group

This Newcastle-based practice has built a reputation around the development of digital design services alongside project commissions, with a particular focus on harnessing the benefits of BIM. CEO Rob Charlton explains its ethos to Laura Shadwell

North east based architectural practice Space Group was founded in 1957 in Newcastle upon Tyne, under the name Waring and Netts Partnership. Quick to move with the technological times, the firm has evolved and innovated over the last 30 years to now offer BIM services and advice, as well as continuing to design projects worldwide.

After working as an architectural practice only for many years, and changing their name to Space Architects in the process, increases in workload meant a need to expand but also diversify. A shortage of architects in the early 2000s led the practice to invest in design software to improve efficiency, and in 2002 they committed to going with Revit BIM software – which had just been bought by Autodesk at that juncture.

With BIM fully adopted throughout the practice, clients became more and more interested in learning about the project design co-ordination software, and the benefits of integrating it into their businesses. In response to the growing demand for digital support among clients, and aware of the increase in design challenges facing the sector, Rob co-founded a dedicated consultancy, which he named BIM.Technologies, in 2011.

At a similar point in time, the practice – now retitled Space Group – created an in-house library of BIM objects to populate the 3D models. It quickly became apparent that there was potential for adapting this as a commercial platform, and Rob and fellow founding director Adam Ward launched bimstore in 2011, alongside BIM.Technologies.

As time went on, and BIM was becoming more regularly used within the industry, great designs were being produced using the software containing a lot of data that could be of use in other projects. Identifying a lack of a place to access this data, post projects' completion, Space Group developed a 'digital viewer' – a digital representation of a physical environment that collects real time data – and this was later launched as a 'digital twin' two years ago, called Twinview.

Under the Space Group umbrella are four brands, which are closely connected and share the same strapline, "Making Buildings Better." All four (Space Architects, BIM technologies, bimstore and Twinview), focus on using technology to innovate and improve outcomes, as Rob Charlton explains. "We see the challenges of the industry as opportunities. That's the way we've always seen it – to help our clients address those issues."

Each of the four brands continue to evolve and innovate within distinct strategies. Space Architects' key goal is to standardise processes for their clients to reduce cost risk; BIM technologies is



"If you're trying to minimise carbon then the best building for our clients is the one they've already got"

Rob Charlton

expanding into the smart building sector; bimstore is focused on building safety and how specifiers can understand manufacturers' embodied carbon information. Twinview is more about people understanding the operational side of buildings on a global basis.

People & planet first

Rob states that Space's focus as a business is "to make a positive impact on the planet and the communities in which we work," and this is practically borne out in projects, but also in how the business operates.

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Space Group was recently awarded B Corp certification in recognition of their social and environmental impact. “The certification aligned with a lot of the things we were already doing as a business,” explains Rob. “The award has been a great way for staff and clients alike to see how important issues relating to the impact on the planet are to us as an organisation.”

Employee engagement specialist firm Best Companies have also awarded Space Group a two star accreditation because of their ‘outstanding’ commitment to workplace engagement.

Identifying projects

In its early days in the 60s, the practice began with commissions in the social housing and civic buildings sectors. Over the years Space has diversified – in addition to working on a number of theatre refurbishments, the practice has identified one of its key strengths as working with schools and universities.

A couple of stand-out examples include the Farrell Centre Project for Newcastle University, where the practice reimaged a listed former department store as an ‘urban room’ – a cross between an art gallery, workspace and lecture room for the community to learn about their built environment. Driven by a £1m donation from acclaimed architect-planner Sir Terry Farrell, the centre is dedicated to “debating the future of architecture and cities.” With additional funding from the university, this new venue has been created on a key gateway into the city.

At Sunderland University, Space Architects is doing a lot of work across multiple sites to help them rationalise their estate; “They’re doing a lot of work in their medical school,” adds Rob, with one project, the Cadaveric Centre for anatomical research, having just been completed by the practice.

The practice also does a lot of work within the public sector, particularly refurbishment and listed buildings. They have a number of regular clients – including a national retailer – and provide technical advice to a couple of national housebuilders. Rob is keen to stress that as an architectural practice however they are “keen on serving their local communities.”

Approximately 80% of Space’s work comes from existing clients, with the remaining 20% given over to new work that particularly interests them. “We’re very focused on doing projects we enjoy and that inspire our team. We have got some great clients that we’ve worked with for years, and they’ve become friends; so they’re our priority,” comments Rob.

In recent years, Space’s design ‘signature’ has evolved to increasingly focus around “creative reuse,” an approach which embodies their commitment to the planet; “if you’re trying to minimise carbon then the best building for our clients is the one they’ve already got,” comments Rob. The practice is also proud of its “design optimisation approach,” meaning buildings can be standardised, making the process more efficient and “removing a lot of the waste,” says Rob. This is particularly applicable to working on school projects, he says, as the Department of Education (DfE) “know exactly what they want.”

Towards net zero

The business as a whole has set itself a target of being carbon neutral by the end of 2023 and zero carbon by 2030. Having tried to reduce their carbon use for many years, the new goal of being carbon neutral has been relatively easy; “you just spend more money on carbon credits,” explains Rob. However they have tried



to do it properly without cutting corners; “we’ve tried to keep our carbon usage down, as well as offsetting.” Although the business is keen to support local new forest growth in the UK, Space Group admits this is a long-term aim which will take years to have any impact on the environment, so cannot be counted as a true ‘carbon credit.’ Instead, it supports the Ugandan forestry approach – which has an “immediate impact,” as much of the funding is used for sustaining the existing trees.

Getting the practice to zero carbon by 2030 “is where it gets really tough,” comments Rob. “Ultimately, for us that’ll mean generating raw electricity; but the tough area is working with our supply chain to deliver ‘scope three’ reductions, in which we use science-based targets to measure our carbon usage,” Rob continues.

Rob outlines some of the sustainability challenges that the practice has faced in projects, as well as the solutions it has identified. He explains that they are trying to use more timber in their projects. “Reducing concrete and steel has a massive impact on your embodied carbon footprint.”

The practice’s Twinview platform has identified that approximately “29% of energy use is carbon in operation,” he asserts. Rob admits that designers (themselves included) are often guilty of not fully understanding the impact that their designs have on day to day energy usage, and the organisation is investing in research into this area.

As part of being a socially responsible organisation, Space Group also hosts an annual conference called _shift, for clients, partners and design teams wanting to address the building sector’s role in reducing emissions and combating climate change.

Future goals

The practice as a whole will continue to focus its energies on mitigating the results of global warming, with the big focus around reducing embodied carbon within the business itself. It harnesses the potential of Twinview to help clients find ways to reuse the built resources they have.

As constructing a building from scratch is resource-heavy, Rob reiterates the resulting – and challenging – proposition for architects to offer their clients: “Is there really a need for a new building?” Only once this has been interrogated and retrofitting an existing building isn’t an option, should building new be pursued, says Space Group. And that should be a building that is as sustainable as possible, to help futureproof the planet. ■



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VIEW POINT



Oliver Lowrie, director and co-founder at Ackroyd Lowrie shares how his firm is championing new talent, and why greater diversity and inclusivity is essential for safeguarding the future of the industry

At Ackroyd Lowrie, we are building a company to design the cities of the future. Architecture has the capacity to impact everyone, so we believe it should be as open and inclusive as possible. To achieve this, we focus on people and creating a workforce with a diverse background, ideally comprising those who grew up in inner city environments, who we can nurture and educate into outstanding designers with their own confidence and passion. However, in our experience, there are two significant barriers into the profession.

The first is that the UK's architectural education system is very long, expensive, and does not necessarily equip candidates with the skills required to be useful to a business from day one.

The second is a matter of visibility. Architecture is not taught in schools, and we find when we go into schools in our local area of Tower Hamlets and Hackney, it's not seen as an obvious career route for young people. To design the cities of the future, we need people from all walks of life. Diversity and representation is vital. Young people need to know what careers are viable; they can't be what they can't see.

Inspiration behind AL Academy

Inspired by the academy Sir Alex Ferguson built at Manchester United, my co-director Jon Ackroyd and I decided to establish a similar model to find and develop the Ryan Giggs, Gary Neville and David Beckham of the architectural world!

The AL Academy firstly aimed to tackle the challenges of employing graduates straight out of university. Via an internal online portal, new (and existing) members of staff can access educational videos, lectures, design principles and other



Students from Cardinal Pole Catholic School, Hackney at an AL Academy workshop

resources to help onboarding and encourage upskilling. This can be accessed remotely, at any time, which was particularly useful during the lockdowns when face-to-face interaction was restricted.

The skills matrix

The portal contains a skills matrix where employees rate their individual skills and identify any knowledge gaps. This has multiple benefits. Instead of becoming stressed and anxious about what is expected of them, employees use the matrix to gain a clear understanding of what skills they need for their current role, and the experience required for progression, which is mapped in individually-tailored career plans. From a business perspective,

it also ensures any shortages are correctly identified and managed.

Our company manifesto is then informed by the skills matrix and gives young designers the confidence and tools to design from their own perspective and passion, but with a shared company vision of what cities of the future should be like.

We quickly realised the real bonus is that this system can be applied to anybody, meaning it's enabled us to develop a second strand to the AL Academy.

Our outreach programme

This allows us to work with local schools and charities outside of the traditional architectural education system to break down barriers and positively

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New City College students Zaineb and Aaliyah on placement at the AL Academy

promote architecture as a viable career. It was designed to turn work experience opportunities into paid placements and then into ongoing careers. Through consultation with neighbouring schools and charities including the Jason Roberts Foundation, Sounds Like Chaos Youth Theatre, Social Mobility Foundation and New City

College, we devised co-design workshops that we give every month in schools around the Borough, followed by studio placements for those who want to become involved. These not only introduce young people to what a career in architecture is all about but help refine skills, boost confidence and enable greater understanding of the

different routes into the profession.

Our first candidate entered the Academy in July 2022, and places are fully booked until the end of 2023. The positive feedback we've had from staff and students has been inspiring, particularly where our college contacts have confirmed students who've completed sessions now produce coursework with a more sophisticated outcome. We're thrilled to be making such a difference to young people's lives.

Looking forward

We're aware that our local schools and colleges are sharing the AL Academy model to demonstrate to other businesses how they can invest in future generations. This just shows how our pioneering approach was the right thing to do, and will ultimately unlock the diversity and talent we need to create the buildings and cityscapes that are inclusive for all.

To apply or learn more about the AL Academy, contact Joe Maguire or Laurence Richards: www.ackroydlowrie.com; IG: @ackroydlowrie; tel 0203 770 9780.

Oliver Lowrie is director and co-founder at Ackroyd Lowrie



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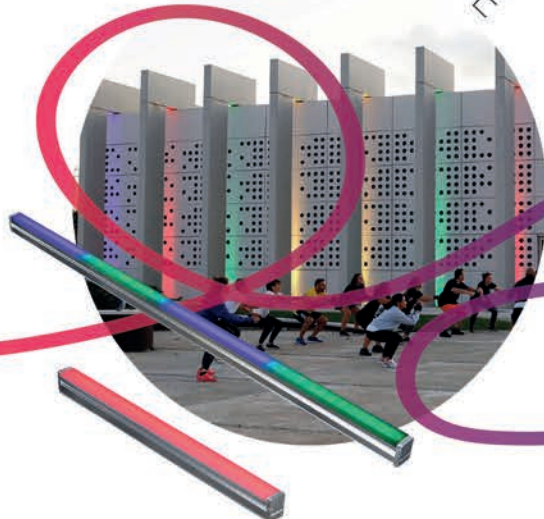
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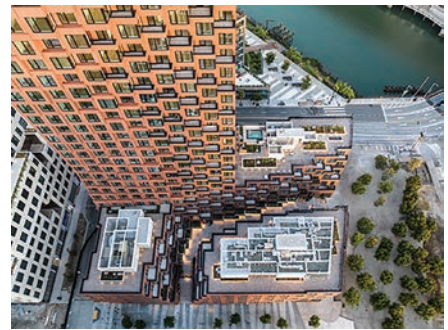
XI'AN LOVI CENTER, CHINA AEDAS

Located in Xi'an, the Aedas-designed Xi'an Lovi Center, which opened last month, consists of a shopping mall, office and hotel towers. Designed to be a "vibrant mixed-use destination," Lovi Center has become a "unique retail-recreational attraction through the hybrid of public space and greenery," said the architects.

Envisioned as a "garden city," Lovi Center is filled with "100% natural greenery and flowers through podiums, gardens and green belts." A "cascading" funnel is designed in the atrium, serving as "a canvas for a 360° light show and uniting disparate elements on each floor." The project was designed by Aedas global design principals Christine Lam and David Clayton.



Images © Jason O'Rear



THE CANYON, SAN FRANCISCO MVRDV

The Canyon – a 23 storey mixed-use building designed by MVRDV – was officially opened on 21 June. The project was built as part of a masterplan that transforms a windswept parking lot on San Francisco's waterfront into a new "sustainable neighbourhood," known as Mission Rock. With its jagged walls and a landscaped, publicly accessible "canyon" providing a route through the site, the building is inspired in part by San Francisco's topography.

Located opposite the Oracle Park stadium, The Canyon is one of four buildings in the first phase. These buildings were designed collaboratively by four design firms – Studio Gang, Henning Larsen, and WorkAC and MVRDV – to create designs which worked "seamlessly together while each having a distinct appearance."

The building comprises a five-storey plinth, topped by a 73 metre tower in the western corner of the plot. The ground level hosts small-scale shops and restaurants, and is topped by two floors of offices, and 283 apartments.

The "canyon" itself cuts diagonally through the building's plinth, connecting to the offices and to shared amenities for residents. Its walls plus those of the eastern side of the tower have step-backs and overhangs giving the impression of steep rocky walls, and create bay windows and small balconies for 40 apartments.

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Quantum Flooring Solutions is delighted to announce that its Detailing Flooring Finishes CPD has been updated for 2023. The new version of the popular presentation has been fully accredited as a RIBA Core Curriculum CPD, offering double CPD points. This seminar

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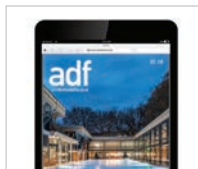
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Solutions for Compliance: Part L and beyond

On 24 May 2023, at London's Building Centre, netMAGmedia staged its first construction round table bringing architects, builders and suppliers together to look at the specification challenges posed by Part L and the Future Homes Standard. It was sponsored by glazing, bifold and sliding doors manufacturer IDSystems, thermal breaks manufacturer Schöck, and PIR insulation manufacturer Recticel. Here James Parker, *ADF* editor and chair of the event, reports on the highlights of the discussion.

ROUND TABLE ATTENDEES

- **Shikha Bhardwaj**, lead sustainability designer, Hawkins\Brown architects
- **Chris Carr**, managing director, Carr and Carr Builders / vice president, Federation of Master Builders
- **Chris Perry**, senior architect, TODD Architects
- **Tzeh Bin Cheong**, technical director and residential lead, Shephard Epstein Hunter architects
- **David Clarke**, marketing manager, IDSystems
- **Bill Hayward**, sales director, Schöck
- **Simon Blackham**, technical manager UK and Ireland, Recticel

We staged our first industry round table a month before the legal requirement was brought in for all new dwellings to comply with the new Part L of the Building Regulations, which requires them to produce 31% fewer carbon emissions than the previous Regs. This is a step towards the 2025 Future Homes Standard, which will require a much more demanding 75%-80% cut in emissions, meaning major changes to both building fabric, design and integration of renewables and alternatives to fossil fuels.

Our timely event saw representatives from architecture and housebuilding sharing their current issues with Part L, with the sponsors contributing valuable insights on the benefits as well as difficulties being experienced in complying with the requirements. There were also some revealing comments on attendees' perception of the Future Homes Standard, in terms of both the timeline and the industry's remaining challenges. We were delighted to have three knowledgeable architects on board from high profile practices – Hawkins\Brown, TODD Architects, and Shephard Epstein Hunter.

As well as Part L, the updated Part F on ventilation, and the new Part O came under scrutiny, and the required trade offs in order to achieve one standard without failing on the other; increasing U-values generally means treading a narrow path to avoid excessive overheating. The event also saw discussions around challenges in terms of future homes' aesthetics, while the planning system remains rigid.

Building Insights LIVE offered an unusual opportunity to host a candid discussion around compliance with the new Regs, with specifiers and key suppliers exploring how to harness different aspects of building fabric, as the industry works toward the new FEES fabric standard. The discussion also took data collected from our research in our Industry Viewfinder white papers as a springboard for elements of the conversation.

Everyone involved hailed the first instalment as a great success, and we will be holding more in the future, with the next addressing Solutions for Stormwater Management in October.





BUILDING INDUSTRY INSIGHT

(L-R) David Clarke of IDSsystems, Tzeh Bin Cheong of Shephard Epstein Hunter, Bill Hayward of Schöck, and Chris Carr of Carr and Carr Builders, discuss Part L in depth
Photos © Tom Boddy

Cutting your losses

The first question posed to the panel was whether cutting 31% of emissions as a result of Part L 2021 had been a major headache, in the context of current pressures such as skills, materials supply chain issues, and inflation.

How had our architects found addressing the required 31% cut in emissions in residential schemes so far under Part L? Shikha Bhardwaj from Hawkins\Brown set the bar high, stating that the practice saw net zero carbon “as a starting point.” She said that in projects it was a discussion with clients around whether Passivhaus levels of performance were achievable or not, but that there was “a lack of understanding of the different parameters,” such as around U-values and thermal bridging.

Bhardwaj added: “It’s very easy to put a figure down and say this is our Passivhaus target, but how does that actually translate into construction? There’s a lot of aspiration to follow Passivhaus, but it comes with a lot of tests at every layer, and the normal way of construction doesn’t do that.”

Chris Perry of TODD Architects told the group that – similarly to Hawkins\Brown – working in London residential schemes has meant that his practice has already been designing to a level of performance well beyond that of Part L, as the London Plan requires all new homes to be at a ‘net zero’ level. He asserted that it was normally possible to get to “around 60% of agreement” using fabric improvements, and then “top the rest up with PVs,” and so believed that the 31% cut in emissions in Part L is “easily achieved, at least in theoretical design terms.”

Chris Perry added that “it’s when you get to site that you hit problems,” adding that most of the headaches he had experienced “had come from suppliers, Part O (on overheating, which is naturally impacted by a more energy efficient fabric), and embodied carbon.” Embodied carbon is not explicitly covered in Part L, but reducing it is fundamental to achieving the UK’s legal commitment

to reach net zero carbon emissions in 2050.

