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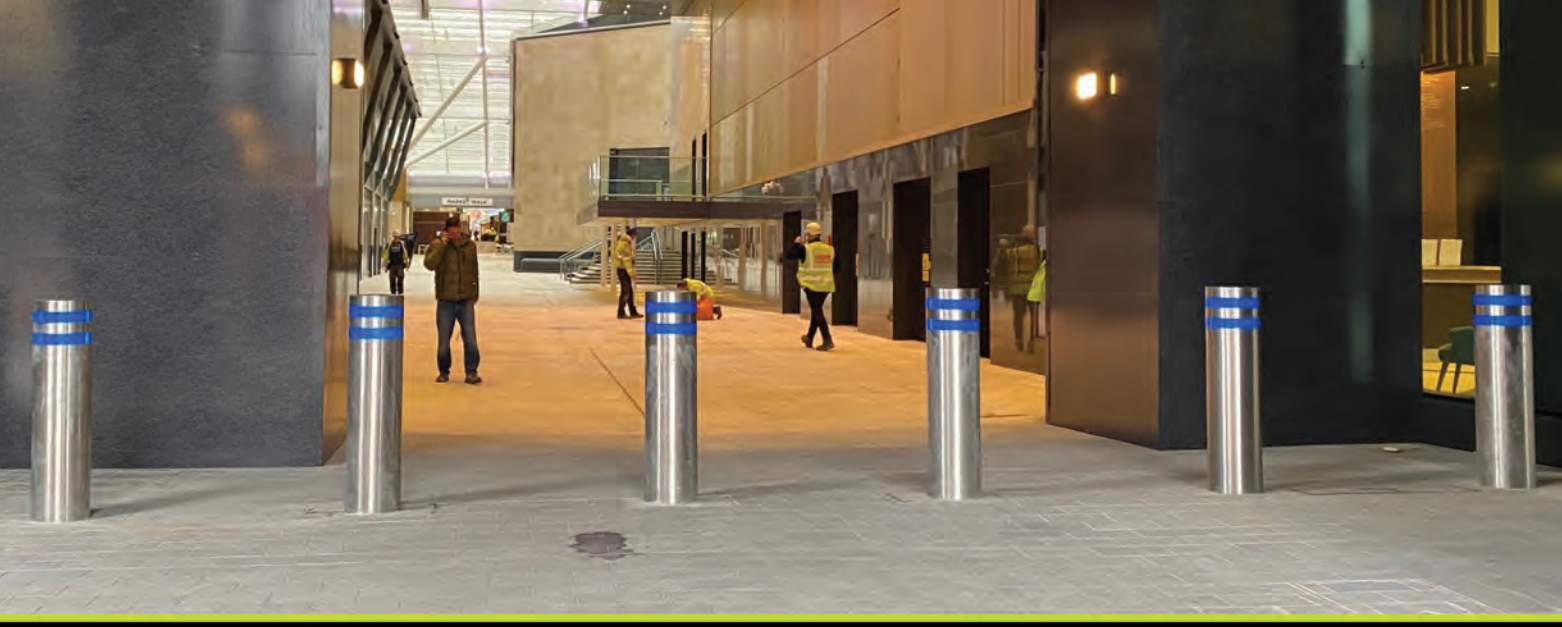

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FROM THE EDITOR

As the Planning and Infrastructure Bill continues to grind its way through Parliament, RIBA is celebrating having secured an amendment to ensure design quality is "at the heart of new development."

The fact that this is something being celebrate, as a tenet that needs to be enforced by planning legislation, is a bit of an indictment of the state of our building culture in the 21st century. However, it's necessary, according to RIBA, as the UK rushes towards taking small bites out of a colossal 1.5 million homes target.

The move uses the new Spatial Development Strategies within the Bill as the vehicle for this enforcement, as the legislation will, following RIBA's amendment, "require SDSs to include a design vision, a clear articulation of what an area or project should be like in the future, developed with the local community and stakeholders."

RIBA continued with its hyperbole, saying the amendment was "vital for high-quality design to be prioritised in the strategic planning process, and would ensure new development meets the practical needs of residents and communities, while embedding the principles of safety, sustainability and accessibility." These are bold, potentially optimistic statements. Perhaps more pragmatic is the assertion that RIBA has "secured support for the amendment from the Design Council, the Chartered Institute of Architectural Technologists (CIAT) and NLA, and support from Peers across the political spectrum." So this might mean it has a head of steam in the Lords, but what will its legislative teeth look like? And who will vet that 'design vision'?

The amendment was tabled by Liberal Dems' Housing Spokesperson in the Lords, Baroness Thornhill, who RIBA says it's "working closely with to amplify its call to prioritise high-quality development." The legislation will hopefully be entering its final stages of debate now Peers have returned from their long summer break.

CIAT President, Eddie Weir, said: "Integrating design visions within SDS gives communities the opportunity to shape local development at an early stage, building support for new homes, amenities, and infrastructure." Incumbent RIBA President Muyiwa Oki added that without the "requirement for a design vision in the Bill, there is no guarantee that good design will be delivered."

His incoming successor, Chris Williamson, has, rather than trumpet the Bill's hoped-for 'guarantee of design quality,' pointed towards the worrying headwinds for the practice – singling out AI. However, he does believe that architects can "meet the challenges head on," and "turn them into opportunities." This, plus issues Williamson pinpoints of mounting financial pressures, I'd suggest, will be the gatekeepers of whether or not the 'design visions' survive into reality.

James Parker, Editor

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ON THE COVER...
Staines' new Passivhaus leisure centre champions sustainability, accessibility, and strong community-led design.

Cover image © GT3 Architects & Kristen McCluskie
For the full report on this project, go to page 32

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TRANSPORT

Scott Brownrigg submits Heathrow expansion plan

Following the Department of Transport's request for proposals to expand Heathrow Airport, the Arora Group has submitted a proposal referred to as 'Heathrow West for a new Terminal 6 building and a 2,800 metre runway, designed by Scott Brownrigg and delivery partner Bechtel.

The proposal "supports the Government's economic growth ambition," said the architects, with a "focus on achieving better performance and lower charges for airlines and passengers, making Heathrow more competitive globally."

Heathrow West offers "robust and deliverable solutions for the site," said the architects, minimising the land required to help reduce the overall carbon footprint of the build, while achieving the required hub capacity. "Crucially, the shortened runway will avoid the additional cost and disruption associated with crossing the M25 motorway."

The design proposals capitalise on Scott Brownrigg's long-standing history and wealth of experience in designing and delivering airports across the globe, which stretch back to the BOAC Terminal at JFK Airport in New York and Heathrow Airport Terminal 4, to the more recent, award winning Istanbul Airport in Turkey.

"Inherently flexible, the campus will be able to adapt to changing passenger expectations over time." A 300 metre-long bridge will connect the new terminal to a satellite pier, offering a unique passenger experience as it traverses above a live taxiway below. Proposals also create the potential for an integrated public transport hub and interchange which incorporates a railway station, hotels and below ground parking, providing safe and convenient access to the terminal by car, bus, taxi, bike or train.

Designs for Heathrow West will target BREEAM 'Excellent' sustainability rating for the construction and operational phases of the project. Close collaboration with key stakeholders, such as the Environmental Agency, will ensure proposals "respect the needs of the environment, enhance local amenity and leave a positive social legacy."

Recognising the importance of resilience and affordability in Heathrow's expansion, an efficient construction programme will enable the scheme to be delivered within just 10 years and with most of the activity contained within the airport boundary.

If given the go ahead, the new runway could be operational by 2035, and the first phase of the new Terminal 6 could be completed and open as early as 2036.

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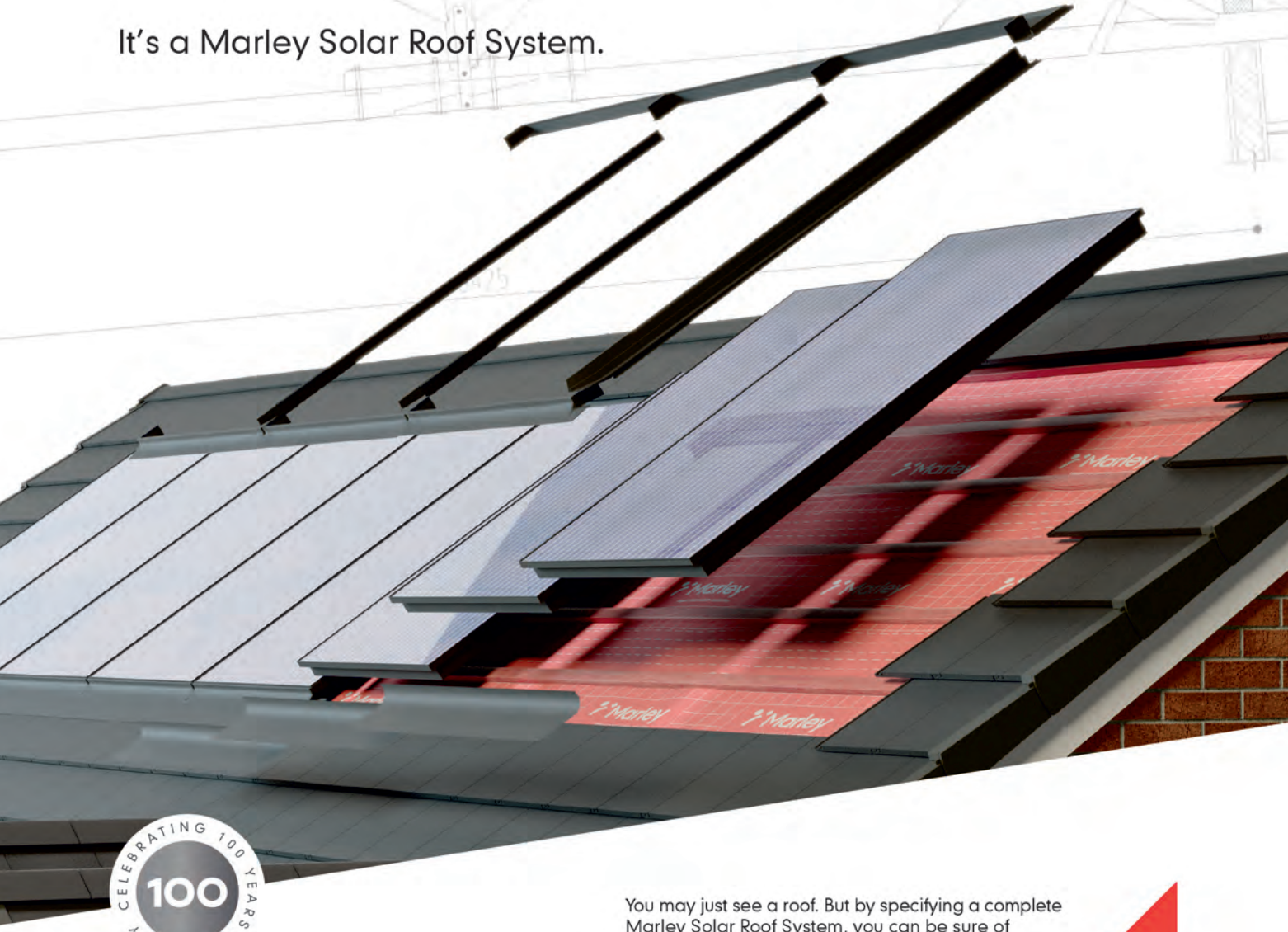

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EDUCATION

Ayre Chamberlain Gaunt completes Charterhouse's art and design centre

Ayre Chamberlain Gaunt has announced the completion of the Art and Design Engineering Centre at Charterhouse School in Godalming, Surrey. The new facility marks a significant milestone in the school's ongoing campus transformation, supporting its transition to co-education and enhancing its provision of "high-quality, future focused education."

The completed scheme includes a state-of-the-art extension and the full refurbishment of the existing Art, Design and Technology buildings. A new glazed link now unites the three structures, creating a central hub featuring a shared entrance, dedicated gallery spaces, and a landscaped external courtyard.

The Art and Design Engineering Centre delivers on Charterhouse's ambition to "create a collaborative, innovative and inclusive environment where Art, Design and Technology intersect." Designed to be net zero carbon in use, the project integrates passive environmental strategies and renewable technologies to ensure long-term sustainability.

Careful orientation maximises natural light, while a high-performance envelope plus natural ventilation systems significantly reduce energy demand. Ground source heat pumps and rooftop photovoltaics provide clean energy, managed through sophisticated building controls to optimise performance.


Photography © Jim Stephenson

The existing studio building, designed by James Dartford in 1957, has been carefully reconfigured and upgraded to meet contemporary standards while preserving its architectural significance. The design carefully negotiates the transition between the campus's Gothic architecture and the modernist forms of the 1957 studio building, using a contemporary interpretation of traditional materials. The new extension's facade – a "refined screen of vertical clay profiled tiles," said the architects – references the historic clay tile banding found on the heritage building roofs across the campus, "harmonising old and new in a visually compelling way."

The design supports a wide range of learning styles and activities, from collaborative studio work and specialist workshops to informal seminars and student exhibitions. The shared "fabrication lab" exemplifies this flexibility, bringing together traditional craftsmanship and digital innovation in a space where departments naturally overlap and ideas cross pollinate.

Circulation spaces have been reimagined as additional gallery areas, giving students greater opportunity to showcase their creative output. At the heart of the centre is a versatile courtyard designed for reflection, social interaction, outdoor learning, and seasonal events. It reinforces the project's mission to serve both the individual and the community.

By creating spaces that encourage collaboration, creativity, and flexibility, the building "helps realise Charterhouse's ambition for a high-quality, cross departmental, and future focused campus," said the architects. "The design balances the need to respect heritage with the imperative to provide innovative, sustainable spaces that will serve the school community for generations to come."

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HOTELS

Assael's Ealing aparthotel approved

Ealing Council's Planning Committee has unanimously approved Assael Architecture's plans, on behalf of Luxgrove Capital Partners Ltd, to transform the derelict site at 96-102 Broadway, West Ealing, into a new aparthotel. The redevelopment is set to positively contribute to the regeneration of West Ealing, enhancing the area's vitality by offering modern, flexible accommodation and coworking spaces. This project marks the first collaboration between Luxgrove Capital Partners and Assael.

The site, formerly occupied by a Woolworths, has remained derelict since its demolition in 2019. The approved plans include 268 aparthotel suites alongside 670 m² of coworking space for use by guests and the wider community. The development will also feature a cafe and courtyard garden accessible to the public, as well as a rooftop terrace for guests to enjoy.

Assael said the design "unlocks the opportunity to repair and reactivate the streetscape." Architecturally, the scheme draws inspiration from the former

Images © Assael Architecture

Woolworths building, referencing its original Art Deco facade through the use of decorative cladding panels, as well as the building's "vertical rhythm and "clear hierarchy."

Landscaped areas have been maximised to enhance onsite biodiversity, with features including biodiverse roofs, raised planters, rooftop amenities, and a sunken courtyard garden. Biodiversity net gain has been prioritised through the inclusion of green roofs, habitat creation, and native planting, all aimed at "significantly improving the site's ecological value."

EMPLOYEE OWNERSHIP

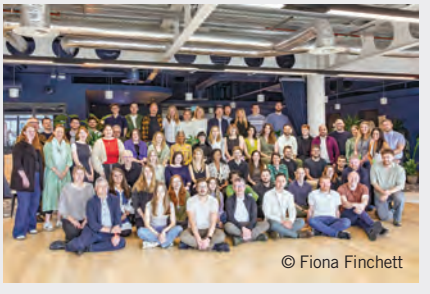
Northern practice Buttress Architects transitions to EOT

Buttress Architects has announced its transition to employee ownership.

The company, based in Manchester and Leeds, is now 100% employee-owned, with the move "reinforcing its long-standing commitment to equity, sustainability, and inclusive design."

The practice commented: "Guided by its purpose – Architecture for an equitable tomorrow – we have championed projects that serve communities, respect the environment, and promote social value. The move to EOT means these values are not only embedded in our work, but also in how the business itself is run."

Gavin Sorby, MD, said: "Becoming employee owned is a natural extension of our purpose. It empowers our team, strengthens our independence, and ensures that our mission of designing



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for equity is reflected in our structure. We've made the bold decision to become 100% employee-owned to reflect our intentions and belief in the new governance structure."

"We're proud to be part of a growing movement in architecture that's rethinking ownership and leadership," continued Sorby. "This is about creating a practice that's built to last – creatively, ethically, and structurally. We believe that how we work should reflect what we design. This change is about fairness, shared responsibility, and building a practice that truly 'lives its values.'"

Buttress joins a growing number of architecture firms in the UK embracing employee ownership, a model shown to boost innovation, engagement, and long-term sustainability.

The firm recently held a staff event to celebrate the transition to employee ownership and to workshop together what the future of the company could look like. Buttress concluded: "Clients can expect the same creative vision and expertise, along with a reinforced ethical, sustainable practice and an even stronger team commitment."

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RIBA

New RIBA president Williamson says architects face ‘myriad challenges’

The new president of the RIBA Chris Williamson used his first day in office to highlight his “key priority” to “focus on how we demonstrate our value” in the face of challenges including AI.

Williamson said in a blog post: “We face a myriad of challenges... from the climate emergy to daunting changes in technology and mounting financial pressures.” He added: “These challenges may threaten our profession, but they also present us with great opportunities to lead.”

He called the rise of Artificial Intelligence a “significant and impactful transformation.” However, he also said that “it provides us with an opportunity to deploy the technology to our benefit and that of our clients and wider society,” adding that architects had adapted to the potential disruption of BIM and CAD in recent years. The new president stressed the resilience inherent to architects’ role: “Architects don’t shy away from challenges and chage, we rise to meet them.”


© Morley Von Sternberg

Williamson said that his key solution for demonstrating the value of the profession was “creating lifelong learning modules, from AI to conservation,” in order to “empower architects to curate their own career paths and remain at the forefront of innovation.”

He said this would allow architects to “constantly improve and grow” and would “ensure that we have the right skills and expertise to influence government.”

We can “turn these challenges into opportunities” and “shape a more inclusive, future-facing society that works for all of us,” said Williamson.

And on the climate crisis, he concluded: “With the built environment responsible for 37% of global carbon emissions, we must transition from being part of the problem, to leaders in providing the solutions; we must lead the conversation.”

EDUCATION

Planning approval for Huddersfield complex autism school & college

Kirklees Council has secured planning permission for a new, purpose built special school in Almondbury, Huddersfield, which will replace the existing Woodley School and College. The new facility will provide 180 places for children and young people aged five to 19 with complex autism, including dedicated post-16 provision.

The school will relocate to a new site on Fernside Avenue in Almondbury. Created to provide a safe, nurturing and inclusive environment for pupils with complex autism, the architects for the new school and college were Frank Shaws Associates. The “thoughtfully designed” facility will include specialist classrooms, sensory and immersive rooms, indoor and outdoor breakout spaces, a forest school, food technology rooms, a post-16 cafe and a life skills suite for young adults. These features reflect best practice guidance from the Autism Education Trust (AET) and were shaped through engagement with students and staff.

Planning consultancy Lichfields, worked in collaboration with Kirklees Council throughout the process, combining their planning expertise with the council’s local insight and strategic priorities. “Lichfields prepared and submitted the planning application and supported the project team during discussions with planning officers and consultees to ensure the design aligned with local priorities and planning requirements,” said the architects.

Investment in the new Woodley School and College forms part of Kirklees Council’s wider transformation of SEND (Special Educational Needs and Disabilities) provision across the district. The new facility will significantly enhance the quality of education and support available to pupils with complex autism. Construction on the building is expected to begin next year.

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NEW APPOINTMENT

Harrison celebrates promotions

Harrison, the full service design and architecture agency, is celebrating a double success this summer. Associate director Tim Watkin is celebrating an extraordinary 30-year milestone with the company, while Nathan Stevenson, who joined Harrison as a senior designer in 2016, steps up to associate director.

Watkin's journey with Harrison began in the mid-1990s, joining as an architectural technician at Harrison's original Lionel Street offices in Birmingham. Over three decades, Watkin's journey has seen him evolve and develop his own role, holding positions including project manager, team leader, and ultimately Associate Director, a role he has held for over ten years.

Over the past 30 years, Harrison has grown from a Birminghamm based team of 20 to a global hospitality design powerhouse with offices across the UK, US and Australia, and projects which touch almost every corner of the globe. Watkin has been instrumental in this development, including working closely with Nando's for over 25 years, one of Harrison's most enduring and successful client relationships.

Watkin 's leadership philosophy centres on fostering creativity within the next generation of designers whilst maintaining the high standards that have established Harrison's reputation. His approach to mentorship and project delivery reflects the company culture that has not only retained talented individuals for decades but also attracted former employees back to the organisation.

