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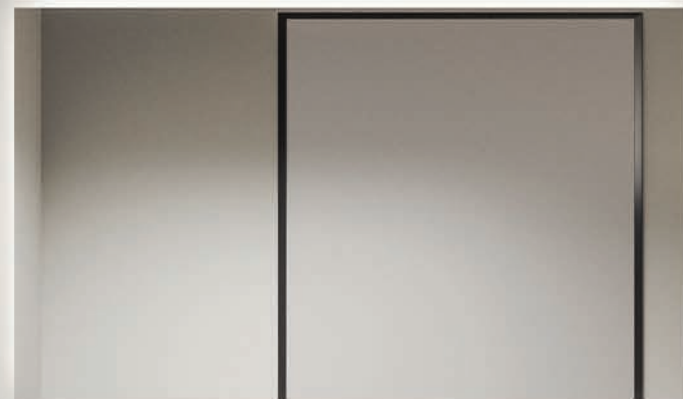
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CONTENTS

NEWS, VIEWS & INSIGHTS

PRODUCTS

- | | | | |
|-----------|---|-----------|---------------------------------|
| 04 | Industry News | 38 | Groundworks |
| 12 | Site Lines: A virtually perfect balance | 38 | Structural Elements |
| 16 | Ask The Architects: George Aboagye Williams & Priya Nahal of Perkins&Will | 41 | External Envelope |
| 22 | International Focus | 49 | Interiors |
| 25 | CPD Focus | 55 | Heating, Ventilation & Services |
| 25 | FutureBuild 2023 Show Preview | 59 | Insulation |
| 26 | Appointments & Company News | 62 | Accessibility & Lifts |
| | | 65 | Safety & Security |
| | | 66 | Landscaping & External Works |



PROJECT REPORTS

- 28 A NEW GATEWAY FOR NEWCASTLE**
As part of a large-scale regeneration of the city centre, Newcastle Central Station is undergoing a revitalising transformation. Alex Vafeiadi of Atkins tells Jack Wooler how the firm was able to bring all the stakeholders together to uplift this major gateway, while retaining local authenticity
- 33 BUILDING GOOD BONES**
A new healthcare facility by global architecture practice HKS transformed a business park in an Atlanta suburb, and set the precedent for the care provider to invest \$1bn in developing the wider site. Roseanne Field reports on the LEED Gold Emory Musculoskeletal Institute



FEATURES

- 39 STRUCTURAL ELEMENTS: TIMBER**
THE TIMBER-PAVED ROAD TO ZERO
The Structural Timber Association updates architects on quality assurance issues
- 45 EXTERNAL ENVELOPE: DOORS & WINDOWS**
A ROBUST CASE FOR TIMBER WINDOWS
George Barnsdale on tackling specifiers' misconceptions around timber
- 57 HEATING, VENTILATION & SERVICES**
THE EMBODIMENT OF LOW CARBON
WMS Underfloor Heating's Craig Edwards champions UFH for zero carbon goals
- 60 INSULATION: ACOUSTIC**
THE HOT TOPIC
James Healey of the Institute of Acoustics explores the overheating vs noise debate
- 63 ACCESSIBILITY & LIFTS**
RIISING TO THE REFURB CHALLENGE
The Platform Lift Company on balancing accessibility with preserving character



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incorporating **Building Projects** magazine,
architectsdatafile.co.uk and [@architectsDF](https://twitter.com/architectsDF)

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Annual subscription costs just £48 for 12 issues, including post and packing. Phone 01435 863500 for details. Individual copies of the publication are available at £5 each inc p & p. All rights reserved

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FROM THE EDITOR



Despite the knocks that timber has received – somewhat unfairly – since Grenfell, at the more award-winning end of architecture at least the material remains a very potent force in driving excellent, sustainable design.

Cambridge University has ‘done the double’ this year with Homerton College Dining Hall by Fielden Fowles picking up the Gold Award in the 2022 Wood Awards, after Níall McLaughlin’s practice won the Stirling Prize – for Magdalene College’s library. Both projects expose and celebrate structural timber in their interior, with Homerton in particular going all-out with a column-free dining space constructed of butterfly trusses connected to side columns, all in sweet chestnut; and a ‘buttery’ lined in ash.

What the Wood Awards judges said was a “bright, airy, and efficient setting by day” transforms into a dramatic area for events. The roof deck is also made from engineered timber. The space has echoes of traditional collegiate halls and the building in general respects its counterparts nearby, but embodies a clean, structural rigour which feels modern.

This follows the heartening success of Níall McLaughlin’s practice in the Stirling Prize – at the fourth time of asking – with Magdalene College’s spectacular new brick-clad library. The interior is a warm combination of timber and brick, using the material to beautifully add a calm comfort to the study spaces. The CLT structure is complemented by hardwood shelves and tables, and the whole composition (rooflights and windows, columns, shelves, baffles, desks and balustrades) comes together in a wonderful unison of materiality enhanced by practical amounts of daylight.

And finally, Fosters is bucking the slightly timber-agnostic trend we have seen recently in major UK buildings, with their exciting announcement of The William, a net zero, 90,000 ft² CLT office which will be one of London’s largest “timber buildings” when completed in 2026, says the practice. At six storeys, it looks to be something of a timber counterpart to the practice’s show-stopping Bloomberg HQ, with an open, curved stair connecting floors, and high quality inside and out.

Adjacent to Whiteleys shopping centre and part of the wider Queensway development which Fosters is undertaking, the scheme also contains 21,000 ft² of retail, and 32 homes (11 affordable). Planted terraces will provide highly visible biodiversity. While this scheme might be the icing on the cake of what is possible in the UK at the moment, it’s to be cheered, particularly as it flies in the face of some persistent assumptions on timber.

James Parker, Editor

**ON THE COVER...**

A former executive office park which was purchased by Emory Healthcare has been redeveloped into a medical office campus. The entire \$1bn project is anticipated to take 15 years, with the Musculoskeletal Institute the second building to finish on site. Cover Image © Tom Harris
For the full report on this project, go to page 33

BRICK AWARDS

Purcell's chapel extension triumphs in 2022 Brick Awards



Radley College Chapel Extension © David Miles

A painstakingly detailed extension to a chapel at Radley College, a private school in Oxfordshire, was the overall winner in the 2022 Brick Awards. The heritage project won in three award categories – Supreme Winner, Contractors' Choice and Craftsmanship.

Purcell Architecture's Oxford studio designed a series of "localised" extensions, including a new octagonal Sanctuary at the east end of the chapel. The brick supplier Northcot Brick was able to "exactly match the bricks to the original 1894 chapel," said the Brick Development Association (BDA), who organise the awards.

Northcot worked closely with the specialist subcontractor O.G. Stonemasonry, who laid the bricks and manufactured and installed stonework. They created three bespoke brick blends in imperial sizes to match the chapel, both internally and externally. The judges commented: "The overall use of brickwork and well-considered complementary materials work fully within a historic context, yet the building is still very much 21st century."

Also awarded was a four-storey workspace in Brixton, London – The Department Store Studios picked up the Sustainability Award for commercial projects. Designed by Squire & Partners, the building provides 13,000 ft² of workspace, in a "highly sustainable development." The judges commended it as being "subtly beautiful, complementing the local area perfectly," featuring Ravenshead Tradesman Common bricks.

In the Sustainability – Residential category, Barratt won for its Zed House, a zero carbon home concept developed with Salford University. Claimed to be the first new home in the country built by a major housebuilder to deliver a carbon reduction of 125%, it used Forterra Butterley Blue Smooth bricks. Alongside overhead infrared panels that provide "instant zero carbon heat" and air powered showers, the building has clay brick facing the ground floor level. The judges said: "Barratt have done a fantastic job of considering the sustainability of the materials."

Woodmore Mews, a development of 37 affordable homes for rent in London was



Houlton School



Battersea Power Station

awarded Architects' Choice. Peter Barber Architects specified Forterra brick for this project built by Neilcott Construction for Greenwich council; 29 houses, seven flats and one maisonette creating a "pretty neighbourhood" of houses, plus a series of mews streets which connect into the urban fabric, said BDA. The houses are built from a "soft and rustic brick that helps ensure that the new homes feel embedded into the surrounding area." The judges said it showcased "sculptural, whimsical, bold and well-articulated architecture."

Medium Housing Development winner was The Gables in Liverpool, by DK Architects, a RIBA National award-winning development of 30 family homes for Musker Developments on a former factory site. Wienerberger's Con Mosso brick was chosen as the main facing brick for its "subtle textured finish and tonal variation." Large Housing Development was won by Goodluck Hope at Leamouth Peninsula in London, a riverside development opposite the O2 by Allies and Morrison architects working with Todd Architects.

Continued overleaf...



The eight separate buildings and 19 townhouses, range in height from three to 30 storeys. Brick is integral to the design with “buildings paying homage to the former brick industrial buildings with a modern warehouse approach,” commented the architects.

Chelwood, a large home in Amersham by Napier Clark Architects won Individual Housing Development, featuring handmade local red brick and local charred timber cladding. Gardenmore Green in Belfast (Small Housing Development), is a high-quality social housing scheme by Hall Black Architects. Buff brick used as the primary cladding material “offers a contemporary marriage of the red brick and buff render used by houses close by,” said the BDA.

In healthcare, winner of the Public category was The Alder Centre, a counselling facility for bereaved families, designed by Allford Hall Monaghan Morris. The judges said: “Clay bricks have been used to excellent effect. The rational, elegant design balances solidity with transparency with a series of parallel exposed brickwork walls bringing the garden in.”

Other winners were Neptune Wharf at Fish Island Village by Haworth Tompkins architects (Urban Regeneration), Royal College of Art Battersea Campus designed by Herzog & De Meuron (Education), Houlton School in the Refurbishment category, designed by van Heyningen and Haward Architects. The Innovation

category was won by the major redevelopment of Battersea Power Station by WilkinsonEyre, Purcell Architecture and Nanci Jones, considered to be the largest brick structure in Europe when completed.

The international project chosen for the Worldwide award was created in Tehran for the Hitra Office and Commercial Building by architect Hooman Balazadeh, sloping outwards to combine a tight footprint with natural light. A “homogeneous mass was formed which creates a varying combination of brick and turquoise colours,” to which the judges responded resoundingly: “The stunning building effect reconsiders the morphology of a typical office building to enhance the quality of lighting of the space.”

RESIDENTIAL

KSR completes complex high-end Novel House apartments in Hampstead

KSR Architects & Interior Designers have completed Novel House, a complex “multi-residential” project comprising 17 apartments in Hampstead Village on the site of a former nurses’ home.

The seven-storey building contains luxury apartments ranging from one to four bedrooms, including a 3,200 ft² lateral penthouse, private parking, gym and concierge. The building’s elevated position offers full views of the London skyline, and it is surrounded by listed houses, boutique shops and the local landmark Christ Church.

KSR “worked closely” with developer client The Linton Group to deliver the scheme. They commented: “Novel House is a rare example of a multi-residential new build in this conservative location,



and the resulting building harmonises with its neighbours and maximises space, light, and views,” said the architects.

Redevelopment of this site was approached carefully, given the proximity to neighbouring properties and the two-storey level change from back to front. The changes in levels across the site resulted in a “complex” piling structure and support to ensure there was no significant movement affecting the immediate neighbouring properties which include a church and several listed buildings.

3D computer modelling was required in order to ensure privacy between the units while maximising natural light and views. The main structure is a concrete frame with brick cladding to the lower levels and lightweight cladding to the upper levels which is stepped back from the principal facade.



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COMMERCIAL

‘Well connected’ commercial schemes completed at White City

Two buildings at the White City Place business campus in west London are now completed. Both buildings – Gateway West and Gateway Central – designed by Gort Scott, and Allies and Morrison respectively, have been given a Platinum WiredScore, the highest certification for “pre-enabled connectivity.”

The project team includes Sir Robert McAlpine (Construction Manager), AKT II (Structural and Facade Engineers), Sweco (MEP Engineer) and Deloitte (Cost Consultant). Cushman & Wakefield and Knight Frank are acting as agents.

Gateway Central is an 11-storey building comprising 280,000 ft² of total floor area, including two outdoor terraces at Levels 4 and 8. L'Oréal UK and Ireland have taken the five upper floors of the building for their UK headquarters and are currently fitting out the new space. Gateway West includes solar control glass with shading from external fins and shelves, designed to enable the building to use less than half the energy a comparable building requires to cool. The building is targeting BREEAM Outstanding and an energy efficiency EPC 'A' rating.



Gateway West is a four-storey building comprising 25,000 ft² which offers the opportunity to accommodate a stand-alone headquarters while also being flexible for a multi-tenanted occupation. It is a distinctive, angular brick and ceramic building, accessed via a new, landscaped public garden. A “collaborative approach to sustainability” has resulted

in a low level of embodied carbon in the building, said the project team. It has also achieved 2025-2030 energy performance targets and the site now supports twice the previous levels of biodiversity, prior to its redevelopment. The building is targeting BREEAM Outstanding and an energy efficiency EPC rating of 'A'.

MERGER

Broadway Malyan merges with DC3 and WILL+Partners

“Architecture, urbanism and design” practice Broadway Malyan has merged with architects DC3 and its sister company WILL+Partners.

Architecture practice DC3 was founded by John Drew, William Poole-Wilson and Therese Bak. Drew worked at Foster & Partners for 15 years, including as a partner, and was responsible for a number of the practice's City of London projects. Bak has worked in New York and London with SOM and, alongside Drew at Rafael Vinoly Architects. Over the years they worked collaboratively

with William Poole-Wilson who also founded workplace specialist practice WILL+Partners.

They bring extensive experience of high-profile developments in London and internationally, including projects such as Battersea Power Station Masterplan and 20 Fenchurch Street (the ‘Walkie Talkie’).

Ian Apsley, group managing director, Broadway Malyan, said: “We are hugely excited to welcome Will, John and Therese as principals and design directors. Their skills and experience will be hugely valuable in helping us broaden

our client base particularly strengthening our commercial and research offers in the UK.”

WILL+Partners' commissions span a wide variety of sectors including banking and insurance, major corporates and third sector, will continue to operate under its existing brand for the foreseeable future. Poole-Wilson, founder and managing director, will join Broadway Malyan's executive board and lead workplace design accounts across the UK, while supporting the established teams internationally.

The merger will see the DC3 and WILL+Partners teams relocate to join Broadway Malyan's established team in Waterloo.

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SITE LINES

A virtually perfect balance

Anthony Day at IMA Architects explains how the practice is pioneering the emerging concept of the Digital Twin, and proving how it can enable architects to hit the balance between efficiency and sustainability on projects

As architects, the art of balance has never been more important. Especially in a world where sustainability is centre stage. But keeping cutting edge design at the heart of new ventures while being eco-friendly is no easy feat.

At IMA, we pride ourselves on completing all client projects in the most sustainable way. But sustainability shouldn't only be considered in design and planning phases; it's a concept that needs to stand the test of time.

Regardless of sector, these sometimes competing interests can present challenges. But we believe the effective use of a Digital Twin is the answer that many industries are looking for.

What is a Digital Twin?

In this particular application, a Digital Twin is an exact virtual representation of a building that collects real time data. The digital

model is designed to accurately reflect a physical space as a virtual model, and gives the building owner/user real time and in-depth analysis of a building's performance. Linked with BIM, the digital model incorporates not only the building information, but also real time data from devices within the building. The different data streams are then brought together within the model so that an exact virtual representation of the physical building is created. This enables users to monitor the performance of the building and make changes accordingly.

Similarly, simulations can also be run in the virtual space, allowing users to gain information on important metrics, from energy consumption to carbon emissions, and then make changes in the real world.

For example, a company has an office with two meeting rooms that, depending on the time of year, both use heating or air



VIRTUALLY AN EXACT REPRESENTATION

A CGI capture from IMA Architects' Digital Pods Virtual Model © IMA Architects



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DIGITAL TWIN PIONEERS

IMA claims to be one of the first UK practices to have developed a Digital Twin prototype © IMA Architects

conditioning in equal measure. The only difference is one room has an exterior door that is frequently opened throughout the day.

Now consider the impact of that door and the high volume of ‘traffic’ to the room. The result is simple – more energy is needed to maintain the core temperature, be that hot or cold. By using a Digital Twin, it would be possible to calculate the energy consumption of each room, and adapt the way the room is used to enhance efficiency; for example, changing the way it’s heated or ventilated, or encouraging a different entry point to minimise the loss of energy.

Over an extended period of time, across multiple locations and activities, cost savings – both monetary and environmental – would be significant.

As the Government continues to pursue plans to decarbonise all sectors of the UK economy and with increasing energy costs, the Digital Twin will be an incredibly valuable tool as we battle towards net zero, leading the way to a better, greener future and cost savings for businesses.

The concept is sound, and the technology exists to make the Digital Twin a reality – but can it be something that works in the real world within everyday architectural practice?

IMA Digital Pods

At IMA, we have known for several years the potential of the Digital Twin, and are focused on implementing the technology on our projects for clients.