Tzeh Bin Cheong from Shephard Epstein Hunter alluded to issues experienced on a couple of current London residential projects, where wall thicknesses and other fabric measures had been upped significantly to deliver the London Plan requirements of 35% lower emissions than Part L. He agreed with Chris Perry that the trade-offs between Part L’s stipulations on U-values and the resultant impact on overheating and Part O was “where there was a problem.” He gave the example of a new build residential scheme in Redbridge inherited from another architect, which had gained planning permission but was now being redesigned with smaller windows in order to comply with both the updated Parts L and the new Part O.

Housebuilder Chris Carr asserted that his firm was struggling with the fact that they were “trying to build with materials that were not fit for purpose in some cases.” He explained further, saying that “materials quality and design have not improved with the policy,” i.e. the new central drive to produce much more energy-efficient homes than the industry has been accustomed to.

This issue of a lack of rigour when it comes to skill levels among subcontractors feeds directly into the performance gap between design and build. “Unless we engage them, we are going to have a problem,” he said.

The fabric of society

We asked our attendees to submit comments or questions for discussion during the round table. Simon Blackham from PIR insulation firm Recticel’s ‘starter for 10’ was that fabric-first “should be the default starting-point; a back-to-basics approach that gives a robust, reliable platform for renewables.” However, would improvements to the building fabric alone be a realistic solution for the Part L 2021 requirements, or was including renewables a given?

A 2022 BCIS survey of housebuilders found that nearly 45%

were using air source heat pumps within their solution to meet Part L, as against 30% gas boilers and PV, with the remainder selecting a hybrid approach. The heat pumps lobby assert that the required efficiencies will only be realised with a low U-value fabric.

Windows, insulation, and thermal breaks – all fundamental components of that fabric – were all represented by our three sponsors. David Clarke at IDSystems admitted that across the glazing industry generally, “products are designed to meet the regulations, not to go far in excess,” which could raise issues around Future Homes Standard compliance. He added that the “historic” tendency of choosing the most cost-effective product “is now having to change.”

Bhardwaj said that architects should be looking at thermal bridging, U-values and window ratios anyway, “as first principles of passive design.” Chris Carr said that installation was the key, and when he was at the Zero Carbon Hub, it identified that thermal bridging was “the one thing that was failing dramatically” in terms of as-built performance.

Regarding poor installation, Chris Perry said that “it is the most frustrating thing when you go to site and can see gaps between insulation sections,” adding “it makes it all a bit pointless.” Carr said that his housebuilding firm was now getting joiners to install PIR insulation, as bricklayers “just want to lay bricks and blocks.”

Blackham echoed David Clarke of IDSystems, saying that delays to getting products tested was hampering results across the sector on energy efficiency. As well as the limited number of testing sites, he said “we’ve got the June 2025 deadline of CE marking no longer being recognised,” although the new UKCA mark “was exactly the same as a CE mark.” David Clarke agreed that the lack of testing facilities was also causing major challenges for firms looking to supply the ‘net zero ready’ homes required by the 2025 Future Homes Standard.

Responding to demand

Chris Carr said as an SME housebuilder he took a slightly different approach to the ‘fabric first’ mantra – “We’ve gone design first, fabric second,” in the interests of delivering what customers want. He explained: “We’re looking at building houses ‘from the inside out’ – we need to know what we can do inside, including in terms of floor space, before we look at the facade.” He mentioned an ongoing development which had outline planning for 240 homes but his firm is looking to build 137 in order to offer the space that customers want.

Shikha Bhardwaj from Hawkins\Brown said that one of the remaining issues was that the housing sector is talking about U-values, net zero and PVs, “but is not actually talking about the comfort of the occupants, which is absolutely essential.” She said that just focusing on heat pumps was counterproductive to creating a product that consumers will buy into: “They are part of the strategy, not the strategy, and step one is to better understand what the occupants want.”

The cost of Part L & zero carbon

In our 2022 Industry Viewfinder audience survey conducted by Housebuilder and Developer magazine on Part L, 65% of respondents thought that added cost was the biggest challenge, and the estimated average £10,000 extra per unit would be passed on to customers by 77% of respondents. Chris Carr said that the cost increase would actually be 10% per house for his firm (around



“It’s very easy to put a figure down and say this is our Passivhaus target, but how does that actually translate into construction?”

Shikha Bhardwaj, Hawkins\Brown

£30K-£40K), which is much more than estimates which have put it as low as 3.6%.

The quality of installation is clearly at the core of ensuring that fabric measures have the desired result, particularly in terms of customer confidence, which was damaged again following botched Green Deal installations. Simon Blackham said that in order to make things easier for installers, Recticel introduced a tongue-and-groove full-fill PIR board solution which has become a major part of its domestic business. It is designed to be simply installed in narrower cavities than would normally be required to achieve that U-value level.

Chris Perry pointed towards the Future Homes Standard and the likely cost uplift of making ‘net zero’ homes, saying his research had found that it was “around 15-20%” currently. In addition, research has shown that homeowners “are willing to pay 10% more for a zero carbon home,” and “the value it adds is really more than that.” He added: “Imagine we were in a tech industry, there’d be so much development into reducing the costs, because it’s something people want and are willing to pay for.”

Chris Carr however said that more of his customers needed to be persuaded, and David Clarke of IDSystems cautioned that for self-builders, “if you present them with the more expensive thermally efficient option and a bog standard one that meets requirements, unless they are going for Passivhaus they’ll find an argument to go for the cheaper option.”

Part L vs. Part O

Shepherd Epstein Hunter’s Tzeh Bin Cheong reiterated that although architects were keen to focus on orientation and passive approaches as part of addressing Part L, Part O was where the major issues were arising. “We need to consider external noise and pollutants,” he said, particularly concerning urban sites. He added: “When there’s a noise issue or pollution, we tend to say ‘these are non-opening windows,’ but Shikha Bhardwaj pointed to cleaner air in future with the exponential growth of EV usage.

She also mentioned that the industry “needed to have a



EXPLORING THE ISSUES

There was consensus around the importance of combining energy efficiency with environmental quality, but also on the likelihood of a delay to the Future Homes Standard

conversation about internal heights, as we end up doing designs for 2.5 metres and these heat up quickly.” She added that it’s “a balance between comfort, carbon, energy and what the developer wants.”

The Standard Assessment Procedure (SAP) used by Building Control, and its associated challenges, came up several times during the discussion. This included when Chris Perry said that an unfortunate side-effect of the need to balance policy across various building typologies was making SAP “so opaque,” as a result of “trying to be very flexible.”

Bhardwaj added that her firm worked closely with energy consultants on projects to “find out whether the energy figure they were aiming at is sensible.” She explained further that “In SAP, you can only benefit from a certain U-value up to a certain point; after that it doesn’t make any difference.”

IDSystems mainly works in extensions to domestic properties, and David Clarke submitted a question for discussion, namely ‘where does the balance lie between glazing performance and appearance that is going to be necessary for Part L compliance?’ He told the group that while his customers “have got used to seeing inside-out living and floor to ceiling windows, we know that is not necessarily going to be achievable.”

Bin from Shephard Epstein Hunter pithily responded: “Our energy consultants keep telling us that anything below the waist in terms of glazing is a waste.” Chris Perry asserted that “the only way of achieving the balance between Part L and Part O, especially with the Future Homes Standard, is modelling and testing.”

He said that an MEP engineer has to be involved “right from the start; the very big housebuilders are already doing this, but at the smaller scale it hasn’t got through.” Shikha added that such modelling data would also be useful for design practices to run in future developments.

Control your emotions: planners & Building Control

Chris Carr suggested that Building Control should be brought into pre-application meetings to help get the balance right between the different standards’ demands: “Planners aren’t interested in how it physically works – you have to educate them on why we are doing certain things that affect the look, such as why we can’t put PVs on the rear of all the properties.”

Shikha Bhardwaj said she believed that planners “needed to change their mindset on how ‘ugly’ a zero carbon home will be.” She added that another frustration with planning teams was that “there’s nobody in the meeting to talk about sustainability.” Chris Perry concurred: “They always say it’s key, central, etc, but they never actually discuss it.”

Bill Hayward added that there was something of a ‘not invented here’ syndrome present: “They need to be prepared to let go of what they know, if it’s a new technology you have to do so much work to get any agreement.” Bhardwaj added that a “quick fix” would be to “hire an external consultant to be in the meetings; there are so many experts out there.”

Looking to the Future (Homes Standard)

The second session of the round table moved onto an attempt to see into the not-too-distant future, namely 2025, when the industry will be required to take a massive jump to produce ‘net zero ready’ homes, in accordance with the Future Homes Standard (FHS).

When it comes to windows, David Clarke of IDSystems candidly admitted that if triple glazing would be required to meet the FHS, some of their current window systems would be “obsolete.” Chris Perry pointed out a further issue around triple glazing in that it significantly adds to a project’s embodied carbon.

Clarke added that with budgets normally under pressure in one-off house projects, it was difficult to persuade homeowners



Housebuilder Chris Carr said Building Control should be brought into planning meetings “because planners aren’t interested in how it physically works”

to specify windows ‘future-proofed’ against the Future Homes Standard. “If they’ve got to make a decision between a product that is going to meet the new Building Regs but also potentially what is required with Future Homes, or saving a bit of money, it’s very difficult when it’s something they’re not necessarily going to immediately see the benefit of.”

However, one area where the FHS would lead to a real beneficial change in specification, according to Bill Hayward, was that products would be treated “as part of a system rather than individually. At the moment, you solve one problem, and create another one,” he said. David Clarke concurred, adding: “It’s counterproductive to just aim for that U-value figure, because you may not be taking into account that if you went slightly better, you impact the whole fabric.”

The BSI has found that thermal bridging can lead to up to 30% of heat losses, but there were design challenges. Tzeh Bin Cheong from Shepherd Epstein Hunter said that the practice “did not yet understand the linear cold bridging issue” which has been raised around the Future Homes Standard, when “the larger the volume of the wall insulation, the higher the chance of condensation.”

Shikha mentioned that Hawkins\Brown is upskilling staff on thermal bridging to investigate some of the mysteries including around the software, and Chris Perry cautioned that “massive cavities” can result in needing bespoke ties and other structures which increase embodied carbon.

Chris Carr expressed concern that in-demand bungalow designs were unlikely to be achievable under the FHS, but advocated that brick slips could produce bigger cavities without losing floor area. He’s lobbying the Government to push back the FHS deadline by

at least two years, due to concerns from SMEs around obtaining materials in competition with volume housebuilders.

However, for suppliers there are obvious benefits to the jump in performance required: David Clarke said that what were potentially “overly efficient products” which have been on the shelf are now seeing the light of day.

Air source heat pumps are likely to be the de facto space heating solution for the FHS in 2025, as gas is phased out. However, Carr feared that the need to provide photo evidence of installation effectiveness might be the “biggest issue” for housebuilders; “you need to get ducting spot on, but on a building site, it’s whoever’s there first that takes priority.”

Simon Blackham of Recticel said the main issues for delivering the Future Homes Standard were “skills,” and identifying what ‘net zero ready’ actually means. He expressed concern that progress to the Standard was “piecemeal,” and was beleaguered by the five year political cycle. He said that ‘zero bills’ houses are “where we should be going,” given the extent of the climate challenge, but our round table showed there was still a long way to travel on this road before the industry is ready to deliver such performance levels. Bill Hayward, echoing Chris Carr earlier, suggested that “maybe the answer is to reduce what we are trying to achieve; if you try to achieve too much, you end up achieving nothing. Maybe we need to break it down into smaller parts.”

One final moment of consensus around the table, among several others, was that with Government not having “made its mind up” on the way forward, the Future Homes Standard is unlikely to be implemented in 2025, though the industry may be technically able to achieve it. ■

We would like to thank our round table sponsors IDSystems, Schöck and Recticel for supporting Building Insights LIVE

RECOMMENDATIONS FROM THE ROUND TABLE

- **Shikha Bhardwaj:** “It’s looking at net zero carbon as a bigger challenge than just focusing on compliance, and instead using compliance as a layer of it, not the entire solution. And we need to focus on comfort.”
- **Chris Perry:** “It’s even more the case with Part L and Part O that the early stages of the designs are so important, and you need to have everyone on board to create something that works in a holistic way, and so you don’t come into problems later.”
- **Chris Carr:** “Planners need to work together with Building Control officers, and we need exemplars to share good practice of design and delivery. We also need to delay the Future Homes Standard by two years minimum, due to materials issues.”
- **Simon Blackham:** “There’s a need for clarity; it’s not beholden on manufacturers to approve something which we haven’t designed to be used in a certain way.”

The image shows a modern shower stall with a textured, light-colored wall. A sleek, dark-colored shower system is mounted on the wall, featuring a handheld showerhead, a control panel, and a horizontal bar. A white, rectangular shower seat is mounted on the wall, and a dark-colored, rectangular shower seat is also mounted on the wall. The floor is covered in patterned tiles.

DELABIE

Be-Line® Shower seat

DELABIE, expert in sanitary ware for public places, has launched its new **Be-Line® shower seat**, combining pleasing aesthetics and comfort.

- **Inclusive design:** sleek lines, visual contrast is suitable for all
- **Comfort:** large ergonomic seat, lift-up seat frees up space in shower
- **Removable:** easy to remove, locking system prevents theft
- **Maximum safety:** tested to over 200kg, 10-year warranty, CE marked

ROYAL LIVERPOOL UNIVERSITY
LIVERPOOL

A singular approach to care in the city

A new replacement for a 70s hospital which removed valuable parts of central Liverpool, this major new health facility for the city bridges healthcare and academia, restores urban quality, and has more ensuite single rooms than any other UK hospital. James Parker reports

The new Royal Liverpool University Hospital finally opened in October 2022, after a saga which included the demise of this PFI project's original contractor Carillion, and a consequent financial shortfall (£300m) to make. However, the result now achieved represents a major milestone for the NHS; the biggest hospital yet constructed with all of its 640 bed rooms being single and ensuite, and restores urban fabric lost during the late 20th century.

Reflecting a move in recent decades towards single bedroom provision in modern healthcare facilities, driven principally by infection control requirements but also other factors, Liverpool's new hospital is a standard bearer for the concept.

The client is Liverpool University Hospitals NHS Foundation Trust (LUHFT), which also runs Aintree University Hospital, Broadgreen Hospital and Liverpool University Dental Hospital, and was designed by NBBJ/HKS, a bespoke collaboration between the two architectural practices. The new hospital has 18 operating theatres for both inpatient and day-case surgery, and 40 critical care beds for patients in the intensive care and high dependency units. In addition, there's a substantial colocated clinical research facility, which, says

architect HKS, "will place LUHFT as a national and international leader in clinical trials and studies."

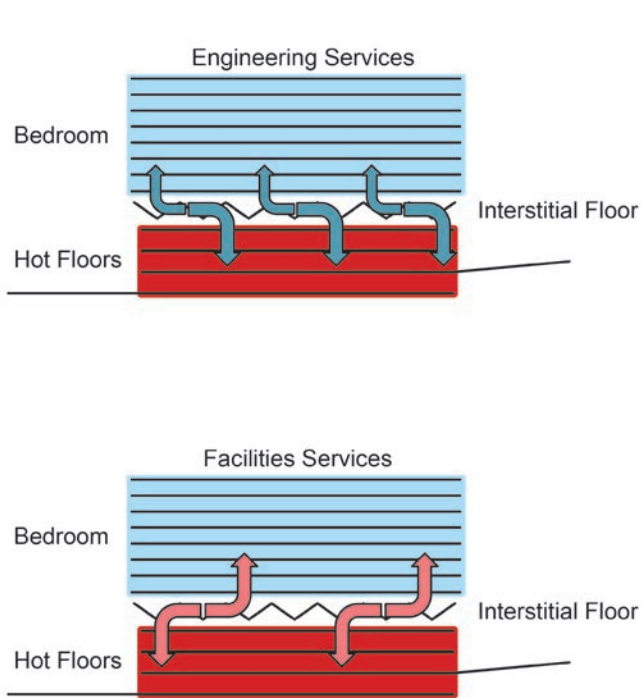
Site & response

Creating a new general hospital in a city centre location means thinking about the wider urban planning ramifications and potential benefits of such a major addition, and with the same level of rigour as the many clinical drivers involved. Liverpool, as David Lewis, partner at NBBJ, confirms, has been transformed since being the European City of Culture in 2008, making the architects' task of knitting into this new urban fabric even more critical.

The existing low-rise 1970s hospital in the centre of the old urban block, which the new unit replaces, was not an architectural response that did justice to the area, as it destroyed the historic urban density and connection to the wider city. David Lewis explains that the design strategy was to "reconnect the site back into the urban fabric," including creating a central public square which echoes Abercromby Square, a key part of the university estate located a few hundred yards to the south.

There was a further incentive to emphasise the potential landmark nature of the building, due to the fact it sits on a prime position anchoring the rest of the development of the area. This is a





11th Floor

10th Floor

9th Floor

5-8th Floors

4th Floor

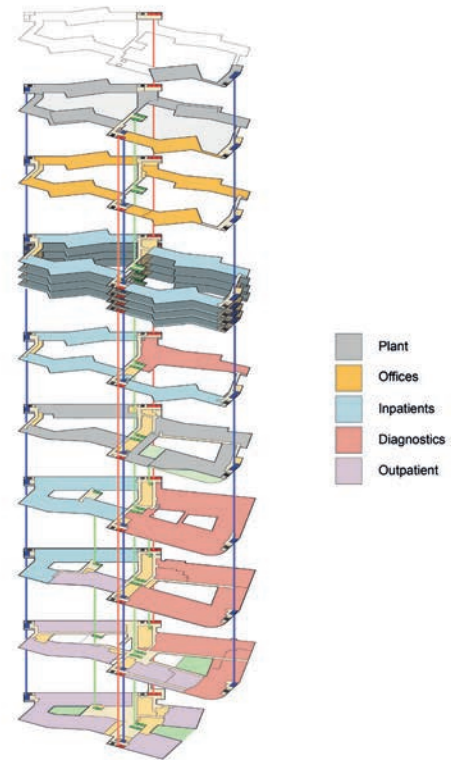
3rd Floor

2nd Floor

1st Floor

Ground Floor

Basement



INTERSTITIAL BENEFITS

The third floor is given over to plant for the hospital's M&E services, freeing up other levels and providing a divide between 'hot' outpatients/diagnostics and wards

prestigious location, north of the city centre, and close to many of the university's prominent buildings, such as those designed by Alfred Waterhouse in the late 19th century. The site, says David, is an important "entry point into the main part of the city."