At the same time, Nathan Stevenson has been appointed as an associate director at Harrison. In his new role, Stevenson will play a pivotal part in shaping the company's creative output and future direction, whilst continuing to mentor younger designers within the team. From establishing cross departmental initiatives focused on enhancing creative processes to exploring new technologies to improve design outcomes for clients, Stevenson's forward thinking approach to design leadership has positioned him as a key driver of the company's creative evolution.

Having worked on some of the hospitality industry's most well known brands, more recently, Stevenson has led

(L-R): Tim Watkin and Nathan Stevenson

Harrison's relationship with Hickory's Smokehouse, working closely with the in-house team to evolve their brand presence through carefully considered design developments. Recognised for his significant contributions to the success of the business, Stevenson recently became the first person outside of the business to receive a company award in its 15-year history. Presented by Hickory's Smokehouse founder Neil McDowell, only 100 people have received the accolade over 15 years, and all previously within the business, marking a notable milestone for Stevenson.

MIXED USE SCHEME

Assael's design secures approval

The first co-living development has been approved for Brent Cross Town, designed by Assael Architecture and Assael Exteriors on behalf of Halcyon Development Partners and DTZ Investors. The scheme will be operated by DTZ Investors' co-living brand, Folk. This marks the fifth collaboration between Halcyon and Assael and forms a key part of Related Argent's and Barnet Council's ambitious 180-acre masterplan, one of the largest regenerative schemes in Europe at present.

The 352 room co-living scheme will be the first within the masterplan and will be located just off Merchant Street, the newly envisioned high street within the Brent Cross Town masterplan. Designed to support both community living and personal wellbeing, the development will feature a mix of shared spaces. The ground and lower-ground floors are designed for various types of communal gatherings, staging events and welcoming guests, and are linked by a feature staircase. Elsewhere, residents will enjoy a fully equipped gym, a podcast room, and co-working spaces. The upper levels elevate the experience with premium amenities, including a wellness spa, a sky garden, and a communal kitchen with an outdoor cooking area and lively communal spaces, to create a flexible, dynamic living environment for residents.

Sustainability is further woven throughout the design, with a fabric first energy approach, connection to the district heat network, green roofs and accessible terraces enhancing environmental performance and resident wellbeing. Two terraces have been designed to respond to the internal amenities from which they stem. The wellness terrace will include raised planters, soft landscaping, and trees to create pockets of calm and promote biophilic connections. The sky terrace is envisioned as a central social hub, fostering a strong sense of community with areas for performance and gathering.

Architecturally, the development comprises a single building, broken into three elements which reflect the internal circulation arrangemen. The facades are unified by high-quality, robust materials and distinctive detailing. A palette tones create a cohesive yet distinctive identity. Deep brick reveals and refined facade treatments add texture, while clearly defining communal spaces through bold, windows and playful detailing to mirror the buildings interior.

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SPORT & LEISURE

Manchester United training complex ‘rethought’ in timber by Fosters

Foster + Partners has completed its work to modernise the Manchester United men’s first team building at Carrington Training Complex, with a focus on creating a high-performance, collaborative environment for players and staff. Working closely with Manchester United, the practice has completely rethought the existing building, which was built in 1999. All areas have been refurbished to deliver a “world class football facility with a positive culture to support future success.”

While the building’s structure has largely been retained, its envelope has been modified in places to incorporate large windows and rooflights, which bring natural light directly into the centre of the floor plate. Timber panelling contributes to a “feeling of warmth and timelessness,” said Foster + Partners, while new integrated MEP systems improve the building’s performance and energy efficiency, as well as the user experience.

The design “facilitates constant care, monitoring, and support for players.” A separate players’ entrance on the south side of the building is designed to provide an “effortless journey from the car park to the dressing room area.” Its expansive glass facade and entrance canopy “transform the experience of arrival.” The ground floor of the building features a hydration and nutrition space, a gym with an altitude room and hydrotherapy pools, as well as new changing areas, medical suites with MRI and CT scanners, and recovery spaces.

A spiral staircase takes players to the main lounge on the first floor, which features a continuous glass facade and an outdoor terrace overlooking the pitches. A dining area in the centre of the lounge connects with a state-of-the-art kitchen. Open plan offices for coaching staff are positioned on the north and south sides of the building, and there is also a briefing room for post-match feedback. A separate area for media on the upper level includes a conference room for press briefings and a studio for TV and video content.

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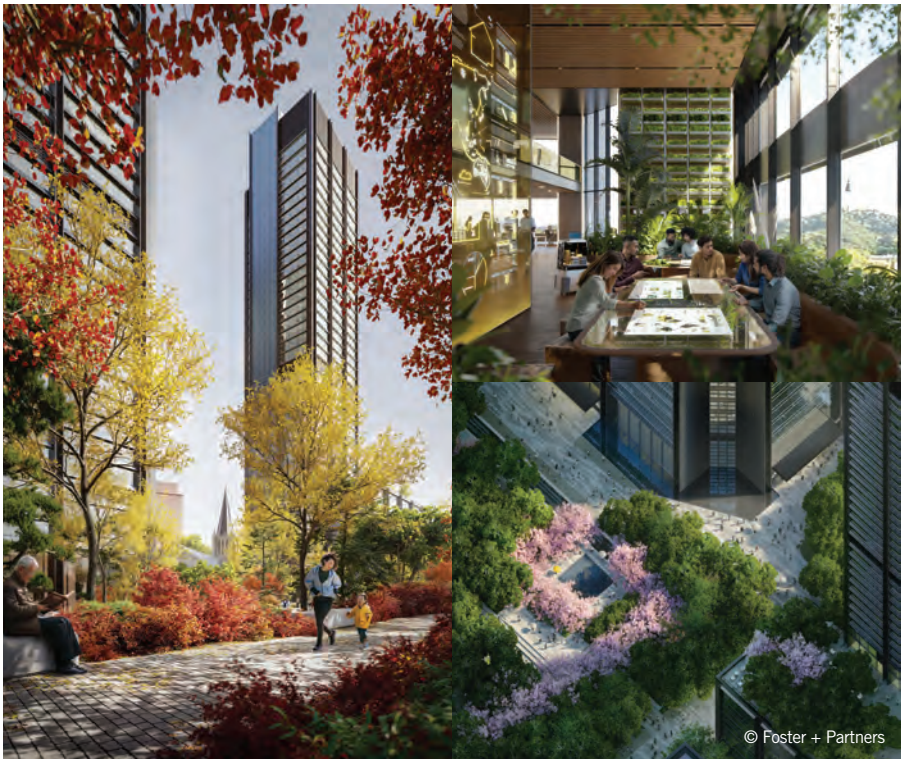

IOTA SEOUL I, SOUTH KOREA
FOSTER + PARTNERS

Foster + Partners have revealed designs for IOTA Seoul I, a mixed-use development on a landmark site between Seoul Station and Namsan. Historically, the site acted as an important gateway to Seoul when arriving by train. The project creates a green oasis in the heart of the city and restores the area's historic connection with Namsan and its surrounding public park.

Two new buildings, a six-star hotel and a 34 storey office tower, are positioned at an optimal distance apart from one another, restoring clear lines of sight from Seoullo 7017 to Namsan and the iconic N Seoul Tower.The site's level changes are also resolved, and new pedestrian thoroughfares are established with escalators and stairs that improve access from the train station and Toegye-ro.

The office tower and its pavilion offer state of the art amenities tailored to tenants' needs and a roof garden that offers views of Namsan and the city. The office building's structural system provides 18 metre spans of column-free space for inherent flexibility and longevity. A third building located alongside the hotel will be the city's new centre for tourism. It is publicly accessible with step free access to a roof garden that overlooks the newly created public park. The practice's design also celebrates the site's architectural heritage by retaining the lobby space of an existing hotel, which was designed by the architect Kim Jong-sung.

47% of the development's operational energy will be generated by photovoltaic panels, which are integrated into building facades and roofs, ground source heating and cooling, and the latest fuel cell technology.

EL BULTO, MALAGA
ZAHA HADID ARCHITECTS

Sierra Blanca Estates (SBE) have unveiled a proposal for the El Bulto area of Malaga, designed by Zaha Hadid Architects.

The plans incorporate up to 153 residential units in a 21 storey building in addition to a further 80 subsidised housing units (VPO) allocated to long-time residents of the El Bulto community. This initiative also includes the preservation and relocation of several nearby heritage structures, such as the Cottolengo Diocesan Residence.

The plans for El Bulto will be the first in Andalusia to be carried out under the urban development initiative, which provides a collaborative management framework for the city's spaces, ensuring Malaga's urban and social development goals are achieved sustainably.

Extending beyond the construction of new homes for the city's residents, the plans also include public squares, landscaped gardens and sheltered courtyards, as well as new sports and recreational facilities, designed to enhance the quality of civic spaces for Malaga's residents and visitors while creating a "more accessible urban environment," said ZHA.

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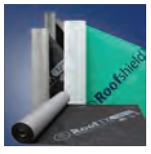

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NEWS FEATURE

Getting it right when tanking a wetroom

Nick Bratt, national technical sales manager for tile adhesive manufacturer Palace Chemicals, outlines the importance of the correct use of materials and good practice, as defined in the relevant British Standards, when it comes to tanking a bathroom or wetroom.

With the continuing growth in popularity of wetrooms, we are seeing a corresponding increase in incidents where the installation has not been satisfactory, and often this is caused by water or moisture getting into the substrate behind the tiles. These issues are very difficult to solve post-installation but can be easily prevented at the design stage by following the guidance contained within the British Standard relating to tiling.

BS 5385-1 2018 states that for all new or refurbished properties, a proprietary tanking system should be used. BS 5385-3, concerning floor tiling, was updated in 2024. One of the key amendments is for direct tiling on to plywood and other wood-based sheets or boards, an intermediate layer, such as an uncoupling membrane, reinforced tanking system or tile backer board should be used, providing the plywood is rigid and stable enough to carry the expected in service load. The new standard also states that timber is not recommended as a suitable substrate for floor tiling in wet, frequently damp, or high humidity areas. For wetroom floors, they should be laid to falls with gradients of between 180° and 135° to ensure that the water flows towards the drain, taking note that a gradient any greater than 135° is unsuitable and possibly dangerous. This requirement impacts on the design of wetrooms in particular since they are subject to repeated and persistent wetting, and a suitable proprietary tanking system should be used prior to tiling. This should be laid continuously around upstands and points where services pass through the floor, to create a seamless seal, so that there is no risk of water leaking through to the substrate.

If using other intermediate substrates, such as moisture resistant boards, the manufacturer's technical data and/or the manufacturer itself should always be consulted, as these would usually state that a tanking system should be used. The recent updated release from NHBC has sparked some controversy due to the wording around flow rates of a shower and moisture resistant boards, as these contravene the British Standards guidance for tanking.

For walls which surround a bath where a shower is not fitted then the substrate should be suitable for the application and moisture resistant.

It is important to recognise that water resistant adhesives and grouts are designed to allow water to pass through them without them breaking down, hence 'water resistant', but are not a substitute for a waterproof tanking system, as clearly stated in BS 5385 Part 4.

If in doubt, tank it out! That way, any and every project that has wet, frequently damp, or high humidity areas will always have the added insurance policy that there will not be any leaks!

Supplied by Nick Bratt, national technical sales manager for Palace Chemicals

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BUILDING INSIGHTS LIVE

Inclusive & Sensory Design for Education Environments

Left to right: James Parker (round table chair); Kathryn Gundry, Motionspot; Dr Matteo Zallio, University of Cambridge; Jean Hewitt, Buro Happold; Laura Light, Interface (event co-sponsor); Claire Barton, Haverstock Architects; Terry White, Planning Learning Spaces; Tamsin Thomas, Design Engine Architects; Zane Putne, Noviun Architects, Carly Parramore, AtkinsRéalis; Dawn Scott, Dulux Trade (event co-sponsor)

When it comes to meeting the growing and wide-ranging challenge of integrating greater numbers of SEND children and young people into mainstream schools, design plays a major role in both the effectiveness of education, and wellbeing. This was one finding of the round table recently staged by Building Insights LIVE in London, in partnership with Dulux Trade and Interface. It heard from a range of leading voices on the need to raise awareness of the size of the challenge, and the solutions the construction sector needed to consider.

From mainstream primary schools to further education, best practice design including space planning and meticulous focus on interior design and materials needs to be based on research in order to support all pupils and students, not forgetting staff. When it comes to integrating provision for SEND in mainstream schools, the numbers and resources required are challenging, in a post-Building Schools for the Future environment.

However, as a former school headteacher, now working extensively with schools on the design of learning environments, Terry White (who worked in the BSF programme itself) said, the reward from the investment could be immeasurable.

Arguably the acoustics sector has largely won its battles in ensuring that such elements are considered in design projects for education environments, having specific official guidance. While flooring, lighting and colour arguably have an equally important role, the latter in particular needs to receive more attention. This round table was an important opportunity to explore how research, reinforced by design practice in the education sector, can feed into a more collaborative, early and open design process which puts all environmental factors into the mix.

The industry is awaiting news from the Government on how it will reform provision for Special Educational Needs pupils, and how it intends to fund education design projects going forward, so

Dulux TRADE Interface

this solutions-focused round table came at a crucial time.

Such collaboration between informed designers, researchers, education and construction is vital to ensure that the right solutions are proposed.

Our meeting was informed not only by the years of professional knowledge and expertise of those present, but also the lived experience of several delegates who have family members with SEND. The group expressed an urge to have an ongoing network for discussion, potentially even including policy makers.

The debate looked at several of the key issues impacting specifiers and the supply chain. It focused on how to bring elements such as colour and flooring up the agenda, the possibility of better 'codesign' approaches including teachers and students, and how the industry could put a collaborative voice forward to drive more Government-level focus on design's ability to help integration.

The SEND & mainstream context

Since 2014, all education facilities have been required to 'make reasonable adjustments' to accommodate SEND students and pupils. This mix of facilities and abilities can contribute to improved outcomes for all students, with careful design a key part of the puzzle. There are obvious challenges to achieving success in a single set of spaces, but with a persistent attainment gap between SEND and mainstream pupils since Covid, there is a lot of work to do, in new build but also retrofit contexts.

The view was shared that design lessons by architects learned in SEND schools needed to be spread into mainstream projects, however this is can be a challenge. Claire Barton, who with Haverstock designed the pioneering Stephen Hawking School in Tower Hamlets in 1996, said "the big conundrum for us at the moment is how we can share the lessons we've learned in SEND special schools and bring them into the mainstream – we've always tried to do that." She added: "We're at the point where the Government are only just realising it's necessary, so it's a bit of a fight. You can't just talk about 'universal and inclusive mainstream schools, you have to have some action. Don't just force us to do it and not give us any money or tools to do it with."

Dawn Scott from sponsor Dulux Trade offered her own experiences of how design impacts SEND pupils

ROUND TABLE ATTENDEES

- **James Parker,** Chair, Managing Editor, Architects Datafile
- **Kathryn Gundry,** Design Team Leader, Motionspot
- **Claire Barton,** Partner, Haverstock Architects
- **Dr Matteo Zallio,** Assistant Professor, University of Cambridge
- **Tamsin Thomas,** Senior Associate, Design Engine Architects
- **Zane Putne,** Special School Sector Director, Noviun Architects
- **Jean Hewitt,** Inclusive Environments Technical Lead, Buro Happold
- **Terry White,** Planning Learning Spaces, Principal Education Advisor, Founder of Edunovaspace
- **Carly Parramore,** Associate Architect, AtkinsRéalis

SPONSORS' ATTENDEES

- **Dawn Scott,** Senior Colour Designer, Dulux
- **Laura Light,** Concept Design Team Leader, Interface

The Department for Education's (DfE) current approach to project timelines was a key topic of discussion, particularly the six-week period allocated for stakeholder consultation. Tamsin Thomas of Design Engine Architects noted that this highlighted "a lack of understanding about the realities of the construction industry."

Claire Barton added that the timelines set within the DfE's competitive school design process are "extremely restricted and do not allow adequate time for meaningful dialogue with clients and end users." She explained that the current process separates feasibility and delivery, meaning one team undertakes the feasibility study, while a different team — responsible for actually designing and constructing the new school — has just six weeks to carry out most of the key design work.

"This approach," she said, "puts significant pressure on schools and on the wellbeing of both the design and construction teams, and ultimately does not serve the best interests of the children and young people who will use these buildings."

Zane Putne agreed, adding that "investing more time in the concept and design development stages to build a genuine understanding of the curriculum, pupil needs and school community leads to a more efficient and collaborative design process overall.""

Terry White of Planning Learning Spaces said the Department had to look at reviewing its current space standards, in order for its ambitions for including many more SEND pupils successfully in mainstream settings to be achieved. There were other factors at play for including SEND pupils in mainstream classrooms, particularly for supporting pupils with a range of different needs. Kathryn Gundry of Motionspot said that "while best practice for

SHARING LESSONS FROM SEND SCHOOLS
Ideas from experts included learnings on design from SEND schools which could be applied for mainstream settings

a classroom layout may be a horseshoe for different needs and user groups, it's a real struggle for behaviour management because students are facing each other." White commented that a solution to this was furniture that was flexible and easy to move.

In terms of official guidance, Building Bulletin 102 (Design for Disabled Children and Children with Special Educational Needs) has been replaced by BB104 – a more streamlined document that offers less descriptive narrative and, in some areas, reduced space standards.

Claire Barton, a co-author of BB102, explained that while the updated guidance provides a simplified framework, it also places greater responsibility on architects to advocate for what is needed. "Because of the way procurement works, we often have to work harder to convince contractors of the importance of certain design elements," she said.

Barton added that these bulletins are not the only briefing documents used on projects, but emphasised that "there is still more to do to ensure that the initial briefing process properly enables us to design the best possible school."

Jean Hewitt, inclusive design expert at consultant Buro Happold, explained how the PAS 6463 standard she developed as technical author (working with a steering group of experts in 2022 on design for neurodiversity in general buildings not only schools), had achieved plenty of traction in the built environment sector. Other delegates gave plaudits to the document; Zane Putne of Noviun Architects said PAS 6463 has been "fantastic," and contrasted it with BB104 which "concentrated more on area recommendations," whereas BB102 is "still being used to understand the intricacies of the various cohorts." Claire Barton called PAS 6463 "a great document, one of the few we can hang onto."

Hewitt said that in writing the standard, working with the steering group, a key aspect was that "places where people learn were top of the list for neurodivergence." She also contributed to a less detailed document to help estates directors in higher education to better understand designing for neurodiversity, but said there was a "huge gap" to close in terms of creating better environments.

Design (and codesign) challenges

Tamsin Thomas of Design Engine highlighted a major design challenge for architects approaching SEND projects, namely both the diverse range of needs meaning that spaces had to be carefully balanced to not favour one user group, but also the differences between neurodiversity and physical disability. "How do we provide spaces that allow everyone to have a good, positive experience without undermining those really specific needs?"

Terry White asserted that design had not kept pace with the improving pedagogical approaches to mainstream and SEND education. "Everybody talks about skills for the future, but actually we're not good about how we translate that into the design of spaces for learning, and especially for young people who are challenged with SEND."

He described "the large numbers of pupils who are still not achieving their full potential in secondary schools, saying that part of the failures to integrate SEND into the mainstream was because, we're not making learning personal or more engaging." He said that in order to roll out better approaches, the industry "has to share more; we have a massive amount of research and intelligence on learning, sometimes it's siloed."

The group also agreed on the necessity of including champions for inclusive design in projects (as recommended in the RIBA's Inclusive Design Overlay to the Plan of Work). Inclusive design specialist Kathryn Gundry of Motionspot said that they were taking the role "on most jobs, embedded from Stage 0 to Stage 7, going

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Creating learning environments with colour

to design team meetings, reviewing drawings. We can help the architects develop the brief for inclusion."

Jean Hewitt said she had recently attended a discussion around RIBA Design Stages and the importance of including the role of the Inclusive Design champion, but that this was not happening as standard on projects. She added that "designers with humility will be more open to listening to others."

Terry White said I think that early intervention at the front end of the design process at the formulation of the concept stage, is really critical." Adding "It's not difficult it requires a well-structured collaborative process with the school setting out key design indicators for the intended next practice."

Delegates explained why the best designs for integrating SEND are likely to be those which closely involve users, i.e. neurodivergent and SEND students and pupils, as well as their parents, carers and teaching staff. Tamsin Thomas and Kathryn Gundry stressed the need for early engagement and continuous feedback from teachers and students to achieve designs closely tailored to needs.

Codesign of this sort needs to happen early in projects to be effective – Dawn Scott, Senior Colour Designer at Dulux, highlighted the importance of engaging colour expertise from the earliest stages of design, particularly in sensitive environments where wellbeing and inclusivity are key.

"Too often, colour input is sought once the design is complete – almost as a final 'check' rather than part of the creative process," she commented. "At that stage, it often means unpicking decisions that could have been better informed by early collaboration."