Over the past year, together with my colleague Dr Asem Al Bunni, I have been working to prove the concept. We wanted to build a physical space and its virtual twin so that we could assess how technology can be used within real world architecture and on actual client projects.

Within the grounds of our head office in Blaby, Leicestershire, we have created that space – the IMA Digital Pods. We have transformed two former shipping containers to create a two storey outbuilding featuring a staff coffee area and small gym. The pods feature the latest ‘Internet of Things’ (IoT) technology, cloud platforms and 3D visualisation technologies which enable

us to collect data in real time from a range of sensors installed throughout the buildings.

The IMA Digital Pods are equipped with:

- Environmental sensors (temperature, humidity, air quality, fire system, rain sensor)
- Light monitoring sensors
- Power monitoring sensors (individual devices/spotlights feedback)
- Motion detection sensors
- GPS sensors (locating device relative to project location)
- USB outlets monitoring sensors
- Door closure monitoring sensors (doors, windows)
- The ability to expand with further IOT sensors.

The data collected by the range of sensors is then analysed within a cloud platform and visualised via the digital model. The data can also be stored in the cloud for further analysis and used for further research and development. Commands can also be sent from the digital model to activate or deactivate devices in the Pods.

The Digital Pods serve as a showcase for IMA to demonstrate to our clients how cutting edge technologies can be integrated within the built asset, where stakeholders can benefit from many features to assist with facilities management including monitoring, simulation using artificial intelligence, predictive maintenance, along with system and spatial re-evaluation.

Impacting the future

To the best of our knowledge IMA is one of the first architecture practices in the UK to have successfully developed and tested a Digital Twin prototype. But we don’t want to be the last. The successful use of BIM and The Digital Twin is the future of building design. Having more buildings with this level of intelligence will play a huge part in helping the UK meet its net zero ambitions and reduce costs for businesses, both during the construction phase and ongoing running costs.

Anthony Day is director at IMA Architects

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ASK THE ARCHITECTS



Newly-qualified architects George Aboagye Williams & Priya Nahal discuss what they enjoy about being at Perkins&Will, who recently merged with Penoyre & Prasad and have invested in a programme to foster young talent within the practice



WHAT MADE YOU WANT TO BECOME AN ARCHITECT?

George: The notion of architecture didn't come to me until quite late. I was in sixth form when I realised that my skills as an illustrator could lead to my future career path. I realised I could do something in design; this initially started off as product design, but I realised when I found it challenging to maintain the good grades that I needed for university that I hadn't defined exactly what it was I wanted to study. Understanding the direction I wanted my career to take was a result of completing my art foundation course.

Priya: When considering a career and the studies to get there, I wanted to ensure I was operating at the intersection of creativity and academics. I have always loved cities, spaces and the way in which people interact with them. I decided to make this the focus of my architectural path.

WHAT STAGE ARE YOU AT NOW?

Priya: I have recently passed my Part 3 Architectural Studies and have now fully qualified as an architect. I found the year in which I was balancing full-time work and architecture studies very intensive, but also very rewarding. Learning about the

business side of an architecture firm has been surprisingly enjoyable. Understanding how contracts are signed and partnerships have been made has given me insight into the processes and technicalities of a professional practice. It has been really interesting to learn about planning, procurement, contracts, insurance and practice management in terms of fees and resourcing.

George: I have just finished my Part 3 course in professional practices diploma. I studied externally at Westminster. The course was done mainly online and gave me an opportunity to understand the inner workings of the industry. Combining study

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“My driving ambition is to create a built environment which can elicit an emotional response within us, and which helps change how users interact with their communities”

Priya Nahal

and work allowed for greater insight to the industry, and this has been helpful in starting out my career.

WHAT MADE YOU WANT TO JOIN PERKINS&WILL IN TERMS OF ARCHITECTURAL REPUTATION?

George: I joined Penoyre & Prasad because I was inspired by the work they were producing, and became part of Perkins&Will when the merger occurred. Sunand Prasad's brilliant reputation within the field was a key motivation.

Priya: Over the years and during my studies I have always observed and admired Perkins&Will's work. I wanted to be part of a larger establishment that worked across diverse sectors. I knew this would allow for cross-collaboration, and also allow me to gain experience in sectors that I had not yet been exposed to. The international reputation was also a major draw; having seen some of the wonderful international projects and competitions, I knew P&W was something I wanted to be a part of.

WHAT HAVE YOU ENJOYED MOST ABOUT WORKING AT THE LONDON STUDIO SO FAR?

George: It has allowed me to gain experience through collaboration on projects in industries I hadn't come across before. Meeting such a large group of people with varying skills and expertise has been really enlightening, and it's taught me a lot about the industry and architecture more broadly.

Priya: The camaraderie provides a good balance to the hybrid working situation but also allows you to ask and participate in

direct conversations with fellow colleagues. This has been particularly useful during my Part 3 studies as I am able to learn from others around me.

DOES THE LONDON STUDIO HAVE A 'US' FEEL?

George: The global firm does seem to carry something of an American feel, however, the London studio maintains its British cultural identity and uniqueness.

DO YOU HOPE TO BE/ARE YOU INVOLVED WITH PROJECTS LIKE THE INNOVATION INCUBATOR?

George: It would be great to be in the conversations. The world is rapidly evolving, and those of us in architecture are at the helm of adapting our spaces to this evolution.

IS THE GLOBAL 'CONNECTEDNESS' ESSENTIAL WITHIN A LARGE PRACTICE LIKE P&W CHALLENGING WHEN YOU ARE BEGINNING YOUR CAREER, OR INSPIRING, OR BOTH?

George: Being globally connected is a great way to experience different techniques, technologies and design methods that inform the work that we do. Not only that, but it gives greater breadth to the social understanding of what we do regarding impact and professionalism.

Priya: It's definitely inspiring. It was a key factor in me wanting to work for the firm, and while there are obviously challenges to operating on a global scale, being able to be so close to it at this stage if my career is something for which I'm really grateful.

ARE YOU MADE VERY AWARE OF THE COMPANY'S DIVERSITY AND INCLUSION PROGRAMMES AND WHAT BENEFITS DO YOU BELIEVE THEY BRING?

George: Not only am I aware of it, I have had the joy of being a part of the London Diversity, Engagement, and Inclusion Work Group of Perkins&Will London. We focus on how we are all contributing to office culture and how we can improve as a studio.

Priya: I am aware of these programmes; they are fantastic, and allow all members of the studio to participate in activities and events which share insights and cultures across the practice. These programmes are also a great way to raise awareness on certain issues. They also help in challenging and improving the way we work and how we can be more inclusive in both practice and design.

WHAT HAS BEEN YOUR BIGGEST CHALLENGE SO FAR SINCE JOINING THE FIRM?

George: Lockdown. Receiving the mentorship and assistance needed to develop within the firm was naturally harder because I was not around my peers and leaders day to day. It is important for everyone to have a sense of progression and growth, and the impacts of lockdown somewhat hindered the ability to be able to achieve these goals in a face-to-face capacity.

Priya: The biggest challenge so far has probably been adjusting from working from home during the Covid-19 situation to then integrating back into the studio in person. I joined after the Penoyre & Prasad merger, and it was interesting seeing how both establishments integrated.

WHAT PROJECTS ARE YOU WORKING ON CURRENTLY AND IN WHAT CAPACITY?

Priya: One of the most exciting things I've been working on is the strategy and phasing of an overall hospital masterplan in London.

George: I have recently had the opportunity to work on more life sciences projects. This is rather new for me, but it is very exciting as the Covid-19 pandemic has made it apparent that there is space for this industry to develop and grow. So far I have assisted with the design process and creating documentation material for these projects.

PLEASE EXPLAIN THE MOST EXCITING ASPECTS OF YOUR CURRENT WORK SO FAR

Priya: As I'm still fairly new, I have been finding learning about the firm and the way in which we function to be exciting. I love to be a part of it and understanding how I can contribute to such a great culture and institution has been really rewarding.

George: For me the most exciting aspects have been experiencing the development in technology within design methods and how that has aided in the design process.

DO YOU FEEL ABLE TO ACHIEVE THE RIGHT WORK-LIFE BALANCE?

Priya: Work-life balance has been a hot topic within the industry. Finding it is something I have struggled with over the years, and this comes hand in hand with studying at the same time as working. I think the industry needs to improve work-life balance generally. It is about breaking the stigma of working late within the

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culture, and making sure we are prioritising life matters.

George: There is always room for improvement! I do really appreciate when senior members of the studio remind us of this and encourage us to pursue a better balance.

DO YOU HAVE 'ONE BIG DESIGN AND ARCHITECTURE GOAL'?

George: During my Part 3 studies, many conversations from society have come into the realms of architecture, including diversity. Being a member of this industry, and of African descent, I am looking to be the best version of myself in a continuously evolving discipline. I would like to be involved in growing the offering of opportunities for those of a similar background to me, who are beginning to navigate through this field. It has been refreshing to explore my own interpretations of vernacular, and this has given students the confidence to approach me to express their views on architecture in a professional environment

Priya: My driving ambition is to create a built environment which can elicit an emotional response within us and in doing

so, helps change how end users interact with their communities. I am motivated by helping people deal with some stark issues occurring in society today by providing a sense of security, belonging and empowerment through a considered use of space, light and materiality while ensuring inclusive design.

Ultimately, I like to meet client needs and aspirations. I want to continue to hone my skills and continue to learn, and I would like to build on what I have enjoyed the most in practice and studying and take this forward in the future.

HAVE YOU MANAGED TO MEET ANY CLIENTS YET AND WHAT WAS THE EXPERIENCE LIKE?

George: I have met clients on the most recent project I have been working on. We met for a kick off meeting to refine the requirements of the project. It was a great step in my career to begin to build these professional relationships.

Priya: I have been fortunate enough to meet the client on 101 Commercial Road. This was a smaller project done in the office and we would have weekly meetings with the client in the office. This was a great experience in conversing with the



“I would like to be involved in growing the offering of opportunities for those of a similar background to me, who are beginning to navigate through this field”

George Aboagye Williams

client and talking through design options and strategies. I've really enjoyed seeing this side of architecture; it has helped me communicate in an effective manner but also expand my architectural vernacular.

George Aboagye Williams & Priya Naha are both recently qualified Part 3 Architects at Perkins&Will (Pending Registration)

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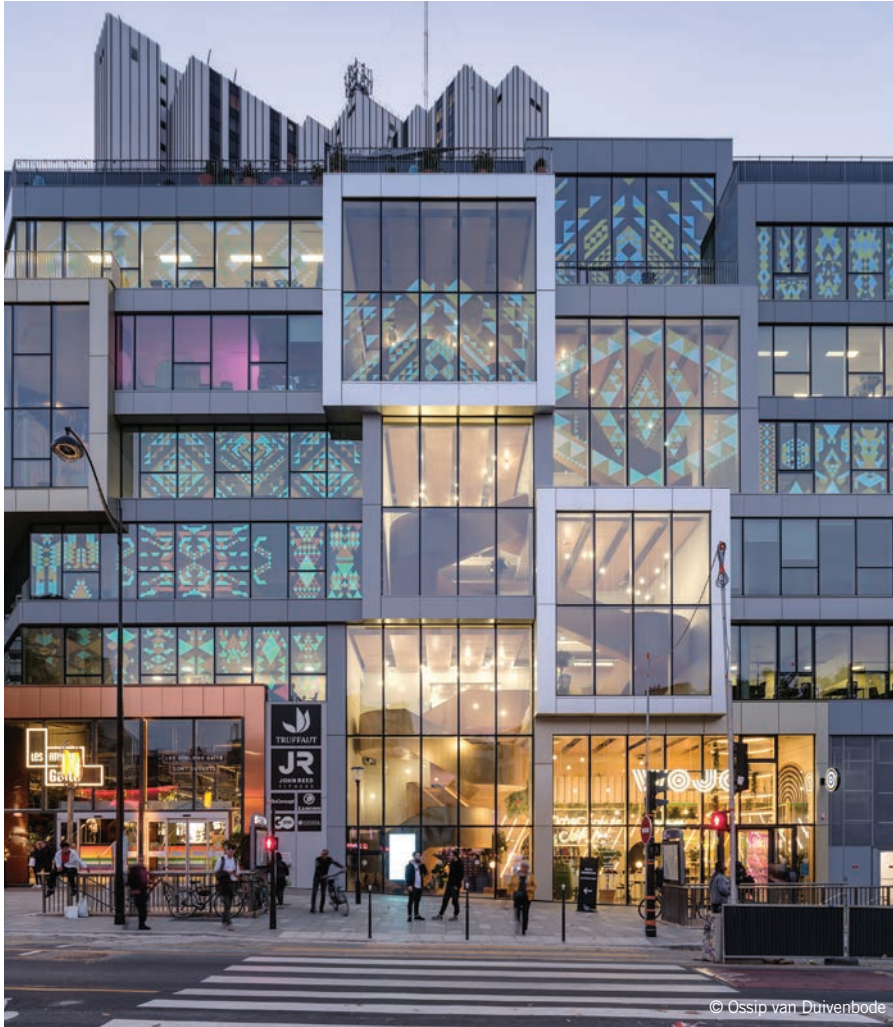
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INTERNATIONAL FOCUS

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GAÏTÉ MONTPARNASSE, FRANCE MVRDV

The MVRDV-designed transformation of a 1970s city block – just a short walk from Paris' Tour Montparnasse – is now open. Gaîté Montparnasse, which incorporates the existing uses of the mixed-use block – a hotel, shopping centre, office space and a library – has densified the area by adding 62 social houses and a kindergarten. MVRDV's transformation "sustainably reuses much of the original structure" including the rough textured concrete plinth with "boxy reflective glass," and red steel lattices, said the architects. The building, with its larger windows, now has a consistent street frontage along its main facade on Avenue du Maine. This mass is "broken up" with a selection of different cladding tones, various small setbacks and overhangs, and balconies and showcase windows in large, multi-storey frames."



VARSO TOWER, POLAND FOSTER + PARTNERS

Foster + Partners has completed Varso Tower, an integral part of HB Reavis' Varso Place in Warsaw, and at 310 metres high, named the tallest tower in the European Union. Situated at the corner of Jana Pawła II and Chmielna Street, the tower forms a gateway to the new development and "draws people through the building" towards the public plaza on its western end that connects to the neighbouring buildings, said the architects. The plaza is enclosed within a glazed screen, with full height trees and benches allowing both office employees and members of the public to enjoy the surroundings.

The public realm continues at the top of the tower, accessed directly from the ground via two panoramic lifts, with a viewing platform at level 53. This is the "highest inhabited floor in Poland," with uninterrupted views of the city. Level 49 will soon offer a fully landscaped terrace bar, with sixteen trees, breaking the record for Warsaw's highest garden. The offices are served by two banks of high-capacity double-deck lifts, with each lift car serving two floors at any one time. With 70,000 m² of premium office space, the tower features large-span floorplates with three-metre clear height for open plan offices. The building achieves BREEAM Outstanding and WELL Gold certification, due in part to its triple-glazed facades. Jędrzej Kolesinski, partner, Foster + Partners, added: "Varso Tower is a timeless addition to the skyline and a vibrant destination in the heart of Warsaw. The tower's direct underground link with the adjacent Warsaw Central Station will breathe new life into the surrounding urban quarter."



HANGZHOU INTERNATIONAL SPORTS CENTRE, CHINA ZAHA HADID ARCHITECTS (ZHA)

Incorporating a 60,000-seat football stadium and practice pitches, ZHA's design for the international centre also includes a 74,000 m² 19,000-seat indoor arena (which can operate independently to the stadium), as well as an aquatics centre with two 50 metre pools. Located within Hangzhou's "future science and technology cultural district," the sports centre project creates a new riverfront park and public plazas with direct access to the city's metro network. As the largest venue within the centre, the 135,000 m² football stadium is situated on the eastern side of the new park to face the city. Located to the stadium's west and south, the indoor arena and aquatics centre are connected to the stadium by the centre's "layered podium that weaves through the site," said the architects. Informed by the terracing of the tea farms on Hangzhou's surrounding hillsides, the 45,000 m² podium houses the sports centre's ancillary facilities that are shared between the venues including training and fitness halls, locker rooms, offices as well as shops, restaurants and cafes overlooking the podium's courtyard and terraces.

Unlike most stadiums, the facade of the Hangzhou International Sports Centre is open to the exterior, with louvers sheltering terraces that host a variety of food and beverage outlets offering views across the city. The facade gives the stadium a "stratified, geological appearance of solidity when viewed from nearby," said the architects. When viewed from a distance, the facade "becomes transparent, connecting the public spaces beneath the stadium's seating bowl with the city." The International Sports Centre has been designed to the highest (3-Star) rating of China's Green Building Program.