The site, which slopes from west to east, was originally at the heart of a rich mix of residential properties, squares, and major civic buildings such as churches, university faculties, museums and the Royal Infirmary. However, a large part of this area was removed when the new hospital was constructed in the 1970s. "They actually completely destroyed the urban fabric," Lewis asserts. NBBJ and HKS were determined to use the opportunity to stitch back some of this urban connection with their new building, adding good quality public realm in the process. The architects designed a new urban block in effect, harnessing the potential to concentrate acute and day case healthcare alongside research and facilities management, on one site.

The low-rise 10,000 m² clinical science building (top right of plan, facing page) provides a crucial function, removing lab and office functions from the expensive acute hospital space into a separate

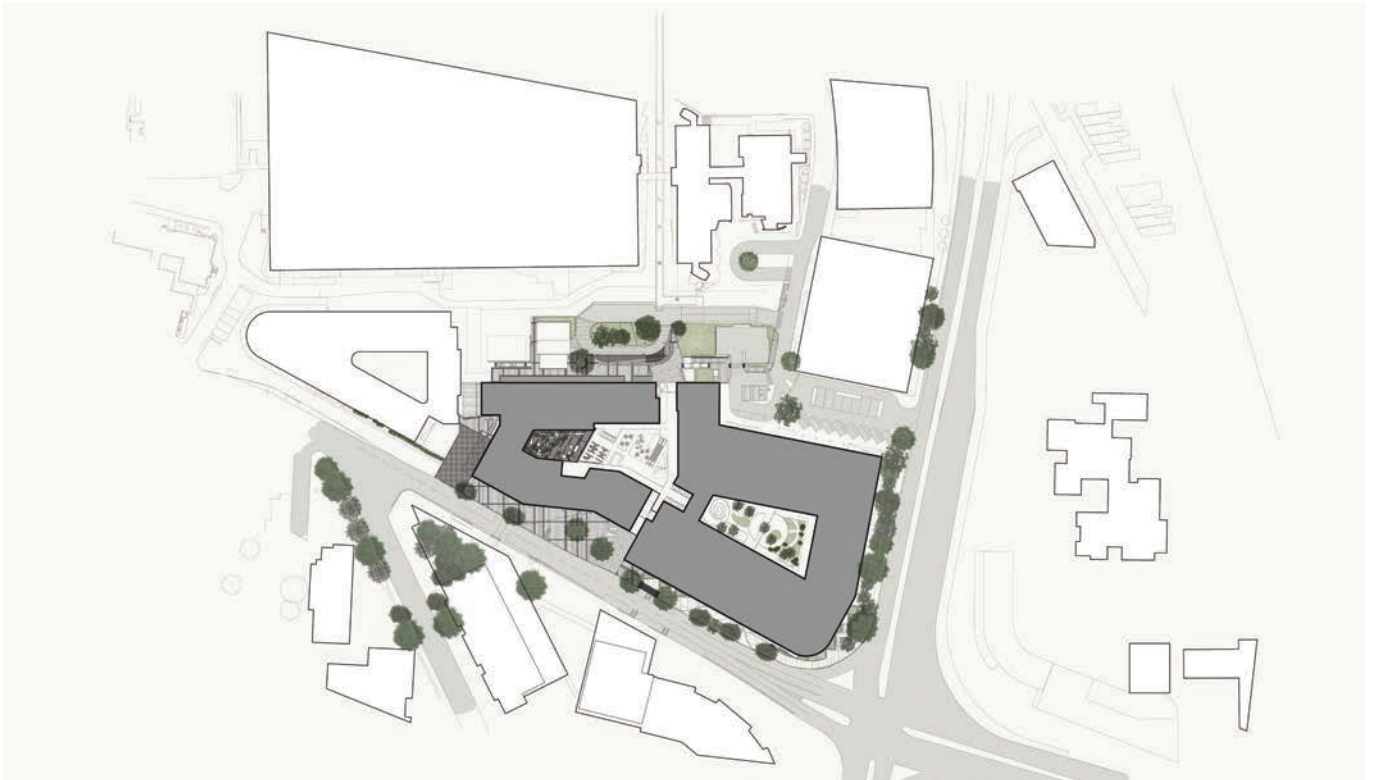
building. It also "reinforces the edge of the site," asserts Lewis. It was able to be opened earlier than the main hospital, enabling the trust to use it to support functions as it awaited the new accommodation.

Procurement & pitfalls

The architects have been through the ringer on this long and convoluted project, which has intrinsic challenges being a PFI scheme – which meant they were more distant from the client, sitting within a PFI consortium with the contractor. However during the competition phase they were able to engage with the hospital management and clinical users "quite extensively," says David Lewis. They created a range of repeatable 'standard' bedrooms which had to be "spot on" in order to be selected as preferred bidder he says, while other more utilitarian rooms such as clean and dirty rooms didn't need to be designed to such a detailed degree at that stage.

As is common in major healthcare projects, design consultation was facilitated with the clinical groups at certain stages according to the level of detail they required to input into the design, as well as the larger scale 1:500 drawings showing how departments relate to each other.

There was an understandable hiatus



between Carillion going into liquidation in 2018 and Laing O'Rourke being appointed to take over the project, when an assessment was carried out to discover "how far they had got and what there was left to do," says Lewis. He adds that because the architects had a "very good relationship with the trust," they were retained, and moved to working with the trust as client rather than Carillion.

There was another positive in this eventuality, namely that the trust was able to take a step back and revisit the brief, which had led to a 2011 design so naturally there were potential changes to make to reflect changing healthcare needs. This revisited output specification was then put out to tender, with Laing O'Rourke victorious. Jess Karsten gives some examples of the changes incorporated in the interim "Some were from changes to healthcare certification, for example our radiopharmacy department was upgraded in order to comply." The endoscopy areas were also refurbished, to further assist functionality for the client, and post-Grenfell there was an even greater focus on fire compliance.

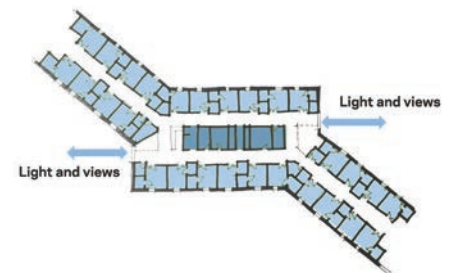
Covid also had an impact – "some thinking changed around how you isolate and separate," says Lewis. However the

ward design was already well suited to any segregation needs, assisted by the double 'cranks' which enable the wards to easily be split into three sections if needed.

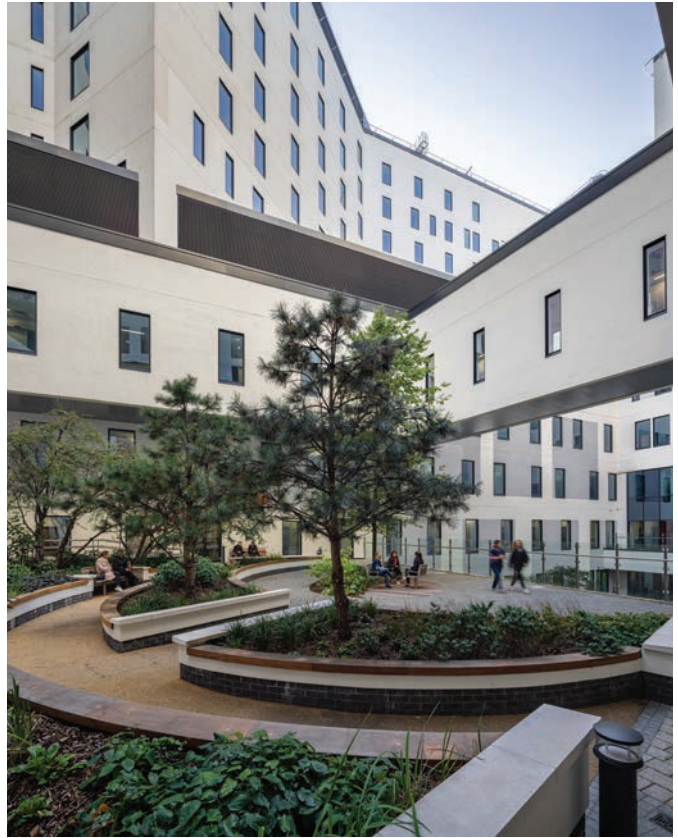
Design levels

In terms of the overall design approach, says Lewis, the architects' overall thinking about the new hospital was "to look at the whole site, not just a new building." This meant that they were able to explore a range of volumes albeit within a fairly constrained curtilage, and create a strong landmark at the south, city centre-facing and higher extremity of the site. This would be a 12-level tower, which, thanks to the site's gradient, has level access both at the Emergency department level (first floor) and at the ground floor level (where outpatients and radiology/nuclear medicine are located).

The building is shaped somewhat like two asymmetrical horseshoes on plan, and bisected by a glazed street, both sections surrounding publicly accessible courtyards. Generally, the programme is distributed with the hi-tech departments at lower levels ('hot' floors), and the ward areas on upper levels. There is a lower ground level, which also has direct external access from the south side on West Derby Street, housing



The low-rise 10,000 m² clinical science building provides a crucial function, removing lab and office functions from the expensive acute hospital space into a separate building



PORTLAND PRESENCE

The east elevations as well as the podium are clad in a Portland stone-like grey tile at lower levels, in a varied pattern to give a sense of stone cladding

ophthalmology, renal and breast units, but also spiritual care facilities and two landscaped courtyards.

As well as the Emergency department, the first floor has the facilities management distribution entrance, where all of the crucial hospital supplies arrive, located within the clinical sciences building at the north-east flank. The architects worked hard to separate the circulation flows of patients, staff and supplies into distinct pathways on this relatively tight, relatively deep-planned site. The general strategy is that patients, visitors and staff come up in lifts through the centre of the building, and there are separate pairs of lifts for facilities management at the extremities, fed from the Level 3 (non-public) floor, which bring supplies in and take waste out.

Creating external as well as internal circulation connections is critical to ensuring that healthcare planning serves patients' as well as clinicians' interests, and gives them the most efficient routes around what can be complex sites to navigate. There's a double link bridge at level three, connecting the tower with the clinical sciences building to the north end of the site. This allows the FM distribution

to 'come in at the back' of the tower, and not impede patient circulation. This is one example of how the architects have successfully managed to separate the flow of patients and the efficient distribution of supplies. The central street is enhanced by trees, and it functions somewhat as a new public space.

As Jess Karsten, of co-architect HKS, tells *ADF*, "direct links" have also been created to the new Clatterbridge Cancer Centre to the west of the site. "We have bridges at multiple levels connecting to the centre, making it very efficient for staff and patients to move between." This was also a part of the overall focus on ensuring that 'patient pathways' were made as helpful and effective as possible for patients, she says: "They were key to the overall design organisation in terms of circulation, space and ease of wayfinding, for example we located departments like ophthalmology and outpatients on the lower ground floor, to make it very easy for ambulatory patients to get in and out."

The organisation and location of theatres was also carefully considered in terms of the different "patient streams" that would be using them, for example





Emergency, inpatients or day surgery, “to maximise patient flow and make that flow efficient and easy, to help them find their way around.” The critical care level is located next to theatres and directly above Emergency, which were optimal adjacencies. Where patients are fully ambulatory such as when arriving at day surgery, “a very specific route has been planned, versus a patient who may be arriving in a wheelchair or in a bed,” she adds.

The two glazed stair cores to north and south extremities are accessible for patients, and they have been finished to a high specification to maximise the quality of the experience. The staff stair to the south corner is lit at night to try and present a welcoming face to the city.

Form

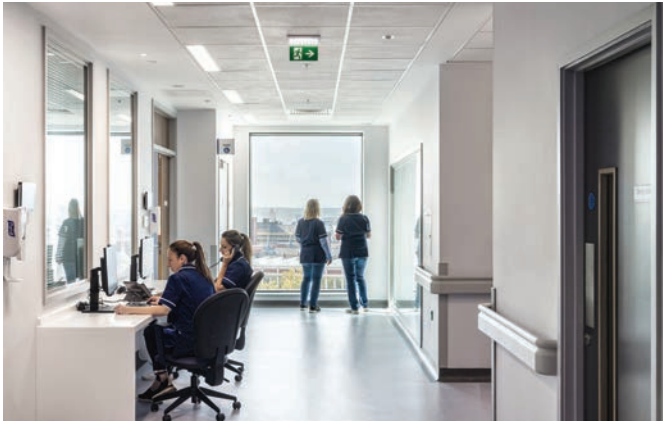
In terms of its form, the architects “wanted the building to step up” visually, says Lewis, with the eye-catching cranked medium-rise ward block still the tallest point, sitting at the bottom of the gently sloping site. “Traditionally, hospitals have a flat top, but we wanted to emphasise that corner.” The resulting form is a dynamic rectilinear statement that takes full advantage of the ‘prow’ of the site. It’s topped off by the restaurant for both staff and visitors on the 10th floor, giving diners great views of the city.

The building appears massive from the exterior, but on plan it’s revealed as fairly shallow-planned, thanks to the two large courtyards, bringing copious light into internal areas. However, cross ventilation was not possible due to the density requirements and site constraints.

As it’s a city centre site, car parking provision is relatively minimal, but there are 300 visitor spaces located under a terrace, to reduce the visual impact of parking and to prioritise pedestrian amenity. It’s located on the ‘lower entrance’ level, with the ground level entrance one floor down. This avoided any need for excavation, instead the requirement was to build a flat terrace, leading from Prescott Street to the entrance where patients can be dropped off before parking.

A single interstitial floor

The third floor is taken up by an interstitial services level, which is a tweak on the established approach of including a series of low interstitial floors to obviate suspended ceilings for maintenance in hospital



departments. Here, the architects decided to dedicate one entire level to accommodating plant such as air conditioning and medical gases, freeing up the entirety of the rest of the building.

The interstitial floor also serves to divide the ‘hot’ heavily serviced floors beneath from the wards above, and enables a different structural grid to be used above, to allow the optimum layout for both sections. This arrangement also brings maximum efficiency, for example, on level 2, which is “mainly theatres,” says Lewis, and the servicing comes from above. Without the use of the interstitial floor, stacking the wards above it and placing services in the roof would have meant bringing them down several storeys. Here they just need to descend one level. The other option of excavating a basement for services, on the rocky geology of this site, would have been cost prohibitive – this solution also offset the extra cost of creating an extra floor at level 3.

Facades

Despite the building housing a wide range of different departments, in a tower and

podium, the architects wanted to “wrap” the base so that there wasn’t too much visual distinction between the volumes. Part of creating this unity was informed by the Portland stone of many of the surrounding significant university buildings.

The podium facade as well as east elevations are in a Portland-like pale grey tile at lower levels, arranged in a varied pattern, using an algorithm to give a sense of stone cladding. By contrast the glazed ward block is curtain walling with vertical bands of aluminium in a greyer hue, and solar control glass plus integral blinds. This produces a strong verticality to add further presence to the articulated cranked volume, but also resolves the issues of potential misaligned windows from the internal arrangement dictated by clinical need.

David Lewis explains that the architects worked from the public realm materials “framework” which was developed when Liverpool was European city of culture, in choosing the facade materials for the new hospital. He explains that this “integrates it into the city much more than us choosing all our own materials, as it’s a palette that had been set out by the city itself.”



David Lewis of NBBJ asserts that using this new building as a chance to “reconnect” this part of the city has meant this project has achieved a wide range of goals beyond just healthcare provision

Wards

The architects “did a lot of work” with LUHFT to identify what bedroom design they really wanted. David Lewis says it involved questions like “do we have an inboard ensuite, do we have an outboard ensuite, is everything mirrored? He says that they “very quickly settled on what we call a nested ensuite.” This entails a square room template offering easy views in and good views out, with two ensuites ‘nested’ efficiently next to each other between each pair of rooms. “It is an optimum bedroom shape, because you don’t have an ensuite poking into it,” says Lewis, admitting that the only issue is it creates long elevations containing ‘strips’ of bedrooms.

The shape of the wards was partly driven by the solution to this potentially over-linear arrangement, with a design of two ‘wings’ of eight bedrooms flanking a ‘core’ of 12, surrounding a staff base. There are four of these wards on each level and due to the site’s shape they have slightly different dimensions on plan. One of the crucial benefits of the cranked shape is that the floor to ceiling glazing where each ward articulates provides excellent natural light into its staff base, as well as views out, and long corridors have been avoided. The repeated layouts of the ward floors allow the client to insert different functionality into some of them,” says Karsten, such as on level eight where one ward is allocated for infectious diseases; a radionuclear

department occupies one quadrant on another level.

As well as all bedrooms having copious glazing, staff have visual connection to the city and its landmarks, including the nearby Metropolitan Cathedral. Small meeting spaces have been placed at the edges of the staff bases next to the floor-to-ceiling windows to take full advantage of this.

There has been a growing movement towards 100% single rooms in the NHS, principally driven by infection control requirements, post outbreaks of infections such as MRSA. David Lewis says that following major schemes such as Dumfries and Galloway Hospital going 100%, “it’s the way everyone is going to go.” With all-single rooms clearly being more expensive than wards in terms of capital cost, LUHFT did a clinical study which discovered that the shorter time spans that patients on average spent if they were in a single room meant an overall cost saving to the facility and better health outcomes for patients.

Conclusion

Although reportedly 90% complete when Carillion collapsed in 2018, new contractor Laing O’Rourke had to remediate a “series of major defects” which were discovered after Laing’s predecessor left the stage. The decision was taken in December 2019 to push the opening date back to 2022, five years later than the original planned opening. It was also revealed that an additional £300m was needed to complete the project.

The delivery team handed the hospital to the client on 28 September 2022, which allowed a controlled, phased move to take place over 24 days. On the final day, 20 October, the Emergency department was successfully relocated into the new building, marking successful completion of the move.