Terry White said: "I think that early intervention right at the front end, even at the concept level, is really critical." Adding, "It's not difficult to get that done early."

Data-informed design

Dr Matteo Zallio from the University of Cambridge (and a former global lead of accessibility and research scientist at Autodesk), delved into the arena of data-informed (not 'data driven') design. However, he warned that as sectors like education and construction increasingly rely on evidence, a persistent bottleneck remains: "We still struggle to combine hard metrics with lived experience in a meaningful way."

Zallio stressed the urgency of creating systems that seamlessly aggregate multiple data sources, from CAD/BIM files to sensor inputs, so that designers can work with "cohesive, actionable insights rather than fragmented datasets."

But he cautioned that while we capture plenty of technical information, we still lack consistent data on attitudes and behaviours, the human side of how people actually use spaces like schools. "Sometimes we have it," he noted, "but often we don't, and that gap limits our ability to truly design for occupants."

Zallio said that "levelling up understanding and application of regulations" to go beyond mandatory standards meant expert input. He expressed a hope shared by many in the room: that "one day we won't need the word 'inclusive' at all, we'll simply say 'design,' because inclusivity will finally be embedded from the start."

DATA ENTERS THE CHAT
Dr Matteo Zallio advocated 'data-informed' (as opposed to 'data driven') design for SEN spaces in the mainstream

Design elements: Floors & colour

The enlightened firms who are tapping into this high demand with thoughtful offerings and support for clients are reaping the rewards, said Matteo Zallio of the University of Cambridge: "Making products – either physical or digital – that are inclusive and accessible is a great competitive advantage for the businesses developing them." Delegates such as Kathryn Gundry said that simple approaches such as colour wayfinding using floor colours could be ideal for such integrated education environments to support children and young people with anxiety.

With floors and colour forming the largest visual and physical surfaces in any classroom, they both play a critical role in supporting pupils with special educational needs. As SEN integration increases, suppliers are increasingly being approached for design guidance and product advice. Laura Light of Interface observed that despite a wide colour offer, "we still sell a lot of grey carpet." She and Dawn Scott of Dulux both questioned how architects prioritise finishes during the specification process – prompting Tamsin Thomas to note that decisions often begin with whichever product category has the most limited range, such as acoustic rafts or baffles.

Despite the overwhelming impact that the 'wrong' colour and pattern choices can have in school environments for SEN pupils, delegates said the choices around finishes were left as an afterthought in many projects. Terry White said there was a "massive amount of research on colours," and that "it's really easy to denote areas in a subtle way." However, he said the opportunity to work closely with staff on this was underused.

Dawn Scott of Dulux noted that wall colour had a major impact on such spaces: "Paint is often one of the last elements to be applied, but one of the first that defines how a space feels."

She also encouraged a move away from the dominance of stark white and grey palettes in schools, explaining that in some sectors, such as custodial environments, the use of pure brilliant white is actively avoided due to its potential to heighten sensory strain and feelings of discomfort.

"In education, it's often chosen because it feels neutral or modern, but in reality, large expanses of bright white can appear harsh and clinical, especially under artificial lighting. Introducing softer tones and subtle contrast can help make learning environments feel calmer and more supportive." Buro Happold's Hewitt added that with "visual clutter" being a problem in school classrooms, muted colours would be helpful.

Later, Scott highlighted the importance of maintenance and ongoing education for estates teams: "Architects, designers and specifiers might get it right initially, but once a building is operational, maintenance teams need the same awareness. I know of one London school where the interior was repainted in white and grey – incidents of disruptive behaviour noticeably increased."

Conclusion

If the Government seeks to incorporate far greater numbers of SEND children and young people into mainstream settings in as smooth and harmonious a way possible, it has to allow designers and stakeholders into the discussion, early, this is also essential to ensure that each setting's particular set of requirements are met. It is critical to open up dialogue between design teams, clients, and end users, and allow time for fruitful discussion to emerge. As Claire Barton summarised: "What really matters to us as architects is making a difference, so the best conversations we are having is with the schools themselves."

Delegates agreed this round table was an important example of the collaboration that was needed across the sector, and suggested it could be a springboard for a network collating evidence to inform a practical inclusive design strategy. This was one of several takeaways, summarised in the box here.

We are very grateful for all delegates' contributions, and for the support of our sponsors, Dulux Trade and Interface.

NOT ALL SPECIALIST DESIGNS ARE TRANSFERABLE
Kathryn Gundry made the comment that early feedback from teachers was essential to avoid adopting challenging designs from SEND schools in the mainstream

RECOMMENDATIONS FROM THE ROUND TABLE FOR GOVERNMENT & INDUSTRY

- We need inclusive design champions, data collected in one place and everyone doing the same thing – and interaction with universities.
- It's important that we talk about the physical environment, but that we overlay it with culture and behaviour. SEND children don't want to stand out.
- Move away from siloed thinking, and make sure inclusive design champions are a priority, and budget is set aside for them.
- Share the lessons we've learned in SEND design and bring them into the mainstream.
- If we understand the value of data, inclusive design specialists, and evidence from research and practice, we will be more confident to build the business case for inclusive environments.
- There's not enough understanding in Government of how the construction industry works, and until we have someone from the industry in there, it's going to be very hard. We also need design CPD programmes for teachers.
- The value of inclusive design should be recognised to allow all pupils in schools to benefit.
- Increase the planning time available for inclusive stakeholder engagement; also ensure flexibility to cater for a range of user needs.
- We need a rethink about the total space budget in new schools for inclusive design to work; this group could be a good lever.
- Whether pupils have an Education, Health and Care Plan (EHCP) or not, they may have additional needs. Design guidance for SEND and for mainstream schools are not completely separate things.

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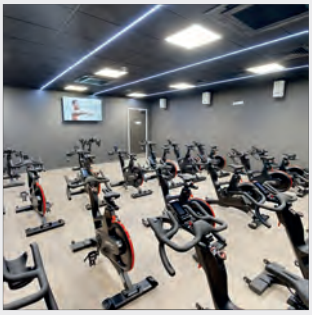
'Fit for purpose' as Mablethorpe Leisure Centre specify world class floorcoverings from Gerflor



The new Station Leisure and Learning Centre in Mablethorpe opened in 2024. This brand-new £13.5M project needed a vast array of world class, high quality, fit for purpose floorcoverings. This was supplied by flooring specialists **Gerflor** who provided over 500 m² of products for the gym, changing rooms, corridors, main entrance, and stairs. The interior finishing accessories were supplied by Gradus, a company of Gerflor, for a complete solution to the client. The range of products specified for the project included Gerflor's Olympic pedigree Taraflex® Multi-Use sports floors, Taralay Impression heterogenous vinyl, Tarasafe Impression safeties, Powershock rubber tiles, together with GTI Max Technical tiles, and Gradus RT247 anodised aluminium ramp edge trims. Paynters Contract Flooring ensured that the Mablethorpe Leisure Centre would benefit from the specified range of Gerflor and Gradus products in delivering the high standards of installation that the project so demanded. Rob Dixon, estimator at Paynters Contract Flooring said: "We specify both Gerflor and Gradus on a host of projects as their innovative products are cost effective, work well, look impressive and are easy to get hold of for fast renovations."

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BUILDING PROJECTS

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ECLIPSE LEISURE CENTRE STAINES

GT3 Architects' new Passivhaus leisure centre in Staines has set a new bar for larger leisure projects in terms of both community engagement and building performance. Roseanne Field reports.

A leisure centre built in the Surrey town of Staines has not only surpassed sustainability expectations by becoming a Passivhaus scheme, but also provided a facility that is accessible and usable for everyone in the local community.

Spelthorne Borough Council set out an ambition in 2017 to create a new facility to replace the existing leisure centre, and from the outset it was envisioned by the council as a key community asset. So, the process began with a detailed public consultation.

This included creating a dedicated website where local residents could view the proposed site – adjacent to the existing centre which would be demolished to make space for a car park – and the plans for the building. A public exhibition of plans was held over two days at the centre, which allowed all local residents to have their say.

It was this process and the council's strong desire to support everyone in the community that attracted GT3 Architects to the project. They were approached by the council to create an "exciting destination" that would be "flexible enough to meet the evolving and varied needs of a growing community," explains Mark Gowdridge, director at GT3, praising the council's "clear and early commitment to meaningful community consultation."

The team got stuck in assisting with the consultation process by taking part in a range of activities, including participating in workshops, engagement sessions, and online and door-to-door surveys.

This variety of public engagement was "designed to ensure all local voices genuinely shaped the development of the new leisure centre," explains Gowdridge. They spoke with and heard from groups who were traditionally underserved by leisure facilities, such as older adults, carers, families with young children, individuals with long-term health conditions and people on lower incomes. He says: "This insight enabled the council and the design team to go beyond standard design, tailoring the scheme in response to real, lived experience." Gowridge adds: "The result is a state-of-the-art centre that addresses cultural considerations,

offers adaptable and inclusive spaces, and promotes health and wellbeing."

People & planet

The initial brief given to GT3 Architects was for a flexible leisure destination that would serve a diverse range of community needs. Their response integrates community spaces with wet and dry areas, "supporting the community's current health, social and wellbeing ambitions, but also futureproofing for later generations, and offering the council long-term flexibility in terms of space and additional revenue opportunities," explains Gowdridge.

GT3 are experts in the field, having previously designed award-winning sport and leisure facilities – though Gowdridge stresses that doesn't mean a 'one size fits all' mindset. "Each design is bespoke and underpinned by our 'people architecture' approach, placing user needs, inclusivity and community benefit at the centre of every design decision."

The council's desire to focus on 'people' was therefore a key attraction, but what really made the project stand out was its "sheer scale and ambition," Gowdridge says. This relates not only to its size, but the decision a little way into the project to expand the brief to align with Spelthorne Borough Council's recent goal to be net zero by 2030. The new leisure centre was the ideal vehicle to demonstrate this, amidst a context of rising energy costs, and the decision was made at Stage 3 of the project to aim for Passivhaus certification – an extremely rare target for a building of this scale and typology.

This turned the already-appealing project into a "one-of-a-kind scheme, blending state-of-the-art leisure facilities, people-centred design and cutting-edge sustainability standards," explains Gowdridge. It presented a challenge that GT3 were more than happy to get stuck into. "We knew it offered a unique opportunity to lead the way in sustainable leisure," he continues. "The opportunity to translate complex Passivhaus requirements into a leisure environment – only delivered once within the UK and to a smaller scale –

PASSIVHAUS EN ROUTE
The decision to raise the project goals to Passivhaus certification once the programme had commenced turned it into a 'one-of-a-kind' scheme


ENTRANCE

was a challenge we were keen to take on."

Despite being up for the task, delivering Passivhaus for a leisure centre was a challenging undertaking. "It's one of the few leisure centres to be designed to Passivhaus standards, and the rigours and technicalities affect both RIBA Stages and programme, impacting design decisions agreed far earlier in the process," he explains.

Passivhaus specialists Gale & Snowden were crucial to success on the project. "They worked closely with our leisure team and brought a level of lessons-learned that supported both the final design, and technical delivery team," says Gowdridge. It was also essential to "escalate" collaboration and communication between design and build teams to achieve the rigour required.

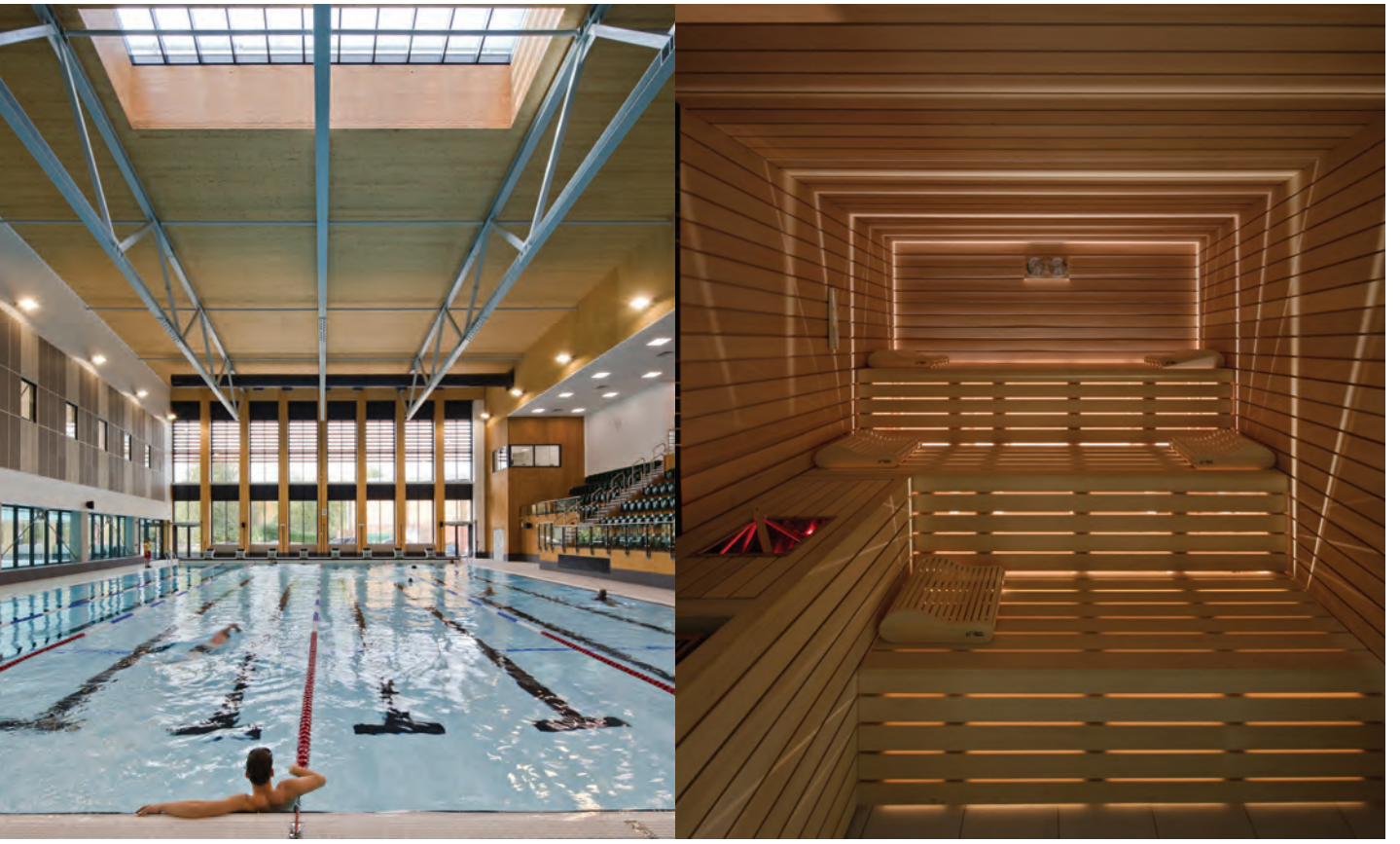
GT3 embraced the complexity and the challenges which the project presented. "Mapping complex technical Passivhaus requirements to such a large wet and dry leisure typology added a challenging yet exciting knot of complexity to the project, as it pushed the team to look at new, better approaches and design techniques," Gowdridge says. They produced over 500 technical and architectural drawings in the process, to ensure the highly controlled standards and necessary communication structures were in place in order to achieve "perfectly matched adherence to the stringent Passivhaus benchmarks, with millimetre precision."

The close partnership with main contractor Willmott Dixon was also fundamental. "The project is distinguished by its deeply collaborative nature," comments Gowdridge. "This shared commitment ensured that the final design didn't just meet technical and environmental targets but also delivered real value to the local community."

The completed facility is the UK's first Passivhaus-designed 50:50 wet and dry leisure centre. The wet amenities include a 25 metre eight lane swimming pool with 250 seat gallery, a learner pool with full-width 'self-depositing' steps, a children's splash zone, a steam room and a sauna. The dry amenities comprise

The decision was made at Stage 3 to aim for Passivhaus certification – an extremely rare target for a building of this scale and typology

PRECISION
The final design met stringent Passivhaus requirements "with millimetre precision"



THE WARMTH OF EXPOSED CLT
Exposed CLT soffits and glulam beams lend warmth to the pool hall

a 200-station gym, three studios, two physiotherapy rooms, a six-court sports hall with 200 seats, three flexible squash courts, a Clip'n'Climb wall, a cafe, a soft play, rooftop community gardens and four rooftop artificial 3G pitches.

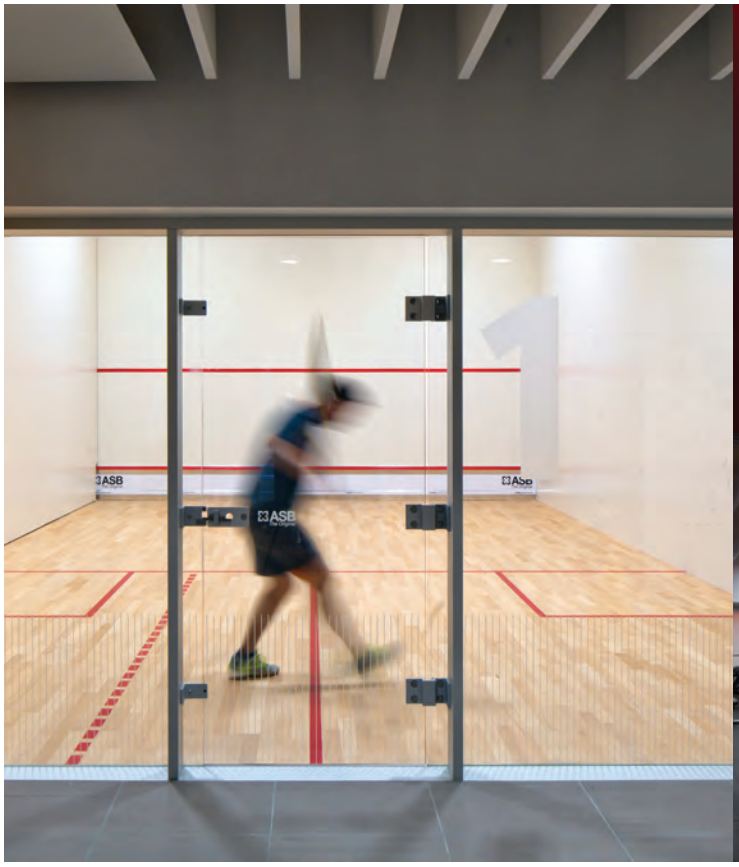
Design with a difference

The design process had shared focus on providing an improved and more inclusive leisure facility placed "at the heart of every design discussion and meeting." Initial conversations centred around the need to offer what the local community was lacking, taking into account inclusivity and local character, before evolving to also include Passivhaus design principles.

This was when the design really started to follow its own path, diverging from the sport and leisure facilities GT3 had designed and worked on previously. "Unlike typical leisure centres, which often rely on mechanical heating and cooling systems, Passivhaus demands a fabric-first solution," says Gowdridge.

It was crucial that a high-performing thermal envelope was allied to well-designed thermal bridging details in order to reduce the high energy demands typically associated with leisure facilities. "The building layout and facilities were purposefully orientated to maximise solar gains, and plant rooms were dispersed throughout the facility to directly service areas directly with minimal energy loss and maximum efficiency," explains Gowdridge.

They also examined the way conventional leisure facilities are often laid out, with "loosely zoned environments" meaning there's very little control over how airflow, heat and humidity move between different areas such as the swimming pool, changing areas, gym or cafe. By contrast, to conform with Passivhaus, the team had to focus on precisely delineated layouts to ensure consistent and balanced conditions throughout the entire building. "This approach also significantly mitigates issues common in older or traditionally built centres, such as overheating, mould and poor indoor air quality caused by inadequate ventilation," adds Gowdridge. This separation in turn fulfilled the other key part of the brief – ensuring the facility



would be suitable for all members of the community, who perhaps might struggle with the humid and uncomfortable environment of a traditional leisure centre. The result is a "welcoming, inclusive environment that not only reduces energy consumption – both now and in the future – but also better caters for a wide variety of users."

The swimming pool hall also provided another opportunity to marry the varied aspects of the brief, with sustainability working hand-in-hand with the team's people-focused architecture. The hall faces absolute south, meaning the windows, as well as offering views into nearby parkland also provide maximum solar gain, helping offset heating demand.

The team installed bespoke glazed screens and automated sliding doors between the learner pool, main pool and changing 'villages.' Gowdridge explains: "This not only enables the thermal separation required – ensuring heat is not lost – but, in addition to a purposeful cubicle and changing layout, this also means lifeguards and caregivers have clear sightlines across a large area." He adds: "This was an integral safeguarding point to support caregivers of children, local school visits and general pool safety." They also installed optional privacy screens for specific user groups, and an innovative microfiltration system which removes contaminants from the water and reduces the level of chlorine required – making swimming more accessible for users with respiratory sensitivities or skin conditions.