BURNHAM BEECHES, VICTORIA, AUSTRALIA WOODS BAGOT

The Trenerry Consortium – comprising the Victor Smorgon Group, Kanat Group and Trenerry Property – has revealed a \$100m masterplan for Burnham Beeches, a historic Art Moderne mansion in Victoria, Australia. Woods Bagot was appointed as lead architect and interior designer, and Australian builders Hamilton Marino are to manage the restoration and build, which includes new 'glamping' facilities. The masterplan encompasses three zones – the Mansion and Spa, the Village Green, and the Hilltop Retreat – each of which "invite visitors to explore the site while also celebrating the spirit of the Dandenong Ranges," said the architects. Due to a lack of commercial viability, as a consequence of the cost of restoration of the mansion and limitations of the existing permit, The Trenerry Consortium has appointed luxury hospitality provider Six Senses to operate a "premium, non-permanent glamping offering, tucked within the surrounding topography of the site." This model is used globally to allow for "non-intrusive and environmentally friendly accommodation in national parks or regions of historical significance." Alongside the restoration of the mansion and surrounding garden, the masterplan includes plans for the Nicholas Hall and Library, a restaurant, wellness retreat, pool house and guest rooms. Approval of the heritage permit is essential to delivering the long-term conservation of the property, including the historic mansion.

CPD FOCUS

SPECIFYING HARDWOOD TIMBER DOORSETS



UrbanFront are now presenting the 'Specifying Hardwood Timber External Doorsets' CPD workshops online and can accommodate up to 20 participants for each webinar date. The objective is to enthuse and inform architects about specifying hardwood internal and external doors. Seminars last an hour and count for double points for architects and architectural assistants. The CPD shows photographs of specifications and settings and includes demonstrations. Attendees will also be able to ask questions throughout.

01494 778 787 www.urbanfront.com/riba-cpdoffering/book-cpd

ROCKWOOL EXPANDS RANGE OF ON-DEMAND CPDS



Following the success of the ROCKWOOL CPD module to help roofing contractors and specifiers mitigate fire risk in flat roofs, and in response to customer feedback, the company is now making the seminar available online to be completed

on demand. The CPD module has been developed to enhance industry understanding of regulations and provide guidance on determining relevant non-combustible classifications in flat roofing systems. It complements the whitepaper 'Flat roofs: Managing fire risk in the fifth facade' and other technical information about the insulation of flat roofs.

rockwool.link/OCPD rockwool.link/fifth-facade-cpd

SANIFLO PROVIDES A NEW CPD OFFERING



Saniflo UK has a new CIBSE-approved CPD offering for Public Health Engineers, Mechanical Consultants, Architects, Mechanical Installers and Specialist Resellers. The hour-long talk, which can be supplemented with a two-hour session of pump curve training if required, is designed to discuss and offer technical training on macerators and lifting stations for commercial and domestic buildings. This CPD is part of wastewater and drainage in the public health sector/mechanical engineering.

020 8842 0033 marketing@saniflo.co.uk

NEW CPD FROM ALUK PROVIDES TECHNICAL GUIDE



AluK has launched a RIBA approved CPD entitled 'Aluminium Curtain Wall Design: A Technical Guide', which is available as either an in person or virtual event. The CPD covers both aluminium curtain walling and associated glazing products and covers the specification essentials as laid out in the RIBA guidance, with particular focus on the all-important regulatory and standards frameworks. It outlines the essential factors to consider in specification and includes a useful system design decision tree which outlines the pros and cons of different curtain walling system types.

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NEW MOY CPD "ACHIEVING ZERO LEAKS"



MOY are pleased to announce the new RIBA approved CPD entitled "Achieving Zero Leaks." This CPD presentation aims to support specifiers and designers on achieving long lasting, compliant and sustainable roofs, with problem free, zero leak solutions. Achieving Zero Leaks CPD covers the following topics:

- Flat roof design principles – building standards & legislation compliance

- Flat roofing systems – roof waterproofing technology types and typical applications, accessories and components
- Achieving Zero Leaks – outlining the importance of 'quality system supplier' selection to help ensure successful development & delivery of the correct specification.

Duration: 1 hour. Format of delivery: At Practices & Digital delivery. MOY are one of the UK and Ireland's leading full system providers for high performance flat roof waterproofing systems. We work closely with clients and design teams to provide and deliver high quality systems to integral roofs and our innovative, long-lasting waterproofing solutions are backed by industry accreditation's and award-winning technical support. If you are looking for a waterproofing solution and require support with designing a flat roof and developing a specification, please contact by phone or visit the website.

01245 373411 moymaterials.com/cpd-training

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

0330 123 2447 www.spiral.uk.com

NEWTON DRIVES CONTINUED DEVELOPMENT WITH TRAINING



As one of the UK's leading suppliers of waterproofing systems, Newton Waterproofing consistently works to help architects and developers achieve the next step. The company offers a range of training initiatives covering all aspects of waterproofing in accordance with the British Standard 8102:2022, that aim to expand knowledge and skills in waterproofing practices. Newton have the means to frequently deliver their four RIBA Approved, double points CPDs to architects, engineers and construction professionals across the country.

01732 280 635 www.newtonwaterproofing.co.uk

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

Back to the Futurebuild – on the path to net zero

Futurebuild is doubling down on its sustainability goals with a promise to bring inspiring ideas on how the industry can reach net zero, with “innovative solutions and knowledge sharing” at London’s ExCel on March 7-9

Now in its 17th year, Futurebuild (previously known as Ecobuild) has kept sustainability at its core – and this year’s theme sees the event taking a stand for a better built environment. Futurebuild aims to build a better future and show its commitment to playing its part in our net zero outcomes. Having launched the ‘Take a Stand’ campaign this summer, Futurebuild is also urging companies and professionals throughout the construction supply chain to act now and take a similar step; all pledges will be displayed at the event in March.

The organisers say Futurebuild will bring together specifiers, decision-makers and “disruptive thinkers” in one place to “exchange know-how, discover game-changing new products and technologies, and forge new business connections as we accelerate our journey to net zero.”

More than 15,000 professionals from across the entire supply chain including architects, housebuilders, developers, consultants, contractors and manufacturers will come together to discover these solutions and find new ways of delivering quality buildings more sustainably, while meeting and exceeding regulatory and compliance requirements.

Leading the way

Futurebuild is looking to “continue to be the industry platform for innovation and elevate further,” with opportunities to showcase the most innovative technology,

products and services. With over 400 brands, start-ups and industry leaders in attendance, this year’s show “will cover every aspect of the built environment,” say the event’s organisers.

At the core of achieving this is the FutureX Innovation section of Futurebuild (in partnership with BEIS) which will focus on start-ups and SMEs who will share their experience of taking “innovations” from an initial idea, through development to realisation. The spotlight will also include an Innovation Stage that will host the new Big Ideas Pitch giving companies another way to get involved and share, what could be, “the next revolutionary idea.”

Visitors can find further inspiration through the return of the Innovation Trail, providing a showcase for 20 leading specifiers and decision-makers the opportunity to explore “revolutionary products, solutions and materials and meet the leading thinkers behind these innovations.” The event’s Big Innovation Pitch will again offer exhibiting companies the chance of being crowned winner in 2023. Last year’s competition received over 90 submissions, with finalists pitching live in the conference arena.

Show features & conference

Futurebuild will be curated into eight show sections including Buildings, Digital, Energy, Interiors, Materials, Offsite, and Sustainable Infrastructure. The newly expanded Retrofit section, in partnership



Day one focuses on ‘Looking Forward’ and why the industry needs to develop the foresight necessary to break out of its current mindset





with The Retrofit Academy CIC and Osmosis, will be showcasing solutions, technologies and services that “can unite and strengthen the delivery of whole house retrofit at scale,” say the organisers. The event will also feature three new spotlights, Lighting in partnership with KNX UK, District Energy in partnership with UKDEA, and FutureX Innovation in partnership with BEIS.

The conference, sponsored by SNRG and Hub Brussels, will explore the roles the whole of the UK needs to play to meet net zero targets, and will feature “world-class” speakers sharing their experiences and debating the most critical issues. Day one focuses on ‘Looking Forward’ and why the industry needs to develop the foresight necessary to break out of its current mindset. Day two will explore ‘Changing,’ and in particular, ‘Behaviour Change.’ Day three will move on to ‘Taking Action,’ hearing from practitioners across the sector, and exploring approaches that can take society and the construction industry forward.

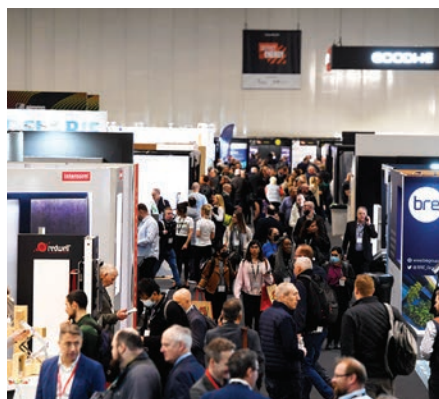
The seminar programme has been expanded for 2023, with content across eight stages, delivering “practical learning

and guidance.” The sessions in this year’s programme are being curated by over 90 partners and associations including CIAT, The Good Homes Alliance, BRE, Passivhaus Trust, Built by Nature, IOM World, RIBA and UKDEA (District Energy Association).

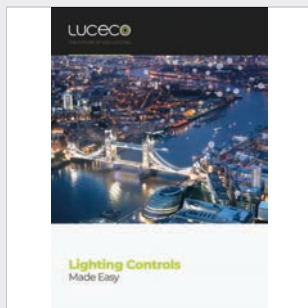
“Sustainability has been at the heart of Futurebuild for 16 years and we are more committed than ever to ensure our built environment remains on track to achieving our net-zero goals” explains Martin Hurn, event director at Futurebuild.

Everyone in the supply chain has a solution that can make a positive change. Futurebuild says the 2023 edition will provide “the ultimate stage to showcase that commitment to the creation of a better building industry and achieving net zero.” The organisers conclude: “By looking at the bigger picture, we can learn from each other’s journey to sustainability and what we need to do to achieve net zero.”

For more details and exhibitor enquiries, visit futurebuild.co.uk. Don’t miss out on next year’s event. Visitor registration is now open.



New Luceco Lighting Controls & Solutions Guide



Luceco has recently launched a new publication demonstrating the range and diversity of its lighting Control Systems. As controls become standard in many new lighting installations, Luceco also provides solutions for refurbishments in existing infrastructure. Both Platform and Elevate from Luceco offer wireless controlled lighting solutions – Platform offering simple and cost-effective wireless control, with Elevate benefitting the client with a function-rich system including energy and emergency lighting reports, asset tracking, as well as the primary functions of dimming, scene setting, presence detection and daylight control. Lighting controls can often seem a daunting prospect with the emergence of convoluted control systems and ever-evolving terminology. With multiple platforms available, it can become perplexing to the client who has a clear end goal in mind. At Luceco, the company understands the importance of allowing the end user to control their own space. Whether a small office, or multiple estates, Luceco can offer a lighting control solution. Download a copy of the guide from Luceco’s website.

01952 238 100 www.luceco.com/uk/lighting-control-systems

Norcros Adhesives appoints Simon Poë



Norcros Adhesives, the market leading manufacturer of tiling adhesives, grouts and surface preparation products, has announced the appointment of Simon Poë as its new Managing Director. Simon has joined the team in November, having most recently been the Managing Director at Levolum – an Alumas Group company. Simon brings with him a wealth of experience of working with customers across the wider building products market. He has a proven track record of leading teams and growing businesses. He holds a Masters Degree in Construction Project Management and a Doctorate in Green Roof Hydrology.

01782 524 140 www.nxadh.co.uk

Newton Waterproofing wins award



Newton Waterproofing, the UK’s leading independent designers and suppliers of guaranteed waterproofing systems, has been named a winner in this year’s celebrated National Building and Construction Awards, in recognition of the company’s commitment to sustainability. Taking gold in the ‘Green/Sustainability’ category, which focuses on sustainable projects and their impact on the environment, Newton has been recognised for its extremely successful Recycling Service.

01732 360 095 www.newtonwaterproofing.co.uk

New appointment and structure changes



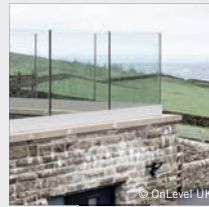
Marc Purcell and John Richards

2022 has been another successful year for **Lecico Bathrooms** with significant growth in all areas of the business. As a result, the company is pleased to announce that Marc Purcell has joined the Lecico Bathrooms team as Head of Category Management.

In this newly created role Marc will support the rapidly growing business with the introduction of new products from an extended supplier base. In addition to Marc joining the business, John Richards will become the new Head of Product Development. John will continue to lead the development of new product offerings.

www.lecico.co.uk

AGC Glass UK and OnLevel UK collaborate



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AGC Glass UK and OnLevel UK are pleased to announce that Stratobel Strong laminated safety glass is now certified in OnLevel's frameless balustrade systems TL6020, TL3020 and Skyforce Juliet balcony for loads up to 0.74 kN. Stratobel Strong is an annealed laminated glass with an interlayer much stiffer than traditional PVB. It can be cut to size from

stock sheets which, under certain conditions, removes the need for additional processes such as tempering or heat strengthening.

www.onlevel.com/en_GB

Solution Fires expands range



Etronic 1500 Slimline Fire

Solution Fires, a new generation of highly efficient, authentic and stylish electric fires, has expanded its range with the introduction of seven new models. Offering more options for customers across its built-in, inset and suite ranges, the new models come with a number of bestselling and unique features, such as Solution Fires' signature high definition,

ultra realistic contoured flame effect technology, and long-life LEDs to provide greater reliability and energy efficiency.

solutionfires.co.uk

Haverland presents Winter 2022 catalogue



With the arrival of winter and its cold temperatures, it is time to start thinking about those products with which we are going to equip our homes and facilities in general to fight against the cold. Aware of this, **Haverland**, a leading Spanish brand in heating, presents its new Winter 2022/2023 catalogue where it incorporates the latest advances currently existing in its heating

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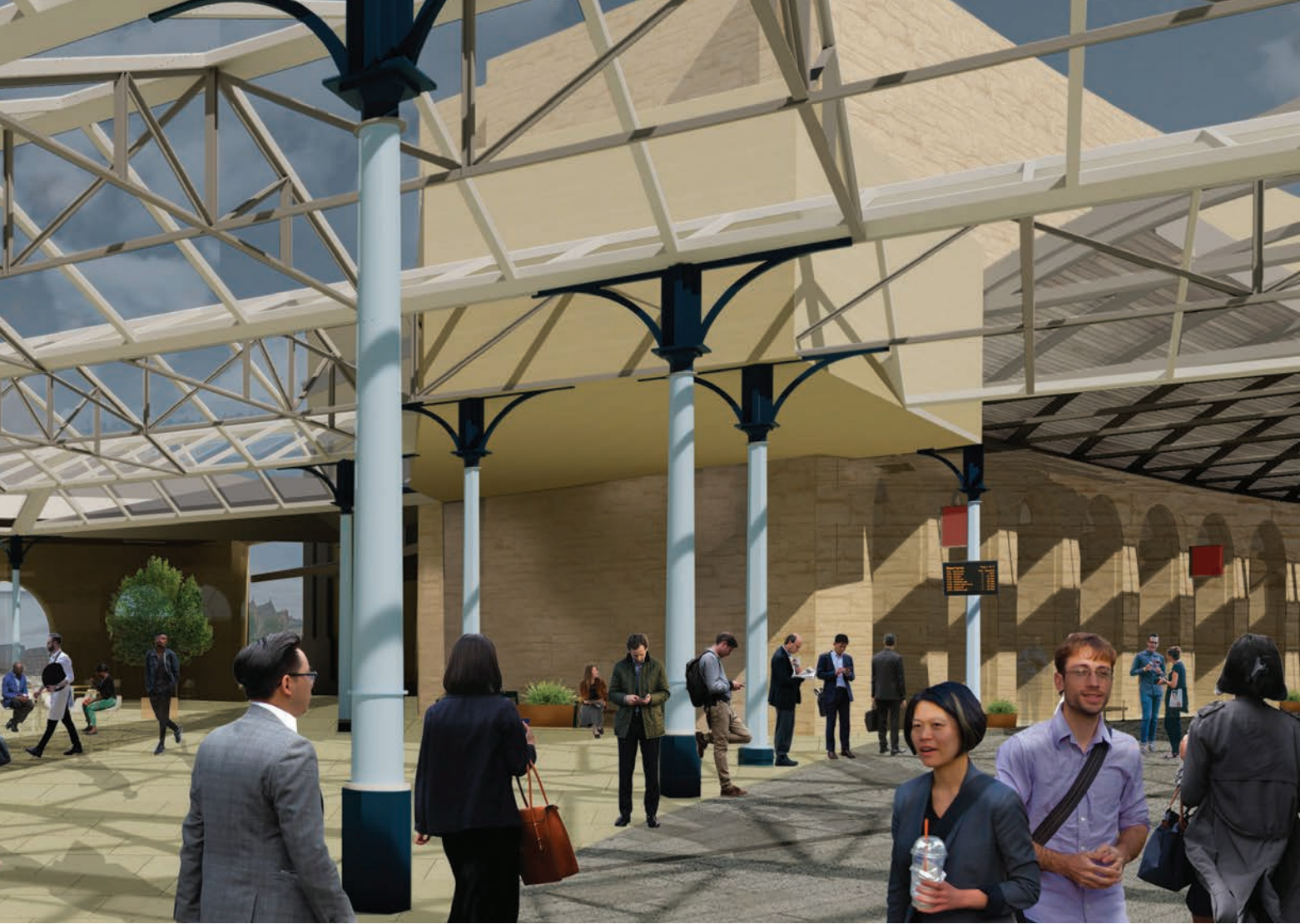
NEWCASTLE CENTRAL STATION

A new gateway for Newcastle

As part of a large-scale regeneration of Newcastle's city centre, its Victorian station is undergoing a revitalising refurbishment. Here, Alex Vafeiadi of Atkins tells Jack Wooler how the firm was able to bring all the stakeholders together to uplift this major gateway, while retaining a sense of local authenticity

With passenger numbers growing continually – 8.4 million recorded in 2016/17 and a further 38% increase expected by 2023 – Newcastle Central Station, originally completed in 1850, was forced to expand.