As David Lewis of NBBJ asserts, using this new building as a chance to “reconnect” this part of the city has meant this project has achieved a wide range of goals beyond merely healthcare. It represents “a sort of anchor tenant for the rest of the site development,” in this prime position, he says, bringing a strong punctuation to a block that has a prominent cancer centre, but integrated with both it and the university. In so doing it will be a major platform for attracting investment and talent, and thereby helping to catalyse more regeneration in the centre of Liverpool. ■

A functional and aesthetic facade for a multi-storey car park



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 3000 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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TECHNICAL CHARACTERISTICS

Raw material: ALU EN 1050 H14/ H24

Pattern: LTH150x56x21.5x2

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Surface treatment: Anodising

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Yeoman Shield improves patient welfare



Yeoman Shield, a leading provider of wall and door protection products, has recently completed a project to install wall protection, including decorative imagery wall panels, in a newly appointed hospital department.

The project not only aimed to enhance the aesthetics and hygiene of the ward, as well as to protect the walls from damage caused by trolleys, beds and other equipment but to aid in client way finding and department differentiation.

Yeoman Shield's FalmouthEx wall protection panels were chosen for their durability, easy maintenance and hygienic finish. These were fitted to the lower half of the walls in the corridor and waiting areas to protect from impact damage that can be caused by the everyday use of the department.

The Guardian Handrail from Yeoman Shield was also installed with the protection panels along walls, serving as an additional defence barrier whilst offering a supportive handrail for those services users that may require it.

To mark out different waiting areas and to make the environment more welcoming and less sterile, Yeoman Shield Imagery Panels were installed full length to one of the walls. Using chosen images of the Yorkshire Countryside to contrast with the interior design colour scheme the decorative panels offer a calming influence.

The materials were installed by Yeoman Shield's directly employed fixing operatives providing a quick and considerate service.

Yeoman Shield's project manager said: "We are very proud of this project, as it

demonstrates how our wall protection products can benefit not only the appearance and functionality of a building, but also the well-being of its occupants. We believe that our wall protection panels can make a positive difference in any healthcare setting, as they create a more attractive and sanitary environment for patients and staff."

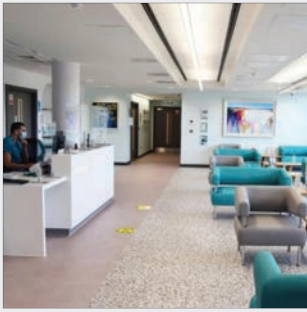
With over 55 years of experience Yeoman Shield provide wall and door protection system for various sectors, including healthcare, education, hospitality and retail.

Please contact Yeoman Shield for more information about the company and its products.

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www.yeomanshield.com



Gilberts delivers form and functionality in healthcare reform “first”



The Rutherford Diagnostic Centre Somerset in Taunton is the first to open in response to recommendations made in an independent review, recommending such facilities be created in free-standing, accessible locations to provide quicker and easier access to patients. Phase 1 of the new facility provides two MRI rooms, two CT scan rooms and an ultrasound room, equipped with cutting-edge diagnostic equipment and cannulation rooms plus support consulting rooms and reception. Throughout the MRI Scan suite areas, a combination of Gilberts' DGA4 louvred face diffusers and GECA egg-crate grilles, specifically manufactured in non-ferrous material and plastic PX extract valves have been used to provide compliant quality and volume of air in line with latest NHS guidance HTM03-01. In non-treatment areas and other clinical spaces, mild steel versions of the DGA4 and GECA units supply fresh, filtered air which is extracted via Gilberts' PG-R perforated face diffusers. In the main reception, Gilberts' JSL jumbo slot diffusers in runs up to 12 m have been installed, blending seamlessly into architectural design of feature ceilings with their “shadowgap” aesthetics.

01253 766911 info@gilbertsblackpool.com

Solar panels to help A. Proctor Group reduce carbon emissions



The A. Proctor Group factory in Blairgowrie has recently been upgraded with solar PV panels to provide a significant part of its energy from renewable sources and substantially reduce its carbon emissions. The high-performance 30kWp Solar PV system was installed to the roof at the manufacturing site by specialists Forster Energy. Based on current electricity consumption, the new system is expected to provide the equivalent of a reduction of 201,741 kg of CO₂ emissions over 20 years. The A. Proctor Group, specialist manufacturers of technically advanced thermal, acoustic and membrane products for the construction industry, continues to increase its focus on sustainability and is working to ensure that its actions from a social and environmental perspective have a positive impact. In 2022, the company set up a dedicated Sustainability Focus Group, led by the Group's Managing Director, Keira Proctor. The group includes specialists from technical, operations, manufacturing, IT, marketing, sales, and accounts, and continues to review internal processes and materials and work closely with external supply chains and customers.

01250 872261 www.proctorgroup.com

Kaz for President



L-R: Outgoing President Mario Del-Signore hands over the presidency to Kaz Spiewakowski.

GEZE UK MD Kaz Spiewakowski looks to focus on education and further developing relationships with RIBA and overseas members as well as ensure value for members as he takes over the two-year presidency of the Guild of Architectural Ironmongers (GAI). Kaz has already held the vice president role for the last two years working closely with outgoing president Mario Del-Signore. The focus on education will look at improving the process for developing new material and how it is delivered. The GAI will explore getting the content validated and third party audited as well as looking at producing new content. Said Kaz: “I am delighted to be taking over the presidency of the Guild. CPD and compliance is vital for our members – becoming trained and demonstrating competence. The work done over the past few years has increased the focus on professionalism, particularly the REG AI status and the aim is to continue that.” To find out more about GEZE and its comprehensive range of automatic and manual door closers and window technology products, please contact the company or visit the website

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

BEWI now heads up former JACKON brands



BEWI, the UK's largest producer of EPS products for the construction industry, has become the parent company of the leading tile backerboard and construction systems brands JACKOBOARD®, THERMOMUR® and JACKODUR®. This follows the merger between JACKON and BEWI in October 2022, which now sees BEWI become the owner of the three former JACKON brands. These brands continue unchanged in their respective markets – and are greatly strengthened under the BEWI umbrella. BEWI is an international provider of packaging, components, and insulation solutions, with an especially strong commitment to sustainability. This is integrated throughout the value chain, from production of raw materials and end goods, to recycling of used products. With a vision to protect people and goods for a better every day, BEWI is leading the change towards a circular economy. “The synergy between our brands and the established BEWI philosophy is very strong, enabling us to take them on to the next stage, as BEWI opens up the possibility of many new and exciting developments in the near future,” says Michael Hailwood, Director.

01204 221089

Key appointments announced by Vitra

Amanda Raine has been announced as the new Marketing Director for Vitra Bathrooms UK, taking over from Margaret Talbot, who retired after 8 years with the business at the end of May. Sam Cooke has also joined Vitra as Retail Sales Director, taking over from Darren Paxford, who headed sales for 27 years.

Amanda joins Vitra Bathrooms in Oxfordshire from her role as Head of Brand and Communications at the Bristan Group, bringing over ten years of experience in the bathroom and construction industries. Amanda has also held product and marketing roles with Travis Perkins and Wolseley. She will lead Vitra's strategic marketing initiatives, drive brand growth, and develop customer relationships across all customer groups, including architects, designers, and the specifying communities."

Amanda says, "Vitra is an innovative bathroom brand with impressive design and manufacturing expertise. The award-winning experiential London showroom in Clerkenwell is a compelling resource for Vitra and its customers - I am thrilled to be



Amanda Raine

part of the next chapter."

Sam joins Vitra from distributor Davroc, where he was Director of Sales, representing some of the biggest bathroom brands as well as Davroc's own brands. Sam's experience is comprehensive, covering many routes to market, having also worked with Triton Showers, Irsap, Vokera and Wolseley.

Sam says, "Joining Vitra is a terrific opportunity to build on years of industry experience. I've collaborated with the team at Vitra for many years through Davroc, so I



Sam Cooke

am delighted to be part of the brand's future."

Managing Director Steve Breen said, "I would like to acknowledge the hard work and years of dedication both Margaret and Darren have given Vitra - we all wish them well in their new adventures. The Vitra story now continues in the capable hands of Amanda and Sam - both bring unique experiences and understanding of bathrooms in the UK. Welcome to the team."

01235 750990 www.vitra.co.uk

Words can paint a thousand pictures



Maud Milton and her talented team of artists, known as Artyface Community Art, work out of studios at Trinity Buoys Wharf in East London. They have become well known across the capital and beyond for helping community groups assemble totally unique mosaics. In particular, Artyface Community Art has been instrumental in fashioning striking interpretations of the ubiquitous London Underground roundel, using hundreds of handmade tiles which carry individual words relating to the locality. Maud and her colleagues have worked closely with school pupils and local residents to design tiles for mosaics for new buildings and walls in the public realm: all mounted on Marmox Multiboards in metal frames. Aside from railway and underground station signs, Maud utilizes Marmox Multiboards for any project which is going to be set in a metal frame, including house names or numbers. A spokesperson for Marmox, Grant Terry, Marketing Manager, added: "We have been delighted to provide Maud and her team with quantities of our Multiboard to help facilitate these very important local projects, involving many different members of the community."

01634 835290 www.marmox.co.uk

Parkside celebrated 40 years at Clerkenwell Design Week



The Parkside 40 Years x Lois O'Hara commission wrapped the Parkside Sustainability and Design Studio in the Brighton artist's colourful graphic print throughout the three-days of Clerkenwell Design Week. Alongside, the tile specification business also held Brunch & Mimosa sessions and inspiring talks from designers and material innovators. With hundreds of visitors through its doors, Parkside has completed another successful Clerkenwell Design Week. Founder of interior studio, LA VILLIANE, Mathilde Le Villian also came to the Sustainability and Design Studio to moodboard with visitors and give a glimpse of her soon to launch tile collaboration with Parkside, Sotho Tile. James Journet, sales design director, Parkside, says: "We're delighted to have taken part in another fantastic Clerkenwell Design Week. With a cocktail party to celebrate our 40th year, cheese and wine with Planq and The Mosaic Factory, as well as serving brunch and mimosas every day at 11; the studio welcomed in people from right across the design and specification industries. It was a great atmosphere and felt hugely positive, we're already looking forward to doing it all again."

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Image: TWR Group
See page 55



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Powered by good design

Darren Hyde for the Automatic Door Suppliers Association (ADSA), outlines how to balance safety, security and accessibility requirements when identifying powered pedestrian door (PPD) solutions for commercial buildings

There are a variety of challenges that architects and specifiers need to consider when identifying powered pedestrian door (PPD) solutions for commercial buildings.

Specifying the right solution

To begin with, the right solution needs to conform with various standards, laws and Building Regulations to ensure that it is fit for purpose – encompassing safety, security and accessibility, along with complementary overarching design.

A bigger picture view is essential to maintain this equilibrium – a view that considers the location and position of the building, its intended use and footfall, how the volume of traffic may need to be channelled around the building, and identification of key entrances and exits – externally and internally.

This includes accessibility requirements, safety and security, alongside an ever-increasing awareness of fire resistance and escape routes. Knowledge of all of these standards, acts and/or regulations will also help build a clearer picture of what is required for your specification.

This may seem like a lot to consider, but taking a common-sense approach can help you arrive at a decision – ruling out the impractical and including the essential. Asking who, what, where, when, how and why is a good place to start, especially when balancing client wishes with practicalities.

The location of the built environment will have a significant effect on the outcome. Is there likely to be an effect from wind loading onto elevations and the door? Is the building in a coastal location, or among other tall buildings where wind is channelled?

A door is similar to a sail: wind loading may detrimentally affect its operation if the 'sail' is too large, or the wrong type. It could cause operation and/or safety issues, resulting in damage. The effectiveness of



door operators, sensors and mechanical elements can be compromised by force or environmental conditions such as salt in the air.

Identifying the user

Building use and considering who it is for, is also a cornerstone when it is likely that vulnerable people are occupants or users. Special measures may be required to enable accessibility and safety while maintaining security. This is particularly pertinent in buildings used for specialist or supported housing and education.

Quite rightly, the role of an architect is to stretch the boundaries of aesthetics, form and function, but this should never be at the expense of user safety.

The role of an architect is to stretch the boundaries of aesthetics, form and function, but this should never be at the expense of user safety



For example, safety sensors and signage can be viewed as an unsympathetic addition to an expensive door but they are essential for the safe operation of the door. The look of activation devices has improved significantly over the last 10 years; they are now slimmer and less obtrusive, discreetly enabling state-of-the-art technology without negatively impacting the appearance of the installation.

Meeting safety requirements

The same can be said of other entrance devices, powered turnstiles, swing lanes and retractable lanes, which are frequently found in larger or shared commercial buildings. These must meet the new EN 17352:2022 standard which addresses safety in use and machinery safety requirements and test methods.

The need to protect and secure our buildings is ever-increasing but specification of high security doors must be balanced with escape requirements. The introduction of the Building Safety Act has highlighted these issues in respect of high-rise living, but as city landscapes change and taller buildings begin to dominate the commercial centres, we should look to how this can best

be achieved in these environs. A correctly specified system should take both needs into account, and if correctly specified, will achieve the desired outcome.

The demand for smart buildings, with integrated building management systems and access control, will also determine choices. Again, these need to be factored in from the start. Most powered pedestrian door and window operators can be linked for wider estate management but selecting the right solution at the start can avoid expensive mistakes.

By working with an ADSA accredited member, architects can be assured that they will be supported in system design and specification. Although the process may be challenging, when properly realised, it can ensure that the outcome is not only fit for purpose but can be incorporated with dynamic design that will enhance our communities.

ADSA has produced a free guide to burglary resistance standards for Security Rated PPD available from adsa.org.uk/news

Darren Hyde is technical and training manager for the Automatic Door Suppliers Association (ADSA)

Titon expands product range with the addition of Roto Al Designo

Leading window and door hardware manufacturer, Titon, has recently announced the addition of the highly acclaimed Roto Al Designo product to its extensive range. The move comes as part of Titon's ongoing commitment to providing customers with innovative and high-quality solutions for their window and door needs.

The Roto Al Designo, developed by Roto Frank, is a cutting-edge window system that combines functionality, aesthetics, and energy efficiency. Designed with a focus on modern architecture, the Roto Al Designo features sleek lines, slim profiles and a range of customisable options to complement any building style.

Robin Gardiner, Titon's Head of Product Development, expressed his enthusiasm for the new addition to the company's portfolio, stating, "We are thrilled to introduce the

Roto Al Designo to our range. It perfectly aligns with Titon's mission to offer our customers state-of-the-art products that deliver exceptional performance and elevate the aesthetics of any building."

Gardiner added, "The Roto Al Designo sets a new benchmark in window technology. Its advanced features not only enhance the overall performance of windows but also contribute to sustainable and energy-efficient buildings. We are confident that our customers will appreciate the added value and quality this product brings."

Additionally, Titon has created an extensive Technical Support team for the new range and can offer to customers the use of its sophisticated ordering and rod calculation software, free expert advice and technical support along with a ten year manufacturer's warranty as standard. A PAS 24 high security option is also available.



For more information about the Al Designo range and Titon's partnership with Roto, please visit the website.

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The power of aluminium

Aluminium door and window systems offer architects an easy way to introduce unique designs to any residential or commercial property. Andrew Cross at Kestrel Aluminium Systems explains how

Architects are, by definition, creative thinkers inspired by the way buildings affect our day-to-day lives, and how we live. People become architects because they want to have a lasting impact on the built environment, designing ever-more creative and unique spaces that offer something special and beyond the norm of typical newbuild properties.

To create these outstanding buildings, architects need modern construction products and methods that will allow their designs to be built safely, economically and, increasingly these days, sustainably.

That means, when designing their next project, they need to consider the limitations of the materials they are specifying, and should prioritise the use of those products and systems that offer the flexibility and reliability that enable them to realise their ideas.

Keep it strong & flexible

Using aluminium doors and windows gives architects and the rest of the building supply chain a flexible material that is also inherently strong and thermally efficient.

Despite the established success of traditional steel and PVCu systems, aluminium windows and doors are lightweight and durable, which gives architects much more flexibility when it comes to the size and shape of the windows, doors and curtain walling systems that they can use.

This is thanks to aluminium's incredibly light weight; just 2.7g/cm³ and around three times lighter than steel. This makes it much easier to transport and move on site than traditional fenestration materials. Aluminium is also a much softer metal, so it is more malleable and easier to form into a myriad of different sizes, designs and shapes to suit any architect's vision, while remaining strong enough to support even large pieces of glass.

Given the current and ongoing trend for buildings with large walls of glass to allow maximum light to penetrate the building's structure, this move towards aluminium is likely to continue for a long time to come.

This is why architects would be wise to specify products from trusted manufacturers who offer a wide range of aluminium door and window systems that provide true flexibility of design, and whose products meet the exacting standards of the modern construction industry.

This is particularly true when working with commercial buildings, where the opportunities for unique design are almost limitless. Architects should choose a manufacturer who offers doors as either single or double door sets as well as a range of style and rail options. A choice of configurations including finger guard, manual centre pivot, auto centre pivot, manual slide, auto slide and rebated options can also help architects ensure their building will stand out.

Further personalisation can be provided since a number of manufacturers, including Kestrel Aluminium Systems, offer in-house single or dual-colour powder coatings in RAL colours as required, so that the building can be finished in any colour the architect prefers.

Meeting sustainability needs

Another benefit of using aluminium windows and doors is the systems' sustainability benefits. Architects are increasingly being asked by their clients to factor whole-life costs into their designs, as well as what will happen to the raw materials in a building once the building has reached the end of its useful life.

Unlike many of the other raw materials used for these systems, aluminium can be recycled many times without loss of quality and, because of its low melting point, very little energy is required to



Aluminium is a much softer metal, so it is more malleable and easier to form into a myriad of different sizes, designs and shapes to suit any architect's vision





extract the raw material and transform it into another product.

In fact, using recycled aluminium saves up to 95% of the energy required for primary aluminium production.

This makes it an extremely sustainable product that has a much lower carbon footprint during manufacture, something that is becoming ever more important as the construction industry moves towards a low-carbon, zero-waste solution.

Aluminium products made using recyclable materials present consistently low environmental impacts while offering strength, durability, stability and reduced weight compared to steel. Among other benefits it has to offer, natural corrosion and UV resistance enable the specifier to forecast with accuracy the cost of maintenance over a system's design life.

So, for those specifying metal window and door systems, there is clearly an incentive to use a raw material that can be reused on an almost infinite basis. In terms of enabling building designs to achieve the highest level of BREEAM certification, aluminium can also provide tangible benefits when calculating a building's environmental, social and economic

sustainability levels, using standards developed by the Building Research Establishment. In addition, aluminium also enhances specific aspects of a window or door's technical performance, such as its thermal, acoustic and energy efficiency.