Poor filtration was just one of the pieces of feedback received from the community on why certain groups avoid typical leisure centres. Other comments that the design team and council took on board and fed into the design included stronger connections being made with the nearby park – via the large expanse of glazing in the swimming pool area. There is also improved wayfinding and Makaton signage, flexible studio spaces and general improved accessibility measures. "Features such as barrier-free entry, Makaton signage, moveable studio walls and LED-lit sport courts not only support

The team had to focus on precisely delineated layouts to ensure consistent and balanced conditions throughout the entire building

STACKED SAVINGS
The stacked layout enabled GT3 to make the most of the 9,000 m² site, and include 3G football pitches and community gardens on the roof
Images © GT3 Architects & Kristen McCluskie

general site flexibility but purposefully make the centre more accessible to a broader range of users," says Gowdridge. "Along with a coherent visual identity, Makaton combines symbols and signs with speech, making navigation and information easier to understand."

Improved and simplified wayfinding was further achieved by exclusion of barriers for entering the facility, and simply "providing a strong, consistent visual identity," adds Gowdridge. "Using a combination of colour, texture and clear signage helps users – including those with dementia, physical or cognitive differences – better orient themselves and move confidently through the facility." These decisions were in part influenced by community input to prioritise circulation, signage and spatial hierarchy to overall improve navigation around the facility.

The studios, pool area and sports hall all include optional, moveable privacy screens and walls which allows the spaces to be tailored to groups of varying sizes and needs. A moveable pool floor in the learner pool means it can be used for different activities such as private school lessons, user-group classes, baby/young children sessions or aquafit classes. The sports courts feature LED-lit court lines to improve visibility for users with visual impairments, making them safer as well as more inclusive.

The centre's colour palette was also carefully considered, with colours denoting different zones. "Throughout the social, transitional and wet leisure spaces, there is

a focus on soft colour palettes, with warm materials and exposed timber instilling a sense of tranquility and relaxation," explains Gowdridge. "In more active areas, signage and colour palettes are more vibrant, while still retaining optional private and quieter spaces."

The facade design took inspiration from the locality. The overall approach was to make sure the building would make the most of its parkland location and blend public and private spaces, "to create an inviting environment and active frontage where the community can meet, play and exercise," says Gowdridge. "The design embraces its parkland setting – drawing on familiar forms, colours, structures and materials – blending public and private spaces to create an active, welcoming frontage."

The site is tightly constrained, so the design team came up with a "stacked" layout to make the most of the 9,000 m² footprint. This allowed them to include 3G football pitches and community gardens on the roof and not lose space elsewhere on the site, maximising the area available for the leisure facilities. This also responded to concerns at the consultation stage about the impact that pitches would have on biodiversity, access routes and flooding.

The materials used externally are textured brickwork, glazing, timber louvres and metallic panels, all of which "harmonise with the surrounding landscape," Gowdridge explains. The brick, timber louvres and glazing were chosen due to their durability and connection to the character of local buildings, as well as their ability to provide both shading and privacy. "Large windows are framed with encased glazing and timber shading, balancing performance and privacy with architectural expression," he adds. The metallic panels were selected due to their robustness and to make a strong contribution to the centre's "visual identity."

Precise construction

The Eclipse centre was built using a bespoke 'hybrid' CLT structure designed by Engenuiti, which had benefits of being light weight while reducing embodied carbon. Parts of the structure have been left exposed including CLT soffits which, along with exposed glulam beams in the pool hall and communal areas, "lend warmth, clarity and a sense of craft to the internal spaces," Gowdridge says. These natural materials feature alongside a palette of muted tones and soft textures, adding to the "calm and welcoming atmosphere."

The CLT structure was used alongside prefabricated elements which helped contractor Willmott Dixon improve the necessary precision for attaining Passivhaus certification. Airtightness was a crucial priority during design and construction – though managing this while designing high-humidity spaces was a challenge, admits Gowdridge. The phased delivery also proved tricky to navigate and meant careful sequencing during construction was essential.

As well as focusing on airtightness and precision during construction, other measures undertaken to achieve Passivhaus – in addition to high insulation

PROJECT FACTFILE

Architect: GT3 Architects
Main Contractor: Willmott Dixon
Structural Engineer: Engenuiti
Passivhaus Consultant: Gale & Snowden
Client: Spelthorne Borough Council
Cost: £50m

levels – include triple glazing, optimised thermal zoning and glazing ratios, heat recovery and low energy systems, and the pool microfiltration system. None of it would have been possible, says Gowdridge, without the support of Gale & Snowden. "We actively sought their expertise to support, train and provide an important soundboard for our own design and technical specialists," he explains. "Communication between design and build team was integral to making sure Passivhaus design choices – sometimes measured in millimetres – were effectively translated to site." He also credits Willmott Dixon's delivery of the high performance envelope and Engenuiti's CLT design as critical factors.

Underpinning everything was the successful collaboration. The early stages had to be managed through Covid, with the design team having to navigate new ways of communicating with the council and stakeholders. There were also other challenges including rising energy costs, increased supply chain costs and the council's net zero commitment; these "all required a high degree of flexibility, partnership and collaboration, ensuring evolving design concepts remained true to brief," Gowdridge says.

The centre opened in October 2024 and has been positively received by both council and users, including for its reduced running costs, improved comfort and accessibility. While it awaits full certification from the Passivhaus Institute, it has achieved airtightness scores of <0.4 (permeability) and 0.12 (air change rate) – a 90% improvement over standard regulatory requirements. It is expected to save 50-60% in typical energy usage and more than 40% in comparable water usage – supported through the use of greywater harvesting and low-water-usage toilets, sinks and showers – and has achieved a 30% reduction in total embodied carbon.

The project has also been shortlisted for several design, build and public sector awards, and won an iESE Public Sector Transformation Award in March 2025. "The scheme has people architecture and collaboration at its heart," says Gowdridge, who believes it "sets a new benchmark" for the sport and leisure sector: "As a large-scale Passivhaus leisure centre in the UK, combining low carbon, operational savings, inclusivity and design quality, it is a model for future projects." ■

Balancing conservation, re-purposing and modern tourism

Sustainable construction extends through to the detail of air distribution in Edinburgh's latest hotel The Resident Edinburgh.

Winner of the Retrofit category at the 2025 Scottish Design Award, the modern venue demonstrates effective re-purposing of a 1950s office building that was no longer fit for purpose in today's commercial environment with low ceiling heights, multiple columns and cellular layout.

MLA Architects' design, implemented by Morrison Construction, has delivered 164 bedrooms with reception, lounge and bar across four storeys. Redevelopment instead of demolition and rebuilding has achieved a 40% reduction in embodied carbon emissions.

The sustainability of the project extends further. Building services consultant Rybka specified the use of mechanical ventilation with heat recovery throughout, using localised in-room units for the bedrooms

and a centralised, basement-level unit for the public spaces. To deliver fresh air and extract the used air, Rybka chose Gilberts' swirl diffusers and linear bar grilles. The ventilation units are manufactured from 100% mild steel- the most recycled material in the world.

Installed by contractor March Engineering, Gilberts' ventilation units ensure rapid entrainment and intermixing into the space and smooth extraction of used air to maintain a comfortable, draught- and odour-free environment for guests.

Gilberts also supplied the facade and penthouse louvres to supply air for the air conditioning plant.

Explained Barry McKenna, associate mechanical engineer at Rybka and lead consultant on the project: "Being mindful of the client's standards of quality and desire to be environmentally responsible, we chose Gilberts to support us on the project. We have always found them to be a manufacturer that guarantees quality and responsive in technical support."

Gilberts has a proven track record in supporting creation of a relaxing, odour-free ambience within hospitality venues beyond Scotland, including Radisson RED, The Social Hub, Premier Inn, Grantley Hall and Carden Park.

01253 766911 info@gilbertsblackpool.com

BUILDING INSIGHTS LIVE

Design for Dementia Network 2: Creating Supportive Spaces for Dementia Care

With a fast-increasing population of UK people living with dementia (thought to be hitting one million by 2026), how can design and research be better integrated across the construction sector, to best support them and people with other neurodiverse conditions? While there is a major push for 'Ageing in Place' at home, many people with these conditions will be in care facilities of some kind, and architects and clients are tasked with working as closely with providers and users as possible to achieve the appropriate facilities tailored to each user.

A recent industry round table staged at Amtico International's London Flooring Studio brought together leading specialists in the field, sponsored by Amtico and Johnstone's Trade Paints. This was the second meeting of what is hoped to become a new network including specialist designers and consultants, and the construction supply chain, to share and spread good practice in the design of inclusive care environments. This event was focused on design for people living with dementia, but the network has a broader inclusive design remit. Representatives from Amtico, as well as from co-sponsor Johnstone's, sat at the table to add a practical industry focus to the discussion.

The round table built upon the recommendations of the initial meeting held at RIBA's Headquarters in 2004, delving further into evidence-based design approaches can help people with dementia navigate new and refurbished care environments and have a better quality of life. The assembled experts provided a unique combination of wisdom, but also insight on the challenges, such as silo'ed thinking in certain areas of the care system holding up progress.

A Design for Inclusivity Network

At the first round table there was consensus about a need for an ongoing discussion network to share and grow best practice in this field. This would not only be a "forum to share designs, ask questions, and showcase work done," but also a "central point where everybody can lean on each other and get advice and education."

Specialist bodies such as the established Dementia Services Development Centre (DSDC) at the University of Stirling (represented once more at our second meeting) support the care and

ROUND TABLE ATTENDEES

- **James Parker (Chair),** Managing Editor, Architects' Datafile
- **Eef Hogervorst,** Professor of Psychology, Loughborough University
- **Dr Jane Mullins,** Dementia Nurse Consultant & Trainer, DUETcare
- **Dr Martin Quirke,** University of Stirling (DSDC)
- **Gemma Bottomley,** Associate, Watson Batty Architects
- **Emily Jeffers,** Inclusion & Diversity Specialist, RIBA
- **Clare Cameron,** Director of Architecture, PRP Architects
- **Fiona Walsh,** Principal, DDS Architects
- **Hayley Morris,** NHS Estates & Facilities Division

SPONSORS' ATTENDEES

- **Dan Bowman,** London Commercial Team Leader, Amtico International
- **Karen Quarterman-Crisford,** Design Manager, Amtico International
- **Donna Taylor,** Colour Design Manager, Johnstone's Trade Paints

amtico flooring

JOHNSTONE'S TRADE

AN INCLUSIVE MIX
This second meeting of the new inclusivity design network saw Amtico host a mix of voices from specialist design, healthcare, and the construction industry

design community with consultation, training and research. The Design for Inclusivity Network could be a more focused addition to the debate, allowing specifiers, designers and dementia experts to exchange information and challenges with the construction and manufacturing sector to disseminate design-focused best practice; and even potentially have the combined weight and influence to successfully lobby Government.

At the second meeting, the broad mix of designers, expert academics, plus care providers, discussed practical solutions to overcome current obstacles. The importance of flooring and colour for spaces for people with dementia were key signposts in the debate, as was research. Specialist architects as well as research experts helped inform debate on the state of UK practice, and representatives from the care sector demonstrated past and current efforts to integrate research and design.

The debate: holistically tailored

The first session kicked off by following up on some of the 2024 meeting's key recommendations on improving design for dementia, to anchor the discussion and provide continuity. The round table chair James Parker cited testimony from Robert MacDonald, architect and independent consultant, who combined user and design experience, having Parkinson's Dementia, saying it was vital to focus on designing for each user where possible: "It's vitally important that all designers become more aware of the spatial difficulties that we live with, 24 hours a day."

Another previous attendee bringing his own lived experience to designing facilities was Rob Hayles of Citizens with Experience. He agreed individualised design was the elusive goal, with a resonant comment: "When you've met one person with dementia, you've met one person with dementia." He added: "there are commonalities, transferables, but we must understand and design for the differences."

The second meeting took this discussion further – Fiona Walsh of DDS architects agreed tailored design was challenging: "We have such a mountain to climb to get it right, even the fundamental layout and plan." She advocated a move back to the "early 1990s" baseline design approach established for achieving disability inclusivity; "we need to identify a baseline we can build from, rather than try and eat the elephant in one go, and get to perfection."

But the overarching factor was that design for people with dementia needed to include focus on all sensory impacts, not just mitigating individual risk factors. This was emphasised by Fiona Walsh of DDS: " The whole environment impacts; the noise, the reverberation, we don't just engage with our eyes, it's all of our senses."

Architects & education

Gemma Bottomley is an experienced designer of care facilities and retirement living at Watson Batty Architects, but she also brings personal experience, having lost a family member in 2024 to early onset Alzheimer's. This informs her pursuit of better environments, as she admitted candidly: "Seeing the kinds of homes that are out there and how shocking they are was fundamentally what pushed me to want to champion good design."

Bottomley is one of many designers who has benefitted from the specialist design for dementia courses run by the DSDC at the University of Stirling, exploring the "complex combination of the individual, dementia and the environment," and promoting design as a "non-pharmacological intervention."

Two architects returning from the first event were Clare Cameron of PLP Architects and Fiona Walsh of DDS (Dementia Design Services) who both recommended that schools of architecture not only "talked about design for dementia, but "invited experts in to open the eyes of young designers to the possibilities." Walsh said: "it needs to be absolutely ingrained in design, we need to move this knowledge into the mainstream."

There is potentially a yawning gap between the knowledge and practice of some designers (such as those at the table), and more mainstream architects however. Gemma Bottomley said that a "lot of architects don't know the basic principles" of design for dementia, such as "wider corridors, bedrooms not facing each other. We are taking on projects at stage four or later, and we wonder 'how are people coming up with this?'"

Research with empathy

There was a lot of in-depth discussion around the veracity of research methods for identifying the impact positively or negatively of different design interventions on people with dementia. Eef Hogervorst mentioned some eye-opening examples, such as cushions that could talk to patients (less successful), and different types of chairs for encouraging exercise.

We were delighted to include a dementia nurse consultant, Jane Mullins, to give valuable hands-on insights from a clinical perspective as well as research into the key factors of dementia design, and do's and don'ts. She has worked in Memory Clinics in Bath and Cardiff, "listening to and observing" people with dementia, as well as working in Swansea University on codesign models with creative industry partners.

She expressed concern with the proliferation of information and advice on dementia online, and private healthcare sources, "how much is research and evidence-based – everyone suddenly has an opinion." She offered the initial feedback on the round table that a future event should include people with dementia here, referencing that many of her colleagues have dementia, which helps inform the work despite the challenges. With this being a very complex area with a wide range of impacts depending on the individual, "We need to come to a place of empathy," said Mullins.

When it comes to research methods for establishing the effect of design, she said that "everyone wants to measure everything quantitatively, and it's not that way [with dementia]." Instead, she said, researchers "should be drawing from more anthropological disciplines, because we're observing people, and their behaviors." Mullins pushed back against the Cochrane-type approach of quantitative, rigorous data and said "we need different ways of measuring."

Testing design impacts & codesign

Event chair James Parker asserted that while there are "decades of research" into the effects of the environment on people living with dementia and other conditions, was there a need for "design-focused, separate sets of guidance; the baseline for designers that parses all that out into what they really need to know?"

While post-occupancy data from 'live' projects is key, Citizens With Experience's Rob Hayles advocated (at the first round table)

PERSONAL TESTIMONY
Delegates gave some personal testimony of the impact of design on people with dementia, bringing a powerful focus to the discussion

setting up a a design 'lab' to test the effects of elements such as lighting, underfloor heating, paint, or flooring, to "see what that actually does." And at the second meeting, Martin Quirke of DSDC said that the "elephant in the room" in terms of research was "we're not asking the end users what matters to them" – in short, codesign.

Jane Mullins lamented that a design lab had been established at Cardiff Metropolitan University, but the funding had subsequently been withdrawn. Eef Hogervorst said "this is where the VR comes in, we had two labs, in Watford and Loughborough, where we looked, for instance, at different thermal environments, and how comfort levels could affect activity levels." However, she admitted there were challenges; "it's a strange environment, it made people with dementia a little bit more apprehensive, a little bit more insecure, because they couldn't really navigate that space."

She said that as a less potentially disturbing alternative, VR had benefits as shown in work at Loughborough University. For example, "recreating the 'wrong' space, and then seeing how you can adapt that environment and observing how people navigate. Thereby, she said, evidence of what doesn't work in terms of elements such as flooring, colour, and lighting, could be gathered, as well as what does.

Alongside such data, codesign approaches with users could be the panacea for aligning each design as closely as possible to individual needs, despite their various challenges. Martin Quirke explained how VR has played a crucial role for the DSDC's codesign research, for example a pilot project where the University couriered VR headsets to people's houses, which "worked really well."

HARNESSING TECHNOLOGY
Martin Quirke of the Dementia Services Development Centre explained how VR trials were successfully enabling people with dementia to contribute to building designs

A second project, Designing Homes for Healthy Cognitive Ageing (www.descha.co.uk), comprised 100 "professionals and people living with dementia," in a "three-stage design for apartments and small houses." Quirke said "a lot of really useful stuff came out of that, because we could make it hyper realistic, to the point where people were able to tell us, for example, that the doorway isn't wide enough to get a wheelchair through."

Quirke said "what was really useful is that, in some cases, we were deliberately designing something that was bad, and the participants were telling us, you need to fix that." He gave the example of flooring contrasts around thresholds, and lighting ("The older someone was, whether they had dementia or not, they were more likely to say it needs to be brighter, while some of the professionals were saying 'this is far too bright.'"

Controversially, codesign approaches were not included in the RIBA's 2023 'Inclusive Design Overlay' to the Plan of Work, focusing more on including 'Inclusion Champions' in projects rather than recommending working with end users.

Session Two: Examples of Design for Dementia in Practice

With Amtico International having dedicated considerable investment and focus to raising the profile of flooring specification for neurodiverse users (exemplified by initiatives such as having products accredited by DSDC Stirling, and the firm hosting this event), they put several questions on the table for delegates to ponder. Karen Quarterman-Crisford, Design Manager at Amtico International, brought her own valuable personal experience as a carer for her mother, who has Alzheimer's, and Dan Bowman, the firm's London commercial team leader, gave his experience from a range of new builds and refurbishments in care environments. He concurred with Donna Taylor's view of colour and paint's low position in the pecking order, in that flooring "tends to be one of the last things to get decided on, and fits around the rest of the scheme." This could potentially cause risks in itself, if the wrong kind of pattern is used, for example.

At the first round table, Amtico asked how suppliers could 'be enabled to work better and more closely with designers and clients,' and Bowman outlined further why this was a challenge, with price and possibly an overt safety focus being drivers currently. The cost motive was particularly prevalent in the many refurbishments the firm is currently working on, he said, whereas new build care environments tend to have a "bigger budget and a lot more design allowance." However, even in the new builds, he said that Amtico tends to "be brought in stage three or four on those projects, and I'm very rarely asked about anything other than LRV (Light Reflectance Values) and slip resistance."

Fiona Walsh countered the misconception that it would cost more to design for dementia, "it costs no more to paint one wall one colour than it does another; it's about knowledge."

A careful balance has to be struck in environments for people living with dementia, between safe navigation, regulated by the Equality Act, and interiors which work harmoniously for users and staff. Strict adherence to the rules on Light Reflectance Values, for example, can result in some unsuccessful designs if incorrectly balanced using architectural and interior design nous.

There may be no general truths beyond that need for balance when it comes to such environments, with each interior needing to be specific to the user group. However, Johnstone's Trade Paints' Donna Taylor asked the delegates what scope there was for designers 'unlock' flexibility to tackle the constraining '30 point difference' rule in LRVs in the Equality Act, driven by the need for adequate contrast. Taylor, at the first meeting, elucidated how in the firm's experience, that part of striking the right balance could mean using the right lighting levels to achieve "more flexibility in LRV percentages." Using 200 lux lighting levels minimum allows specifiers leeway to have lower contrast (down to 20 points LRV difference).

Taylor explained that LRVs are also affected by finish, not just hue and shade, so attention needed to be paid to this in finding the right interior design, but that "there's not a lot of talk about that." She said that in the months following the previous round table at RIBA, Johnstone's had actually developed some innovative products which are designed for use in facilities for neurodiverse users, with finish as important as colour aspects.

Fiona Walsh said that there is a raft of deep knowledge out there (such as guidance from on the effect of for example, color rendering and light wavelengths, and the guidance for the sector in terms of LRV levels was very unsophisticated. "It's a massive field, and unfortunately, if we're just talking 200 lux and 30 points LRV, we have such a chasm to fill before we get to where we need to be."

There were 'myths' around the best colours to use in such facilities, said delegates. Walsh cited guidance such as from DSDC, Trinity House, and Fleming & Bennett), but added that "the problem is that a lot of design in this field isn't done by

professionals with a key interest." As a result, she said: "there are a lot of people out there who have heard urban legends that red is the best colour, then one manufacturer grabs it and says the best thing for people with dementia is red, then you have all the red toilets and grab rails."