Following this realisation, Newcastle City Council have taken the opportunity to revitalise the station's Victorian design to match its stature, introducing a new and improved canopied entranceway, while retaining visible signs of the original



platforms (which have always served the master railway terminal for the area) and complementing the range of historic buildings in the central conservation area of the city.

Part of the wider Newcastle Central Gateway project, the improvements to the station are intended to improve pedestrian and rail passenger experience in and around the station. Its other key aim is to solidify and improve its function as a gateway to three central areas of Newcastle surrounding it; the Stephenson Quarter, Forth Yards and Quayside Key developments.

The council hopes that these works will not only improve life at the station for passengers, but contribute dramatically to the wider revitalisation of the area, which is undergoing a number of regeneration works including new homes, public realm, business spaces, as well as leisure and recreation facilities.

As lead consultant for this wider project,

one of the most important roles for Atkins was in bringing together the wide range of stakeholders involved – including major players Newcastle City Council, London North Eastern Railway and Network Rail, as well as local specialists in town planning and heritage, and interested local people and businesses – ensuring all parties were communicating effectively, and satisfied with the final result.

According to Alex Vafeiadi, senior architect at Atkins, it was this role especially that allowed the team to truly unlock the development potential of the whole area, creating “a welcoming and connected station, which links seamlessly with the public realm improvements and surrounding city centre neighbourhoods.”

Experience

Newcastle Central is merely the latest addition to Atkins’ portfolio of regeneration in the North, with transport schemes including Sheffield Station and the Leeds

CONNECTED

The aim was to create a “welcoming and connected station which links seamlessly with the public realm improvements and surrounding city neighbourhoods”



Station masterplan all part of its repertoire, alongside other leading roles on HS2 and Transport for the North.

As such, it was in no small part because of this experience that Atkins was commissioned by Newcastle City Council to develop the project, which, in the first phase alone, saw a total of £24.5m invested.

The practice was reportedly introduced to the project at the initial stages, right through to the recent stage three – when the practice published its last report on the project – on the realisation of the ambitious brief to create “a new gateway for Newcastle.”

As the principal railway station for both this key city, and, arguably, the wider North, Vafeiadi tells me the project’s stakeholders were aware that any restrictions in accessing the station would in turn restrict the wider growth of the area.

“To combat this, we had to make sure we were creating something central to the city,” she says, “and provide a catalyst for the growth of the entire area – bringing wider economic benefits and employment opportunities.”

A warm welcome

Practically, the new design offers a range of functional improvements to the station, including the improvement of traffic

movement around it, the enhancement of pedestrian and passenger experiences, as well as access through it to the nearby developments.

The capacity has of course been increased, being the initial goal of the project, which itself raised a number of design challenges that required “ongoing consultation.”

The team were also required to reduce congestion through design, achieved in a number of ways, not least by relocating vehicle movement around the site, and in “rethinking” the car parking to best suit both pedestrian and vehicle traffic – the main vehicle interface with the station previously shared space with a busy pedestrian gateway.

“The design intent was to provide generous public space which is attractive, high profile and welcoming,” says Vafeiadi, “framing the sense of arrival, and guiding users away from areas designated for vehicles, while maintaining sightlines in and out.”

The practice specified an expansive, canopied entrance to deliver this welcome, Vafeiadi describes how the new design allows for a “seamless flow” between the surrounding neighbourhoods and the station, as well as shortening journey times to key areas of the station and avoiding cross-traffic.



The works also include an expansion of the shopping and leisure offered within the station, hoping to draw in users that are travelling to stay a little longer, or even invite those who are not travelling to utilise the facility – all considered in the rising capacity the station had to be fit for.

Rigorous standards

As a Grade II listed building, Vafeiadi tells me the project had to be designed to “rigorous” standards in order to receive planning consent, ensuring that its materiality be sensitive to the historic site, while revitalising other aspects of the design where achievable.

“All the materials we considered for use in the project were primarily focussed on their suitability within this historic context,” explains Vafeiadi.

“We were absolutely clear that we wanted to keep the traditions of the and focus of the original station,” she continues, “Using materials that already feature across it where possible, and choosing those which complement them if not, always retaining the important aspects of the building.”

Heritage style railings, for instance, were specified to match the existing railings on the platform edge, and to reduce the visual impact on the pedestrian routes out of the station a simple balustrade was specified – with the precedent again

already being set for its use in other areas of the station.

Alongside these restorations and enhancements, Vafeiadi tells me that material specification was also harnessed to “visually separate and link different areas,” such as public and private, and inside and out.

She explains that a “simple” palette was chosen here to ensure the entire project remained cohesive, users feeling as though they are in one place throughout the pedestrian routes from one side of the building to another.

High quality natural stone was also used in the hard landscaping elements around the station, with green “softening” forms with tree plantings around them.

“With this simple, effective palette of materials and colours, we have achieved a sense of legibility, as well as reflecting the buildings that surround it,” says the architect.

A wider context

Continuing on the site’s renowned context – being surrounded by a host of historic and well-known buildings, many of them graded – Vafeiadi tells that avoiding any negative impact on this context was a key focus for the stakeholders from the outset, with the three surrounding development areas previously mentioned all falling within the “urban core plate” for Newcastle, working

“We were absolutely clear that we wanted to keep the traditions of the station”



“Being a part of this team, and working on something so big, has been something I’m truly proud of”

to elevate the area while retaining what “made it special in the first place.”

Considering how this impacted the team, the architect says: “While the scale varies from building to building, really, the design process remains the same – you just need to consider the impact of the whole masterplan instead of just focusing in on one area, while also taking into account different areas, how they are integrated, and how they interact with each other.”

As such, she says, the team had to take a “holistic approach” to the design across the station in order to “set the scene for future phases.”

Through frequent meetings with the various stakeholders – with Historic England taking a central role – design workshops were held to ensure that there were no negative impacts of the upgrades on access, use and aesthetics of its surroundings on all sides of the station, including on future parts of the masterplan itself and any emerging concepts the team introduced.

Temporary challenges

One such challenge here – particularly in meeting the future endeavours of the wider project itself – was in proposing temporary materials to cover areas that would later be dedicated to future stages of the masterplan.

According to Vafeiadi, the team was “somewhat limited” on its specification of the materials used in these areas, with the stakeholders aware that they would not be in place in the foreseeable future.

“In some of these areas, during works we had to propose temporary materials such as a timber screening, which could form the barrier between the pedestrian and service areas at low level,” she explains.

This reportedly not only saved time and costs, but presented the opportunity to create some public art relating to the station’s history and location.

Sustainability

Another key area of the brief was sustainability – ensuring that there was as little environmental impact of any additions as possible, while improving any aspects where achievable.

“We considered the project’s sustainability from the outset, Atkins focusing largely on the material choices – making sure that all of our proposals considered first their environmental impact and sustainability properties – something

we always feel is important to discuss from the onset of every project.”

One particular element that is most notable to visitors to the station, and one that Vafeiadi is particularly fond of, is the green wall proposed along the pedestrian route adjacent to the local playground to the north of the station.

“Not only did this create an attractive and soft area of the facade,” she says, “but it also provided sound and air pollution absorbing properties,” especially important with its proximity to the playground.

Stand-out stakeholder contact

When discussing her experience on the station, and working in the transport sector in general, she says the project “definitely stands out.”

She particularly enjoyed the challenge of complementing the historic surroundings around it: “On all sides are these buildings of great importance, and ensuring we maintained a visual relationship with all of them while enhancing the station’s presence as a gateway was a real challenge.”

The architect believes that this has been achieved however, with the city “able to reflect that,” with “every visitor able to see it as a part of Newcastle,” somewhere not just to “walk by, but to actually stop.”

She attributes much of this success to the long and healthy relationship between the stakeholders, all being heavily involved from the initial stages of the wider development to every stage since, Atkins’ outputs and ideas being seen, read and discussed frequently, not just by the council, the planning department and Building Control to ensure compliance on the complex project, but also by local businesses and historic experts helped ensure its impact remained a positive one.

“Being the lead consultant,” says Vafeiadi, “we were the people bringing all these stakeholders together, addressing their concerns reactively, and delivering something that everybody could be happy with.”

She concludes: “From the service lines to the back of house, everyone played an integral part in these meetings, making sure that throughout the process all could utilise the station and its surroundings as they did before, but with a new front, a new vision.”

“Being a part of this team, and working on something so important, has been something I’m truly proud of.” ■



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BUILDING
2022

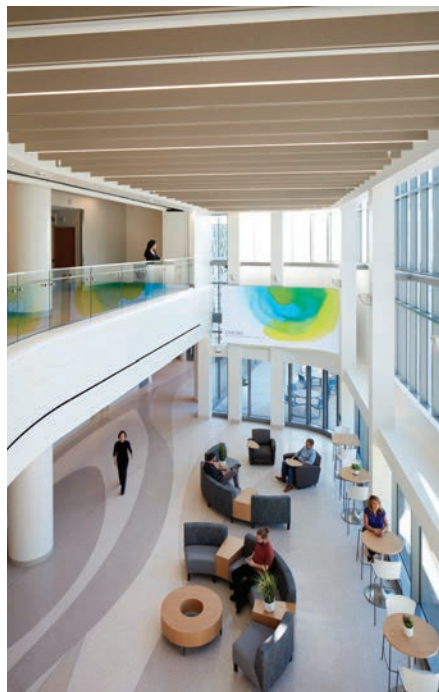
EMORY MUSCULOSKELETAL INSTITUTE BROOKHAVEN, GEORGIA, USA

Building good bones

A new healthcare facility by global architecture practice HKS transformed a business park in an Atlanta suburb, and set the precedent for the care provider to invest \$1bn in developing the wider site. Roseanne Field reports on this LEED Gold project

The Emory Executive Park covers 60 acres in the city of Brookhaven, located in the north eastern suburbs of Atlanta, Georgia. The site was formerly an “executive office park,” built in the 1960s on what was previously dairy farmland. It had slowly fallen out of favour over the past 30 years before being purchased by Emory Healthcare, part of Emory University, which is an “academic healthcare system” in the state.

The aim was to rejuvenate the area and redevelop the park into a medical office campus, with centres for orthopaedics, sports medicine, and ‘brain health.’ A masterplan was developed that placed the Musculoskeletal Institute “as the cornerstone of the plan, establishing a central greenway, new streetscape, and connecting disjointed pieces of the adjacent communities,” explains Teresa Campbell, studio practice leader and health principal



HUMAN CONNECTIONS

At the atrium, the ceiling slats are intended to emulate “muscular ribs,” and the upper-level structure suggests bone-joint connections

© Jonathan Hillyer

at HKS. The practice was appointed after several rounds of interviews.

The entire \$1bn project is anticipated to take 15 years, with the Musculoskeletal Institute the second building to finish on site. The institute will help people regain activity and motion through the diagnosis, treatment and repair of bones, joints, and connective tissue.

The brief

Emory Healthcare already had multiple facilities around Georgia, but wanted to bring its several orthopaedic clinics under one roof – in a “comprehensive, state-of-the-art Ambulatory Orthopaedic Centre of Excellence,” explains Campbell. Their client’s mission is to “improve health through integration of education, discovery and healthcare delivery.”

In terms of healthcare requirements, the design team was tasked with creating a patient and family-centred facility encompassing orthopaedics and spinal care, physical therapy, imaging, and ambulatory surgery. Equally important was the inclusion of research space – HKS was aware this was “at the core of Emory’s mission,” but it was also key to the client that the building included the sustainability features that would enable it to achieve LEED certification standards.

Although HKS has previous experience designing healthcare buildings, this project

wasn’t without unique challenges from the offset. The site was brownfield, which meant a substantial amount of construction debris from a demolished office building had to be cleared before new construction could begin.

The site also had a challenging topography, sloping down a total of 25 metres from one end to the other. However, as Campbell explains: “This grade became an advantage, allowing the design team to locate the loading dock and delivery area one floor below the primary floor.” It also created an opportunity to recess the 750-space, six-storey parking structure into the lower portion of the site, reducing its visual impact on the campus.

There was a further design challenge, that of setting the design standard for future developments at the park. “It was important for the building to establish a focus on excellent patient care, reinforce innovation, and be a good steward of the site’s resources, restoring the natural ecology where needed,” Campbell says.

Much of the area’s native ecosystems had been lost due to development over the years, and so it formed an important part of the landscape design to reinstate as much of this as possible, including native deciduous trees. The Institute has been designed to control stormwater onsite and large oak trees were placed to eventually grow into a canopy of trees which will provide cover to



maintain moisture during dry seasons, and control rainwater during wetter periods. “It promotes biodiversity and creates a self-sustaining landscape that won’t need regular irrigation after the first two years.”

This approach in turn also provides refuge for wildlife such as small animals and birds. Although the building has been designed with a large amount of curtain wall glazing, less reflective glazing and fewer mullions were specified in order to minimise bird strikes. External lighting was also designed carefully to limit uplift and glare on both local wildlife and communities, and this will be reduced further when the trees reach maturity.

Musculoskeletal inspiration

Emory was heavily involved in the design process from the outset in October 2018. In particular, Dr Scott Boden, chair of orthopaedics at Emory University’s School of Medicine, played a big part and influenced many of the key decisions. “He was a strong advocate for the functional layout, design expression, and the push for LEED Gold,” Campbell says. “His passion for creating a healthy environment for occupants, and environmental responsibility, led the design team to map out a path to achieve net zero.” Although not fully carbon neutral, the building does currently achieve 50% less operational and embodied carbon than the average

healthcare project.

From the beginning, Emory made it clear they didn’t want the building to be a “plain rectangular box.” Fluidity of motion and the musculoskeletal structure were key influences, “referenced beautifully” throughout both the interior and exterior. “This ethos informed the overall design of the building and the expression of the curvilinear forms represented,” Campbell explains. “Furthering the concept, the interior abstractly reflects the symbiotic relationship between the four components of the musculoskeletal system: bones, cartilage, muscles, and nerves.”

A particular quote from Dr Boden was a great source of inspiration for HKS: “Every day we work together to give patients their lives back, innovate new treatments and inspire the next generation.” This, says Campbell, focused them on the fact they were designing something to make people’s lives better. “From the beginning, we recognised that the healing process benefits from a healthy building with clean air and natural elements that provide comfort and distraction from ills and pains.”

This way of thinking led the design team to incorporate physiological forms into both the architecture and landscape. “Interior elements mimic neuro ganglion and soft bone cells of the body, the exterior curtain wall alludes to bone structure, and the landscape incorporates vertebral forms

Less reflective glazing and fewer mullions were specified in order to minimise bird strikes



Equally important was the inclusion of research space – HKS were aware this was “at the core of Emory’s mission”

for areas of respite,” says Campbell. “These forms were crafted to educate users about the body while adding a touch of delight and distraction for patients.”

The car park has been clad in perforated metal panels, “whose pattern recalls the microscopic structure of bone cell anatomy, in keeping with the project’s objective of embodiment,” Campbell explains. Architectural precast concrete wall panels and glazed curtain walling form the exterior of the institute itself. To combat overheating, electrochromic glass from SageGlass was specified for the building’s south facade, which automatically tints to prevent solar gain, while still allowing views out. This in turn reduces the energy consumption required to keep the building cool.

Internally, material choices were largely dictated by sustainability, with “environmentally responsible” choices including terrazzo flooring, sustainably harvested wood panels, gypsum walls, and composite decorative panels.

Continuing the theme of drawing inspiration from the building’s end use, the sixth floor design was inspired by the research that would take place within it. “Since research is used to inform future orthopaedic treatments, it was important for the research component to be located at the top of the facility,” explains Campbell.

“It features a protruding triangular form, breaking out from the curvilinear facade, signifying cutting edge research.”