To achieve greater efficiency in terms of thermal transmittance, high performance window and door design is becoming increasingly sophisticated. As already stated, aluminium can be formed into complex and diverse profile shapes, a feature that makes it ideal for contemporary architectural design.

Aluminium's permanence, its flexibility and versatility will pave the way for products of increasing environmental value. If we add to this the widely accepted ecological argument against the use of PVCu and the tangible evidence of the sustainability and thermal performance provided by aluminium window and door systems, with a design life that has already spanned several decades, the case for the use of aluminium window and door systems has never been stronger.

Andrew Cross is marketing manager of Kestrel Aluminium Systems

Senior doubles production thanks to its new thermal improvement facility

Following the opening of a second UK manufacturing site in South Yorkshire, leading aluminium fenestration solutions provider Senior Architectural Systems has increased production and reduced lead times on its popular PURE® range of thermally-efficient windows and doors.

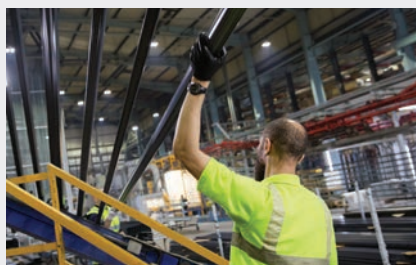
Senior is the UK's largest privately owned aluminium systems house and recently opened a dedicated thermal improvement manufacturing facility in Rotherham to support its main manufacturing facility in Denaby, near Doncaster, and its distribution site in Livingston, Scotland. The new site has seen production of Senior's patented PURE® range of low U-value aluminium doors and windows double, helping to bring down lead times and deliver the award-winning Part L compliant solution to more of Senior's fabrication and specification customers.

The unique range, for which Senior recently won a King's Award for Enterprise

in innovation, is the first on the UK market to benefit from an enhanced thermal barrier manufactured from expanded polyurethane foam (PUR). Traditionally used in cladding and insulation products, the innovative use of PUR as a thermal barrier gives the PURE® range the potential to achieve U-values as low as 0.71W/m² K when calculated as a commercial CEN standard window and 0.93W/m² K when calculated as a CEN standard door.

Senior is planning further investment in the new site and has already expanded its local workforce with the recruitment of four new operatives. The speed and efficiency of Senior's production is set to increase further with the addition of a second high pressure polyurethane injection system later in the year, as well as a new double grooving machine and spiral wrapping machine.

As Senior's dedicated Thermal Improvement Centre, production of other Part L compliant and low U-value aluminium



windows and doors within Senior's extensive range will also be moved to the Rotherham site in due course. This will support the work that is set to continue at Senior's main manufacturing and national distribution centre in Denaby. Together with Senior's established sites in South Yorkshire and Scotland, the new facility has increased the company's overall UK manufacturing capacity to 220,000 square feet.

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By  Hydro

First large scale installation of AluK's new C70S 70 mm window system

HG Construction's recently completed £77m Canada Street development in London's docklands for client Scape is the first large scale installation of AluK's new C70S 70 mm window system.

The mixed-use project includes modern student accommodation in blocks up to 10-storeys high, affordable housing, commercial and health space. It showcases the benefits of AluK's new, thermally efficient, slim sightline system and demonstrates just how easily it can be integrated in a scheme alongside AluK's 77ID system residential doors, SL52 capped curtain walling and GT55TB commercial entrance doors.

In total, there is almost 4,600 m² of glazing on the Canada Street development, all designed, fabricated and installed in AluK systems by Arkay Windows.

The C70S system was chosen by HG Construction in response to the specification from Stephen Marshall Architects. Sam Coley, a partner at Stephen Marshall, explained: "Our specification was for a high performing contemporary aluminium fenestration and façade system with slim sightlines and excellent U-Values - and the AluK systems were ideal for that.

"The fact that we could use two different window configurations, residential and commercial doors and curtain walling from one supplier right across this mixed-use development meant we got a satisfyingly uniform look right across the project. For safety and optimal natural ventilation in the student accommodation, we were even able to specify a cost-effective fixed light in AluK alongside a vertical louvre.

"The design scheme at Canada Street included an innovative pre-cast banding façade solution which HG Construction were



able to deliver very successfully in the AluK window system and we're really pleased with the finished look."

For HG Construction, the project represented a significant construction challenge because it sits very close to Canada Water underground station and directly above the busy Jubilee Line. Logistically, there were also tight timescales to meet because the student accommodation blocks needed to be finished in time for the start of the academic term.

AluK and Arkay worked closely together to meet the timescale and to accommodate the fact that the installation method had to be changed from traditional scaffolding to working off mast climbers. This meant the installation sequence switched to elevation by elevation and there had to be multiple installation teams working on different blocks at the same time in order to meet the completion dates.

Sony Atwal, Arkay's Technical and Operations Director, commented: "This

project required a well-engineered, cost-effective window system and the C70S fitted the bill perfectly. It met all the performance and aesthetic requirements and was quick and easy to fabricate and install. Because it shares some components with the AluK 58BW system which is one of our most popular products and has a similar fabrication method, we were easily able to integrate it into our factory and deliver the same level of quality and precision."

The 70 mm C70S system has the same slim 89 mm sightlines as the 58BW window system, but also boasts class-leading wind (600Pa) and water tightness (1500Pa). It has Secured by Design accreditation and can accommodate 50mm acoustic glazing, making it a good choice for this type of noisy urban environment.

A video case study is available to watch at: https://youtu.be/J_SsG-tfg4w

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TWR Group adds AluSpace to range



TWR Group has enhanced its portfolio with the introduction of Smart's AluSpace. The aluminium interior steel-look door and screening system is perfect for residential or commercial spaces, offices, homes and old industrial buildings that are being converted into apartments that require the steel aesthetic. The predominantly single glazed system comes with a choice of hinged single and double doors, as well as pivot and sliding options to accompany the fixed glazed screen.

0191 565 2200 www.twrgroup.co.uk

Senior offers a fenestration health check



Senior Aluminium Systems is launching a new technical advisory service to help specifiers working in the healthcare sector identify the most efficient ways to improve fenestration design. From upgrading the safety and security of doors, to maximising daylighting with curtain wall systems and reducing heat

loss through windows, Senior's team of architectural advisors is offering free of charge consultations and technical support to assist with the ongoing refurbishment and repair of healthcare buildings.

www.seniorarchitectural.co.uk



A Happy Place with Unilin Panels

For Clerkenwell Design Week, Unilin Panels put on a programme of workshop and events focused on what it takes to create happy interior experiences for people. Over three-days of hands-on classes, discussions and happiness inducing experiences at The Gallery Clerkenwell, the district's A&D community explored the idea of being happy and learnt about the Belgian manufacturer's award-winning decorative panels and HPL surfaces. With an architectural sketching masterclass from renowned illustrator Phillip Buckingham, essential oil room spray creations with London Refinery, the Miracle Tree, tasty streetside tacos and a closing party; Unilin Panels gave every visitor a little piece of happiness to take away with them. Manufacturer of the award-winning Master Oak decorative HPL, Unilin Panels used Clerkenwell Design Week to share its innovative surfaces and pioneering approach to recycling and sustainability through the use of 100% recovered wood. This philosophy sees more than 900,000 tonnes of recycled wood processed every year and Unilin chipboard panels made with 95% recycled wood.

info.panels@unilin.com www.unilinpanels.com

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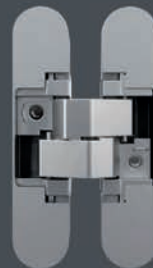
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UKCA Approval for the TECTUS HINGE SYSTEM

SIMONSWERK, Europe's leading hinge manufacturer is pleased to announce it has received UKCA (United Kingdom Conformity Assessed) approval for the TECTUS concealed hinge system.

The TECTUS range is the only UKCA approved multi-axis concealed hinge currently on the market.

The UKCA mark is the new UK product marking that covers goods which previously needed EU CE marking. The new mark applies in England, Scotland and Wales (Great Britain), while CE marking will continue to be recognised in Northern Ireland. This latest certification will allow SIMONSWERK to remain a market leader and be at the forefront of compliance and quality.

Robin Guy Managing Director commented: "We reacted quickly to the changes in the market when the initial deadline was January 2023. Although this has now been extended to June 2025, for us it is such good news to have a fully-compliant product ahead of the UKCA deadline. We now offer our Brass range and TECTUS range of hinges which are both tested to CE and UKCA standards."



SIMONSWERK is one of Europe's leading hinge manufacturers with a history spanning more than 130 years in the production of brass, aluminum and stainless-steel hinges for doors and windows. The range includes the

renowned fully concealed TECTUS hinges and the popular TRITECH solid brass hinge with concealed bearings.

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JACKOBOARD® has helped notch up a major win at this year's Chelsea Flower Show. Working with the multi-award winning G.K. Wilson Landscape Services led by Company Director Gareth Wilson, JACKOBOARD® products have been a key element in the RBC Brewin Dolphin Garden, which has won a Silver Gilt Medal at the Show. JACKOBOARD® XPS Construction Board provided the ideal backing for the tiling work, due to its high bond strength, high weight supporting, lightweight and waterproof characteristics and the fact that it is very easy to cut and shape on site creating no dust or other mess.

"We went with JACKOBOARD® following an industry recommendation," says Gareth Wilson, company director of G. K. Wilson Landscape Services. "We were advised that the company was reliable and good to work with. That has certainly turned out to be the case – and that is at least as important as the quality of the products, which cannot be faulted in our experience. I would like to thank JACKOBOARD® very much for their support in sponsoring us and also congratulate them for being a part of our success."

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Modular Highline 235 range Shortlisted



Heating and cooling equipment specialist Diffusion is delighted to announce that it has been shortlisted in the RAC Cooling Industry Awards 2023. The company has reached the final line up in the Air Conditioning Innovation of the Year category for its

New Modular Highline 235 Fan Coil Range. The new range has been developed to create the perfect indoor environment, offering modular design, compact dimensions and advanced components that deliver low sound levels, reduced energy consumption, optimal performance, and significant sustainability benefits.

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Often one of the biggest problems when installing a reliable wastewater pumping system is space! The Jung Pumpen Hebefix Plus, available from Pump Technology Ltd, based in Berkshire, is suitable for commercial buildings and can be fitted neatly

in all pre-walled systems or cavities due to its small tank depth of 183 mm. The tank is "pressure tight" to assure the pumping system never floods even in the unlikely event of a breakdown. Additionally, it will easily fit perfectly under washbasins and counters.

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UK's largest speculatively built warehouse gets Protech membrane protection

Two brand new industrial units totalling approximately 118,000 m² have been built on land protected with high-performance Protech GM Super gas barrier membrane from the A. Proctor Group. The units at Panattoni Park Avonmouth, Bristol, are said to include the UK's largest ever speculatively built warehouse. UK Membranes Limited, specialists in ground gas membrane installation carried out the project to install a welded gas barrier to the footprint of the building including a vent mat layout under the membrane and protection fleece on top. The technical team at A. Proctor Group worked closely with the contractor UK Membranes in supplying the Protech GM Super geomembrane. GM Super is a high performance, proprietary, reinforced gas barrier, that incorporates a 12 micron aluminium foil layer, for maximum protection against the ingress of ground gasses. Designed with the latest standards and guidance in mind, the heavy duty reinforcing grid ensures the membrane meets the need to survive construction, reducing the impact of tears and punctures on the membranes long term performance.

01250 872261 www.proctorgroup.com

Making full use of SterlingOSB Zero's benefits



Treharne Homes serves clients in multiple sectors, offering an award-winning, custom design, manufacture and erection service. The company prides itself on the quality and accuracy of its fabrication processes. The team employs West Fraser's 22 mm SterlingOSB Zero T&G panels for its wall and roof constructions as well as CaberDek panels for its floors. Founder and Managing Director, Delfrig Treharne comments: "We have used other OSB boards in the past, but the quality just doesn't match up, whereas with SterlingOSB Zero every sheet is the same."

uk.westfraser.com

Newton up for impressive eight awards



Newton Waterproofing, one of the UK's leading independent designers and suppliers of guaranteed waterproofing systems, has made the finals in an impressive eight award categories in the past month, at the same time as celebrating their 175th anniversary. Managing Director Warren Muschialli commented: "To be shortlisted in multiple award categories in such a short space of time truly is an honour, and is a testament to the hard work and dedication that goes on behind the scenes at Newton."

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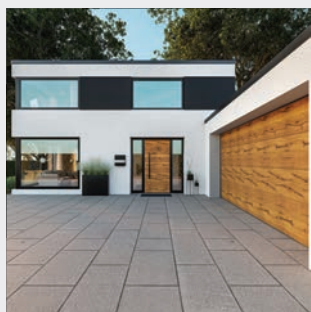
Basement specialist specifies Triton Systems for vintage project



One of Triton Systems approved installers has made use of the manufacturer's waterproofing and sealant products in constructing a large wine cellar as the semi-buried basement structure beneath a new five-bedroom property in North London. Harkmac Construction Limited undertook the new build in the Stanmore area on behalf of Inspired Designs, a Residential Design and Build company and recommended the use of Triton's TT admixture to the project structural engineer along with Swell Seal mastic to address the day joints. Harkmac's Contract Manager on the Stanmore job, Anthony Anderson, comments: "We work right across the country from Cardiff, down to Portsmouth and up to Coventry and have utilised the Triton range on a variety of domestic and commercial projects, including several of the David Lloyd gymnasium extensions. The products are very easy to use and we get good technical back up from Triton, including site visits and the supply of drawings or special details when needed." Triton Systems offers a wide range of well proven products to cover damp-proofing problems, timber protection, structural repairs, condensation control and the penetration of gases such as radon and methane.

01322 318830 www.tritonsystems.co.uk

Hörmann entrance and garage doors – the perfect match with new Duragrain Décor colours



Hörmann have introduced five new Duragrain Décor colours to their LPU 42 L-ribbed sectional garage door range which provide a perfect match to their ThermoSafe Decoral aluminium entrance doors. Developed to provide discerning consumers with the ability to create a real point of difference for any home, five modern finishes are available – Cement, Rusty Pantina, Wild Oak, Barnwood and Barnwood Grey. Hörmann's market leading sectional doors offer a winning combination of high-quality materials, safe operation, and good thermal insulation properties. For added peace of mind all automated Hörmann sectional doors are supplied with Secured by Design as standard (subject to fitting criteria and door style selection). The five new Décor colours are available with the company's Duragrain finish which is extremely hardwearing and scratch resistant. An innovative, UV-resistant digital print is applied onto the primed sections of the door with the Duragrain protective coating added to safeguard against environmental effects and keep the door looking beautiful for years to come.

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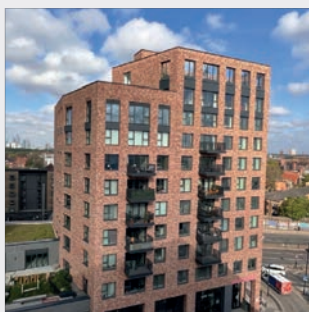
Cemgold features in rainscreen specification for new medical school project



A specialist rendering, plastering and drylining contractor has made use of IPP Ltd.'s Cemgold cement particleboard as part of the rainscreen build-up covering a four storey medical teaching facility in Ipswich, following rigorous evaluation in conjunction with the main contractor and system supplier K-Rend. The extension to a site in the heart of Ipswich is being built by T.J. Evers, with O'Hara Drylining East – a sister company of Essex based O'Hara Plastering – being responsible for installing all of the sheathing boards across the Metsec framing on all four floors. Then in order to ensure a well-insulated as well as fire and weather resistant performance for the facade the Cemgold boards are being covered with Rockwool and the proprietary silicon render system. Cemgold is a 100% asbestos free board produced using Portland cement and high purity silica sand, reinforced with selected fibres, employing advanced pressing and autoclaving technology. The resulting boards offer high impact strength as well as excellent racking and pull-out strength, making them ideal for a range of applications. Contact Magply for more information.

01621 776252 www.magply.co.uk

Renson UK supplies louvres to impressive East London new build development



Renson UK has provided a bespoke louvre solution to a prominent East London new build development. Designed by Assael Architecture and installed by Alliance Facade Services, Imperial 2 in Bromley-By-Bow is an enormous new build development by The Guinness Partnership, providing over 500 homes, community space and commercial areas across five high rise tower blocks. The project was installed with market leading louvres from Renson UK. Renson's 414 louvre panels are made from aluminium sections with stainless steel 304 insect screen. They offer a 50% physical free area and are assembled with aluminium blade supports. The Renson 414 louvre is fully tested and achieved a Class A weather rating when tested to EN 13030:2001. Renson UK National Sales Manager Martin Daniels comments: "We were thrilled to have the opportunity to supply our market-leading louvres for this impressive piece of architecture. At Renson, we take great pride in offering high-quality ventilation solutions that undergo rigorous testing, while we also excel at creating customised products for projects such as this."

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High quality performance and reliability with fully tested louvre system

When specifying for architectural projects, it's imperative that the products selected are of the highest quality.

It's why ventilation louvre specialist Renson UK has developed Integrated Ventilation Solutions (IVS), custom-made tested louvre designs that offer a one-unit solution to guarantee both performance and premium aesthetics.

IVS is made to interface with the external face of the window or curtain wall and mechanical connections, and with these systems, the rear of the louvre is just as important as the front – hidden behind is the thermal protection, the plenums and the duct connections for mechanical installations.

Not only is IVS a unique one-unit solution, but one that has been fully tested, ensuring high-quality performance and reliability at all times.

Renson UK National Sales Manager Martin Daniels comments: "Our customers



can trust that all our louvres offer outstanding weathertightness and have been fully tested to the highest standards, having been tested for airflow in two directions, and having undergone rigorous rainwater penetration and pressure drop versus airflow curve testing by the Building Services Research and Information Association (BSRIA).

"In addition, our test reports are freely and easily downloadable from our website, offering complete transparency to our customers at all times.

"By recognising that the louvre can be used as a component rather than just a product, we were able to create IVS, a unique one-unit, combined solution with outstanding performance and reliability. Match that with honest, transparent testing, and we're ensuring our customers always have access to the best performing and most reliable products in today's louvre market."