Clare Cameron countered that there was some logic to choosing red as "the last in line on the spectrum of colour," but questioned whether that meant red should be the colour of fixtures such as grab rails. Walsh said: "It looks more like a school environment," and asserted: "it's down to contrast; is the colour as relevant as the actual tone? A lot of it is actually logic, basic principles." She added: "Your average architect isn't going to go trawling through libraries of information and going to social care or individual units, and a lot of times architects aren't even aware they need these intersections between tones, there's no regulation. And operators and commissioners aren't asking for it; until it's mandated they won't be."

The big goal for improving specification and design for people with dementia, for our delegates, was including design discussions on the customisation and tailoring aspects like colour and flooring much earlier in projects. The key question was how could they be raised up the list of priorities? Donna Taylor, Colour Design Manager, at Johnstone's Trade, again expressed the problem of paint "sitting right at the bottom; by the time it gets to us, the majority of the elements have already been put in place."

Hayley Morris of NHS Estates and Facilities Division commented that an official NHS Health Building Note of design guidance (HBN 0802) exists "specifically on dementia, however it hasn't been reviewed recently," and she added a caveat that "there's a list that need reviewing." Donna Taylor said there was sadly "very little feedback" from projects in terms of what had worked and what didn't, when it came to colour and people with dementia.

Silos & how to break them

One of the biggest takeaways from the event was that design for people with cognitive impairment cuts across all sectors, and needs to not be viewed as a separate, ring-fenced area of design or provision solely for dementia and 'elderly' care facilities. However, delegates said it is viewed as a discipline and set of parameters reserved for care homes and dementia, rather than the wide range of other neurodiversity issues and settings where it's appropriate and needed.

Emily Jeffers said that the Inclusion and Diversity Overlay to the RIBA Plan of Work had helped to direct architects towards thinking about holistic approaches to supporting people with dementia, but that currently this was only applied "if they've got that specific user group in mind." She added: "We need to let people know that this is a user group that needs to be considered outside of just care homes. As soon as you're designing for dementia, you're designing for lots of other neurodivergences as well."

With, as Fiona Walsh confirmed, 40% of the UK population have cognitive or sensory problems, in effect 'good design for dementia' should in fact be viewed as a cross-cutting challenge which amounts to nothing less than 'designing for spaces for people.' There is a major battle to be won here, when as architect Gemma Bottomley says, some short-sighted clients such as local authorities, prompted to include dementia-friendly design in extra care developments, say why, "when they might not have dementia?"

This was a brilliant and searching exchange of ideas and views on this key issue for future designs, and we hope to stage further events on the subject – to support this new Design for Inclusivity Network, in 2026. We would again like to thank co-sponsor Amtico International for hosting the meeting at their premises, and their fellow sponsor Johnstone's Trade Paints for their invaluable support.

EXTENDING THE DISCUSSION
Delegates enjoyed Amtico's hospitality and the opportunity to talk at length around the potential of an ongoing design network for inclusivity

Taking the hard work out of leisure sector casings

Hotels, restaurants, gyms and sports facilities would probably be less attractive and welcoming leisure environments without decorative column casings from Peterborough based specialist, Encasement. But the beauty of column casings is more than skin deep and goes beyond the purely aesthetic.

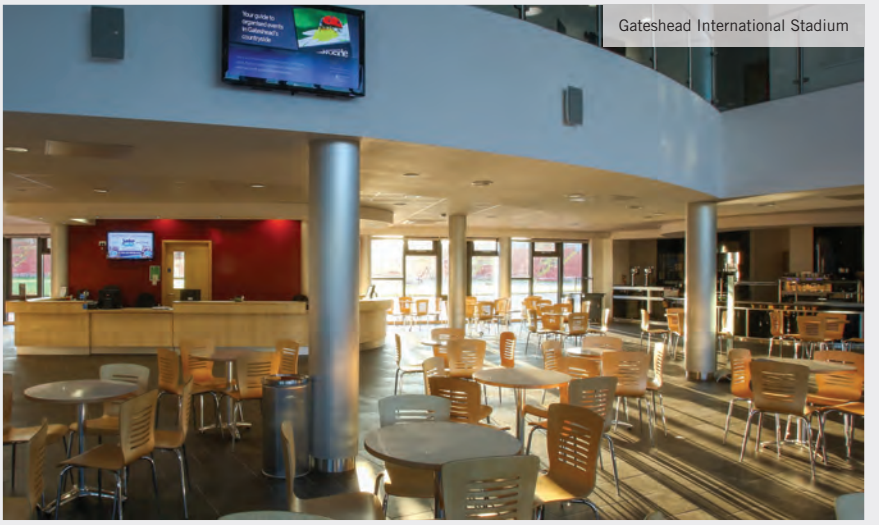
While it's widely acknowledged that a key benefit of column casings is their ability to provide a decorative finishing solution, that can blend in or contrast with a building's design scheme and décor, they also perform an important practical function, as their primary role is usually to conceal structural steelwork and building services.

As hotel, sports and leisure (HSL) facilities typically deal with large numbers of visitors and guests, often with high traffic areas in reception foyers, dining areas, fitness suites and other public spaces, these have an important influence on casing specifications, as durability is an essential requirement for most projects.

Meeting these requirements from architects, specifiers, contractors, and specialist leisure sector design teams, have been key factors that have guided the growth and development of Encasement's product range, which are widely used on hotel, leisure, and recreational projects.

The company's extensive Verta column casings range includes pre-formed MDF, ply and glass reinforced gypsum (GRG) products, specifically for interior use, together with aluminium, stainless steel and glass reinforced polymer (GRP) casings, which are suitable for both interior and exterior applications, due to their inherent weather resistance and durability.

Hilton Garden Hotel, Sunderland



Gateshead International Stadium

These characteristics, coupled with their design versatility, have made the metal Forma and Polyma GRP ranges the most regularly specified and used in HSL and recreational projects, where their toughness, durability and wide choice of finishes make them an ideal solution.

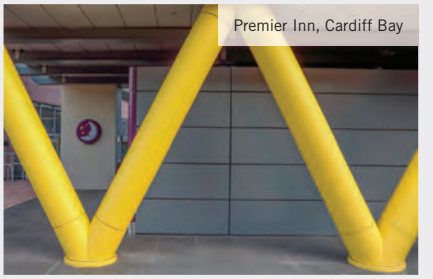
Both Forma and Polyma provide specifiers with an exceptional scope of specification options and although standard sizes are available in each range, they are both regularly specified on projects where casings with bespoke shapes and dimensions are required.

As Forma is manufactured and fabricated from aluminium or stainless steel, and the Polyma range is produced from moulds, both provide a high level of design freedom that enables them to meet individual project requirements.

In addition to installations at Premier Inn's flagship hotel in Cardiff Bay and The National Memorial Arboretum's events & banqueting facility, further high profile projects for Holiday Inn, Mondrian London Hotel, Glyndebourne Opera House and the Gateshead International Stadium have all exploited the practical and decorative properties of Forma and Polyma GRP.

For interior applications, Encasement's Circa and Quadra ranges are also regularly specified within a range of hotel, leisure and fitness projects. While both ranges are manufactured from UKTR compliant pre-formed MDF or plywood, the main difference between the two types is their shape.

Circa is used where round and extended circular forms are specified, while Quadra provides designers with the option to use square and rectangular profiles.



Premier Inn, Cardiff Bay

The unrivalled palette of finishes available include plain, textured and patterned high pressure laminates (HPL), from specialists such as Formica, ABET and Polyrey, as well as real wood veneers. Due to their ability to resist scuffs, scratches and impacts, coupled with the extensive colour choice, HPL finishes are the most popular solution by significant margin for these products, as used at The Hilton Garden Hotel in Sunderland.

01733 266 889
www.encasement.co.uk

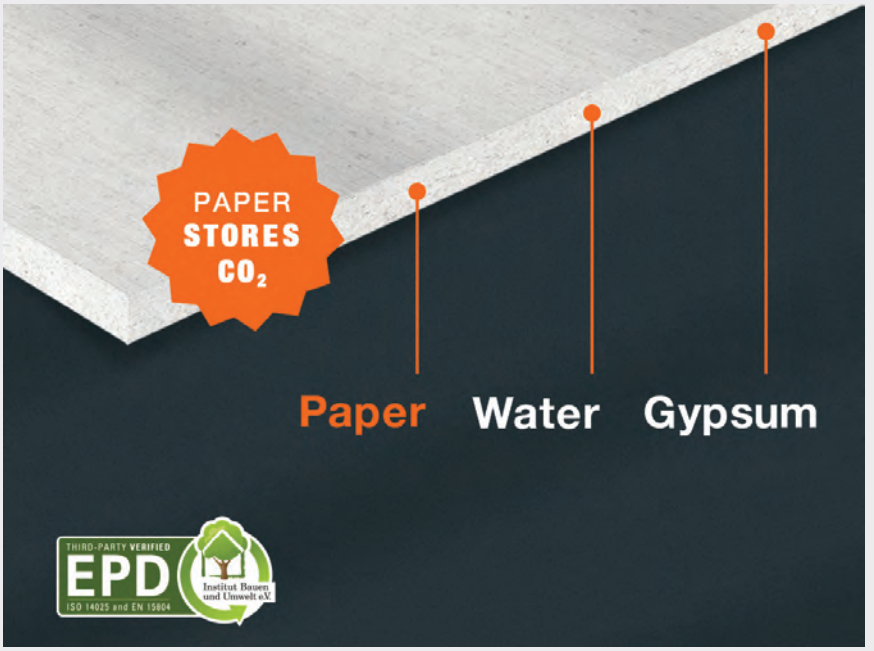
fermacell® Fibre Gypsum Boards: A Sustainable Revolution in Commercial and Timber Frame Architecture

In the evolving landscape of sustainable architecture, material choice is no longer just a matter of performance – it's a statement of environmental responsibility. Among the frontrunners in this movement is James Hardie with its brand fermacell®, whose EPD-verified fibre gypsum boards are redefining standards in commercial and timber frame construction.

What sets fermacell® fibre gypsum boards apart is its carbon-storing capability throughout the entire product life cycle. Thanks to optimised recycling processes and responsible raw material sourcing, these boards don't just reduce emissions – they store CO_2*. This makes them a powerful ally in the fight against climate change and a compelling choice for architects committed to low-carbon design.

Unlike traditional gypsum boards, fermacell® fibre gypsum boards are manufactured using a unique combination of recycled paper fibres, gypsum, and water – without any added adhesives. This not only enhances their structural integrity but also ensures a clean, closed-loop production cycle. The result is a product that's robust, versatile, and environmentally sound.

From a design perspective, fermacell® fibre gypsum boards offer exceptional load-bearing capacity, racking strength, fire resistance, and acoustic performance, making it ideal for high-spec commercial interiors and multi-storey timber frame buildings. Its ability to support heavy fixtures without additional reinforcement simplifies installation and reduces material waste - an often overlooked contributor to a project's carbon footprint.



The Environmental Product Declaration (EPD) verification provides architects with transparent, third-party-certified data on the product's environmental impact. This is crucial for projects aiming to meet BREEAM certification standards, where material selection plays a pivotal role in achieving sustainability targets.

In timber frame construction, where the emphasis is on lightweight, high-performance materials, fermacell® boards shine. Their dimensional stability and moisture resistance make them particularly suited to off-site prefabrication and modular building techniques both of which are gaining traction as efficient, low-impact construction methods.

But perhaps the most compelling reason to specify fermacell® fibre gypsum boards is its contribution to carbon positive building strategies. By storing CO_2* rather than emitting it, these boards help offset the embodied carbon of other materials used in a project. This aligns perfectly with the architectural shift toward regenerative design, where buildings don't just do less harm, but actively improve the environment.

As the industry moves toward net-zero targets, architects must look to embrace materials that support long-term ecological balance alongside aesthetics and functionality. fermacell® fibre gypsum boards offer a rare combination of technical excellence and environmental integrity, making them the number one choice for forward-thinking commercial and timber frame projects.

In a world where every design decision carries environmental weight, choosing fermacell® is more than a specification – it's a commitment to building better. Discover now.:

www.fermacell.co.uk/sustainability-meets-simplicity

**CO_2 storing refers to production stages A1-A3 of EPD.*

Why should I consider water risk management?

Water systems and services can be an afterthought in building design. Kitchen, toilets and other service areas are designed to be attractive and easy to find and use. However access for monitoring & maintenance is key with issues like cold water storage tanks being sited in difficult to access areas or squeezed into areas with little or no headroom for inspection.

Understanding water risk

Water systems can also become breeding grounds for harmful bacteria – particularly Legionella, causing Legionnaires' disease, a potentially fatal form of pneumonia.

Designing for resilience

Architects need to understand a clients' water systems, associated equipment and its constituent parts ie:

- Whether the water temperature in all or some parts of the system is between 20-45°C.
- Is it stored or recirculated as part of the system?
- Are there sources of nutrients ie rust, sludge, scale, organic matter and biofilms?
- Are the conditions likely to encourage bacteria to multiply?
- Is it possible for water droplets to be produced? If so, can they be dispersed over a wide area ie showers and aerosols from cooling towers
- Is it likely that employees, residents, visitors etc are more susceptible to infection due to age, illness, a weakened immune system? Could they be exposed to contaminated water droplets?

What to include in your risk assessment

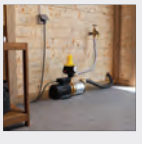
- Management responsibilities, including the name of the competent person and a description of your system(s)
- Competence/training of key personnel
- Identified potential risk sources
- Means of preventing the risk/ procedures in place to control risks
- Monitoring, inspection and maintenance procedures
- Records of the monitoring results and inspection and checks
- Arrangements to review the risk assessment regularly, particularly when there's reason to suspect it is no longer valid

Inspectas Water Risk Management Principal Consultant Steve Clare

Fully understanding water risk management or involving water management specialists at the outset of building design, ensures early control of water issues. The resulting planned and preventative maintenance ensures ongoing water risk control and easily achievable and sustainable water risk compliance.

info@inspectas.co.uk inspectas.co.uk

Saniflo launches Clear Water pump range



Saniflo has unveiled its new Clear Water range, extending its expertise into clean water management. The line-up includes jet pumps, multi-stage pumps, domestic boosters, submersibles, and underground lifting stations – delivering flow rates up to 15 m³/hour and heads up to 54 m. From rainwater harvesting and garden irrigation to basement drainage and boosting household supply, the range provides a solution for every application. Saniboost domestic boosters feature integrated buffer tanks for smooth, quiet operation, while the Sanisub submersibles and Sanifos lifting stations tackle more demanding environments.

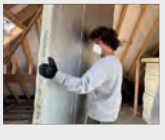
020 8842 0033 www.sfasaniflo.co.uk

SFS updates Dynamic Hinge Brochure

SFS has updated its brochure aimed at assisting fabricators, specifiers and other customers in selecting the most appropriate hinge solutions for a wide range of applications. The brochure starts by giving a short overview of the services SFS provides, including application consultation, development, manufacture and distribution solutions, as well as reliable after-sales services. The guide also highlights the suitability of each hinge for different applications. Rounding off the brochure is a section emphasising the critical importance of selecting the right fasteners for optimal hinge and door-set performance.

uk.sfs.com

Preventing condensation



Architects face growing pressure to design buildings that minimise condensation risk while balancing thermal efficiency. **Celotex's** Technical Team highlights the importance of integrated design, where PIR insulation, airtightness, thermal bridging and ventilation strategies work in harmony. By using tools such as Celotex's U-Value and Condensation Risk calculators, architects can make evidence-based design decisions that meet BS 5250 and deliver resilient, comfortable buildings. This approach ensures moisture is managed effectively while supporting long-term building performance and compliance.

01473 822093 celotex.co.uk

Sustainable solution at ARC 500

Hathaway and Building Systems UK were committed to ensuring ARC 500 is constructed as a net-zero carbon facility. The project aimed and achieved significant environmental, social, and governance (ESG) credentials, including a BREEAM Excellent rating and an EPC A+ target, adding a valuable economic asset to the ARC 500 Birkenhead Freeport. Building Systems UK, a **Tata Steel** enterprise, provided a complete building envelope solution. This included Trisobuild® site assembled roof and wall systems featuring a newly developed profile specifically designed for the office areas of the building.

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EJOT UK provides fully tested standing seam fastening solution for new 'civic hub'

EJOT UK has supported roofing and cladding products distributor Tektum Supplies and contractor Fowler McKenzie to develop a robust fixing specification for the building envelope of a highly sustainable new multi-purpose civic facility in Aberdeenshire.

The two-storey, £11.4million development in Ellon is designed to elevated sustainability standards to reflect its significance and to achieve net zero in operation. It incorporates renewable energy systems and a highly insulated and airtight envelope to minimise energy use.

A key challenge for the construction of the building envelope for 'Formartine House' was how best to securely fix the Kalzip standing seam system to the building's structure. This is formed of glulam beams and supporting secondary steelwork, with the envelope also featuring a thick layer of insulation as part of a design to Passivhaus standards.

To determine the most effective fixing solution for this unconventional envelope design, the project's appointed roofing and cladding contractor, Fowler McKenzie, consulted with Tektum Supplies, with whom EJOT UK has a strong working relationship.

The process started with Tektum utilising their unique prognosis software to generate the calculations necessary, confirming that the fasteners recommended by EJOT would satisfy Kalzip's own technical criteria. Tektum's calculation program has been developed specifically for specifications such as this, with the benefit here of being able to provide EJOT's technical team with the data to conduct a range of detailed tests, recreating applications scenarios within its Applitec Centre.

Mike Saini, managing director of Tektum Supplies said: "Collaboration with the fastener manufacturer at an early stage is key to the success of projects like this and, through our work with the EJOT UK team on previous projects over many years, we knew they would have the products, resources and expertise to confirm our own calculations.

"Combining our prognosis data with Applitec's physical testing capabilities meant we could achieve a fastener specification that everyone in the project could depend on. It enabled Fowler McKenzie to move forward with the envelope construction with complete confidence, providing peace of mind for the main contractor and the client that the roof will perform as specified."

Pullout tests conducted by EJOT's technical team confirmed the suitability of the two recommended fasteners. They also looked deeper into the material characteristics of the proposed envelope build-up, including an analysis of the steel section using X-Ray Fluorescence (XRF) technology and withdrawal testing on the glulam sections which were conditioned in one of Applitec's dedicated chambers for one week. Installation depth was also carefully monitored to further ensure quality control and consistency.

Jon Knaggs, technical manager for Industrial Light Weight Construction at EJOT UK added: "When Tektum approached us for a standing seam fixing solution we immediately recommended two types of our JT3 fastener. One of these, the FM Approved JT3-X2-6.0, is actually purpose-designed for fixing standing seams and brackets back to steel and aluminium substructures, and has been used on projects where Kalzip is specified, as well as other similar systems, for many years."

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Freefoam unveils ambitious sustainability targets

Freefoam, a leading manufacturer of innovative building products, has announced its Sustainability Targets as part of a comprehensive strategy aimed at creating long-term value for stakeholders while addressing environmental and social challenges.

Freefoam have always been at the forefront of best practice and continuous improvement, holding ISO's 9001, 14001 and 45001 in addition to an Ecovardis rating in the top 6% of companies. These goals are the natural extension to Freefoam's long-standing commitment to quality and sustainability.

The newly unveiled targets are designed to be achieved by the end of 2030, unless otherwise specified, and focus on two key categories: Operations and People. These initiatives underscore Freefoam's commitment to responsible business practices and align with its vision for a more sustainable future.

Under Operations, Freefoam is taking significant steps to reduce its carbon footprint, with goals to cut Direct and Indirect emissions by 15% from a 2022 baseline. Water conservation is another critical focus, with aims to reduce mains water usage by 30% and implement closed-loop water systems in all manufacturing plants by 2027. Additionally, Freefoam is working towards zero waste to landfill by 2030 and a 15% reduction in general waste.

On the energy front, the company plans to transition entirely to renewable electricity and eliminate reliance on non-Bio LPG fuels for forklift operations.

In the People category, Freefoam is prioritizing employee wellbeing, safety, and development. The company has committed to reducing its Annual Injury Incident Rate (AIIR) by 10% year-on-year and ensuring each employee receives at least 18 hours of training per year by 2027. Furthermore, 5% of the workforce will be placed on structured training pathways, including graduate, apprenticeship, and work experience programs.

Ethical standards also remain a top priority, with targets to ensure 100% of employees with company email accounts receive IT security awareness training and to maintain a zero-tolerance policy toward corruption and bribery.

"These targets represent a bold step forward in embedding sustainability into the core of our business," said Aidan Harte, CEO. "The simplicity of our goals gives us transparency and ensures they are relevant and clear to our teams and our customers. By acting today, we are building a stronger, more resilient company for tomorrow."