Patient experience & layout

The patient experience was placed at the heart of the design. “Strategies to ease wayfinding, such as orienting all public functions of the north side of the building, to co-locating registration on level one, to a close and proximal parking structure – each step of a patient’s journey was considered in the design,” Campbell explains.

Before working on the layout, HKS undertook a “design diagnostic” of an existing Emory healthcare space in order to inform this design. The process highlighted several areas for improvement, such as poor wayfinding, a decentralised check-in system, waiting areas with no windows, no collaboration between clinic pods, excessive travel distances, and a bottleneck at imaging.

Patient-family advisors were involved in all design committees throughout the design process, which took just over a year to finalise. Frontline staff – physicians, researchers, nurses, technicians, security professionals, and environmental service workers – were also heard in town hall meetings, “contributing their unique perspective to ensure the design met the vast array of user needs in a building of this complexity,” says HKS.

Emory’s mission was to locate all the services addressing the needs of an orthopaedic patient in one place, including surgery, imaging, physical therapy, the cafe, education, and physician practices. “The floorplans are organised in a way that maximises consistency in the patient experience while allowing for the maximum amount of flexibility in the future,” says Campbell. The fixed elements, such as lifts and stairs, and mechanical, electrical, and technology rooms – are located around the perimeter.

Simple wayfinding and clinical adjacencies were implemented, such as locating imaging, physical therapy, and surgery closer to the entrance for the benefit of mobility-impaired patients. Clinician examination space, on the other hand, is located on higher levels (three to five), to take advantage of the light-filled waiting spaces that run the length of the building.

Views of the natural environment were important – from a patient wellbeing perspective as well as wayfinding. Further

wellbeing inclusions are ample waiting areas, a cafe, a centralised registration system, decentralised check-out points on each floor, and education and consultation rooms for patient and family training.

Natural light was important to the faculty and students using the education and research facilities, so elements such as lab, conference, and office spaces were located around the perimeter of the research floor. “At every floor the planning was optimised to allow for maximum visual access to views and natural daylight,” explains Campbell. As well as waiting areas being located adjacent to large glazed areas, corridors end with windows as opposed to enclosed spaces, providing users views out, even from the core of the building. “Research has shown views outside help maintain proper circadian rhythms and positively impact sleep cycles, which in turn contributes to healthier people.”

As well as lab and office spaces, the research floor also includes histology, biomechanics, molecular imaging, and administrative space. The building has also been set up to allow for cross-clinician collaboration where necessary. “This is most evident in the design of the clinical floors where a continuous row of clinician work areas criss-crosses the five patient examination corridors, allowing caregivers to exchange information,” says Campbell.

Building systems & LEED

HKS collaborated with various companies to include technological aspects to aid optimisation of patient flow. The institute is a test site for an app by Carrier that clinicians can use to interact with the building, such as opening doors, calling lifts, and setting preferences such as lighting and temperature. The system also monitors carbon dioxide levels, coming on automatically to provide additional oxygen supply when sensors show low levels. A ThyssenKrupp system monitors and moves lifts, and directs users to the one with the shortest travel time.

With LEED certification in mind from the outset, every detail relating to energy performance was carefully planned. “The LEED process challenged the team to evaluate the material selections for the building to meet environmental, ingredient and content requirements,” explains Campbell. “The design uses over 85 products with Environmental Product Declarations and Health Product

Declarations, as well as satisfying seven of the eight material emissions categories for LEED and potentially earning exemplary performance.”

A detailed lifecycle cost analysis was undertaken to ensure the HVAC system offered future flexibility, while not oversized. This showed an 18% improvement in building energy performance was possible by adding heat pump chillers, with a 50% cut in whole-life running costs, so paying back in seven years.

Solar glare was minimised by the building’s east-west orientation, while still allowing clear views out to the trees. The north east corner of the building, housing the rehabilitation and physical therapy gym, sits in a “lush garden of trees and plants,” bringing biophilic benefits.

The layout located the noisier areas on lower levels, while each floor home houses rooms requiring more privacy, before ending at the top with the research floor. The building’s connections to the wider campus and the Peach Creek Greenway – a path connecting Atlanta and its many suburbs – encourage staff to do physical activity.

Beginning in January, photovoltaics will be installed on the car park roof, intended to offset 12% of the building’s operational energy. Energy and water consumption has also been reduced throughout via smart technology including touchless systems in communal areas.

Construction of the institute began in April 2020, though with strict testing protocols, limited site visits, and appropriate PPE, the team were able to keep to their scheduled construction timeline, with work completing in September 2021. Due to its use of technology throughout, the building has been hailed as a “first-of-its-kind intelligent building.”

Since opening the institute has been well received by both Emory and the public alike, and has been given recognition in the World Architecture Festival, and received a Special Mention in the Architecture + Health Category of the Architizer A+ Awards, as well as receiving numerous US honours. “We’re incredibly proud of this building,” Campbell concludes. “It meets and exceeds the project’s initial goals of being visionary, embodying the restoration of health and movement, and being a good steward of the client and earth’s resources.” ■



NHS GP Practice improves patient access



As part of a significant re-development project, Derwent Practice has improved patient access from the carpark by installing a smart new TORMAX automatic bi-parting entrance system. Giving clear and easy access to all users, the sliding doors are fully compliant with current legislation. Powered by the in-house designed Win Drive 2201 operator, a long and reliable working life can be expected thanks to the sophisticated design of the motor which benefits from almost wear-less operation. As with all TORMAX operators, the Win Drive is tested to significantly more than current industry requirements of one million cycles and can be found installed in busy locations throughout the world. A significant local service, Derwent Practice is the only GP practice in Malton, North Yorkshire. As well as the newly positioned automatic entrance, patients also now benefit from the addition of new consulting rooms, extending the clinics and services that can be offered. "With heating bills set to rise even further, an automatic entrance is a sound financial investment," comments Simon Roberts, MD for TORMAX.

sales@tormax.co.uk

Texture and materiality to Chapter House



The design of award-winning Chapter House is draws inspiration from the characteristic historic morphology of Lichfield's walled gardens and the original cloistered form of the demolished medieval friary which once occupied the site. The main facing bricks are Vandersanden's Aalborg with their water-struck, rich red texture. Providing a striking contrast, the expanses of Vandersanden's Creme stocks are bedded in white mortar. Both bricks are an elegant, narrow 50 mm high – an innovation that helps to minimise the mass of the Chapter House development.

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New Gang-Nail iPanel timber frame software



iPanel is a robust panel design tool that manages all the information needed to draft, estimate, manufacture and install wall panels. Gang-Nail's workflow from STITCHER® to iPanel is uniquely powerful in its ability to produce rapid and accurate quotes. iPanel with STITCHER®

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The timber-paved road to zero

Andrew Orriss of the Structural Timber Association explores the vital importance of timber in construction on the path to net zero, but also the associated importance for specifiers of quality assurance and competency



In recent decades timber has faced greater competition from other construction methods and materials. However, for the UK to meet its net zero 2050 commitment, carbon savings must be made in the construction industry, which is responsible for almost 25% of carbon emissions in the UK.

Carbon accounting benefits

As part of these efforts, the Future Homes Standard regulations are becoming much more stringent, meaning that alternative materials such as timber are appealing thanks to low embodied carbon, low energy in use, and proven design qualities. Structural timber systems offer clear sustainability advantages, while also offering greater versatility, flexibility and construction speed when compared to other traditional construction materials.

A keen focus must be placed on the energy efficiency of new homes and buildings, and ensuring high levels of airtightness and insulation are essential. Structural timber systems offer a

straightforward route to achieving these objectives and the use of both timber open and closed frame and Structural Insulated Panels (SIPs) offers excellent flexibility to increase the thermal insulation of the external wall construction. For example, closed panel timber frame systems can typically achieve U-values as low as 0.10 W/m²K. Additionally, the controlled factory conditions under which offsite systems are manufactured allows high levels of precision and means that when the panels are assembled on site, they form a highly airtight, energy-efficient building envelope.

Maximising the use of timber in the construction of new residential and commercial buildings is a simple and effective way of achieving a substantial reduction in carbon emissions. For every cubic metre of timber used in construction, 0.9 tonnes of CO₂ is sequestered and stored for the lifetime of the building. And typically for every farmed tree, a further five are planted in its place.

Durability is also a critical component of sustainability that generates an overall

Structural timber systems offer clear sustainability advantages, while also offering greater versatility, flexibility and construction speed



reduction in waste. Structural timber systems are more than capable of meeting service-life objectives. To deliver building longevity, a systematic approach to procedures is recommended to engage professionals to review durability as a wider topic throughout the building process. Best practice should always be adhered to for the planning, designing and construction of buildings, and then maintained by those with a solid foundation of understanding of the building material. A moisture management strategy for building projects provides a clear pre-build plan and focuses attention on design and installation.

Health & wellness

Expanding the use of timber throughout a building can also have a number of health and well-being benefits. It is shown to improve both physical and mental wellbeing, and reduce stress. A study conducted by the University of British Columbia and FPInnovations found that the presence of wood surfaces in a room lowered sympathetic nervous system (SNS) activation, which is the system responsible for physiological stress responses. Timber is also linked to benefits in terms of blood

pressure, digestion and healing.

A person may feel good about living in a home constructed of natural materials. In a study conducted by the BRE, 62% of respondents saw climate change as an issue they should be concerned about and 96% said that they had already made changes to be more sustainable. Additionally, 43% said they would prefer to buy or rent a home that had a sustainability certification. In fact, approximately one in five were prepared to pay more for such a property.

To deliver durable buildings and reach net zero by 2050, quality of construction is paramount. Across the construction sector, the importance of quality assurance schemes cannot be overstated.

Timber presents our best opportunity for meeting the UK's net zero commitments by 2050, but the quality and standards of timber construction must be to the highest degree, as will the scrutiny that it is put under. Therefore, accreditation is crucial to providing investors and insurers with evidence that companies are being held to high standards.

Andrew Orriss is director at the Structural Timber Association



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Overlooking the Manchester City Canal, a total of 500 apartments are being built in Manchester Waters. The location, quality and facilities are unique, and the selection ranges from studios to 3-bedroom apartments. The first blocks are finished and stand as a symbol of the new Manchester.

Premium waterfront living on this level must offer all amenities, including the ability to park near the residence. Therefore, car park facilities have been established on the lower level. In this connection, RMIG Solutions has supplied facade panels for covering the car park.

Challenges and wins

The facade panels presented several challenges. Aesthetically, the panels should be decorative and match the architecture. Functionally, they should have an extraordinarily large open area, as the rest of the basement is surrounded by solid walls.



Finally, the panels should appear in a raw finish, directly from the mill.

The task was solved thanks to a close and trusting collaboration with the architect. Aesthetically, the choice fell on a botanical pattern with a closed surface at the top that hides the concrete deck.

An open area of 50% is difficult to achieve in this thickness (3 mm), particularly in an



aesthetic finish, but with precision tools, our sales and development departments at RMIG Solutions managed to increase this. The architect proposed displacing some of the panels to provide extra ventilation, and this ultimately resulted in an open area of approximately 75%.

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Crittall's West End success

Recently completed is the refurbishment of a substantial mixed-use building in the plush Fitzrovia/Marylebone area of central London. Crittall Windows made a significant contribution to both the aesthetic and sustainability of the seven-storey Devonshire House that commands the corner of Devonshire and Great Portland Streets.

The refurbishment, designed by architects Robson Warren, upgraded the building's green credentials by the installation of T60 thermally broken steel windows. The high-performance steel fenestration comfortably surpasses the requirements of current legislation while satisfying the designer's desire to maintain heritage characteristics.

The area around Great Portland Street was developed in the 18th century with fine Georgian houses and, although these were replaced in the 19th and early 20th centuries, the newer office blocks that took their place often sought to retain the period features.



The black powder-coated T60 windows in Devonshire House, provided in both inward and outward opening configurations, have been fitted with glazing bars to mimic the

Georgian-style panes that were a prominent feature in the period facade of the building.

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Hidden benefits

Health and beauty retailer Boots UK is well known for offering beauty products to enhance the stylish good looks of its customers, so the entrance to their brand new store in Kensington High Street in London, just had to step up to the mark.

The busy store needed an entrance to complement its glass and bronze-anodised facade and GEZE UK had just the answer – the UFO NT.

The UFO NT is an underfloor operator that is completely hidden from view, so perfect when installed with glass doors.

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GEZE UK worked with facade solutions specialists Colorminium to design and install double doors with two UFO NT automatic operators to the store entrance.



The Boots store is part of a mixed use building on the corner of High Street and Wrights Lane, the 1970's building was remodelled and extended, to completely transform it and includes office space, a new retail arcade and connection to the London Underground.

Said Andy Iredale, GEZE UK's national sales manager for automatics and window technology: "The UFO NT was the perfect solution for this busy store, the operator is concealed beneath the floor giving designers the freedom to create aesthetically pleasing entrances yet still provide automatic access."

Said Mihai Ciobanu, project manager at Colorminium: "We have worked with GEZE many times and we were delighted with this solution from them. This new product is mounted below the finished floor level and so gave us the clean stylish entrance we wanted."

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A robust case for timber windows

Today's timber windows are vastly improved on their predecessors, but a recent survey and round table found that specifiers' misconceptions are still making them wary, says Tracy Pomfret of George Barnsdale

Rishi Sunak's U-turn on attending COP 27 came too late to avoid sending a message to other nations that the UK's short term financial pressures are more serious than the long term survival of the planet. There are echoes of this within the construction industry; a wide acknowledgement that we need to be building more sustainably, but when it comes to the bottom line, many of us are still not prepared to put our money where our collective mouths are.

Timber windows are 'carbon negative' – there is no argument that timber windows and doors are the most sustainable option for the planet, and a recent survey we undertook shows architects agree, with 98% of respondents saying they preferred to choose sustainable materials. However, only 5% said they were specifying timber for windows on a weekly basis. Furthermore, one fifth of them said they were actually specifying less timber than they were five years ago.

Aluminium is the material of choice – 84% said they specified it most regularly even though it is not the most environmentally friendly option. Despite it being almost fully recyclable, the growth in demand for aluminium means that, in reality, only a third can be supplied by recycling with the majority still coming from source (Bauxite mining).

Unlike timber (via FSC certification), there is currently no legal requirement in the UK for aluminium, used in construction, to have a chain of custody in place to demonstrate responsible sourcing. This is addressed to an extent by some of the building assessment schemes like BREEAM but dubious practices still go on in the mining industry, and there are no guarantees they aren't part of the UK supply chain.

Researchgate.net has calculated that an aluminium window creates four times the amount that a timber one does.

Analysing the survey results, it was



important to understand why there is such a gap between good intentions and delivering an environmentally friendly build/renovation. To this end, a round table event was hosted in Manchester with architects and practice owners working across commercial and residential projects.

Round table results

One of the overriding sentiments is that clients want to be sustainable, but it has to be at an acceptable price point. Architects were unanimous in their wish to be sustainable, and were regularly suggesting timber options to clients. However, they were often met with objections; timber is perceived as being expensive and is one of the easiest things to save money on, with clients opting for "posh PVC" instead.

Further evaluation of the discussions that took place demonstrated that price wasn't the only concern people had. As an industry, timber window companies are still battling with the same misconceptions surrounding aesthetics. The project 'had to suit timber windows,' and timber wasn't readily associated with contemporary projects.

Some of the architects blamed fads and

A fifth of architects said they were actually specifying less timber than they were five years ago





Researchgate.net calculated that an aluminium window creates four times the amount of carbon emissions of a timber equivalent

fashion, with TV shows promoting large bi-fold doors, for example. Again these are perceived to be unsuitable for timber, so architects “end up sleepwalking into aluminium.”

Busting the durability myth

Another misconception is timber's durability. Many are still under the impression that not only does timber not last, it is both difficult to maintain, and can move and twist over time.

Most of the architects currently only consider timber on projects where they need to match to existing or where there is a planning requirement, for example a historic project.

Few of the participants seemed to be aware of the advances made in timber fenestration in the past 20 years – the fact that, made to Wood Window Alliance standards, they can last up to 80 years, compared to 35 years for PVCu.

Companies working to the tested standard use sustainable, defect-free engineered timber which prevents twisting and warping and is strong, stable and an excellent substrate for the advanced coatings. They also incorporate optimal

designs and processes with water shedding angles on cills and beads, end grain sealing and the use of microporous paint that lasts up to 10 years without needing to be recoated.

The legacy of poorly made wooden windows of the past still hangs heavy in the minds of most clients, and it would appear that architects don't feel confident enough to argue this with them.

It is clear that the high performance timber windows industry has not done a good enough job of educating architects about the benefits of modern timber windows, the fact that they can last twice as long as PVCu, the technology and tested performance they deliver, the long guarantees and low maintenance required. Nor have they provided architects with the inspiration to see timber windows in a contemporary light, something the Scandinavians, for example, have no issue with. It is time we stood up for the environment, by changing our approach to timber windows, and recognising their benefits in practice.