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Port Said Lighthouse dances with Slicedstone



Slicedstone, from bathroom specialist **Marmox**, has been used extensively to clad a new lighthouse in Port Said, replacing the deactivated original, which stood sentinel over the city at the northern end of the Suez Canal since its opening in 1869. The old lighthouse – now a historical monument – is unusual and considered architecturally important as it was the first in the world to be constructed from reinforced concrete, which architect Karim Gabr took into consideration when designing the visually stunning replacement. Slicedstone was specified by Karim Gabr's practice to enhance the lighthouse and its environs, being that it is a natural material produced from large stone slabs, with each veneer being unique in appearance. The lightweight sheets are backed with a 100% waterproof decoupling membrane, allowing them to be secured using cement based tile adhesive. Incorporating the latest technology, the re-engineered veneers of Indian sandstone, along with their stabilised backing are treated with a clear polycarbonate solution to offer a flexible surface that is both durable and waterproof, as well as stain resistant.

01634 835290 www.marmox.co.uk

Dorset refurbishment project illustrates flexibility of Sto external wall insulation



A major refurbishment project in Dorset has seen a landmark building completely transformed with the use of a BBA-certified StoTherm Mineral external wall insulation system designed by **Sto**. The Crown Building in Poole now houses 57 new luxury apartments which benefit from outstanding thermal performance to help keep the residents more comfortable and to reduce their heating costs. "Designing the most effective insulation solution for this building required a considerable amount of detailing and development work between ourselves and the other parties involved", explains Sto Head of Sales, Ashley Wainwright. "The result is extremely impressive, both from a thermal and aesthetic point of view, and it's a great example of how Sto is able to collaborate with architects and clients to provide a bespoke solution for individual project requirements." Its efficient single-leaf construction makes it ideal for this type of refurbishment project as it allows the insulation to be added without reducing the existing room spaces inside the building. The dense nature of the system materials also provides a high degree of sound insulation to the Crown Building.

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FLAT ROOFING





Match the cladding with cedar garage doors

Garador's beautiful horizontal cedar garage doors are a top choice by developers and renovators, especially on properties where timber cladding has been used on exterior walls. Garador's horizontal cedar garage door is constructed from tongue and groove natural solid cedar boards, a design that naturally complements timber cladding. These timeless garage doors, with their precision crafted design and glowing red cedar, will enhance the appearance of any home and they also offer many additional advantages. The red cedar used by Garador is a natural, renewable and eco-friendly material. It is grown in cooler climates which helps the wood develop a number of self-protective qualities. These make it an especially useful building material for areas where humidity, temperature and cracking are common problems. While many types of wood can warp when subjected to moisture, cedar stays straight and flat and should last a lifetime if properly maintained. A wider board version, the Countryman design, is also available when there is no requirement to match exterior cladding.

01935 443722 www.garador.co.uk

A leisure hub with Rockpanel at its heart



The stylish Bridgewater complex is part of a scheme which includes a cinema, restaurants and rejuvenated green space. Corstorphine & Wright were project architects with Willmott Dixon acting as main contractor. The facade features triangular and diamond shapes in

a mix of designs, from the Colours and Metals ranges and from the Chameleon offering with its constantly changing spectrum of colours. With outstanding fire-safety and sustainability credentials and an unrivalled range of designs, Rockpanel truly enable specifiers to realise their most creative ambitions.

01656 863 210 www.rockpanel.co.uk/inspiration/northgate

Historic England specifies Stella rooflight



Stella rooflights are manufactured using marine grade 316L stainless steel and sit flush within the roofline – an ideal choice to satisfy the strict conservation requirements of the building. Stella was the only company able to meet the requirements of the client, with a bespoke design consisting of four casements, two electronically operated centre side hung opening panes and two fixed side panes at the same level

as the opening casements. A bespoke hardwood liner and high specification glazing ensured industry leading thermal performance.

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What do U Value?

While it is important to comply with the latest Building Regulations, Conservation Officers are more concerned with the suitability of the rooflight, the flexibility in its design, and genuine, tangible environmental credentials.

Give yourself the best chance of achieving planning consent at the first attempt and specify a Stella rooflight.

www.stellarooflight.co.uk



STELLATM
ROOFLIGHT

Rooflights with the authentic touch

Keeret Eden from The Rooflight Company discusses retrofitting rooflights to heritage properties to deliver the latest thermal performance standards while also improving user experience

Retrofitting describes not only an intention to renovate but also to reduce the energy and carbon emissions produced through a building's use. Preserving the historical integrity of heritage properties with a retrofitting target requires a more delicate touch than straightforward renovation. Typically, retrofitting uses a 'fabric-first' approach that – among a number of other factors – requires an assessment of the balance between thermal efficiency, lighting and ventilation. Fitting new rooflights to old buildings can be appropriate to address these elements, providing that the roof window solution respects the building's heritage.

Whether the aim is to replace existing rooflights for a higher thermally performing solution or introduce new roof windows to balance light and ventilation, in protected heritage properties maintaining the original design elements of a rooflight is paramount. Preserving history in this way calls for close attention to detail. By carefully studying how manufacturers created the original rooflights, they can be replicated in modern replacements.

Features of the original Victorian rooflight include stepped glazing edge that allowed water to drain away without getting trapped by putty at the cill; glazing clips that held the thin sheets of glass in place preventing glazing displacement; top hung with exposed hinges; an integral glazing bar, and slim putty facing that secures the glass in place.

Retaining the finer design detailing in a modern performing unit allows the structural integrity of the building to be preserved, as well as creating an aesthetically seamless transition between old and new.

Optimising thermal efficiency

Optimising thermal efficiency is a delicate balancing act. Modern rooflights use double glazing to achieve an optimum whole window U-value. A true conservation rooflight will maintain the Victorian style stepped edge feature on the glazing unit for authenticity. Equally, as modern manufacturing methods allow for a robust glazing installation, the purpose of retaining glazing clips in 21st century design is to enhance the overall aesthetic character.

An instantly recognisable feature of the Victorian rooflight was the glazing bar. Modern glazing technology has evolved with larger glass panels readily available, meaning rooflights can now be constructed from one uninterrupted panel of glass, allowing for a thermally decoupled glazing bar, and thus vastly improving the thermal performance rating. As a distinctive feature, the glazing bar is still incorporated into modern designs to maintain this key element of authenticity. The combination of double glazing and a thermally decoupled glazing bar support the retrofitting principles.

Silicone facing offers a modern and efficient solution to sealing between the glass pane and the frame, creating weather resistance and optimum energy efficiency. Combined with a slim frame profile, the angled silicone wedge imitates the putty used in older construction methods without adding bulk to the frame. Retrofitting heritage properties with a rooflight that shares this design feature results in not only a thermally performing solution, but also in an aesthetically accurate replica of the original design.

Another key feature of the original Victorian rooflights was the flush installation with the roofline. A flush finish



Retaining the finer design detailing in a modern performing unit allows the structural integrity of the building to be preserved and creates an aesthetically seamless transition between old and new





is often a key stipulation from planners with any heritage properties, and importantly for a retrofit scheme. It also plays an important role in thermal efficiency. Sitting flush with the roofline reduces the roof window's exposure to the elements and therefore enables the rooflight to retain more heat.

Guidelines for flat rooflights and pitched roof windows are found in Part L of the Building Regs. They specify the appropriate whole window and centre pane U-values for different building environments. Building Regulations make allowances for heritage properties to use centre-pane values for thermal efficiency calculations.

However, centre pane values will only measure the glazing's thermal performance. These values tend to be lower than whole unit calculations since they don't take into consideration the frame and supporting components. The Rooflight Company discloses both whole window U-values and centre pane U-values for rooflights and skylights, thereby supporting designers in calculating the true performance improvement of a retrofit scheme.

Each heritage property possesses its own unique history and charm. Consider the 1839 Derby Roundhouse, once a hub

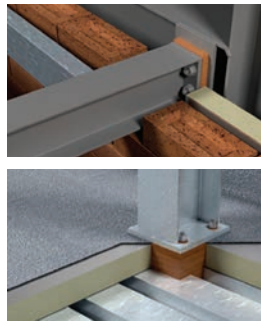
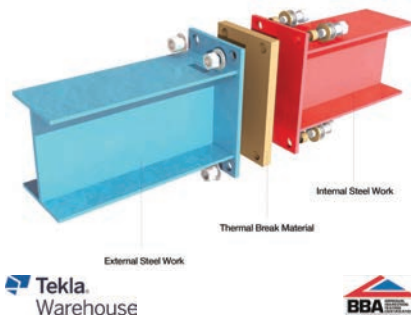
for steam engine production – the site fell into dereliction throughout the twentieth century. An unusual polygon of sixteen sides, 58 metres in diameter, the space is lit from a dome-shaped roof some 15 metres above the ground. The Grade II Listed Building has been sympathetically restored as part of Derby College.

The roof provided one of the few opportunities to improve the building's thermal performance. The work involved reinstating a ring of 48 trapezoidal roof lights within the existing timber frame, of which 36 open remotely using electric actuators. As every facet was unique, scanning technology was used to map the entire roof structure and build a 3D CAD model of the rooflight that ensured millimetre accuracy and enabled the construction team to work within the historic constraints of the existing building. The result was a sympathetic renovation, keeping the look and feel of the original building, without compromising on modern performance.

Keeret Eden is innovation manager at The Rooflight Company



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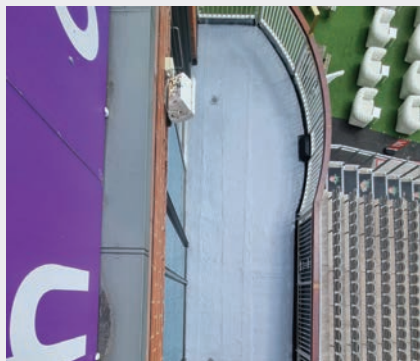
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Resapol supplies Mapei Purtop for Old Trafford Cricket Ground

In early 2023, Steven Smethurst from Owens Builders & Contractors, contacted the Resapol Leigh branch seeking assistance for a balcony waterproofing project at the Emirates Old Trafford Cricket Ground. They needed a waterproofing solution to protect the balconies located at the pavilion stand, as standing water had been collecting and seeping into the function rooms below.



This water infiltration was causing damage to the ceiling and had the potential to cause even greater harm if not addressed promptly. They therefore required a quick and user-friendly waterproofing system.

Resapol Leigh depot's technical team considered Mapei Purtop Easy as a potential solution. Purtop Easy is a ready-to-use, one-component elastic polyurethane membrane commonly used for waterproofing balconies, terraces, roofs, and areas with pedestrian access, both for new construction and renovations. Its high elasticity and durability make it suitable for application on both horizontal and vertical surfaces using brushes, rollers, or trowels. Once applied, Purtop Easy ensures complete waterproofing even at low temperatures and in the presence of standing water, making it the ideal choice for this particular project.

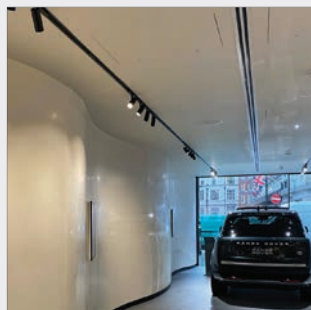
Once the project was approved, the delivery of Purtop Easy system was swiftly arranged from Resapol Leigh, direct to



the project site. Work commenced on 11th April 2023; time constraints were crucial as the project needed to be completed within two days of applying the new screed to the balconies. The full Purtop Easy system, consisting of Mapei Polyprimer HB 45, Purtop Easy, and Mapetex FG, was required. The primer played a key role as Purtop Easy could only be applied to substrates with a moisture content of less than 6%. Applying the primer allowed Owens Builders to begin application of the Purtop Easy system earlier, saving them time. Thanks to the ease of application of the Purtop Easy system, the project was successfully completed on 14th April 2023.

0800 083 1942 www.resapol.com

Top marque for Gilberts



The UK premiere of Land Rover's new branding concept, re-imagining modern luxury design with sustainability, has been unveiled at one of the marque's most prestigious dealerships, Stratstone Mayfair. The new image for Land Rover meant a similar new image for the retail outlet, which has been a Stratstone location for more than a century. In designing a modern environment that exuded quality, architect Studio Hagger specified Gilberts' GSLS slot diffusers to supply and extract the showroom ventilation. The combination of two- and four-slot diffusers, installed by Rossair, were powder coated in a subtle cream to blend seamlessly with the understated luxury surroundings that included a specialist polished plaster, providing an appropriate backdrop for the high-end vehicles. Gilberts' GSL series has been designed to meet the exacting performance requirements and standards of modern slot diffuser applications. Combining up to date styling and design technology to blend with modern architecture the GSL maintains excellent air distribution characteristics providing smooth, accurate and flexible airflow control through clean, unbroken lines.

01253 766911 info@gilbertsblackpool.com

Panasonic specified for sea-side home



Irish Architect, Emmet Murray, designed two stunning and unique homes on the dramatic Irish coast in Waterford for both himself and his brothers' families. Emmet wanted the homes to be energy efficient and to take advantage of sustainable energy sources.

Having specified Panasonic air source heat pumps on many other projects, he recognised their quality and capabilities. Working with the builders, both houses are now benefitting from 16kW Panasonic Aquarea Monobloc T-Cap units to provide a highly energy efficient heating and domestic hot water system.

youtu.be/B8qgAFG1BzM www.aircon.panasonic.eu

Quiet operation with Highline 235



Heating and cooling equipment specialist Diffusion's new Highline 235 modular fan coil range is proving the ideal heating and cooling solution for buildings where noise can be an issue. Noise often tops the list of complaints for hotel guests, but this issue isn't confined to hotels. Architects and developers of high-end apartments have two main specification requirements when it comes to selecting fan coil units. One is ensuring the best energy efficiency, the other is ensuring that noise levels are extremely low. The Highline 235 delivers solutions to both of these requirements.

020 8783 0033 www.diffusion-group.com

Mitsubishi Electric upgrades flagship ventilation system for offices, schools, hotels and more



We all spend an average of 90% of our time indoors, so ensuring the air inside buildings is fresh and clean is vital for our health. Dangerous pollutants like particulate matter and carbon monoxide are found indoors, and outdoor pollutants like nitrogen dioxide can also enter buildings from the outside. To combat their potential negative effects on health, equipping offices, schools, shops and more with the technology to support good air quality is essential. This is why **Mitsubishi Electric** has upgraded its trusted flagship Lossnay ventilation range, with the new LGH-RVX3-E system designed specifically for the UK's commercial buildings. The units are designed to extract stale indoor air continuously and efficiently, and replace it with fresh filtered air from outside. With heat recovery, the system also minimises the amount of energy lost by recovering the heat from the extracted air and transferring it to the supply of fresh air. The new system features a host of improvements to enhance performance, efficiency and versatility – all while reducing running costs. The units can now be installed vertically for the first time, to allow for use in more spaces.

les.mitsubishielectric.co.uk/products/ventilation/commercial-ventilation-units/commercial-lossnay-series

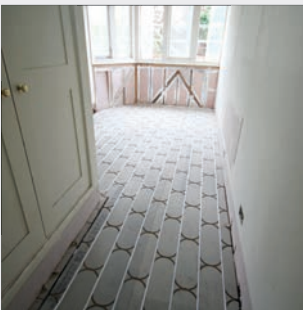
One unit, one responsibility



When sourcing ventilation products, it's common to rely on several different suppliers for each component. Different manufacturers will often focus their expertise on particular elements, so by sourcing the best components from various suppliers, you're bound to end up with the perfect product. Not according to Martin Daniels, National Sales Manager of **Renson UK**. "At Renson, we've spent time carefully developing each component of our louvre products, including the insulated blanking plates, spigots, plenums and insulating boxes for acoustic louvres, and have combined these products to produce a one-unit solution that benefits both developers and aluminium fabricators," he said. "Manufacturing and supplying a one-unit solution not only means our customers can conveniently source their ventilation solutions from one place, but that should anything go wrong with the product, there's only one party responsible. At Renson, we take full responsibility for every component and have adopted the principle of 'one unit, one responsibility'." For the past 50 years, Renson UK has specialised in the design, development and production of high-performance ventilation products, supplying fully tested, high-quality louvres for every application.

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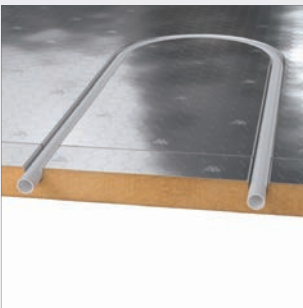
OMNIE UFH chosen for Cambridge College decarbonisation programme



A renewable heating specialist is employing OMNIE's latest generation underfloor heating systems and controllers for the radical energy upgrade of an extensive multiple occupancy building in Cambridge, as part of a long term decarbonisation programme for one of the historic colleges. Infinite Heating and Energy is undertaking a range of work on behalf of the main contractor and is close to completing the installation of OMNIE's TorFloor 2®, plus a small area of Ultimate 2, across most of the three floors of the 15-bedroom property. The new generation TorFloor 2® evolves from the market-leading TorFloor® predecessor by adding a 6 mm thick chipboard upper panel with pre-foiled aluminium heat diffuser. Crucially, both panels feature matching routed channels to perfectly align around the 12 mm water pipe, while the printed upper face clearly indicates the pipe's position and the points where screws can be safely fixed. Not only does this arrangement greatly reduce the risk of the pipe runs being accidentally damaged when floor coverings are installed or replaced, but the location of the routed channels places the warm water pipes closer to the surface: delivering faster warm-up times.

01392 363605 omnie.co.uk

OMNIE adds AL HEX heat diffuser technology to UFH systems



OMNIE will be incorporating the advanced AL HEX aluminium diffuser technology on all its foiled underfloor heating systems, as standard, with immediate effect. The patented AL HEX foil, with its trademark hexagonal pattern, increases the in-channel foiled surface area that is in contact with the warm water pipe. The result is greater heat output, faster heat transfer and a more even heat distribution across a floor area, plus it avoids the risk of damage due to heat 'striping'. Striping is caused when heat in the warm water pipe doesn't diffuse into the floor panel effectively and, instead, creates hot spots and hot lines on the floor surface finish. Prolonged exposure to striping can damage both the floor finish and the subfloor, particularly if the installer raises the temperature of the water to try and improve the diffusion. "AL HEX is a real step forward for underfloor heating particularly when the industry is moving away from gas boilers and towards renewable heat sources," says Brendan Hourican, OMNIE's Managing Director. "Because it is so efficient at transferring heat, AL HEX works very well with lower water temperatures. This means it improves the performance of the underfloor heating."