01604 591110 www.freefoam.com

NORclad launches two new pre-finished timber cladding ranges for 2025

NORclad, National Timber Group's specialist cladding division, is proud to unveil two new cladding ranges as part of its 2025 launch – Tailor's Collection and Natura Collection. These innovative additions expand the NTG Group's offering of pre-finished timber solutions, combining natural beauty with premium performance coatings and outstanding material integrity.

The Tailor's Collection features ultra-stable Accoya® boards, factory-finished in a selection of contemporary tones using high-performance coatings from Remmers. The result is a modern, elegant cladding solution with a refined, tactile finish and a 50-year warranty on the timber.

The Natura Collection, by contrast, celebrates texture and warmth—offering brushed ThermoWood® boards finished in a palette of rich, earthy hues. Crafted from heat-treated Scandinavian Pine, Natura balances rustic character with lasting durability, ideal for residential and commercial exteriors.

"Both new ranges are about offering architects and installers more design freedom without compromising on performance," says Phil Nash, cladding manager at NTG England. "With Tailor's and Natura, we've blended the best in timber technology – Accoya® and ThermoWood® – with the trusted protection of Remmers coatings. It's all about delivering style that lasts."

To obtain a sample or for technical support, the specification team at NORclad are on-hand to provide anything else you need – contact the team or visit the website.

sales@norclad.co.uk
timbercladdingsolutions.co.uk

Invisible Innovation: The architectural case for underfloor drive systems on swing doors

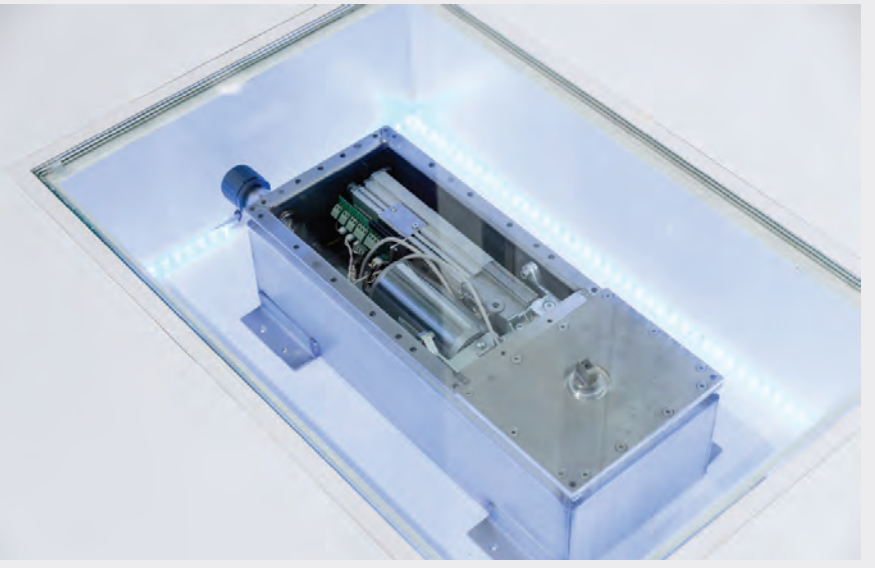
In contemporary architecture, the demand for seamless integration between technology and design continues to grow. Nowhere is this more evident than in entrance systems, where the challenge lies in balancing automation, accessibility, and aesthetics. Underfloor drive systems for swing doors offer architects an elegant, discreet solution – one that delivers all the benefits of automation without compromising on visual design.

Seamless design integration

Architects often face the dilemma of integrating essential hardware into spaces where minimalism or heritage preservation is paramount. Traditional surface-mounted door operators can disrupt clean lines, obstruct sightlines, or appear visually intrusive – particularly in glass facades, timber doors, or stone-clad entrances. Underfloor operators resolve this by removing the need for visible hardware. Entirely concealed beneath the floor, these systems allow swing doors to function effortlessly without interrupting the aesthetic flow of the space.

Meeting accessibility standards with style

Complying with regulations such as the Equality Act and BS 8300 doesn't have to come at the expense of design. Underfloor systems support fully automated, barrier-free access, while remaining hidden from view. They can be integrated with push pads, access control systems, sensors, or building management systems – ensuring compliance without cluttering the interior or exterior design.



Maximising space and flexibility

For projects where space is at a premium – narrow corridors, compact lobbies, or glass curtain walling – underfloor operators are an excellent alternative to overhead systems. They eliminate the need for side or overhead clearances and free up wall space for other architectural elements like signage, glazing, or lighting.

Quiet, durable, and built to last

Behind the scenes, underfloor operators are designed for longevity and performance. Housed in sealed, floor-mounted boxes, they are protected against dirt, dust, and moisture – making them suitable for both interior and exterior applications. Their quiet operation makes them ideal for environments where acoustics are a priority, such as hotels, libraries, and healthcare settings.

Smart specification for modern projects

Underfloor swing door operators align perfectly with modern architectural values: minimal visual impact, improved user experience, and intelligent, integrated functionality. While installation requires early coordination with floor construction and finishes, the design benefits are significant. For architects committed to delivering clean, cohesive, and compliant environments, underfloor operator systems offer a quiet revolution in door automation – both literally and aesthetically.

UFO NT: Underfloor operator – concealed door drive system

Giving designers greater freedom to create aesthetically attractive entrances the UFO NT operator is perfectly hidden from view. Mounted below the finished floor level it enables maximum transparency of the entrance yet still provides automatic access.

The UFO NT offers a wide range of capabilities and features, including manual use via the Smart swing function, a redundant spring system, programmable force settings, greater opening angles and increased leaf weight and widths for both internal and external doors.

Offering flexibility, the UFO NT has a full range of operational functions from fully automatic to manual opening and closing including low energy and Push & Go. At its core is GEZE's popular automatic swing operator, Powerturn.

Please scan the QR code to find out more.

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

Renson at the Old War Office: Historic elegance, modern air

The historic Old War Office (OWO), a Grade II* listed neo-Baroque landmark in central London, has undergone a remarkable transformation. An example of adaptive reuse in architecture, where heritage meets modern sophistication. A pivotal element was the integration of Renson's innovative 450 and 480 louvres. These high-performance ventilation solutions played a crucial role in enhancing indoor air quality, energy efficiency, and aesthetic harmony, all while preserving the building's architectural integrity.

Balancing heritage with innovation

Transforming a historic structure into a contemporary space demands a delicate balance between conservation and innovation. Renson's louvres were seamlessly incorporated into the building's facade, offering discreet yet effective airflow management. This ensured optimal indoor climate control without compromising the grandeur of the original design.

By reducing reliance on mechanical ventilation systems, the louvres contributed to lower energy consumption – aligning with modern sustainability standards and demonstrating how heritage buildings can be future-proofed without sacrificing their legacy.

www.renson.net

New Lift & Slide Hardware System from VBH

Hardware supplier **VBH** has introduced an exciting new hardware system to suit Sheerline Prestige aluminium lift and slide patio doors. greenteQ ClearLIFT Slim has been developed with Italian hardware expert AGB and is described by VBH as 'the ideal hardware for slimline lift and slide patio doors.' It accommodates sliding sashes weighing up to 250 kg as standard, with the option to increase capacity to 400 kg with the addition of just one item. ClearLIFT Slim allows the creation of sliding panels measuring up to 3.6 m wide and 2.75 m high, designed to flood any room with natural light. Security is provided by two sturdy hook bolts, with the option to add additional hooks in the middle and at the top of the door if required. The hooks retract into the sash when the door is open, and the striker plates are flush to the frame. This provides a neat finish to the door and eliminates the risk of items snagging on any projections into the opening. Further optional extras include a ventilation position, the Auto-Brake Closing Damper that gently slows the sliding sash down as it approaches the frame and the Opening Damper that provides a controlled opening of the door.

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Vectaire can now offer custom designed Fire Rated Air Bricks to ensure that every installation requirement can be met. The Fire Rated Air Brick range comprise high performance, non-combustible terminals designed for low resistance use with powered mechanical ventilation. The standard range is available in three sizes, 204 x 60 mm, 220 x 90 mm and 208 x 130 mm with 90%, 92% and 91% free areas respectively: and in 500 mm or 100 mm length. There is a choice of bezelled or non-bezelled and five RAL colours (brown, white, terracotta, grey or beige) together with a complete range of accessories. They are manufactured from galvanised sheet steel and powder coated achieving an overall fire rating of A2-s1,d0 as required by Approved Document B. They have been salt spray tested and are corrosion resistant. The 500 mm length versions are IPX3 rated for water ingress and they all have very low airflow resistances. They are manufactured in the UK and all designs are registered. They complement Vectaire's MVHRs, MEVs and DMEVs. Fore more information, please contact Vectaire or visit the website.

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The embodiment of quality?

Reyan Clarey of CA Group discusses the challenge facing the industry of balancing embodied carbon targets against design quality in the race to net zero.

Decision makers are looking for a simple metric by which to measure products' sustainability credentials. 'Embodied carbon' of new construction materials and products is now under scrutiny, with the perception that components manufactured with lower embodied carbon being automatically more sustainable. Yet a better understanding of the picture is essential when identifying and specifying products.

'Net zero' continues to be the buzz word throughout the industry, and Scope 3 Emissions offers many challenges to achieving sustainability goals. The rise in EAF (Electric Arc Furnace) steel is an essential evolution for metal cladding solutions, and has seen a slight increase in the availability of construction products with lower embodied carbon content at the 'Module A' product stage. However, availability remains limited, and the benefit should not mask environmental concerns that construction products may be exposed to later down the line.

We are finding that many designers and Principal Contractors are requesting significant improvements and reductions be made towards achieving net zero, including striving for lower embodied carbon products. The risk of this leading to a compromise on quality, guarantees,

The risk of a compromise on quality, guarantees, standards or specification is real if these aspects are not also prioritised

Simply comparing 'cradle to gate' embodied carbon is insufficient

standards or specifications is real if these aspects are not also prioritised.

There is a risk of a deterioration in such performance aspects, where robust products and materials are at risk of being replaced by alternative materials purely on the basis of 'embodied carbon' alone, and where little to no consideration is given to the full life cycle assessment of the product. This includes its guaranteed performance, remediation or maintenance requirements, certification and classification in regard to fire, long term durability or the end of life benefits when it comes to deconstruction, recovery and recycling.

Ironically, scrutiny is often directed to the recycled content within new construction materials, with little focus on how these products are then fed back into the recycling stream at the end of their operational life. Selecting products with 'face value' lower embodied but with reduced guarantees and serviceable life, and limited recycling options, actually creates a far worse 'whole life picture.'

The market is looking for its next quick win, a 'silver bullet' to differentiate products, and for architects and specifiers to emphasise their commitment to the environmental agenda with easy to communicate metrics. Construction of buildings in the UK has become so complex, with ever changing requirements for fire, sustainability, use of renewable energy solutions and long term financial viability underwritten by guarantees, the prospect of balancing all of these intertwined considerations means that considering just one aspect of performance in isolation is likely to lead to significant unintended detrimental consequences.

In the short term, the UK construction industry cannot be solely focusing on the carbon emissions associated with one specific area of a product's Environmental Product Declaration (i.e. manufacture alone, ignoring installation, maintenance or end of life), with the risk that environmental benefits of primary material production are outweighed by the burdens of a product's unsuitability for reuse or recycling processes in later life. These aspects are key elements of circularity, with the 2022 updates to EN 15804+A2 – focusing on mandatory reporting of end of life (Module C) and benefits beyond the life cycle (Module D) for this reason.

For example, if the use of currently available EAF steel leads to a reduction in guarantee (and therefore reduces the effective product life), this factor needs to be considered in the overall assessment of that product. If a building needs major refurbishment after 35 years compared to 40 years, this is a significant uplift in the life cycle carbon emissions. If a guarantee is compromised or its period reduced by the inclusion of rooftop solar PV modules, this must be considered.

In summary, simply comparing 'cradle to gate' embodied carbon is insufficient, and could yield incorrect conclusions when selecting products or solutions. It is essential to consider whole life factors, including using materials with established recycling routes to reclaim the embodied carbon at their end of life. Everyone has to contribute if we as an industry are going to achieve truly sustainable construction solutions. How to measure our achievements is a critical element. Being taken in by marketing slogans does not yield genuine results, therefore don't just consider embodied carbon up until Module A (product manufacture).

Consider the whole life cycle and look at the big picture. The evolution of cladding systems is underway, but it requires intelligent application of the solutions.

Reyan Clarey is sustainability officer at CA Group

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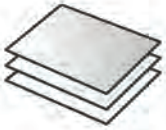

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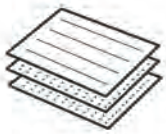

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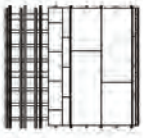

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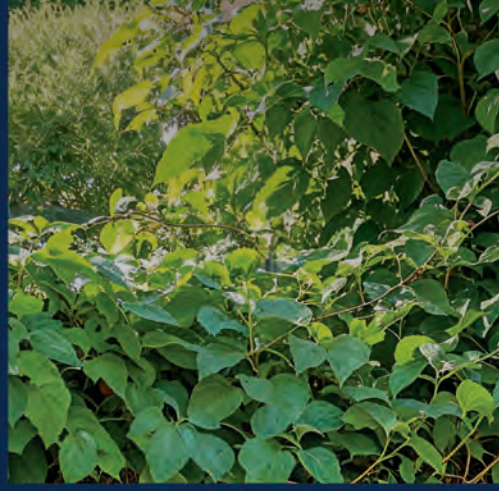

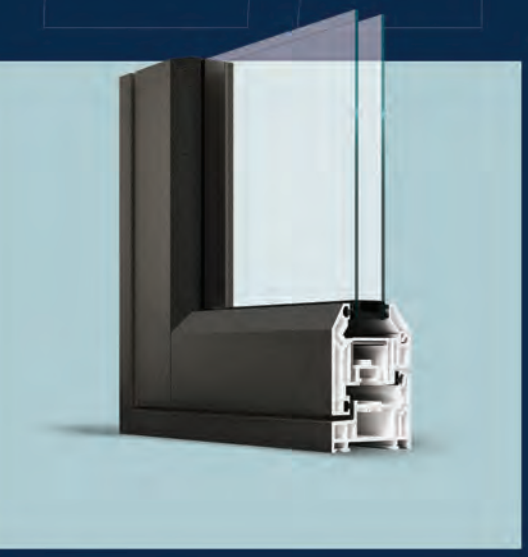

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OMNIA excels beyond aesthetics. Offering enhanced acoustic insulation, BS 6375-tested weather performance, and full compliance with 2025 building regulations.

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Award winning suite of double flush PVCu windows and doors

Achieves U-values as low as 0.79 W/m²K

Class leading thermal efficiency

BS6375 tested for weather performance

Secured by Design potential

Using Wraptite® to achieve Ireland's Home Performance Index certification

Around 11,000 m² of Wraptite® – the Proctor Group's external air barrier membrane – are being installed at Rockbrook Apartments in Sandyford, Dublin. The 428 apartments, built in two blocks and arranged around two courtyards, are all being certified to the Home Performance Index (HPI).

HPI certification includes enhanced levels of airtightness, as part of the overall aim "to produce great quality homes, healthy and comfortable, with efficient use of resources, minimising waste and destruction of the environment. "

Readers outside Ireland are unlikely to be familiar with HPI certification. Essentially, it is a residential equivalent to BREEAM or LEED. First trialled in 2016, the scheme is managed by the Irish Green Building Council.

Demand for the certification has grown in the years since and, according to the HPI website, many developers use the certification as "a symbol of quality assurance" in their developments.

For areas of the scheme considered to be most important, mandatory requirements are set to ensure a particular level of quality and comfort is achieved. Examples of such areas include water efficiency, ventilation and thermal bridging, as well as the aforementioned enhanced airtightness. It is in this context that Wraptite has been specified and, at the time of writing, is currently being installed.

Rockbrook Apartments features a concrete frame with SFS infill stud. The Wraptite membrane, which is both airtight and vapour permeable, is applied to the external face of the wall structure. In this position, the airtightness barrier is moved away from the internal services zone, which simplifies detailing and reduces the number of penetrations.

At the same time, Wraptite's vapour permeability allows the passage of moisture vapour and helps to eliminate any condensation risk in the wall.

Wraptite has always been a feature of the facade specification at Rockbrook Apartments – and it was originally complemented by an internal membrane acting as a vapour control layer (VCL).

01250 872 261
proctorgroup.com/products/wraptite

Okopod selects Hörmann RollMatic roller doors for striking 9-car garage

Modular building specialist Okopod has specified Hörmann RollMatic roller garage doors for a newly completed nine-car garage project in Cambridge, showcasing the company's commitment to sustainable design and precision-engineered construction.

Founded in 2019, Okopod has quickly become a leader in the manufacture and supply of eco-friendly modular pods for use as garden rooms, workspaces, and garages. Drawing on lean manufacturing techniques inspired by the automotive sector, the company's offsite construction process ensures minimal waste, high build quality, and reduced disruption on site.

In one of their most recent installations, Okopod delivered a Scandinavian-inspired garage structure designed to store a collection of classic and performance cars. The double-height garage accommodates up to nine vehicles, thanks to an integrated stack parking system, offering a luxurious yet practical solution that blends seamlessly into family life.

To complement the clean, contemporary exterior, which is clad in vertically arranged, sustainably sourced Red Grandis timber – Okopod selected two fully automated Hörmann RollMatic roller doors for their slim profile, reliable performance, and stylish modern aesthetic. A double-width door (6,000 mm x 2,100 mm) and single-width door (2,600 mm x 2,100 mm) were installed, both finished in Anthracite Grey (RAL 7016) to perfectly match the garage's refined, minimalist palette.

"Our design ethos is rooted in the belief that less is more," says James Home, founder of Okopod. "This project is all about celebrating materials and craftsmanship. The Hörmann doors provided the perfect balance of function and form - elegant, discreet, and built to last."

The Hörmann roller doors were supplied and installed by Fenland Garage Doors, ensuring smooth integration into the structure. The slimline fit of the RollMatic doors allow for maximum internal clearance, while offering the robust security and convenience demanded for the high-value vehicles housed within.

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

New from Garador!

New – GRP side hinged door

Garador has announced the launch of a new GRP side hinged garage door designed specifically for the modern market. These new doors offer a perfect solution for homes requiring all the advantages of a modern side hinged garage door with the added benefits of a lightweight, impact resistant and low maintenance material that looks stunning on any design.

Garador's new glass fibre reinforced side hinged doors feature a glass-fibre reinforced construction with a fully encapsulated chassis for strength and durability. They won't rot, rust or corrode and the special UV stable finish protects against the elements, with only an occasional rinse to keep them looking pristine. These great looking doors come in a variety of sizes and styles including a wide range of timber effect finishes and colours.

To find out more, visit **www.garador.co.uk** or call **01935 842094**.

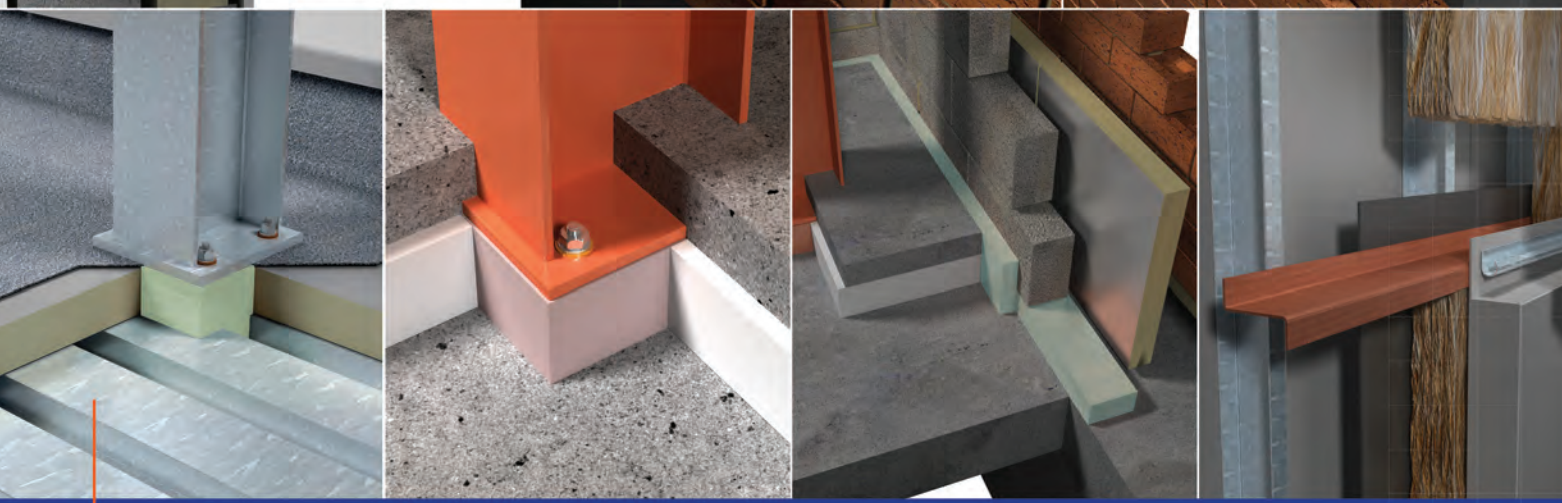
New – GaraPro Automation Kit + Door Package for just £949

Garador has also launched an all-in-one GaraPro automation solution, combining the renowned reliability of Carlton and Horizon up-and-over doors with the new GaraPro electric operator and framed retractable gear – all for just £949 + VAT, fully fitted.