Tracy Pomfret is head of marketing at George Barnsdale



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Swifix innovative fixings for use with EWI and MMC systems

The SWIFIX fixing solution has been designed and developed specifically for refitting and installing both lightweight and heavy items through External Wall Insulation (ETICS) systems.

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The solution is suitable for all system finishes from brick slip, textured and rough-cast/dashing and through all types of insulation types and thicknesses of 50 mm to 300 mm.

Tested by the BRE for strength, compression, wind, load and thermal loss the fixings ensure the thermal efficiency of the building is maintained and provide an aesthetically pleasing appearance to enhance newly installed external wall insulation. The fixings are approved by the NHBC and Sky (for satellite dishes), as well as being recommended by numerous EWI system designers and installers across the UK for securing any item from bird netting, external lights and rainwater goods to air source heat pumps and canopies.

Considering the environmental impact, all products are manufactured in the UK using recycled materials and are available in black and white as standard; however bespoke colours are available to compliment

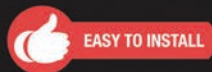


the finished render if required. Fixings are available direct from SWIFIX Ltd via their on-line store and from various distributors and builders' merchants throughout the UK, with design and technical guidance available.

For more information about specifying Swifix fixings, please visit the website.

01884 560477
www.swifix.co.uk

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Sika donates green roof to facility aimed at tackling social isolation

Leading roofing manufacturer, Sika, has donated over £7,000 worth of materials to a social enterprise in Salford which is creating a safe, indoor space to host events and activities aimed at tackling social isolation.

Created from two disused shipping containers, the new building is located at the Cleavley Community Forest Garden in Winton, which is run by Incredible Education CIC, a social enterprise providing nature-based services for local communities through horticulture and forest school activities.

Prior to the arrival of the shipping containers, the garden and its activities were at the mercy of the weather, having no covered area large enough to protect groups or events from the elements.

Having access to the new covered space will enable the garden to host music events, health activities, parent and toddler groups and workshops all-year round; all with the aim of improving community connection.



The building will primarily provide a secure indoor workshop to Salford community group, Working in Wood, which runs woodland projects for anyone over the age of 18 looking to gain skills or meet new people. The group, which helps to tackle social isolation, has also been involved with the construction of the new building, having erected the timber frame surrounding the containers.

The two shipping containers were combined to form a 20 ft x 30 ft room topped with a Sika Green Roof, which blends in with

the natural surroundings and nods to the land's former use as a plant nursery.

The system build-up included SikaBit VB-724 Air and Vapour Control Layer (AVCL) VCL, 100 mm Foil-faced AL Sikatherm insulation and the new, sustainable roof membrane Sarnafil Advanced Technology (AT) – the UK's only Cradle to Cradle Silver certified single ply membrane. The membrane is not only independently certified in sustainability performance but as it contains no plasticisers, oils, chlorine or heavy metals it is ideal for sustainable construction. Topping this, the aluminium edge trim, SikaRoof drainage layer, SikaRoof Biodiverse substrate and a SikaRoof Wildflower Blanket, created a natural habitat for flora, fauna and wildlife. The wildflower blanket was laid in such a way to encourage the roof to self-germinate with local seeds blown by the wind onto the roof.

01707 394444 www.sika.co.uk/roofing

London School of Economics receives airtight solution



The Marshall Building, part of the renowned London School of Economics has been fitted with the Wraptite external air barrier system from the A. Proctor Group. The impressive 10-storey building features pale stone cladding and is home to a series of educational facilities including lecture theatres, offices, classrooms, and a sports hall. Specialist contractor, I & S Construction, Dartford consulted with the A. Proctor Group's technical team and selected the Wraptite air barrier to be incorporated within the external wall cladding system. Wraptite is the only self-adhering vapour permeable air barrier certified by the BBA and combines the critical properties of vapour permeability and airtightness in one self-adhering membrane. This approach saves on both the labour and material costs associated with achieving the energy efficiency demands in buildings. Wraptite is Class B1-s1,d0, compliant with Approved Document B Building Regulations for use in the external wall systems of buildings over 18m in height, both as a continuous layer on sheathing board, behind fire classified insulation, and for use to tape joints in insulation behind rainscreen.

01250 872261 www.proctorgroup.com

OYO DUO by designer Stefan Diez



The MEISTERSTÜCK OYO DUO, created by the Munich based designer Stefan Diez for Kaldewei is an elegant free-standing bathtub, demonstrating how luxury and sustainability can go hand in hand, even in smaller bathrooms. The OYO DUO combines organic, natural design with durable, recyclable

Kaldewei steel enamel. Stefan Diez has created a graceful design sculpture with the OYO DUO, which integrates harmoniously into any bathroom, flowing and almost floating – even in smaller rooms.

01480 498 053 www.kaldewei.co.uk

An Industry exhibition on your doorstep



Keep ahead of product developments and innovations without the time and travel of an industry exhibition. The Horne Roadshow can effectively and efficiently meet all your needs, in an hour or so, at your office, or on your client's or project site doorstep. A compact and cleverly devised exhibit that demonstrates a vast range of shower models (all sectors/applications covered), the award-winning and updated Optitherm thermostatic clinical hand-wash tap, patented In-line Thermal Disinfection Unit, and Horne thermostatic mixing valves, DN15-DN50.

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

The Root of Easy Bathroom Design from Vitra

Vitra's Root collection offers a wide range of product sizes and styles in mix-and-match colour and wood unit combinations with complementing handle styles, Root brassware and the choice of three washbasins to suit.

Root brassware and furniture combine to create one of the market's most flexible and customisable bathroom collections. The range comprises three key furniture designs: flat, groove and classic. Flat – a simple style for those with a minimalist taste; Groove – a contemporary option with a panelled style; and Classic – a modern take on shaker design. The furniture joins the recently launched brassware collections Root Round and Root Square, available in five colours (chrome, brushed nickel, copper, matt black and gold) across the array of basin, bath, and shower mixers.

The Root furniture units are available in seventeen assorted colours with three types of finish – gloss, matt, or wood. Colours include white, anthracite, Sahara beige, pearl grey, dark blue, fjord green, etc. Handle options include matt black, chrome and matt white,



with two distinct styles to suit the different furniture designs. The wood options include walnut and natural oak finishes.

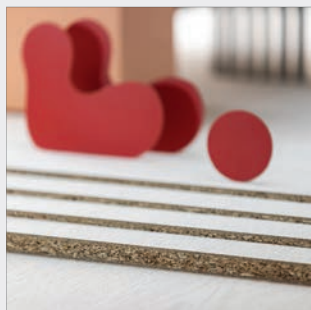
Straight-forward design, soft lines and smooth surfaces keep cabinet surfaces dirt-free and easy to clean. To help designers, Vitra has developed the Root Configurator. This online tool allows users to experiment with various styles, colour finishes and



sizes to find the perfect bathroom design. In addition to the washbasin units, the tool includes the taps and additional storage units available to enable users to design their whole bathroom space. The Root Configurator can be accessed here [Vitra Root Configurator](https://www.vitra.co.uk/rootconfigurator).

01235 750990
[rootconfigurator.vitra.co.uk/uk](https://www.vitra.co.uk/rootconfigurator.vitra.co.uk/uk)

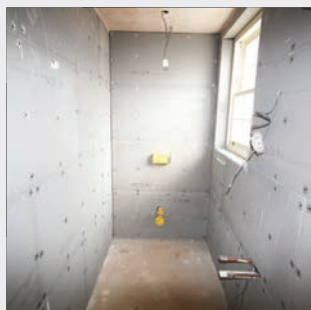
An instant finish with decorative MDF



Decorative MDF from UNILIN Panels are ready-to-use, pre-finished wood fibre panels that give an instant and affordable decorative finish in a wide range of applications. Ready-to-use panels that let you put a great design together quickly and affordably, decorative MDF from UNILIN Panels are suitable for general interior use including furniture, wallcoverings, cupboards, stand constructions and displays. Coming in five striking looks that give any project a premium look that belies its cost-effective nature, decorative MDF Panels also deliver impressive durability for a design that stands the test of time. Moisture-resistant, stain-resistant, exceptionally scratch-resistant and easy to maintain, they can be used immediately, with or without edging tape, for a high-quality look in a fuss-free finish. Every decorative MDF panel features a strong coloured core combined with a high-tech lacquer coating available in varying transparency and gloss levels. The decorative MDF panels are finished on both sides and can be sawn, drilled and milled without chipping of the lacquer, making a versatile solution for general interior applications.

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

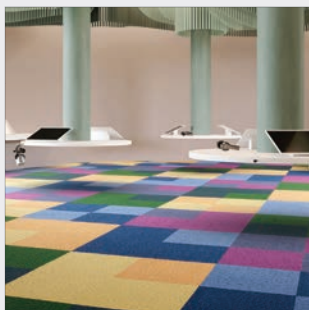
Award winning luxury house developer relies on Multiboard to build its bathrooms



The latest development by one of the country's leading luxury housebuilders is making full use of Marmox Multiboard's benefits in converting a series of former agricultural buildings into half a dozen high specification homes. Maybanks Manor, Cox Green, close to Horsham in Surrey, is being built by Surrey based Rockwood Homes; a past winner of both Silver and Bronze awards in the annual Daily Telegraph 'What House' competition. With one property already being marketed and another close to completion, the site is expected to be finished by the end of this year, with the Multiboards featuring in the bathrooms and en-suites throughout. In total, 400 of the 12.5 mm thick 1250 x 600 mm Multiboards are being supplied by Marmox stockist, Travis Perkins; along with the special fixing plugs, waterproof tape and Marmox 360 adhesive. Marmox Multiboards are manufactured from extruded polystyrene or XPS and offer a range of positive physical characteristics, including good thermal insulation and being fully waterproof, with the polymer modified concrete coating to both faces providing an ideal key for tiling or rendering.

01634 835290 www.marmox.co.uk

Create immersive experiences with a world first



Immersion is the new carpet tile collection from IVC Commercial made with Thrive® matter, the world's first carbon negative carpet yarn. Used in IVC Commercial's new Immersion carpet tile collection, Thrive® matter has the lowest emissions of any solution-dyed nylon carpet yarn, removing more CO₂ from the atmosphere than it emits. Available on all three Immersion designs, it's made from 90% recycled content and has the lightest production footprint in the world. Immersion explores the corners of the virtual world where there are no limits, creative freedom is absolute and digital and physical personalities blend effortlessly. With textures that create a 3D effect that's constantly in motion, the collection brings a surprising and unexpected dynamic to your design. Available in Alternate, Liberate and Animate; it comes in a shared palette of 18 vibrant and purposeful colours that can mix and match. Thrive® matter is third-party certified with 1.45 kg of embodied carbon emissions for every 1 kg produced. This already low number is brought below zero by partnering with Carbonfund.org in support of forest conservation and reforestation projects around the world.

01332 851 500 www.ivc-commercial.com

Interface is a Carbon Neutral Enterprise



Interface, a worldwide commercial flooring enterprise, has announced that it is third-party certified as a Carbon Neutral Enterprise. This achievement demonstrates the company's voluntary and ambitious commitment to climate action. Interface is a Carbon Neutral Enterprise according to the PAS 2060 standard, the leading international carbon neutrality standard created by the British Standards Institution (BSI). To achieve this, Interface has transformed its factories, products, and supply chain – including using innovative new carbon storing raw materials – to dramatically reduce its carbon emissions. Today, verified emissions credits are necessary to balance emissions that Interface has not yet been able to reduce. Ultimately, the company intends to balance its carbon impact without them. “Now everything we do, every aspect of our business, is carbon neutral,” said Laurel Hurd, CEO of Interface. “We have worked tirelessly to radically decarbonize, tapping into our culture of innovation and design, resulting in what we believe are the lowest cradle-to-gate carbon footprint carpet tile products on the market, even before applying offsets.”

interface.uk@interface.com www.interface.com

HeartFelt® ceiling specified for office



One of Hunter Douglas Architectural's most innovative and environmentally friendly ceilings greets visitors and staff to the new Edinburgh office of a leading legal firm. When Brodies LLP moved to Capital Square, in Morrison Street, the design included the global architectural

products manufacturer's award-winning HeartFelt® ceiling for its foyer and waiting area – complementing the building's impeccable ESG standards. The 223 m² lightweight ceiling has superior acoustic performance, making it ideal for a large space.

01604 648229 www.hunterdouglas.co.uk

F. Ball chosen for high-level Dutch build



Products from F. Ball and Co. Ltd.'s System LVT range have been used to install floorcoverings as part of the stylish Overkamp Park residential development in Dordrecht, the Netherlands, consisting of three apartment blocks, each with 53 luxury apartments and two penthouses. Commenting on the project, F. Ball technical support advisor for the Netherlands Kees-Jan

van Eeren said: “F. Ball's System LVT range comprises subfloor preparation products and adhesives which, used correctly and in combination, guarantee a flawless finish when installing LVTs.”

01538 361 633 www.f-ball.com

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Vicaima IDS changing trends and possibilities

As the construction industry gets ready to welcome a new year with a fresh set of challenges and opportunities, 2023 heralds the dawn of changing trends and possibilities in the world of interior timber doors and door sets. Ever one to embrace innovation and seen as a true manufacturing trailblazer, Vicaima bring design, performance and quality solutions to the interiors arena. With this in mind, the launch their latest incarnation of the perennially popular Interior Door Selector (IDS) has been much anticipated.

In recognition of changing specifier preferences, Vicaima is largely moving away from conventional paper-based brochures, towards digital catalogues. This is not only environmentally friendly, but also enables a more dynamic user experience. New products and useful information can be updated instantly and at the same time enabling links to other resources such as technical data, so that specifiers can be fully equipped to make an informed decision about their next project.

Bigger than ever! This latest brochure contains over 150 pages to inspire professionals who are looking to transform modern living space. From economy options which are ideal for affordable homes in the current cost of living crises, to ground-breaking quality designs that create an instant wow factor and set the standard for twenty twenties living!

Although best known for fresh ideas in veneer, foil, laminates and paint lacquered finishes, Vicaima are also opening a window to the future with their new Infinity Range, where digital and precision imagery can re-imagine stone, metal and other surface features, in a way that hitherto was the stuff of dreams!

Of course, innovative doors from Vicaima are not confined to aesthetics alone. With

fire safety, security, acoustics, and thermal efficiency very much in the minds of specifiers and regulators. Vicaima Door kit and set solutions build on a framework of rigorous testing and superior constructional cores. Among recent additions to what is already a comprehensive performance range, comes VCP 60 from Vicaima. This in-house developed core, which is third-party accredited under the BM TRADA Q-Mark scheme; provides a one-hour FD60S rated door, but with a considerable cost saving over conventional products, thereby improving safety while keeping budgets on track.

What to look out for in the latest Vicaima IDS

There are a great many new products to be found in this latest issue, among which look out for:

- **Naturdor Vision** – A new range where real wood veneers are taken to new heights, with tones such as Rich Mocha and Fresh Bamboo

- **New Economy Veneer Range** – Cost effective options such as Red Oak and Walnut Crown EV give that luxury look for less
- **Dekordor 3D** – Two new colour tones are added to this highly tactile and durable finish range, with Cloud White and Pale Oak
- **Visual Sensations** – A touch of Scotland comes to this popular foil collection, with the introduction of Highland.
- **Vicaima Wardrobes** – Flexible configurations to match Vicaima's many door finish options.
- **Infinity** – Endless Possibilities to be explored. Pushing the boundaries of interior design

To download a copy of the Vicaima Interior Door Selector or for further inspiration, please visit the Vicaima website or email info@vicaima.com

01793 532333
www.vicaima.com



Vicaima New Dekordor 3D Pale Oak



Vicaima Dekordor SD Highland



Vicaima Vision

Mapei creates industrial-style at Everlast Gyms – with more to follow

Mapei's Ultratop Loft floor finish has been installed at Everlast Gyms – Shirebrook in Mansfield. The installation, by Rossington Contracts, is part of an extensive refurbishment and 'elevation' programme which will include installations at up to 60 sites throughout the UK. Mapei's industrial-style floor finish was chosen to complement the gym's urban design, whilst providing high performance and abrasion resistance.

Located at the Frasers Group complex, the relaunched Everlast Gyms – Shirebrook features new equipment and elevated group training, along with new changing facilities, a new reception area and Smoothie Bar. Throughout the site, the Mapei Ultratop Loft installation totals over 300 m² and spans the reception and retail area, corridors and stairs, and training areas.

Ultratop Loft was specified throughout the venue. Following installation of the cement-based system, Rossington Contracts applied



a finishing coat of clear matt polyurethane, Mapefloor Finish 58W.

Available in over 120 colours, including a variety of popular grey shades, Mapei Ultratop Loft is a rapid-drying, micro-cement system that combines two separate components: coarse grained Ultratop Loft F and finer grained Ultratop Loft W which are mixed with water to create a trowellable cementitious paste that is applied in layers

at 1 mm thick. Both components were used at Everlast Gyms – Shirebrook, creating a surface that was set to foot traffic within three hours. Mapefloor Finish 58W – which can be applied six to 24 hours after application of Ultratop Loft – provides additional resistance to wear, abrasion and chemicals, creating an easy care, highly-durable surface.