01392 363605 omnie.co.uk

Getting to grips with Part L

A year on from the latest, and highly significant, changes to Part L in England, Chris Pateman of Engineered Panels in Construction (EPIC), explores why the current requirements are so important, and what specifiers need to know going forward now that the transition period has ended

After sitting in the doldrums for almost a decade, Part L of the Building Regulations finally got an overhaul in June 2022 and set us back on the path towards a net zero carbon built environment – a target that new non-domestic buildings were originally planned to meet by 2019.

With a 27% reduction in emissions over the 2013 standard being required at this stage, there is still a long way to go before hitting net zero, however there were some important changes introduced in the most recent update that will help to pave the way to that goal. This article explores the requirements that directly relate to the building envelope for non-domestic buildings, but full guidance on all aspects can be found in Approved Document L2 2021 (ADL2).

There was previously a loophole in the transitional arrangements which allowed developers to continue to build to the previous standards, provided work had started on one building before the end of the transition period. This meant phased projects and developments of multiple buildings could continue to be built to a lower standard. Under the new requirements, any buildings not started within the transition period are subject to the current regulations. The transition period to ADL 2021 finished in June 2023, so all new construction must now meet this version.

Improvements in insulation – what changed?

Previously the building fabric limiting values were not particularly demanding, and in most cases, buildings needed to meet the much more rigorous values set out in the notional building models to achieve compliance. The 2021 minimum U-value requirements now more closely reflect



those of the notional building, and the maximum allowable ‘backstop’ level of air permeability has also been tightened.

Building Fabric Limiting Values (England)		
	ADL2A 2013 (with 2016 amendments)	ADL2 2021
Flat Roof	0.25 W/m ² K	0.18 W/m ² K
Pitched Roof	0.25 W/m ² K	0.16 W/m ² K
Walls	0.35 W/m ² K	0.26 W/m ² K
Floors	0.25 W/m ² K	0.18 W/m ² K
Rooflights*	2.2 W/m ² K	2.2 W/m ² K
Air permeability	10 m ³ /(hr·m ²)	8 m ³ /(hr·m ²)

(Note that rooflights were previously measured in the vertical plane and are now measured in the horizontal plane)

The same limiting values apply for new and replacement elements in existing buildings in England.

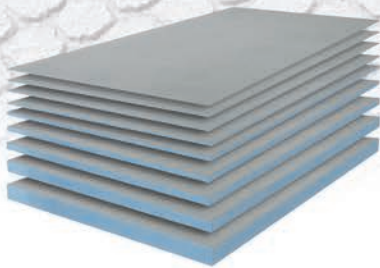
Factory engineered jointing helps to ensure high levels of airtightness, often achieving 2 m³/(hr·m²) at 50 Pa or better



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Steel faced PIR core insulated panels can readily achieve the required U-values with minimal thickness

Measuring compliance

The National Calculation Methodology (NCM) remains the means by which compliance must be demonstrated, with an updated version of the Simplified Building Energy Model (SBEM) available to calculate aspects such as the Target and Building Emission rates (TER/BER) as well as the Target and Building Primary Energy Rates (TPER/BPER).

The introduction of the Primary Energy rate as an additional metric by which performance is measured was one of the most notable changes. The metric applies a fuel factor adjustment to the energy used, accounting for upstream activities to prepare the fuel for use, this includes steps such as extracting, refining and transporting fossil fuels. The primary energy demand for a building also factors in the fabric performance of the building and the efficiency of the heating technology used.

Carbon emissions were also retained, allowing some consistency in the benchmarking process – both metrics must be met for a building to comply.

Interestingly, amendments were introduced in February 2023 to remove the Primary Energy factor as a performance standard where district heat networks or community heating is being used. Buildings with a useable floor area of 500 m² or more must be subjected to pressure testing to assess air permeability.

As the building envelope becomes more efficient, thermal bridging becomes a more significant factor, so ADL2 (England) requires accurate calculations of the psi values at junctions and penetrations, with a 50% penalty if assumed psi values are used instead of project specific calculations. To support this approach accredited details were removed.

Complying with Part L

Steel faced PIR core insulated panels readily achieve the required U-values with minimal thickness. For example, the minimum U-value for a flat roof is 0.18 W/m².K, 0.16 W/m².K for pitched – a typical trapezoidal insulated panel can achieve 0.16 W/m².K with just 120 mm thickness. The single unit panels ensure insulation continuity, and manufacturers can often provide detailed psi values to use in building energy modelling, helping to avoid penalties.

Chris Pateman is general secretary at EPIC

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The ongoing issue of hard - to - treat walls in the UK can be overcome utilising Spacetherm, an ultra - thin insulation for thermal upgrades, saving valuable space without altering the exterior fabric of the building.

Modern materials house classic vehicles

'Autobarn' is an unusual build comprising an elegant five-bay garage and accompanying workshop sitting within the grounds of a Grade-II listed 18th-century home in Somerset.

Designed by Bindloss Dawes Architects, the brief was to create a garage with an adjoining workshop to house the client's classic car collection. The finished result is an aesthetically beautiful building with its deceptively simple wooden barn-themed styling using agricultural materials such as concrete and recycled wood under a zinc roof.

With surfaces comprising steel, timber and polished concrete floor, the architects incorporated Trolldtekt acoustic panels to clad both the walls and ceilings between the steel frames for sound absorption and to combat the issue of reverberating noise.

The added advantage of having services hidden behind the white panelling means

the final result is a stunning simplistic and minimalist design allowing the classic cars to be the focus of attention and transforming the space into more of a gallery than a traditional garage.

Trolldtekt acoustic panels are available in a variety of different surfaces and colours and combine sound absorption with a tactile surface. With an expected life cycle of at least 50 years and resistance to humidity and impact, they are available in various sizes and four grades, from extreme fine to coarse. The panels can be left untreated or painted in almost any RAL colour. Depending on the panel specified, reaction to fire is classed in accordance with EN 13501 as B-s1,d0 or A2-s1,d0 respectively.

Founded on the Cradle-to-Cradle design concept and having attained Gold certification, Trolldtekt wood wool acoustic panels are manufactured using wood from certified forests (PEFC™ and FSC®C115450)



and can contribute positively to a building's BREEAM, DGNB or LEED points.

Samples, case studies and technical guidance is available by visiting the website.

01978 664255
www.trolldtekt.com

Knauf Insulation launches OmniFit® Slab 32



Knauf Insulation has launched OmniFit® Slab 32, the first 32 lambda glass mineral wool insulation slab on the market for use in light steel frame systems (SFS) as part of a rainscreen facade or other external wall build-ups. "From thermal performance to fire safety, the regulations governing how buildings are built and perform are getting stricter," explained Liliya Luke, Glass Mineral Wool Product Manager at Knauf Insulation. "So, we have launched OmniFit® Slab 32 to help our customers deliver the low U-values required, without compromising on fire safety, acoustic performance or sustainability. Specifiers can now optimise their rainscreen facade systems by adding the benefits of glass mineral wool to their build-up – delivering acoustic performance, and reduced embodied carbon compared to rock-only solutions, with an insulation specification that remains completely non-combustible." OmniFit® Slab 32 is primarily designed for use with Rocksilk® RainScreen Slab when used in rainscreen applications, and is suitable for use in the external wall systems of all residential buildings over 11 m tall and relevant residential buildings over 18 m tall.

01744 766 600 www.knaufinsulation.co.uk/omnifit-slab-32

ROCKWOOL® launches new SoundPro Guide



To support specifiers in selecting acoustic solutions for education and residential applications, ROCKWOOL® has launched ROCKWOOL SoundPro. The specialist guide combines technical data, product information and the latest regulatory advice in one place,

aiding the specification of stone wool solutions for settings where sound insulation is key. ROCKWOOL SoundPro outlines the importance and principles of good acoustic design and how to effectively enhance the acoustic capabilities of building projects.

01656 862 621 www.rockwool.com/uk

New Majestic Mansion design from Keller

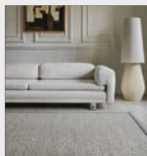


Illustrating the style of the Dutch masters, with the play between dark and light, and the floral pattern in the wallpaper, the Majestic Mansion design from Keller features warm, dark veneered units with narrow frames. The dark smoked glass doors are designed to create a 'majestic'

atmosphere. The on-trend Elba recessed open units in pecan brown, with LED strip lighting, provide a chic finishing touch while the Lexington narrow framed cabinet fronts in matt black oak stain deliver luxurious elegance with a timeless appeal.

www.kellerkitchens.com

Introducing Rococo from Crucial Trading



Rococo is the latest wool carpet collection from Crucial Trading and further expands their range of luxury carpets and rugs with a new, timeless elegant design. Crafted with 100% New Zealand Wool, Rococo's contemporary loop pile brings the finest quality and a truly exquisite feel to any interior. With six soft and comfortable wool carpets to choose from, you're sure to find a style that's perfectly suited to the design of your space. Whether you're looking for a mix of dark and light shades offered by Candelabra, or the light monochromatic tones of Sculptured White, Rococo has it all.

crucial.consumer@crucial-trading.com www.crucial-trading.com

F. Ball delivers win-win for Decorette



Stopgap 600 Base deep section base compound and Styccobond F49 Hybrid PS adhesive were amongst products from F. Ball and Co. Ltd. used to install floorcoverings in the new premises of the Echt franchise of the Dutch home deco retailer Decorette. Raymond Schuijt,

franchise owner and installer at Decorette Schuyt, said: "We love using F. Ball adhesives and smoothing underlayments as they are top quality and very easy to work with. The range is well thought out and contains solutions for every situation you can imagine."

01538 361 633 www.f-ball.co.uk

Infinity
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A sky full of stars

Photo credit: HiFi Cinema

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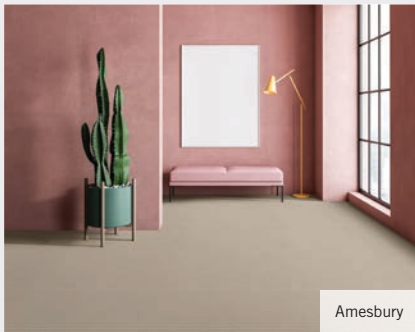
Twitter

01922 639 111

info@strandhardware.co.uk

Furlong Flooring launch Beyond Wool® collection

Poised to deliver excellence beyond expectation, the new British-made Beyond Wool® collection from Furlong Flooring will give customers the wool-like look they want, with the finish they need. This treat for the feet is sure to create the very best interiors and includes a great new addition with a 100% recycled yarn range to give customers a sustainable, durable and easy-to-clean carpet.



Amesbury

The luxury Beyond Wool® collection consists of five ranges with a choice of luxury twist and loop pile carpets that give customers the natural wool-like look combined with the practical benefits of stain and moth resistance. Featuring the twist pile ranges of Renaissance, Elegance & Serenity along with the loop piles of Henley & Marlow, the Beyond Wool® collection will also include the 100% recycled yarn loop pile range of Amesbury & Castlerigg from June 2023.

Made from recycled polypropylene yarn, the Amesbury & Castlerigg range features 100% bleach cleanable fibres, that keep a carpet looking great while being easy to clean. With a choice of six natural hues and two on-trend loop designs, the range is made in a two-ply construction with Furlong's award-winning Combi-bac® backing to ensure a trouble free-fitting and a stunning finish. These Class 33 carpets are also suitable for heavy domestic and commercial applications.

Offering outstanding value and choice,



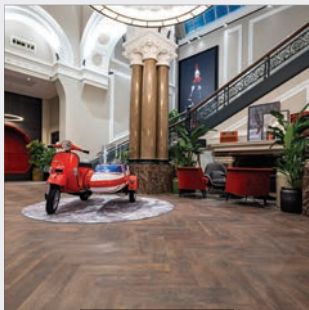
Castlerigg

without compromising on contemporary style, the Beyond Wool® collection will give customers a hard-wearing and stylish carpet suitable for use across the home.

These visually appealing and easy to fit carpets are available in a variety of warm and cool tones that have been professionally designed to suit both residential and commercial environments, allowing you to keep up-to-date on current flooring trends, no matter the space. This innovative collection is supported by Furlong Flooring's market leading wear and stain warranty ranging between seven to ten-years.

01322 628 700 www.furlongflooring.com

Multicategory flooring solutions from IVC Commercial at Radisson RED Liverpool



Carpet Tiles, Luxury Vinyl Tile and Heterogeneous Vinyl floors by IVC Commercial have been used in the conversion of a former halls of residence for Liverpool's students into a Radisson RED hotel. In a project that has seen a once-derelict halls of residence turned into a glamorous hotel, returning grandeur to a Grade II Listed building that was once a British Transport Hotel, IVC Commercial's ability to go across categories has seen a range of its flooring solutions specified. Across Creative Spark carpet tiles, LayRed 55 engineered acoustic vinyl, Moduleo and Studio Moods luxury vinyl tiles, and Optimise 70 and Isafe 70 heterogeneous vinyl; more than 6,100 m² of IVC Commercial flooring has been specified by KonzeptID. "The ability to use luxury vinyl tiles, carpet tiles and sheet vinyl floors from one brand helped greatly in creating a flooring specification that met our design and performance needs," said the team at KonzeptID. "IVC Commercial's choice, value and performance across a wide range of flooring options allowed us to deliver a floor that met with the hotel's strong design ethos, while prioritising functionality and performance."

01332 851 500 www.ivc-commercial.com

Mapefloor System complements modern reinvention of Newark Works

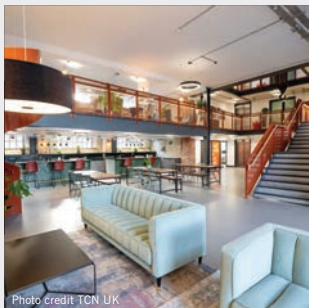


Photo credit: TCN UK

A Mapei Mapefloor Resin Flooring System has been installed as part of a stunning transformation of the previously derelict Newark Works in Bath Quays' new business district. A vibrant new community for entrepreneurs and businesses in creative industries, TCN's new industrial styled, collaborative workspaces are set within a remodelled historic crane factory. To maintain its industrial feel, Mapei recommended its highly durable Mapefloor Resin Flooring System in a pale grey colour tone, RAL 7035. Throughout the project, Mapei's technical team provided onsite advice on preparation and application, including guidance on crack repairs to the original screed, and mixing and installation of the resin. The specification included Mapei Eporip – a two-component solvent-free epoxy used to repair cracks within the subfloor – and the Mapefloor System which comprised: Mapefloor I 302 SL – a two-component epoxy formulation; Mapecolor Paste colouring system and Mapefloor Finish 58 W – the top layer surface which provides additional resistance to wear, abrasion and chemicals, creating an easy care, highly-durable surface.

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

Harlequin Liberty Switch wins three prestigious awards, including ABTT Engineering Product of the Year 2023

Harlequin, a global leader in flooring systems for dance and the performing arts, is proud to announce that its revolutionary new product, Harlequin Liberty Switch, has received three prestigious awards, including, at the recent ABTT Theatre Show, the highly coveted ABTT Engineering Product of the Year 2023. This recognition reaffirms Harlequin's commitment to providing the performing arts community with the highest quality cutting-edge products available.

Harlequin Liberty Switch, introduced at the end of 2022, is a groundbreaking modular, multi-use flooring system that seamlessly transitions between a sprung dance floor and a rigid theatre floor at the touch of a button. Using pioneering technology this multifunctional floor enables performers to adapt their space according to their specific needs while providing the highest standards of safety and comfort.

The engineering behind Harlequin Liberty Switch enables carriages running on low-friction rails to engage or disengage stop blocks on the underside of the Liberty panels, transforming the floor effortlessly from rigid to fully sprung in less than a minute. Harlequin Liberty sprung panels, renowned worldwide for their excellence, make up the upper part of the floor, sitting above base units housing the actuators and the mechanical components. The system is linked to a master control unit located off-stage and is controlled using an intuitive touch screen display.

The advantages of Harlequin Liberty Switch are far-reaching. The system optimises



space utilisation, saving both time and money by offering a flexible multi-use floor within the same area. With significant reductions in the manpower required for changing from a heavy-duty stage floor to a sprung dance floor, Harlequin Liberty Switch streamlines operations and eliminates the need for expensive ballet wagons or floor storage. The speed of transformation also ensures less 'down time' between performances.

The system can also be fully customised to specific customer requirements. For example, areas of the floor can be isolated to create rigid zones for the placement of pianos or scenery while maintaining a uniform and consistent shock-dampened sprung dance floor across the rest of the stage. Features such as traps and lifts can easily be accommodated if required.

Harlequin Liberty Switch has won awards for its innovative design across the world,

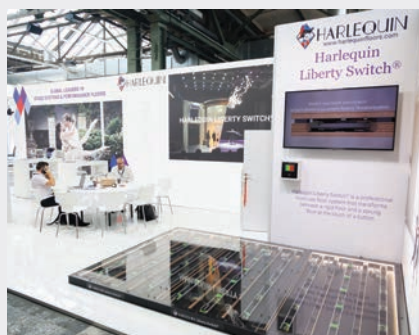
including the Best Debuting Product Award at LDI Las Vegas in 2022 and the DTHG Technology Product Award at Showtech Berlin earlier this year. The triple award recognition for Harlequin Liberty Switch speaks volumes about its exceptional design, functionality, and impact on the performing arts industry.

"We are thrilled to receive these prestigious awards, including the ABTT Engineering Product of the Year 2023," said Guy Dagger, Group CEO at Harlequin. "Harlequin Liberty Switch represents our commitment to providing innovative solutions that enhance the performance experience while addressing the practical needs of our customers. This recognition serves as a testament to our team's dedication and expertise in developing cutting-edge products for the performing arts community."

Harlequin continues to work with industry professionals, researching and developing products that are practical and cost effective whilst putting the needs and safety of performers first. The company remains committed to pushing the boundaries of what is possible in flooring technology and supporting artists and performers worldwide in achieving their creative vision.

See Harlequin Liberty Switch in motion at youtu.be/FEMitk1K_A

01892 514 888
www.harlequinfloors.com



40 years of wedi

Individuality rooted in secure systems

As the pioneer of the XPS industry, wedi has introduced countless product innovations to the construction industry over the past four decades.

Built on the vision of Helmut Wedi a master tiler from Emsdetten, Germany, the forward-thinking brand is well-known for its precision-engineered, clever waterproofing system solutions for wet areas.

What started off with a tileable XPS bath board in 1983 has become a full system: performance-led wedi innovations have grown into a large portfolio of premium quality, versatile product solutions. From directly tileable, 100% waterproof XPS elements through clever system accessories to large format, seamless design surfaces – the strength of the brand lies in its system concept.