Choose between two of Garador's most popular steel garage door designs – Carlton or Horizon – each engineered for strength, weather resistance, and low maintenance. Available in four sizes, the GaraPro complete

kit includes a GaraPro Operator with handset, framed retractable gear and fitted by the nearest garage door specialist. An optional Retractable Plus enhancement is available at an additional cost.

This exclusive offer is available through Garador's nationwide network of approved installers. To learn more, email **promo@garador.co.uk**, call **0330 4415 222**, or visit **www.garador.co.uk**.



armatherm.co.uk

ARMATHERM™
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THERMAL BRIDGING SOLUTIONS

Armatherm™ is one of the leading suppliers of thermal break materials for the construction industry. Our goal is to provide architects, engineers, and contractors with the knowledge and materials to effectively address thermal bridging issues. Armatherm™ thermal break materials have low thermal conductivity, high strength, and have been designed and tested in a number of load baring applications where they effectively reduce or prevent thermal bridging.

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Siderise passive fire protection installed on historic Manchester redevelopment

Siderise has provided a suite of masonry passive fire protection products for Waterhouse Gardens – an exciting five-tower development built on the historic former Boddington Brewery site in the heart of Manchester's city centre. Named after architect Alfred Waterhouse, designer of the Manchester Town Hall, the vibrant new neighbourhood by developer Salboy will provide 556 high quality homes, luxury amenities, and 31,000 ft² of commercial and retail opportunities, set across five towers ranging from 10 to 26 storeys. With a fire performance requirement for two-hour fire resistance on all towers, Siderise EWFS 120 Firestop, EWCB 30 Cavity Barrier and CT Cavity Tray were specified for the masonry elevations, and Siderise RH25 120 Cavity Barrier for horizontal protection of the rainscreen elements. This systemised approach helps to ensure continuous fire stopping and effective moisture management, all sourced from a single supplier to ensure complete compatibility. Additionally, the Lamella insulation core of the EW Cavity Barriers enables them to be friction-fit within the cavity with no concerns of it pushing out of place by compression or building movement.

01656 730833 www.siderise.com/project/waterhouse-gardens-manchester-uk

Taking care of wastewater and sewage: DAB launches new FXS submersible pump

DAB Pumps has launched the latest addition to its trusted FX range of wastewater pumps: the FXS, a robust, compact submersible pump designed for residential, commercial, industrial and agricultural applications. Built for lifting and transferring wastewater and sewage, the FXS combines the reliability contractors expect from the FX range with a more compact design that makes positioning and servicing straightforward. It features a non-clog screw impeller that delivers excellent hydraulic efficiency, performing reliably even in narrow pipework or systems prone to blockages. The FXS efficiently transfers wastewater containing solids thanks to its 50 mm free passage and meets EN 12050-1 standards for wastewater handling. Durable construction comes as standard, including a double silicon carbide mechanical seal fully enclosed in an oil chamber, an anti-corrosion stainless steel motor shaft and a hard-wearing two-component coating for great protection even in aggressive environments. The FXS uses a three-level structure that allows quick access to all key components. Spare parts are also universal across the FX range, simplifying service and reducing downtime.

0333 777 5010 www.dabpumps.com

Siderise safeguards Manhattan skyscraper

Siderise CW-FS120 Firestop for Curtain Walls is now being installed at 989 6th Avenue – delivering robust passive fire protection for this dynamic new 73 storey development. Siderise CW-FS120 Firestop was specified to provide floor-to-floor compartmentation, protecting the void space at the perimeter joint between the edge of the floor slab and the internal surface of the external wall assembly. It offers a third-party certified FT rating of up to three hours (resistance to fire spread and temperature rise on the non-fire side) when tested to ASTM E2307 as part of the CW Perimeter Barrier System.

01656 730833 www.siderise.com

School ventilation solutions exhibited

Breathing Buildings is set to showcase its complete ventilation solution of natural, hybrid, and mechanical ventilation for schools, colleges, and universities on stand 208 at the Education Estates Exhibition and Conference, taking place at the Manchester Central venue on 14-15 October 2025. Visitors will be able to learn more about Breathing Buildings' entire ventilation solution, and its service and maintenance options for schools, as well as being able to have some interactive fun while Breathing Buildings serves refreshments.

01223 450 060 www.breathingbuildings.com

Why modern wood burning stoves belong in Future Homes

Erica Malkin of the Stove Industry Association explains why modern wood burning stoves offer architects a low carbon, resilient secondary heat source for sustainable home design, and one which is now backed by policy.

As the UK moves toward net zero and the decarbonisation of domestic heating, architects are increasingly being called on to specify solutions that are not only energy efficient but which are also resilient, flexible, and futureproof. In this context, the role of modern wood burning stoves as a secondary heat source is rightly being reassessed, both in policy and practice.

Recent political developments have added renewed momentum to this shift. In Scotland, following public and industry concern, the Scottish Government reversed its proposal to restrict the installation of wood burning stoves in new build homes. Meanwhile, in England, Housing and Planning Minister Matthew Pennycook MP confirmed that modern stoves will be permitted in homes built to the forthcoming Future Homes Standard. Both announcements reflect growing recognition that modern stove technology has earned its place in sustainable building design.

A low carbon, local fuel source

When sustainably sourced and properly seasoned, wood is a 'carbon lean' fuel. Trees absorb carbon dioxide during growth, which is then released when burned, creating a relatively short carbon cycle. Unlike fossil fuels, which release long sequestered carbon, wood used responsibly supports a renewable model.

Most wood logs and other types of wood fuel are a by-product of sustainable woodland management or sawmill activity. Using this local fuel helps to support the circular economy, create rural jobs, and encourage biodiversity through active woodland stewardship.

Cleaner technology

Modern stoves are a world away from the smoky open fires of the past. Appliances that meet Ecodesign standards significantly reduce emissions, producing up to 90% fewer fine particulates (PM2.5) than open fires, and around 80% less than older stove models.

These stoves also deliver high levels of efficiency, with many achieving over 80%, meaning more heat is extracted from each log and less fuel is needed overall.

For projects in Smoke Control Areas or locations with strict air quality requirements, Defra exempt appliances ensure compliance and offer a low-impact heating solution.

Future Homes Standard

The recent confirmation by the Ministry of Housing that wood burning stoves will be allowed in homes built to the Future Homes Standard is a significant step forward. It confirms that these appliances can complement low carbon primary systems such as heat pumps, especially when integrated intelligently into modern building design.

A stove provides targeted heat in the main living space, reducing the load on central systems, improving user comfort, and enhancing overall efficiency. For rural homes, where electricity supply can be more variable and heat pump performance can fluctuate, a wood stove adds a layer of reliability that supports long term resilience.

Energy independence & resilience

As climate change and energy market volatility continue to challenge grid reliability, interest is growing in off grid capable home features. A modern stove operates independently of gas or electricity networks, providing consistent heat even during power cuts or fuel interruptions.

This is especially valuable in remote areas, but it's becoming a consideration for urban projects too. Stoves offer homeowners the ability to store their own fuel, avoid energy contracts, and reduce exposure to fluctuating energy prices, delivering both practical and psychological energy security.

Supporting local forestry

Specifying a wood burning stove isn't just a heating decision; it's a commitment to localism. Logs are typically sourced from within the UK through sustainable practices like coppicing or thinning. These woodland management techniques are vital to maintaining biodiversity, reducing the risk of disease, and ensuring long-term woodland health.

Architects specifying stoves contribute to reducing the embodied carbon of building services, support rural economies, and align with broader goals around local procurement and sustainability in construction.

Contemporary integration & flexibility

Stove aesthetics have evolved dramatically. Today's models cater to a wide range of architectural styles, from clean, minimalist lines suitable for modern interiors to more traditional formats for period properties or rustic schemes. Whether inset, freestanding or compact, there are options to suit virtually every design brief.

In airtight or highly insulated homes, modern stoves can be installed with an external air supply, allowing safe and efficient integration even in buildings built to Passivhaus or near-zero energy standards, while adding warmth and character.

Erica Malkin is communications manager at the Stove Industry Association

Modern stoves are a world away from the smoky open fires of the past

Modern comfort in historic walls

A building that is protected as a historic monument with modern radiant heating system? What may sound like a contradiction has become reality in a 1915 Amsterdam apartment – thanks to the **Uponor** Siccus 16 underfloor heating system. "This system is perfect for refurbishment projects," says installer Hans Steenbeek. "It installs quickly and requires no wet screed, heavy machines or noisy milling work. Our fitters can lay it directly on the existing floor, even on timber beam ceilings." The aluminium surface ensures even heat distribution, and the pipes are positioned just below the surface for rapid heat transfer.

info@uponor.com www.uponor.com/en-en

The opinions of the architectural community

As part of netMAGmedia's research offering, *ADF* has been increasingly harnessing the knowledge and views of its focused readership to produce 'Industry Viewfinder' white papers based on reader surveys. These are documents which contain unique insights and data on a wide range topics that are currently fuelling debate in the industry, from Passivhaus to Part L. This audience research, providing real-world experience, provides us with the opportunity to better understand the needs of our readers and tailor our content accordingly.

insights.netmagmedia.co.uk/whitepapers

FUHR strengthens security with a new automatic door locking solution

Experts in innovative door lock solutions, **FUHR** is launching the autosafe 837, an automatic multipoint locking system designed for buildings requiring automatic locking and monitored access. Paul Balfe, business development manager for FUHR UK, explains: "There's growing demand for added security within specific areas of a building – such as data centres or bank rooms containing sensitive information or assets." Paul continues: "The autosafe 837 guarantees automatic door locking via FUHR's DuoSecure technology which features a latch and hook bolt combination that securely engages every time the door is closed. Access is restricted as the outside lever handle is activated only by using access control or the cylinder key." Fail-secure as standard, the door remains locked in a power cut, protecting the space at all times. However, it can be configured to fail-safe in emergencies. The autosafe 837P also integrates a panic function, allowing safe escape and fire service access, if needed. Paul concludes: "As you would expect from FUHR, the autosafe 837 is capable of meeting the highest security standards, including PAS 24, and is also certified to EN 179 and EN 1125 for emergency and panic exit compliance."

pbalfe@fuhr.co.uk www.fuhr.de/en/products/multipoint-locking-systems/automatic/autosafe-837

Visitor access upgraded with TORMAX Automatic Entrance

Swaffham Museum is an independent social history museum providing a wealth of information about the locality. Creating disabled access into the building, **TORMAX** was recently contracted to install an automatic telescopic sliding door, maximising the available pass-through distance within the limited available space. Delivering smooth operation and exceptional reliability, the entrance is powered by the in-house designed, TORMAX iMotion 2202.A door drive. Being an historic building, Swaffham Museum needed to maintain the existing external entrance. TORMAX was able to install an elegant automatic sliding door within the existing set of folding doors, maintaining the heritage feature whilst improving accessibility for all visitors. Aesthetically unobtrusive the iMotion 2202.A door drive combines reliable AC motor technology with a state of the art microprocessor control system in a slender guide track with an installation height of only 100 mm. "TORMAX has a proven track record of delivering automatic entrances to historically sensitive locations," comments Simon Roberts, MD for TORMAX UK.

sales@tormax.co.uk

Cistermiser welcomes bold water industry reforms and focus on sustainable future

Cistermiser has welcomed the findings of the Independent Water Commission and the Government's commitment to fundamental reform of the water sector, including the replacement of Ofwat with a new integrated regulator. "We support this report and its focus on the pressing challenges facing the water industry – from leakage and pollution to long-term supply resilience," says Richard Braid, managing director at Cistermiser. "It rightly recognises the need for coordinated action from regulators, water companies, suppliers, manufacturers and consumers, while building on the ambition of the 2038 and 2050 sustainability targets." The report highlights the importance of smarter data use and more widespread metering – areas where Cistermiser's water management technologies play a vital role. "Solutions that identify inefficiencies, detect leaks early and support responsible water use will be central to the sector's future," continues Richard. "Our intelligent washroom controls and flow monitoring systems are already helping non-domestic buildings – from hospitals to universities – minimise water waste and support sustainability goals."

sales@cistermiser.co.uk www.cistermiser.co.uk

The natural and technological unite at the NQCC

The new £33m National Quantum Computing Centre (NQCC) in Harwell, Oxfordshire, is a landmark laboratory created to drive quantum technologies for the future. Not only is the facility state-of-the-art in terms of technology but also in design.

Rated BREEAM Excellent, architects Hawkins\Brown has conceived a dynamic and versatile work environment designed to deliver transformative results. At the building's heart are non-laboratory spaces full of open-plan areas for collaborative working, interaction and innovation. These are centred around a high linear atrium and link off to adjacent laboratories and the 12 quantum computers.

At every stage of the design and specification, careful thought and diligence was given to the choice of materials, ensuring that the building uses products which minimise its carbon footprint, harness natural energy and provide a calm and inviting space for its users. To control sound reverberation from the open areas and hard surfaces, Troldtekt's wood wool acoustic panels were specified as floating clouds above the open break-out spaces and within the meeting rooms. These effectively maintain acoustic levels, leading to a more productive environment and promoting a healthy indoor climate.

Troldtekt's wood wool acoustic panels are Cradle to Cradle Certified® at Gold level and manufactured using wood from certified forests (PEFC/09-31-030 and FSC®C115450), positively contributing to a building's BREEAM, WELL or LEED points. Panels can also be manufactured with FUTURECEM® which achieves an approx. 30 per cent lower carbon footprint than that of Troldtekt based on white cement. Depending on the panel specified, reaction to fire is classed in accordance with EN 13501 as B-s1,d0 or A2-s1,d0 respectively.

Available in a wide variety of different structures and colours, they combine optimal sound absorption with an award-winning design. The Troldtekt range has a minimum expected life cycle of 50 years coupled with excellent resistance to humidity and tested to meet ball impact standards. Panels can be supplied as natural wood, unpainted based on FUTURECEM™ offering a reduced carbon footprint or finished in almost any RAL or NCS colour.

Samples, case studies and technical guidance are available from Troldtekt's website or see product listings on NBS (https://bit.ly/3vxoTfq) or Material Bank (www.materialbank.eu).

sales@troldtekt.co.uk www.troldtekt.co.uk

A new angle on ceiling design

Material Source Studio in Manchester serves as a hub of innovation and inspiration for built environment professionals. Featuring installations from over 50 leading brands, the space offers a dynamic mix of product showcases, seminars, workshops, CPDs, and networking facilities. The studio is designed to foster creativity while providing a comfortable, collaborative environment for designers and architects.

When Material Source Studio sought to enhance its meeting room with a ceiling solution that would push the boundaries of traditional ceiling tiles and encourage collaboration across its partners, Zentia in collaboration with MSS partner, Light Forms, stepped in to deliver a tailored solution.

To meet the unique needs of Material Source Studio, Zentia was tasked with incorporating a ceiling solution that would tie in with the room's soft furnishing and create a cohesive visual appeal. A ceiling solution that could integrate lighting and remain acoustically sound was also required to ensure the installation provided practical benefits, including a comfortable co-working and networking atmosphere.

Material Source Studio wanted to highlight how successful collaboration between different manufacturers could result in a high-quality, bespoke product solution. For Zentia, a grid solution had to be devised that could include bespoke lighting from Light Forms as well as the installation of triangle ceiling tiles. Zentia proposed and delivered a bespoke solution featuring the DecoFrame Kit Classic Canopy, Gridline, and triangle tiles in a mixture of white and grey. Zentia's Solutions Design Manager, Nick Harper, created the design alongside providing the expertise and partnership working that Zentia is known for.

Key features of the solution included bespoke lighting, designed in collaboration with Light Forms, which complemented the overall aesthetic and functionality of the raft system. The raft was tailored to align perfectly with the size and space of the table beneath it, ensuring a balanced and cohesive look.

The meeting room containing the Zentia ceiling solution is positioned next to the kitchen and at the bottom of the main staircase meaning people were often walking past. The room is also primarily used to host presentations and board meetings, so an acoustically sound solution was essential. The DecoFrame Kit Classic Canopy, Gridline, and triangle tiles enhance the ambience, inspiring designers and architects while providing a comfortable, inviting atmosphere for collaboration.

0191 497 1000 www.zentia.com/en-gb

An education in colour

It is well known that colour can have a profound impact on building occupants; Dawn Scott at Dulux Trade explains how in educational environments, it can be used to enhance learning and wellbeing for students.

Across the built environment, colour is used to bring life to spaces and evoke specific emotions within building occupants. When used correctly, colour can be used to make students feel at ease in a high stress exam room or energised in the gymnasium. However, if used incorrectly, students' performance and wellbeing may be negatively impacted. For example, four experiments found that even briefly looking at the colour red before an important test, such as an IQ test or exam, impaired performance.

It is therefore vital that architects work closely with clients to determine what each space will be used for and how they want students to feel in that space. In doing this, architects can create colour schemes that place the occupant and use of the space at their centre, ensuring effective and inclusive designs that help students to thrive.

Psychology of colour

When used correctly, colour can improve behaviour and encourage creativity within educational environments. Every colour evokes emotion, so it is important to think about the use of the space when designing schemes. For example, pale blues and greens are often associated with relaxation and tranquillity. This means that they are ideal for high stress environments like classrooms, exam halls and medical rooms where calm and focus are needed.

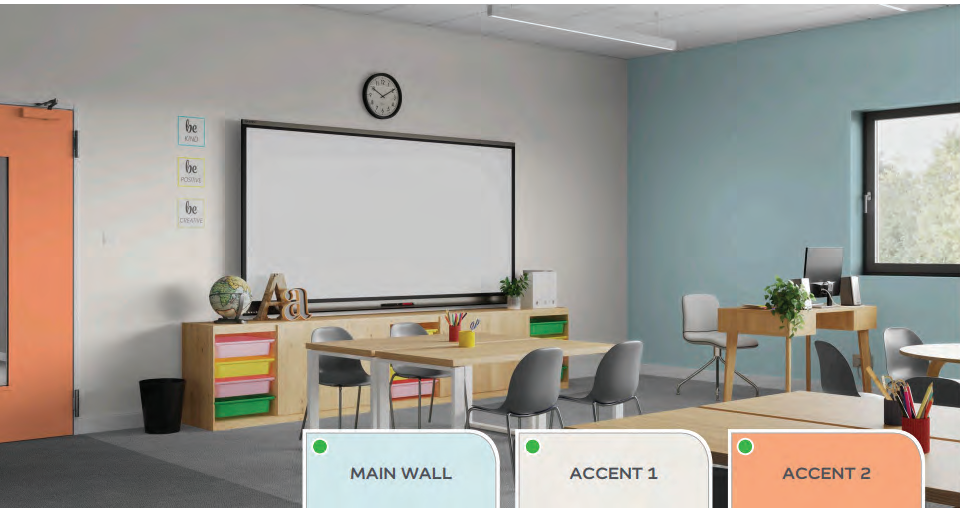
On the contrary, bolder hues like yellow and orange can bring a sense of energy and excitement and lend themselves to spaces like gymnasiums and canteens where energy and play are encouraged.

Ensuring inclusivity

Everyone is different, which means learning environments must be adaptable to suit as many needs as possible. While a calming, distraction free classroom design might work for some students, other learners may need a bolder colour scheme to bring out their creativity. As such, architects should consider offering options for students, with some spaces designed for focus and others for stimulation.

Creating visual contrast

To ensure everyone can move through a building as easily as possible, architects need to consider visual contrast across critical surfaces. Building Regulations Approved Document M, volume two and the British Code of Practice: BS8300-2:2018, which align with the Equality Act 2010, recommend that a minimum visual contrast of 30 Light Reflectance Value



Everyone is different, which means learning environments must be adaptable

(LRV) points is used for critical surfaces like walls, floors, ceilings and doors. This ensures these elements are clear and easy to identify.

To put this into practice, if the main wall is painted in a neutral colour, then the doors and door frames should be in a bold tone that has a minimum visual contrast of 30 LRV points. Contrasting colours can also be used to visually differentiate each building or floor, to help students quickly identify if they are in the correct location.