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

Hospital sees benefits of Forbo

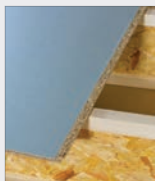


Minimising disruption for patients, staff and visitors was a priority for the University Hospital of North Tees team, responsible for the refurbishment of a vast area of new flooring in the hospital's main public corridors. Forbo Flooring Systems

supplied its adhesive-free Modul'up Compact sheet vinyl – a resilient flooring solution that was easy to install and could be walked on immediately after installation. Creating a fresh, contemporary and airy feel, the wood-effect flooring has been selected to complement the corridor walls, which feature a split wall colour scheme.

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

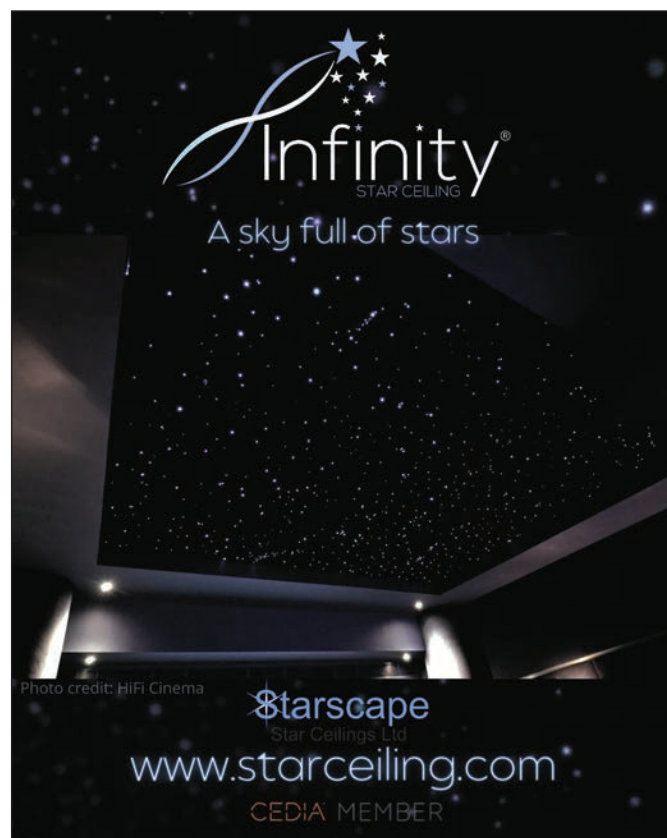
Safe and sustainable working platform



CaberShieldPlus, from West Fraser (Trading as Norbord Europe Ltd), is a durable, P5 flooring which features a permanent, waterproof coating on both sides. Almost exclusively preferred now to P4 boards – for both new-build and refurbishment applications, the P5 particleboard panels are able to withstand the unpredictable British climate without deterioration. In fact,

if installed using CaberFix D4 adhesive, the boards have BBA approval for 60 days exposure to the weather while, for safety, the upper face is non-slip and colour-coded to distinguish this.

uk.westfraser.com



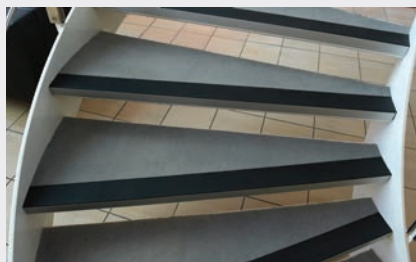
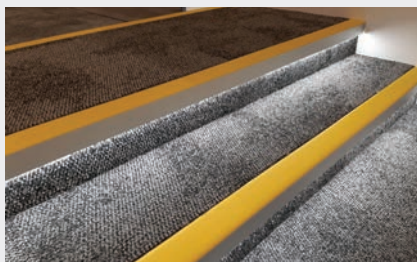
Q-Range Stair Nosings Sample Box

Quantum Flooring is proud to announce the launch of the new Q-Range Stair Nosings sample box. This box showcases the most highly engineered stair nosings range, which is designed specifically to adhere to all Building Regulations, BS 8300-2:2018 and Equality Act guidelines.

The new sample box contains a small length of each of Quantum's Q-Range Stair Nosings, along with a swatch of all 25 colours which can be specified with the profiles. It also contains a longer sample of Q-Range DUO, the most specifiable stair nosing on the market.

The idea behind Q-Range is to adhere to all regulatory guidelines. The profiles have an all-over tread to prevent slips, trips and falls, along with a colour range to provide LRV compliance with any floorcovering. Plus, the range has a satin-etched finish as standard, ensuring that they are scratch-resistant and inhibit glare.

Q-Range DUO takes it one step further: it follows all Building Regs, BS 8300 and Equality Act guidelines to the letter, meeting



all Best Practice recommendations. The unique DUO design has both a tread and riser in all 25 Q-Range colours, offering a solid colour on both surfaces. This makes the step edges clearly visible, while also offering great design options. Plus, DUO has a 55mm by 55mm all-over slip resistant material, ensuring overstep is not a problem.

Quantum's unique Q-Range Stair Nosings offer the perfect solution to any project. They are suitable for installation in all categories of public, private and commercial buildings. These profiles provide great aesthetic possibilities, while ensuring longevity and durability for step edges. When

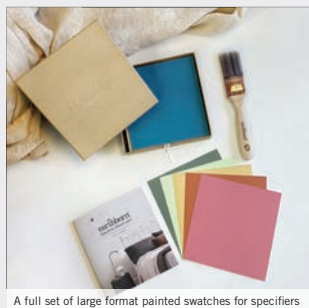
it comes to superior stair nosings, Q-Range ticks all the boxes.

- ✓ Quality
- ✓ Compliance
- ✓ Safety
- ✓ Design
- ✓ Sustainability
- ✓ Colour

To order your Q-Range Sample Box, please email Quantum Flooring.

0161 627 4222
info@quantumflooring.co.uk

NEW Earthborn paint swatches

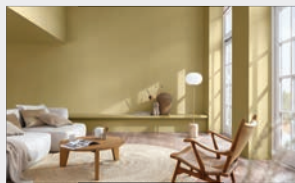


A full set of large format painted swatches for specifiers

Earthborn is introducing a new approach to paint colour choices. Now, interior designers looking to specify an environmentally friendly paint will have access to a full set of 84 Claypaint swatches, comprising all 72 classic colours and the 12 Modern Country colours created in collaboration with Country Homes & Interiors. Each swatch is a generous 16cm x 15cm and has been individually painted with real Earthborn Claypaint so you and your clients can see exactly what you're getting when you order. Placing the swatches around your chosen space will show your clients how the light affects the colour at different times throughout the day. 100ml sample pots are of course also available. Claypaint is a highly breathable paint with a luxurious ultra matt finish for interior walls and ceilings. It goes on like a dream, often requires fewer coats than conventional emulsions, is virtually VOC free and gives off no horrible smells. Interior designers need to register an interior designer trade account with Earthborn, which gives access to trade pricing and some additional products. These full sets, priced at £80 RRP will not be available to consumers.

01928 734 171 www.earthbornpaints.co.uk

Nature gives life to Dulux's Colour of the Year



Dulux is celebrating two decades of Colour of the Year and has just launched its colour for 2023: Wild Wonder™ – and four complementary, versatile colour palettes that can be used to create stunning spaces across all sectors. Wild Wonder™ – a

soft gold with hints of green inspired by fresh seed pods and harvest grain – is Dulux's Colour of the Year 2023. Its upbeat glow connects us with nature, creating a sense of energy and positivity.

0333 222 7070 www.duluxtrade.co.uk/COTY23

Keller opens brand new office



After recent major investments to the production facilities, Keller Kitchens has just opened its brand new office complex at its Bergen Op Zoom base! The new head office, which accommodates 300 employees of the DKG Group, features plenty of workplaces, meeting rooms and also a restaurant. Recently several major investments have been made into the production facility so that the group optimises today's technology, raises productivity, and remains at the forefront of the industry in terms of sustainability initiatives.

www.kellerkitchens.com

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The embodiment of low carbon

Craig Edwards from WMS underfloor heating gives his views on why the latest embodied carbon data on heating systems shows that underfloor heating is the option to consider for specifiers pursuing low emissions

The total carbon emissions from a building can only truly be calculated when both the running emissions – for heating, cooling and power – are added to the carbon embodied within materials and from construction. The calculation also includes carbon emissions from the deconstructing and disposing of materials at the end of the building's (and product's) life cycle – so, material specification choices today will continue to have an impact long into the future.

Following recent regulatory changes with the way we heat domestic properties, and sustainability remaining firmly in the spotlight, the important matter of embodied carbon is becoming even more pressing.

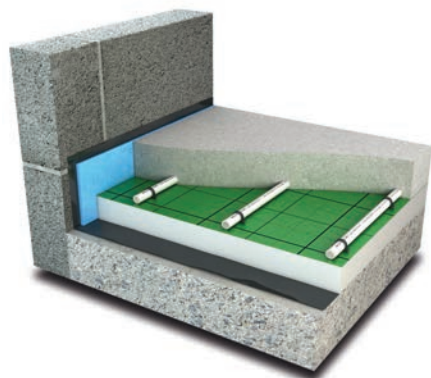
Changes in the making

The latest regulations for newly built dwellings – namely the low water

temperature update to the Building Regulations and Part L – are already driving the changes needed to achieve a net zero emissions state in the UK by 2050. These new rules and goals ahead have not only opened up conversations about which heating system to specify, but also the manufacturing process of products/materials, overall sustainability and their wider effects on the environment.

To gather a deeper understanding of how underfloor heating compares with traditional radiator systems, WMS carried out a study using key statistics from a Government report in relation to the carbon impact of manufacturing building materials. The study revealed that underfloor heating systems have very low embodied carbon, when compared to radiators and when all the key elements are taken into

The low water temperature update to the Building Regulations and Part L are already driving the changes needed



consideration, switching to underfloor heating has 93% less embodied carbon.

Crucial calculations

The foundation of this calculation is data from within the Government statistics which disclose the carbon impact of manufacturing building materials. The report states that the manufacture of iron and steel products have a 7.1 MTCO₂e (metric tons of carbon dioxide equivalent), compared with plastic products which have a 3 MTCO₂e – 58% less than that of iron and steel.

Material volume is also a key aspect. In an average house with 10 rooms over two floors, underfloor heating also proves to be a low embodied carbon heating system as the system requires 42% less material (129.4 kg) compared with 222.6 kg of material for an equivalent standard radiator system.

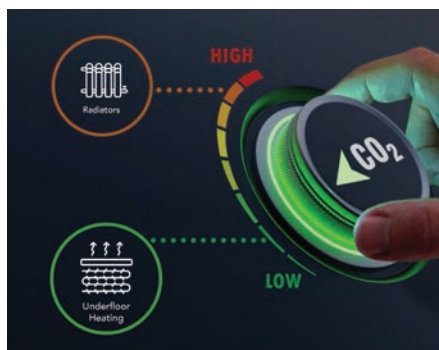
The weight, and consequently the volume of material, would also increase further for larger, low temperature radiators now required to meet the demands of the new 55°C flow temperature update to the Building Regulations and Part L revisions, which are now in force.

Future proofing

The relatively short life cycle of traditional radiators, around 25 years, means that, in addition to being less efficient than underfloor heating when in situ, they become a waste product in a relatively short space of time. While they can be recycled once decommissioned, the carbon produced during the recycling process is extremely high.

Underfloor heating systems are distinctly different, as the system can last three times longer, with most offering at least a 75-year guarantee. This not only boosts the building's sustainability credentials, but also provides reassurance that the system will likely outlive the lifetime of the building. A good quality underfloor heating pipe – which is made from superior quality five layered sustainable PE-RT (polyethylene of raised temperature resistance) – can also be melted down safely and reused. So, when it comes to a longer view of a building's overall carbon emissions, underfloor heating is also proven to be a truly sustainable specification choice.

Craig Edwards is sales manager at WMS underfloor heating



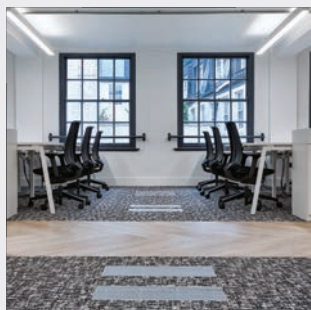
Gilberts delivers “fantastic” performance for Virgin’s UK first



Gilberts has risen to the challenge of delivering indoor air quality to a constantly evolving brief for a high profile, luxury hotel. The new Virgin Hotel in Edinburgh is the first in the UK for the global brand and has overcome a complex array of challenges in its construction over the past four years. Three listed buildings have been merged into a cohesive whole with the addition of new build elements and a suspended glass link bridge. Emtec turned to Britain's leading independent air movement specialist Gilberts to supply all the ventilation grilles and diffusers to ensure supply and return of air from the variable refrigerant flow (VRF) system to the whole hotel. A stand-out element has been Gilberts' GHV double deflection grilles, specially produced in a bronze finish to sit within 200 years-old wood panelled walls. Gilberts provided a raft of different powder coated finishes to the diverse LG linear bar grilles in the bedrooms. Bobby Armstrong, senior contracts manager building services at Emtec said: “Gilberts has been fantastic all the way through this technically challenging project”.

01253 766911 info@gilbertsblackpool.com

The bottom line? Get the low-down on how to improve project profitability



However much we all want to do the right thing, there is always a shadow over our shoulder – what's the cost? Good news: going against the conventional, getting below the skin of your new build, refurbishment, or refit project, WILL tick all the boxes in terms of ethics and morals – AND deliver savings on construction costs – and beyond. What is this miracle? Underfloor air conditioning – or UfAC. The clue is in the name – underfloor. Using a 200m+ raised access floors eliminates the need for a ceiling based ventilation zone – typically twice the depth which helps to maximise floor to ceiling heights. The process in new build means the overall building height is reduced, by up to 10%, with all the associated savings in construction material and labour costs. The building is completed – and therefore occupied – more quickly. That delivers an accelerated revenue stream/ ROI, potentially providing income three months before an office block offering the same lettable floor space is even finished! Because UfAC uses the floor as a plenum, there is no ductwork, delivering further cost savings in terms of materials and labour. Please contact AET Flexible Space for more information.

01342 310400 www.flexiblespace.com

Sto's compatibility with SIPS



A Scottish residential development with a strong emphasis on offsite construction and energy-efficiency has highlighted the suitability of Sto's external render systems for use with modern structural insulated panels (SIPS).

The company's StoRend Flex external render system, which utilizes the StoVentec carrier board, has been installed onto SIPS to create the new detached and semi-detached properties built at Robertland Gardens. Spokesman Pat Hynds said: "We have used Sto solutions many, many times and we know that for SIPS panels, Sto can provide a thoroughly tried and tested system."

0141 892 8000 www.sto.co.uk

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0330 058 0668 www.soprema.co.uk

New Tyneham heat pump technology



Hamworthy Heating, trusted British manufacturer and supplier of commercial heating and hot water products, is set to celebrate the future of heating with the launch of its first ever monobloc air source heat pump range, the Tyneham, designed to meet UK efficiency

requirements in commercial applications. In line with the latest uplift of Building Regulations' 'Conservation of fuel and power: Approved Document L', which state that non-domestic buildings should be moving to low-carbon heat sources, the launch of the new Tyneham Heat Pump range plays a key role in decarbonisation.

01202 662 552 www.hamworthy-heating.com

Improving air quality in retirement apartments



VORTICE has worked with Peterborough-based VentfiltersRus, to successfully install the VORTICE Invisible Mini heat recovery system in retirement living apartments. VentfiltersRus undertakes service contract work for multiple retirement living apartments, ensuring that residents benefit

from excellent indoor air quality and energy efficient ventilation, with the obvious benefit of lower electricity costs. The Vort Invisible Mini is a void mounted heat recovery unit, which is a lightweight product and is easily fitted in smaller void spaces.

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The hot topic

With the UK breaking temperature records while homes become increasingly air tight, James Healey from the Institute of Acoustics looks at hitting the tricky balance between overheating and external noise



We have designed houses to reduce energy consumption by making them more airtight and better insulated for the winter, without considering the consequences for use in the summer



This summer saw the hottest temperatures the UK has ever experienced; 40.3°C was recorded in Coningsby, Lincolnshire on 19 July. People living in houses with cross-ventilation – and in quiet, non-polluted areas – have probably learned that closing curtains and windows when the sun shone helped reduce solar gain and minimise internal temperatures, while at night, opening the windows brought the benefit of colder air.

However, if you live in a flat that doesn't enable cross-ventilation, or if you live in an area with night-time noise or poor air quality, this wasn't an option. In fact, if you live in a modern house or flat, then it's likely that opening a window will not have provided much benefit. This is because we have ignored the impending effects of climate change and designed houses to reduce energy consumption by making them more airtight and better insulated for the winter, without considering the consequences in the summer.