Thanks to their modular nature, wedi elements are designed to interlock with one another offering unparalleled peace of mind for everyone involved.



Tile backer boards (XPS)

- standard boards in 11 thicknesses between 4-100 mm and in 2,500 x 600/900/1,200 mm formats
- flexible boards to create curved structures in 20/30/50 mm thickness
- vapour boards in 12.5/20/50 mm thickness
- preformed cladding solutions such as for pipe, bath and toilet cistern cladding
- under-tile heating boards with pre-cut grooves for laying hot-water pipes in 30/40/50/60 mm thickness

Flush-to-floor shower elements (XPS)

- for point drainage in 21/23/40 mm thickness in different formats
- designer trays for point drainage in quadrant, round and shell shapes with or without matching walls
- for linear drainage in 25/50 mm thickness in different formats
- with integrated drainage, linear or point design in 65/70/90 mm thickness including drainage and cover

Functional design elements (XPS)

- benches and shower seats
- shelving and storage solutions
- ready-to-use partition walls with or without niche

Wellness cabins and bathroom furniture (XPS)

- loungers with or without integrated heating
- steam cabins in different formats
- bathtubs, washstands, washbasins and shower units

Seamless, large-format design surfaces in assorted colours and textures in 6 mm thickness

- for wall panelling in 2,500 mm length, 900 or 1,200 mm widths
- for shower elements with perfectly matched gradients
- for niches, with or without integrated LED lights
- for the rounded Sanoasa bench 3
- for toilet cisterns with pre-cut openings for connections

“No nasty surprises with us! Tried and tested over 40 years, wedi solutions are proven to effectively prevent leakage problems for decades to come. We offer high-quality products and system solutions that stand the test of time. This is why, beside the industry-compulsory standard manufacturer’s warranty, we also offer a 10-year product quality guarantee on our entire standard range” – comments Stephen Neild, Managing Director at wedi UK – “and by standard, we mean tested, proven products”.



- 100% waterproof and directly tileable = no additional waterproofing or priming is required
- 133 kg/m² vertical weight-load capability = ideal substrate for heavier, large-format tiles
- excellent thermal properties = perfect for use beneath underfloor heating systems
- enhanced cementitious coating = unrivalled security for areas with high water exposure
- partially integrated, 360° rotatable dry-fit drain technology = reduced installation steps, minimised risk of failure

wedi XPS products are manufactured with 100% green energy, have a minimum of 25% recycled foam core and have their own Environmental Product Declaration to comply with sustainable building. What’s more, seamless design surfaces of the wedi Top Line are made entirely of recycled materials. Paving the way for a sustainable future, wedi supports its clients in the responsible use of energy and environmental resources while inspiring creative, functional bathroom design.

0161 864 2336 www.wedi.net



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A false dichotomy?

Lidia Cetrangolo from Multipanel delves into whether style and sustainability are really conflicting requirements in bathroom design, and how they can both be met using wall panel solutions

While their function is to service the basic daily needs of a household, bathrooms can be one of the two main spaces that make a property stand out. Whether it's an ultra-modern space or an outdated eyesore in major need of urgent replacement, the bathroom can often be overlooked for its ability to be the key selling point in a property for a client.

When it comes to bathroom specification, architects need to be ahead of trends in order to meet the room's current and future needs; a complex requirement that goes beyond aesthetics.

With modern methods of construction (MMC) slowly creeping up the industry's agenda in a bid to meet net zero 2050, there needs to be growth in the number of materials that tick both style and sustainability boxes.

Modern alternatives

While bathroom wall panels aren't necessarily the 'new kid on the block', increasingly they are becoming the smart choice for stylish and sustainable specification. Offering a myriad of design options, they are fully recyclable, waterproof and offer a 30-year warranty.

Applied simply using adhesive, they eradicate the need for high-maintenance grout; a danger zone for water ingress and a feeding ground for mould and mildew. Providing sleek, uninterrupted aesthetics, bathroom wall panels can be the smart choice for 'fit and forget' wallcovering solutions.

An impenetrable idea

With so much focus on the cost of living and a wide-reaching demand for money-saving solutions, bathroom wall panels can help towards water-saving goals thanks to their complete impermeability. Available in a range of sizes, they are fixed with adhesive and usually connected with tongue and groove technology.



Maintained simply with hot, soapy water and without any grouting to upkeep, the panels are designed to offer 30 years of watertight coverage, meaning the difficult decision regarding specification comes only with choosing the finish.

Having recently undertaken some research into the latest trends, we understand demands from a consumer perspective, enabling needs to be met with various wallcovering solutions.

Here we take a look at the top trends in further detail.

Bold colour

Uninspired and generic greys have made way for more vibrant, even loud shades. While subdued tones like white and grey promote a sense of cleanliness and space, bold colours provide a platform to bring personality into the room.

Delivering a sense of originality, brighter shades – in particular green and pink hues – can lift the space and accentuate an area or feature.

For example, areas of form and function could be determined with a juxtaposition of different materials.

Providing sleek, uninterrupted aesthetics, bathroom wall panels can be the smart choice for 'fit and forget' wallcovering solutions



80s is retro

While many thought the ultra-common, retro avocado bathroom suites were a thing of the past, they've made an unexpected comeback.

Whether it's feature cabinets, freestanding bathtubs or old-school radiators; 'period' features are increasingly in demand in the bathroom, with accents being accentuated with complementary design or furniture pieces.

Mix & match

Neutrality has been replaced with contrasting colours, patterns or designs; beautifully working against each other to subsequently work well together.

Whether it's a variety of mixed-patterned wall coverings to achieve a bold, statement look or herringbone flooring against a honeycomb-finished bath, a client's expression can be realised through a blend of complementary and competing aesthetics.

Tile wall designs

The mixing of tiles and panel patterns is very on-trend, too, with the focal point now becoming a stand-alone feature wall in the

bathroom. This can be a complex design of tile/panel, or a subtle contrasting wall.

However, you don't necessarily need tiles to provide the desired look. Tile-look bathroom wall panels can deliver it, without the usual accompanying headache of grout and silicone maintenance.

Food for thought

While architects will always be at the behest of new legislation or updated guidance, creativity and vision doesn't need to be dampened in order to accommodate forthcoming changes. Quite the opposite, in fact: product innovations and new materials can be the solution to outdated, cookie-cutter specifications and enable the delivery of both style and sustainability requirements.

Speedy to install (up to 15 times quicker versus traditional tiled walls), waterproof and with Forest Stewardship Council certification, wall panels may be the 'no brainer' solution for bathroom specification, providing future-proofed design.

Lidia Cetrangolo is marketing manager at Multipanel



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 [papiliovent.co.uk](https://www.papiliovent.co.uk)
 07824 862 595



VitrA at the Installer Show 2023

VitrA Bathrooms UK is one of the fastest-growing bathroom brands in the UK. The company exhibited at The Installer Show, NEC Birmingham with a stand jam-packed with industry experts, product innovation and fun!

Bathroom installers who visited the stand not only got hands-on with the new VitrA frames and concealed cisterns, which are arguably one of the easiest to install on the market but also learnt more about VitrA's award-winning V-Care Smart shower toilets as well as VitrA Aquacare WCs that provides toileting with the convenience of a built-in bidet. Additional product highlights include the Vitrus frame, which provides the perfect retrofit solution for wall-hanging WCs, and the striking Origin brassware collection.

Complementing the product launches, VitrA included a basketball court on the stand, with a toilet seat basketball hoop! Anyone shooting three hoops could try and crack a safe containing a pizza oven from Ooni – the Fyra 12, with basketballs on offer whether the safe is cracked or not!



Plumbing influencer James Lawrence, the lead reviewer and advice guru from Plumberparts, was on the stand on Tuesday and Wednesday. At the show, he participated in VitrA's industry survey, where every participant received an extra mini gift.

Senior Channel Marketing Executive Lucy Holland said: "We have a solution for all things bathroom, designed beautifully, tested thoroughly, and certified appropriately."

01235 750990 www.vitra.co.uk

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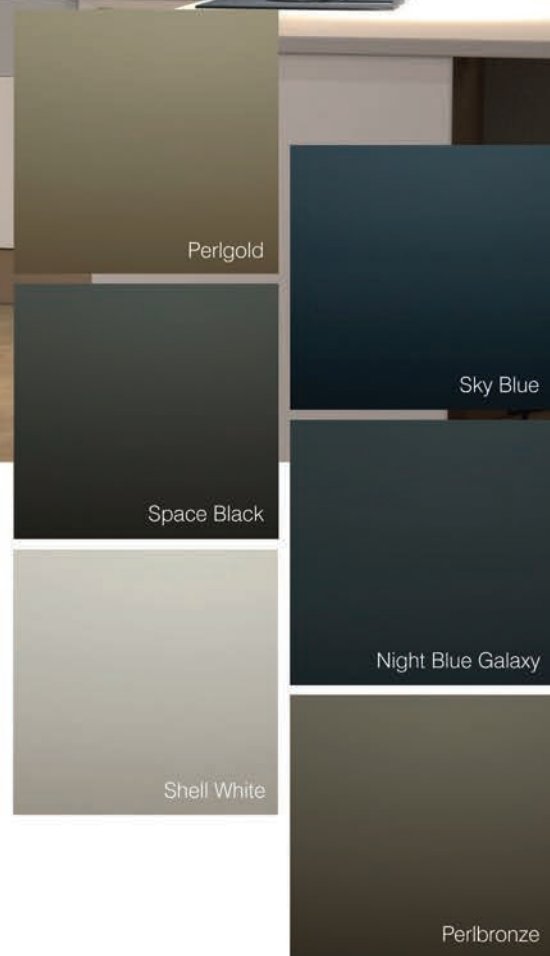
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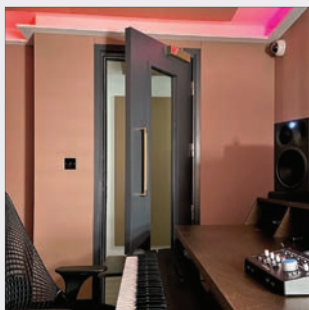
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Enfield Speciality Doors is a hit for A-list London recording studio



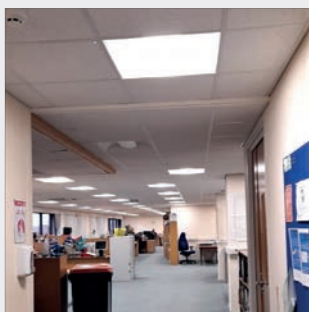
A brand-new, high-end recording studio in East London has been fitted with bespoke acoustic doors from Enfield Speciality Doors.

The doors provide exceptional acoustic performance while delivering on fire safety, security, and style at Qube East, where some of the country's biggest A-list musicians and producers are customers and members. Located near Canary Wharf, Qube East has 24 studios for recording, production, DJ, and more. The design and fit-out was a collaborative project between KVIST Interior Design, Sustainable Acoustics, contractor Trabur, Stream Properties, and Qube – all of whom had worked with Enfield Speciality Doors before or had been referred to them.

For corridor doors which lead to studios, a back-to-back door, or 'room-within-a-room' system was installed to enhance the sound protection qualities of the Quiet Mark-accredited doors, with 35dB doors fitted on the outside and 42dB doors inside.

sales@enfelddoors.co.uk www.enfelddoors.co.uk

Luceco relights Hartlepool Civic Centre



Luceco has recently supplied luminaires for an extensive refurbishment at Hartlepool Civic Centre located in Victoria Road, providing local government and essential services to the borough as well as other community facilities. The Council now benefits from energy efficient, cost effective lighting throughout their buildings which significantly contributes towards their environmental and sustainability strategy. Over 1,000 luminaires were supplied, principally LuxPanel and Epsilon fixtures. 3,500 lm, 26W dimmable recessed Epsilon luminaires were installed throughout the buildings being ideally suited for office environments. Epsilon is an LED direct / indirect UGR19 compliant recessed fitting designed to optimise lighting performance and maximise luminaire spacing. Epsilon enjoys an efficacy of up to 140 Llm/cW due to a micro prism optic and is available in standard, dimmable, emergency dimmable, emergency self-test, DALI emergency dimmable and enabled for Luceco Platform and Elevate wireless lighting controls. Architecturally pleasing in appearance, the Epsilon also remains within the spirit of The Society of Light & Lighting's LG 7 requirements.

01952 238 100 luceco.com/uk

Reformulated Dulux Trade Diamond Matt



Dulux Trade Diamond Matt has been reformulated in line with customer feedback to deliver durability and improved sustainability credentials, helping the industry move towards a more sustainable future. Available since June, architects and specifiers can be confident that Dulux Trade Diamond Matt meets key industry standards and will provide their clients with

quality results for years to come. Designed for high traffic areas, the new formula will help extend maintenance cycles further with walls that stay looking newer and cleaner for longer.

0333 222 7070 www.duluxtrade.co.uk/diamondmatt

Fire Retardant HR Prof – with test data



Fire Retardant UK has increased the number of species specific (extremely important to see the species test data when specifying a fire retardant), fully certified test data for its high performing HR Prof, classified on solid timber to Euroclass B-s1-d0. Water based, non-toxic, for internal

or external use. A revolutionary product with Green Credentials. Tested for use externally, the efficiency in outdoor use conditions was determined by a research method based on EN 16755. The accelerated weathering was performed according to EN 927-6, with cycles of rain, drying, UV, and additional freezing-heating cycles.

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Sensitive to urban safety

New legislation in the form of Martyn's Law means that organisations which operate venues and locations where people gather will have a duty to prevent terrorist attacks. Mark Stone from Securiscape discusses the architect's role in the UK's ongoing campaign to keep the population safe

Six years on from the devastating bomb attack which killed 22 people attending an Ariana Grande concert at Manchester Arena, the law regarding ways to make venues safer has taken another step forward.

Named Martyn's Law after one of the victims of the arena bombing, Martyn Hett, the ruling has reached draft legislation stage, a step that was marked recently at the Crisis Management in High Rise and Complex Buildings event on May 18.

The legislation, which will become the Terrorism (Protection of Premises) Bill, is being introduced in order to place the burden of making venues – where members of the public gather – safe on its owners and operators, in the same way that they need to take responsibility for fire safety and health and safety.

Terrorism (Protection of Premises) Bill

The new Bill, which is expected to be introduced next spring, and which will affect venues including shopping centres, stadiums, music venues, bars and public spaces, will change this.

It will introduce a three-tier system and a range of requirements for operators and local authorities encompassing everything from training security staff to better spot potential terrorists before they launch their deadly attacks, to ensuring staff are wearing body cams.

The emphasis will also be on processes rather than 'bollards and gates,' but venues will still need to consider creating a first line of defence by installing equipment and products that will prevent a potential terrorist reaching the area where people are gathered in the first place, requiring them to work in conjunction with security advisors to assess their premises and identify possible vulnerabilities.



The architect's role

This is where architects come in, because of the need for the function to fit the form. While defences can take many forms – such as concrete blocks or rows of bollards – their task will be to ensure that whatever perimeter security is applied does not detract from their overall design or make the exterior of the building resemble a fortress.

They will need to consider how a potential terrorist attack might be mounted in the first place – whether by a lone individual travelling on foot or in a vehicle – and imagine the route they might take, their ability to climb over or dodge past defences in order to reach their target.

And they need to know which products are capable of mounting a defence if called into action – what constitutes a reasonable performance and how to know whether an installation that might look good is suitable for helping to save lives.

It is most likely architects will need to include defences in the design that can

The new Bill, which is expected to be introduced next spring, and will affect venues including shopping centres, stadiums, music venues, bars and public spaces, will change this



Martyn's Law means that architects have a role to play in providing well-designed protection schemes

prevent vehicles, such as those used to carry incendiary devices or to deliberately target people, from getting too close to an entrance way or to an area where people are gathering.

Thankfully, help is at hand, including via ProtectUK, a police initiative launched last year to create a hub whereby business owners, security industry representatives and members of the public can stay up to date with the latest news, advice and training.

Hostile vehicle mitigation (HVM) devices

Alternatively, the UK's perimeter security products manufacturers are also able to offer advice, along with the devices which have been rigorously tested to ensure they satisfy performance and aesthetics.

These are known as hostile vehicle mitigation (HVM) devices and include fencing, bollards, street planters and other often ingeniously designed products which can create a ring of steel, either as part of a new build or by fitting them retrospectively.

Key to understanding their capability is understanding the PAS 68 and IWA-14 rating systems, which indicates how the products behave in test conditions in terms of the weight of the vehicle they were required to stand up against and the speed that it was travelling at.

All products are judged on their ability to withstand such collisions, including the distance that the vehicle was able to proceed beyond the point at which it came into contact with the device in question.

The PAS and IWA ratings are, in essence, different, but there are many similarities and, in practice, many manufacturers have

turned to the IWA 14-1:2013 (International Workshop Agreement) for classification, since it is a global standard that combines elements of the original (British) PAS system and the American standard ASTM.

There are a number of different classifications available under the IWA system, incorporating nine different types of vehicles (including pick-ups and flat-bed trucks), different speeds from 20 mph upwards, the angle of impact – most commonly 90° – and the distance it penetrated beyond the leading edge of the device.

All of this information is included in the precise rating, which you will find on suppliers' websites, so that, for example, a security bollard whose rating is declared as IWA 14-1:2013 V/1500(M1)/64/90:0.6 has been successfully tested against a 1.5 tonne passenger vehicle (M1) travelling at 64kph and at an angle of 90°, allowing a penetration of just 0.6 mm.

Such is the performance you can expect from a security bollard, but there is a whole range of products available with similar capabilities, including products which can be retrofitted into pavements and have shallow footings, ensuring they do not disturb underground services.

And then there is security fencing which can be fitted onto bridges – which is a challenge because of the depth of footings needed to ensure the products can withstand a collision – and which can be fitted with period designs to blend in with the surroundings.

In conclusion

Martyn's Law means that architects have a role to play in providing well-designed protection schemes.

But arguably, their role in this campaign goes further, because while the legislation will usher in a new era of safety, the peace of mind it will bring will be meaningless if it makes members of the public feel like they are under attack.

Sensitive urban design, incorporating the latest products capable of withstanding vehicle-borne attacks, will more than play its part when Martyn's Law comes into play by ensuring going out for a meal or a gig remains a pleasant and carefree experience while those who wish to do us harm are kept at bay.

Mark Stone is managing director at Securiscape

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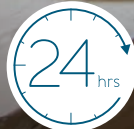
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