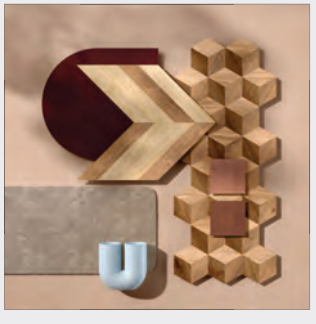
Colour tools can help

To help architects create compliant colour schemes that can improve occupant wellbeing and productivity, some manufacturers offer useful colour tools. Some allow architects to experiment with various palettes and visualise how colours will work together in a space. They can also explore curated colour schemes tailored to specific sectors, including education. Once the design is ready, architects can get an A3 mood board printed and delivered, allowing them to share their professional designs with colleagues, clients or building users.

In conclusion, when designing for education environments, architects must work closely with the client to determine what the space will be used for and who it will be used by. This will help them to identify the right tones that will evoke the desired emotional response from students and help increase productivity and wellbeing.

Dawn Scott is senior colour designer at Dulux Trade (part of AkzoNobel)

A floor to match your mood



Moduleo Moods luxury vinyl from **Unilin Flooring** is the standard for stunning bespoke flooring designs in hospitality and leisure, commercial offices, high-specification housing and retail. Through its multiple shapes and wood and stone effects, Moduleo Moods lets designers get creative with flooring. Whether subtle toned patterns or bold high-contrast statements, it can be used to elevate areas out of the ordinary. Unilin Flooring has now updated Moduleo Moods for a more accessible library of 70 patterns in new wood and stone effects. In designs such as Chevron Trio, Hexagon Cluster and Diamond Origami, Moduleo's designers have created a range of standard patterns that show the expressive, striking nature of Moods. Designers can also create their own pattern choosing from any shape in a combination from seven wood and five stone designs. Moduleo Moods has a 0.55 mm wear layer for use in commercial interiors, so it can be confidently used in high-traffic areas such as receptions and communal spaces. As a dryback luxury vinyl, Moduleo Moods can be used alongside Moduleo Roots tiles and planks, and can also be easily installed with Flex Pro Pure.

salesuk@moduleo.com pro.moduleo.com/en-gb

The first line of defence in social homes from Beauflor

With varied household needs and unpredictable maintenance, it could be argued that durability is the paramount criteria for selection, but the comfort and well-being of tenants are also important factor. **Beauflor** sheet vinyl floors are made to fulfil all of these requirements: affordable, durable, easy to look after, comfortable and in a wide range of calming natural designs, they are the ideal choice. For the best in durability, Xtreme and Phoni-Xtreme are two top-tier options for flooring in social homes. Featuring a 0.70 mm wear layer, these floors deliver impressive wear performance and can withstand constant use. In fact, with a Class 34 Very Heavy Commercial rating; you're unlikely to find a more durable option that's also as affordable. With a wear layer over twice as thick as domestic sheet vinyl floors and Beauflor's low maintenance Premium Coating, these floors resist scuffs, scratches and daily abrasion, reducing telltale signs of visible wear. The installation of Xtreme and Phoni-Xtreme also has advantages over similar looking modular floors like LVT or laminate. It's faster and with fewer joints to be compromised, less prone to damage and failure.

info@beauflor.com www.beauflor.com

Reporting on the future

Dorothe Kessels and Thomas Eurlings of Forbo Flooring Systems discuss how trend reports are helping to shape the future of design, helping architects create spaces that meet modern expectations and inspire creativity.

Trends are a crucial part of the architectural world, feeding into and influencing specification choices, as well as ensuring the buildings you are creating meet modern expectations. Whether it be design or functionality, it's important that as an architect or specifier, you are up to date with what is evolving in the industry. To aid this, many manufacturers will create their own in-house trend reports, which they use to curate product collections and meet market needs. Such documents can be a very beneficial tool, with in-house design teams using them to create new collections.

Making a trend report

First and foremost, it's key to analyse the trends in architectural development and the ways in which a specific product, like flooring, is being used by customers. By studying this information, design teams can build a clearer picture of what the current trends are and begin to form ideas of how they can support this. For example, if research were to find that there is a growing trend towards 'nature-inclusive' design, firms may incorporate this into upcoming product collections. This could involve a shift from cooler colours to warmer tones or developing patterns inspired by nature. Supporting this, they can look at how this is reflected throughout other building finishes, whether that be furniture, flooring or the materials being used.

Another effective way that design teams can gather trend information is by venturing out to trade shows and speaking to other interior finish providers, looking at what products they offer and what they're developing. By getting face to face with other manufacturers, designers can gain a more rounded perspective on the types of products that their offering will be used alongside.

Once these initial ideas have been gathered, it is time to examine and explore them in greater depth, both internally within the business and out to a wider panel of customers. By gathering customer feedback on the existing offering or asking directly what it is they need or want, design teams can get a much better picture of how they're able to support these requirements. Some teams will even go out and interview architects to learn more about their recent material specification experiences and their key 'wants' from a product collection.

To finalise new ideas and internal reports, designers will focus on developing

Natural materials, like wood and stone, remain a key and enduring design trend among architects

their ideas into a more streamlined range of products. Here, being mindful of the colours or building materials that are being used is key, ensuring new products support the methods of working which are currently used in the sector.

Benefits

The most obvious benefit of trend reports for architects and specifiers is to be supplied with a product that meets their needs and allows them, in turn, to satisfy their clients' needs. Whether that's to meet the design expectations they have, in terms of colours, patterns and materials, or tick the boxes for functional requirements such as acoustic performance, slip resistance, durability, ease of cleaning or installation.

For example, at Forbo we create our own trends report every two years, as well as compiling this into a global colourcard; these tools are used internally by our design teams to help create new collections and to ensure consistency across our extensive product portfolio. To showcase the crossover of its entire portfolio, a curated selection of colours, patterns and materials is translated into a mood. Each selection, or edit, tells a unique story connected to an overarching design theme, developed to inspire and excite architects and designers.

Current trends

Natural materials, like wood and stone, remain a key and enduring design trend. More specifically, the focus is on celebrating a material's inherent character shaped by its natural origins, rather than imitating nature. By harnessing bold, raw and refined designs that are tactile and expressive or make the most of history, the past becomes more accessible. Spaces are another key consideration; mainly, by creating spaces that are made with design in mind rather than functionality, designers can produce a flexible basis for various user scenarios.

By developing such trend reports, manufacturers can help customers by supplying on-trend products that fit not just aesthetic needs, but also functional ones too. It's important to note that trends can include more than just colours or patterns, but also more functional needs like installation methods or durability.

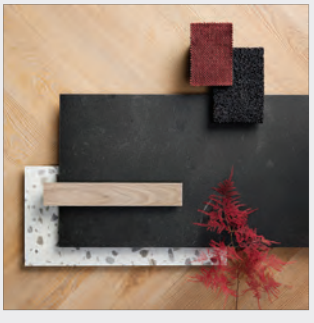
Dorothe Kessels is director of global design & Thomas Eurlings is a senior vinyl designer at Forbo Flooring Systems

HMG has floors covered with refreshed Floor Paint range

HMG Paints is making it easier than ever to choose the right floor paint for every job. The company has relaunched its Floor Paint Range, complete with redesigned packaging, a simplified selection process, and an enhanced colour offering – all created with the end-user in mind. The updated floor paint range helps customers quickly identify the right product for their specific needs, whether it's for light-use walkways or heavy-duty industrial spaces. The range has already been used on projects across the country by Belle Vue Aces, FC United, Arriva Bus and many more. The revamped range consists of three high-performance solutions, clearly segmented by usage and traffic levels: HydroPro Floor Paint – A water-based, low odour option for interior and exterior spaces with light to medium foot traffic; Polyurethane Floor Paint – A solvent-based, choice for light to medium traffic areas. Ready to use, quick drying and ideal for both internal and external use; 2K Epoxy HD Floor Paint – A heavy-duty, two-pack solvent-based system designed for internal areas with medium to heavy traffic. Delivers excellent chemical resistance and long-lasting durability.

0161 205 7631 shop.hmgpaint.com

Luxury vinyl with an aspirational touch



Moduleo Roots from **Unilin Flooring** is a luxury vinyl collection that makes the aspirations of specifiers and end-users possible. With 130 different floors that embrace the latest trends and celebrate the classics, Roots brings the ability to combine different styles and bring self-expression to the floor. Across six different worlds, decision makers can explore design options that connect to nature and bring the outside in, but it is the quality of each and every design that shines through. Oak grooves you can actually feel and cloud-like concrete colours that stir the senses: Roots is a collection that delivers beauty and emotion. For houses, hotels, retail shops and workplaces that are looking for the best in realism, then Moduleo's EIR (emboss in register) mimics texture perfectly, synchronised with the pattern in every grain, knot and marking for a floor that's true-to-nature. Soft and silent underfoot, as well as slip and water-resistant, Moduleo floors also come with improved scratch and stain resistance thanks to the ultra-durable Protectonite® finish. And with 0.40 mm and 0.55 mm wear layers, homeowners can choose their floor based on durability and area of use.

salesuk@moduleo.com pro.moduleo.com/en-gb

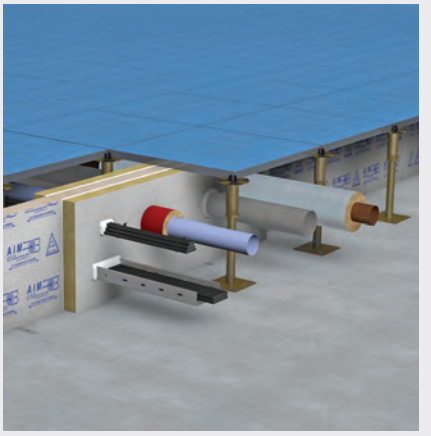
AIM raised access floor barrier system facilitates services

Installers are often faced with the challenge of maintaining fire barrier integrity when passing services through raised access floors. AIM – Acoustic & Insulation Manufacturing's new technical solution combines its Raised Access Floor Barrier (RAFB) with Rockwool Ablative Batts to provide a tested, cost-effective solution.

RAFBs prevent the passage of flame and smoke through underfloor cavities for at least the period of fire rating specified. The AIM RAFB is used to subdivide large uninterrupted cavities, maintain partition fire ratings when aligned under a partition, reduce flanking transmission of sound through underfloor voids and create plenum chambers.

However, passing services, including cable trays and pipes, through the RAFB can compromise the barrier's vital primary function if not completed in line with the manufacturer's standard tested details.

Now, AIM provides installers, specifiers, fire consultants and RAF system holders



with a solution. When penetration is required to pass services through the AIM RAFB, two Rockwool FirePro® Coated Batts, the same height as the AIM RAFB, are placed on either side of the barrier. The services are passed through both the RAFB and ablative batts with any small gaps around the penetrating component filled with Rockwool FirePro® Acoustic Sealant, pipe sleeves and pipe closers.

The AIM RAFB is tested to BS EN 1366-4 and the principles of TR31 and can provide up to 120 minutes integrity and insulation. The addition of Rockwool Ablative Batts, to allow services to penetrate the barrier, does not denigrate or reduce the overall fire resistance of the AIM RAFB.

An additional advantage of AIM's new solution is that the services do not need to be installed as the barrier is installed. The Ablative Batt and services can be installed at a later date providing a retrofit solution.

The AIM RAFB datasheet is available at www.aimlimited.co.uk/solutions/raised-access-floor-barrier

01293 582400
www.aimlimited.co.uk

Life Trade: A new brand from the Danesmoor Group

A new brand and offering from the Danesmoor Group, **Life Trade** provides reliable, high-quality and beautifully crafted complete kitchen and bedroom solutions. A trusted partner for KBB trade professionals, independent retailers and specialists, Life Trade is a one-stop-shop with a wide range of products and price points, supported by UK manufacturing expertise and personal service from end-to-end. Life Trade offers extensive design flexibility with a collection of over 30 kitchen door styles and 20 cabinet colours, alongside fully pre-assembled units complete with internals, fittings and frontals – with the aim to reduce site time and increase project turnover for partners. Unlike flat-pack or mass-market competitors, Life Trade provides premium, made-to-order rigid cabinets tailored to the customer's needs and a comprehensive product collection. With a focus on UK-based manufacturing, craftsmanship and care, skilled tradespeople ensure every partner is supported and every kitchen or bedroom is finished to the highest quality. Life Trade's team is always on hand every step of the way, alongside efficient delivery via dedicated logistics.

enquiries@life-trade.co.uk www.life-trade.co.uk

Procheck® A2 membrane delivers speed and performance on regeneration project

Occupants of Moda Living's 722-home build-to-rent scheme at Great Charles Street in Birmingham will soon enjoy the thermal comfort benefits of airtight building fabric, thanks to installation of the A. Proctor Group's Procheck® A2 membrane. The accommodation comprises a mix of one, two and three-bedroom apartments, including some penthouses. As of April 2025, work is well under way by Titan Interior Solutions (part of the Horbury Group) to complete the membrane installation as part of the full internal fit out package on blocks B and C of the project.

Internal airtightness line puts onus on product handling and ease of installation The 16-storey block B and the 5/6-storey block C of Great Charles Street both feature a concrete frame with brickwork finish. This is in contrast to the 39-storey block A, which features a facade build-up and is outside the scope of Titan Interior Solutions' work.

The external wall structure of blocks B

and C meant the airtightness line was specified internally. That has required the company to install an air and vapour control layer (AVCL) membrane to the internal face of the walls.

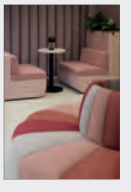
Procheck A2 is a vapour and airtight membrane. Its composition gives the membrane a high degree of vapour controlling properties, as well as being airtight, which allows its use as an AVCL and helps contribute to the thermal efficiency of the building due to its' reflective surface. It is also rated A2-s1,d0 when classified to BS EN 13501-1, meaning it is considered limited combustible with no contribution to fire and can be used in relevant buildings and those over 11 m / 18 m.

Better handling and faster installation make a big difference on a large project like Great Charles Street. With an internal airtightness line, installers had to work around a lot of penetrations, including ducts, pipes and brackets. Thorough checking of work has also played a significant role in the delivered results.

The change in product and the approach to quality control has so far paid dividends. Finished apartments that have been airtightness tested have averaged a result of below 2.0 air changes per hour (ACH) at 50 Pascals pressure. It gives an indication of the performance and thermal comfort that eventual occupants can expect to enjoy.

01250 872 261
proctorgroup.com/products/procheck-a2

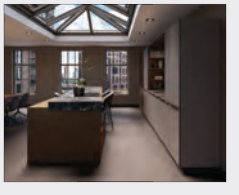
Altro adhesive-free is flexible choice



Altro Illustra adhesive-free flooring was the perfect choice for JDD Furniture's full refurbishment of its flagship showroom. The manufacturer of hand-crafted, meticulously-executed workspace furniture was looking for flooring with strong aesthetics, performance, flexibility and sustainability credentials for its Birmingham Jewellery Quarter showroom. Joe Duffell of JDD says: "We chose Altro Illustra adhesive-free for its versatility and hard-wearing attributes. The natural visual textures complement the hand-crafted wooden structures we use to provide a soft, warm and welcoming feel to all our products."

enquiries@altro.com www.altro.com/uk

Elegant Evia from Keller



Keller Kitchens has expanded the popular Evia Ultra Matt range by adding new colours from the 2025 Master Collection. For the first time, Evia is available in the full palette of Silk, White, Mist, Loam, Clay, Fossil Grey, Graphite, and Carbon. Fossil Grey is the standout newcomer and is already a customer favourite. Beyond the aesthetic appeal, Evia's ultra matt surfaces are protected with fingerprint-resistant technology, helping to keep that sleek, velvety finish looking fresh day after day.

www.kellerkitchens.com

The point of WCs in BREEAM

David Davis of MEP engineer G&H says that with BREEAM remaining a well-used method for assessing sustainability goals, choosing the right product choices for earning points needs to be a prority, and why toilets are a key component.

Achieving higher levels of BREEAM rating can prove to be challenging and expensive, but additional points can often be earned by specifying water efficient toilet systems, which can significantly contribute to a building's overall sustainability performance.

The Building Research Establishment Environmental Assessment Method, better known as BREEAM, is now a key go-to framework that provides a sustainability assessment for building and infrastructure in new builds, refurbishments, and fit-outs. The certification allows for a consistent and comparable view across the entire built environment lifecycle, with ratings ranging from 'Acceptable' through to 'Outstanding.'

Embedding this framework in the build process over the past 35 years has been highly effective, ensuring that architects seek additional BREEAM points where possible to improve building ratings. Achieving an 'Acceptable' status is relatively easy to obtain, but striving for 'Outstanding' requires a change in habits and can be expensive.

The BREEAM Wat 01 calculation considers 'Water Consumption,' focusing on reducing the demand for potable (drinking) water through the provision of efficient sanitary fittings, rainwater collection, and water recycling schemes. BREEAM Wat 01 Water Consumption credits are based on percentage improvement over baseline building water consumption. A 12.5% improvement earns one credit, and the range increases up to six credits for a 65% improvement. For toilets specifically, refer

BREEAM encourages sustainable water use in the operation of a building over its lifetime

Whichever toilet system you decide is right for your next project, make sure you ensure it contributes to increasing your building's BREEAM rating

to the table below from the BREEAM UK New Construction Technical Manual (SD5079, version 6.1). This manual contains all the relevant credit calculators.

Specifying some of the new washroom innovations can therefore help increase the score by up to six points, and it doesn't have to be expensive. Let's look at the options. Most toilets are now available with a low flush or dual flush cistern, capable of flushing a toilet using less than six litres of mains water. Most dual flush toilets offer a 6/4 litre flush, some go down to a 4/2.6 litre flush. Most sanitaryware manufacturers list the performance of their products on the Unified Water Label (UWLA) website, offering an easy reference guide for specifiers.

BREEAM encourages sustainable water use in the operation of a building over its lifetime, so be aware that while many claim to save on a six litre flush, best practice is to monitor that they deliver that performance. The BREEAM technical manual assumes one full flush for every three reduced flushes on non-domestic buildings as part of the calculation for water conservation. However, research has shown that many users don't understand the purpose of the two buttons on a dual flush toilet, and some public toilets attempt to 'educate' users with signs suggesting that both buttons should be used to flush the toilet, thereby defeating the initial promise.

Direct flushing toilets, which don't require a cistern, are another option. Designed to suit highly frequented public toilets, this option is more expensive but, having brass valve components, can offer lower maintenance costs. While they are available as a 6/3 litre dual flush, saving water, theyy are also designed to reduce the risk of leaks, another sustainable advantage. Such direct flushing toilets however require a wider diameter water outlet, so tend to be the preserve of new builds or major renovations, not for retrofit.

Under BREEAM assessments, specific toilets, such as vacuum toilets, claim to reduce water consumption by 85%, with flushing usage of around 1-1.5 litres. They are a solution with some compelling benefits, and there is no doubt about their water saving performance and 'close to flush' hygiene benefits. But again, the positives in BREEAM points achieved need to be balanced with a higher unit cost, a need for a dedicated water supply, extra space for equipment, and lastly, an electrical power supply.

A more recent innovation we have been using (eco-cistem) seems to offer many advantages. It is a component of the toilet, rather than a complete system, so it can be paired with any brand of sanitaryware. The toilet cistern uses the waste condensate water created by the building's air conditioning units to flush the toilet. It can therefore only deliver its fresh water saving benefits if paired with an air con unit within the building. However, BREEAM points can be gained from specifying it not only due to its reduced flush volume, but also because it uses a grey water source, both of which factor into the credit calculation. Exact amounts of grey water used within its installation can also be easily monitored.

This toilet cistern has an 18 litre twin chamber cistern that can store up to 12 litres of free condensate water above a standard six litre chamber dedicated to flushing the toilet. The unit prioritises using the grey water for flushing and only pulls in fresh water when no condensate water is available, therefore ensuring an efficient flush each time with no reduction in performance if the aircon system is not in use. The installation requires that the pipework, which drains away the condensate from the aircon unit, be diverted to go into the cistern instead of straight into the waste pipe, which in most cases is a very simple diversion to plan.

The amount of condensate produced by air conditioning units will vary based on usage by country. However, even in the UK, the forecast for air conditioning unit sales is dramatically on the increase and considering a small 1.75 kW air con unit can produce over a litre of water per hour, installation will always make a substantial saving on freshwater usage. Monitors in two hotel installations in Europe have demonstrated 64% peak water savings, making them eligible for BREEAM points under WAT 01 and earning up to six points in the LEED water efficiency category. There is a slight increase in cost to use this cistern option, so that also needs to be taken into account.

When looking at which toilet system is right for your next project, it is vital for architects to consider whether or not it contributes to increasing your building's BREEAM rating.

David Davis is a director at MEP engineering firm G&H

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