Guidance & regulations

In 2019, the Government released studies into the risk of overheating in our homes. In the reports it confirms that there are currently around 2,000 heat-related deaths each year in England and Wales, and this has been expected to rise to over 7,000 deaths per year by 2050. The findings of the studies have culminated in the release of a new Building Regulation – Approved Document O – specifically addressing overheating in homes and covering applications for all new dwellings, care homes and student residential buildings submitted after 15 June 2022.

The Institute of Acoustics and Association of Noise Consultants (the main industry bodies) formed a working group covering Acoustics, Ventilation and Overheating which released a national

guidance document in 2020 on how to consider the balance between overheating and noise in new homes. This guidance document has informed Approved Document O, with the government recognising that overheating strategies must be usable.

The Building Regulation stipulates that where the prescribed noise or air quality conditions are exceeded, an alternative method other than opening windows is required. However, this approach is needed in order that any overheating strategy developed is usable – there is no point developing a strategy to avoid one risk that results in causing another. Given the need to consider environmental factors within the overheating strategy, this is likely to mean that locations within city or town centres, or next to roads, rail lines with 10 or more trains at night or airports with night flights, will require an alternative to opening a window. When implemented correctly, this regulation, along with others, should improve the living conditions in our residential buildings and lead to reduced heat-related deaths.

However, Approved Document O contains a significant amount of ambiguity and is open to interpretation. In recognising the need to have a clear, precise and usable method of compliance, the Acoustics, Ventilation and Overheating working group again convened to write guidance to clarify and fill the gaps.

Impact on architecture

The regulation correctly requires designers to exhaust all passive means of removing excess heat before using air conditioning. When you couple this requirement with a need to consider closed windows in a poor air quality or a high noise environment, designs need to focus on reducing heat gains as much as possible to reduce the use of mechanical systems. This inevitably

leads to architectural features which are not common in the UK.

Reducing the g-value of glass (a measure of how much solar heat is allowed through) makes a difference, but this alone will not be enough in many UK locations. Reducing glazing also make a difference, but where an open window can be used to remove excess heat, the window openings need to be sufficiently sized to allow the necessary air flow. Increasing the proportion of floor area of a room compared to glazed area, or recessing windows, also reduces heat gain a little, but there are obvious limitations to how far this can be taken.

The regulation permits the use of adjacent buildings to provide shading, but it does not allow modellers to account for external foliage or internal blinds, as either could be removed and result in non-compliance.

After these measures have been exhausted, the next effective step is to consider external shading. This is the most controversial element, as (outside of London) our residential buildings do not have any deliberate shading elements and introducing them changes the appearance significantly. Balconies on apartments are a

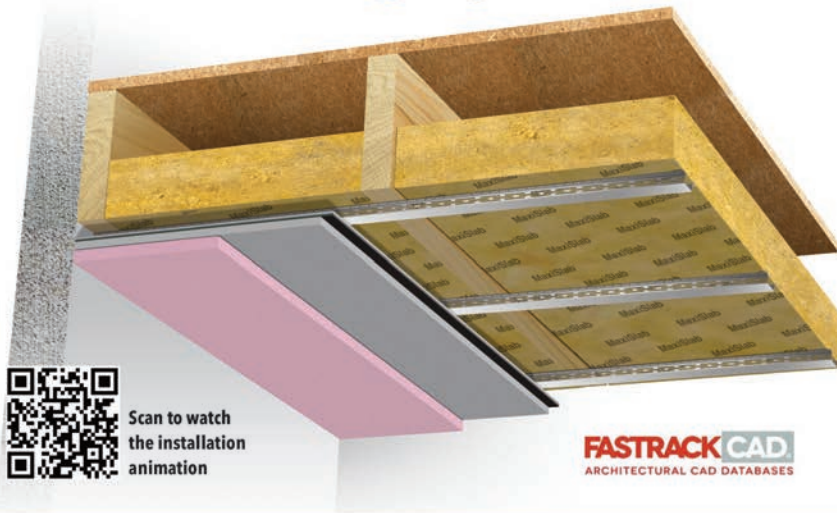
good way to shade the windows below and where they have solid upstands and provide noise reduction, but more commonly we are likely to need to consider elements such as brise soleil, awnings, external venetian blinds or shutters to provide reduced solar heat gains.

Another unfavourable feature if the objective is to avoid mechanical systems, is to use an acoustic louvre when needing to avoid an open window. However, the size of the louvres needed without a mechanical system (and sometimes the appearance) mean that this option is often not chosen. This points us towards more mechanical systems to ensure a usable overheating strategy. While on the face of it this sounds bad, when you consider that if a design is done correctly, and that these systems are operated infrequently (in the current climate), this is perhaps not as bad as it might seem. Nevertheless, the goal should be to naturally cool a building wherever possible – and therefore we will need to improve our outdoor environments in the places we build.

James Healey is director of overheating & acoustics at the Institute of Acoustics

The Building Regulation stipulates that where the prescribed noise or air quality conditions are exceeded, an alternative method other than opening windows is required

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Rising to the refurb challenge

Renovating older buildings requires a delicate balance of facilitating disability access while remaining sensitive to a building's original character, says Sean O'Sullivan from The Platform Lift Company

A visit to a local market town or high street provides stark evidence of just how many retail buildings are now standing empty because of the pandemic, rising energy bills and competition from online stores.

What is happening to these buildings? A report by Save Britain's Heritage, *'Departing Stores: Emporia at Risk'* highlights the historic significance and architectural merits of the department store, and argues that these "cathedrals of commerce should – and can – be rescued, and new uses found."

The £95m government-funded High Streets Heritage Action Zone programme, which is being delivered by Historic England, also aims to "unlock the potential of high streets, fuelling economic, social and cultural recovery, and breathing new life into them for future generations."

The argument for reuse versus demolition is further strengthened by the Climate Change Act to reduce emissions and waste. Transforming and restoring disused and dilapidated buildings into new homes, workplaces and community space is a much greener and more ethical solution. It is also an opportunity to update older buildings into accessible spaces.

Irregular layouts, limited space, narrow corridors and steep stairs as well as differences in floor heights or steps can all present physical barriers within an older building. However, with the advancement in design of platform lifts, even historic environments which might have been deemed inaccessible because of the layout and precious fabric of the building, are now achieving access through sensitive alterations.

Bridging the gap between old and new

Low rise platform lifts are still one of the most popular products to reach heights of up to 3 metres. Not only do they take up less space than a ramp, they are also easy to



install and are visually unobtrusive. Hidden step lifts and stairs which transform into a platform lift are also available, offering innovative solutions that can be subtly integrated while preserving the character of the building.

To reach heights of over 3 metres, the vertical platform lift wins against the passenger lift when it comes to cost and energy efficiency. They also have very small footprints – as little as 1,560 mm deep x 1,250 mm wide – but remain compliant with Part M of the Building Regulations.

A vertical platform lift also requires much less head space than a passenger lift, making them ideal for older buildings that are being repurposed. For example, a standard platform lift requires 2.2 metres from the finished floor level – the distance from the floor up to the top of the shaft when the lift is at its highest point. A cabin style platform lift will need a little more head space (2.5 metres).

Vertical platform lifts can be installed by creating a 50 mm pit in the floor



With the advancement in design of platform lifts, even historic environments are now achieving access through sensitive alterations

but in many cases a ramp is fitted to the front of the shaft to conserve the existing floor material.

The self-supporting shaft is also freestanding and doesn't require any fixings, leaving sensitive wall fabrics untouched. In some cases – especially with a department store, warehouse or factory style building, an existing lift shaft can be used.

Wenlock Works

This 1980s building in east London has been renovated into a refurbished contemporary office designed to tie in with the unique industrial architecture of Shoreditch. Fit-out contractor Thirdway specified a platform lift with a unique finish, and one which could comfortably reach a total 'travel' of 3,555 mm, as well as fitting in the existing shaft. The clean-lined model chosen combines a large platform size with a small external footprint, plus a low noise level and dual guided chain system.

Featuring a fully glazed door, it was supplied with a special narrow platform to accommodate the current shaft. A non-standard jet black finish was used to co-ordinate with other structural elements. Glazed panels were incorporated

into the shaft on the upper ground level, contributing to the natural light.

Installation was carried out over two days with minimal building works. The three-stop lift has made both floors fully accessible from the street level entrance and overcome steps between office suites.

Disability access

Creating a new injection of life into a building gives so much opportunity to not only conserve historic features or its industrial past, but also to embrace change. Over 20% of the population have a disability, so accessibility is a vital element of the future of any public or private building that is destined to become a home, workplace or a community space.

It is a careful balance of retaining the integrity of the historic architecture, the heritage of the building, and introducing modern design to enable the environment to be accessed by all. Architectural solutions like wheelchair lifts can help transform derelict buildings to produce positive accessible results for the future.

Sean O'Sullivan is managing director of The Platform Lift Company

Bodmin Jail Attraction

The five-year project to restore and reinvent the Grade II listed Bodmin Jail from its derelict state into a luxury boutique hotel and leading visitor attraction required the installation of disability access lifts.

Platform Lift Company's expertise was called upon by the main contractor, CField Construction, to provide a two-stop vertical platform lift for the historic 18th century building and the new stone gabion clad 'Dark Walk' experience building.

A platform lift was required to create step free access from the entrance level of the new building to the lowest level of the 'Dark Walk' experience. The appearance of the product needed to blend in with the theme of the buildings which transport visitors back to Cornwall's murky past.

The Platform Lift Company built a bespoke platform lift in a matt black finish to meet the specification. The hydraulic platform lift complete with a self-supporting shaft was installed using a ramp system to avoid digging a pit into the floor which



had already been constructed as part of the new building.

When visitors reach the original jail building from the 'Dark Walk' experience, they are taken up a level which is accessed by stairs. A platform lift would overcome this architectural barrier but limited space within the 18th century building presented

a challenge. The Platform Lift Company proposed the Motala 2000 because of its small external footprint. This model of lift fitted the available space and could provide the 4 metres of travel needed to reach the upper floor.

With no modifications required, a standard white platform lift was installed. The clean appearance of the lift remains sensitive to its historic setting and clearly shows modern intervention has been successfully used to enable the building to be accessible.

Results

Both the platform lifts were installed within the given timeframe and fulfilled the architectural and structural requirements of the new and old buildings.

Bodmin Jail Attraction is fully accessible, welcoming all to its unique immersive experience.

For more information please visit Platform Lift Company's website.

01256 896000
platformliftco.co.uk

SALTO launches Homelok, an all-in-one smart access solution for residential living

SALTO Systems, a global leader in smart electronic access control solutions in the hospitality and commercial industries, is launching a groundbreaking new platform aimed at the residential market.

SALTO Homelok is set to revolutionize residential living with its all-in-one solution that integrates smart access control technology, hardware, cloud software, digital keys, a smart living ecosystem, and global service support.

“Smart home living is becoming increasingly more popular,” says Iñigo Unanue – global residential lead, at SALTO Systems. “Residents want seamless access, without managing multiple keys – and property managers want a solution that is easy to manage and provides seamless resident onboarding. All want physical security and protection for assets as well as a smarter living experience. Homelok, SALTO’s residential solution, delivers all this and more, providing convenient,



secure, and technology-enabled living.” SALTO Homelok will provide smart access control solutions across the residential market, from multi-family to single-family housing, vacation rentals, and home care/assisted living establishments. SALTO Systems’ electronic locking solution is modern and easy to install and maintain, without the cost and complexity of traditional access control solutions.

SALTO Systems brings a wealth of smart building expertise, groundbreaking innovation, a unique combination of flexibility and control, and a market-leading portfolio to its residential solution, with a specific focus on the following five value propositions: Operational efficiency; An elevated experience; Future-proof SVN access-driven technology in the cloud; Enabling the Smart Living Ecosystem; Guaranteed safety, privacy and security.

“We are very excited to launch SALTO Homelok to the residential and multifamily market. The platform is set to revolutionize the way we live, access our home, and go about our everyday lives. And, while security has always been a concern, data protection, privacy and secure home access are vital – now, more than ever. Homelok is the solution,” says Aznar Sethna, CSMO of SALTO Systems.

01926 811979 saltosystems.com

Pressalit products feature in the National Robotarium in Edinburgh



The Pressalit INDIVO kitchen system at the National Robotarium. Photo credit: The National Robotarium

Demonstrating how assisted living technologies can transform lives, advanced solutions from award winning manufacturer and designer, **Pressalit**, have been chosen to feature in the National Robotarium, the UK’s largest and most advanced centre for robotics and artificial intelligence, which recently opened in Edinburgh. The Ambient Assisted Living Lab (AAL) within Heriot-Watt University and the University of Edinburgh’s acclaimed National Robotarium, aims to revolutionise the way assisted living care in the UK is delivered in the community using robotics and AI within a recreated home setting. Featured is the Pressalit PLUS track system, which allows vertical and horizontal adjustment of different bathroom products. The room can be configured to suit individual user and carer requirements, optimising space for wheelchair or carer access. Pressalit’s height adjustable INDIVO kitchen system brings a sense of independence to daily tasks in the kitchen and dining room. With a simple press of a button, sink and hob worktop heights can be adjusted to suit standing and seated users, and wall cupboards can be brought within easy reach.

0844 8806950 www.pressalit.com

EvacGo offers the solution to meet Part B of the Building Regulations’ December deadline



With amended Part B (Fire Safety) of the Building Regulations coming into effect from 1st December 2022, fire protection solutions manufacturer, **Advanced** offers the ideal solution with its compliant evacuation alert system, EvacGo. Published on 1st June 2022, the updated Part B of the Building Regulations has now made it mandatory for all new build residential buildings over 18 m to have an evacuation alert system. An evacuation alert system is vital to help fire and rescue services inform residents of a change in evacuation strategy during an incident. This gives fire and rescue services an additional tool to use on the ground, alongside existing methods of evacuation, improving safety for residents. To comply with the amended Part B, an evacuation alert system should be provided in accordance with BS 8629 Code of Practice for the design, installation, commissioning, and maintenance of evacuation alert systems for use by fire and rescue services in England. Advanced’s EvacGo evacuation alert system offers peace of mind as it was designed alongside fire industry leaders specifically to meet the recommendations of BS 8629.

0345 894 7000 uk.advancedco.com

Residential roofs being upgraded using FIREFLY's Zeus Lite 90/30



A specialist fire contractor is employing the Zeus Lite 90/30 flexible fire barrier and Collaroll wrap from the range of TBA FIREFLY™ in undertaking a major fire protection programme in Sittingbourne. A phased scheme set to continue till its entire stock is upgraded. Established in the 1990s, DC Fire Protection Ltd. works right across the country covering multiple sectors of the construction industry, installing active as well as passive fire protection systems. It is currently engaged in lining the roofspaces to dozens of terraced houses on an estate in Sittingbourne, Kent. Director of DC Fire Protection Ltd, Daniel Mabbott, commented: "We have a good working relationship with FIREFLY™ whose technical team are always ready to come to site to offer advice on issues which arise, or to provide a bespoke detail. We also rely on them to give our operatives the hands-on training required. In this case the installation work is fairly straightforward also using the Collaroll to wrap beams and the project, which is set to continue for several years, is progressing well."

01706 647422 www.tba-pt.com

Tiles with a View from Parkside



With a range outdoor-ready wall and floor tile collections, as well as technical accessories designed to withstand the rigours of all-weather use, Vistascape is the new outdoor tile brand exclusively available from Parkside. Vistascape makes it easy to find a tiling solution that will deliver durability in all-weather. Not only tiles, but outdoor Easy Joint and ProScape grouts, fabricated metal treads and strips, trims and pedestals; this is a solution for creating beautiful outdoor spaces. Vista is Vistascape's core collection, providing 36+ PTV frost and UV-resistant floor and wall tiles in a range of effects and specifications. With marble, stone, terrazzo, wood, concrete and slate effect finishes, Vista is exceptionally versatile vitrified porcelain range. Several options within Vista are also available in a specification for indoor use. With up to 40% recycled content, Dawson has the same weather and UV-resistance, its concrete effect bringing a modern and clean look to outdoor areas. In a range of four natural wood colours in plank and herringbone formats, Lusaka is the Vistascape collection for creating an exclusive spa-like feel in outdoor areas.

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Resiblock score at the FIFA World Cup



This month, the eyes of the planet have been glued on Qatar for the FIFA World Cup. Hamad International Airport will act as one of the main arrival points, and the Qatar Civil Aviation Authority raised concerns as to whether the sudden influx of additional aircraft, the weight of their payloads and the increased volumes of footfall traffic could lead to paver destabilisation. Up stepped Resiblock, who were able to showcase the effectiveness, durability and longevity of Resiblock Sealers from the Ras Laffan Port Terminal project, also in Qatar, and as such Resiblock '22' was specified to be installed at the airport.

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