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Neil Jeffery of Franke Water Systems takes a look at some of the key trends in commercial washrooms, from product design and materials to sustainability

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FROM THE EDITOR



he new Housing Secretary Robert Jenrick has joined Oliver Letwin's offensive on poor quality house design, promising system-wide changes to the "broken" planning system to try and leverage quality. He is promoting a package of measures in the wake of the National Design Guide which he launched at the Stirling Prize ceremony in October, and which has received less than a glowing response from the architectural community so far.

However, Jenrick is not explicitly targeting architects delivering poor design, but large developers, many of whom do not use external architects for housebuilding. A survey by architect Robert Guy at Bristol practice Arturus found in 2015 that the top 25 housebuilders directly employed a grand total of 46 architectural firms, with three practices making up half of that list.

The Secretary of State says he will shortly unveil a planning White Paper (based on the Letwin Review into housebuilding) which will radically reform the "exceptionally complex and convoluted planning system" that has developed over the past 75 years. Jenrick said he was welcoming comments from industry.

He was putting the focus on community involvement as well as industry, saying that the White Paper would attempt to make the system work for "consumers who interact with it," small builders "of which we need far more," as well as large developers.

Few would argue with those precepts, however the Housing Department's 'model design code,' due to be issued in the new year nationally and then rolled out locally, is likely to be where the battles emerge in the architectural sphere. Guidance is to be welcomed, but the more prescriptive (and therefore potentially useful on the ground) it is, the more it's likely to raise questions. One hopes it's been properly consulted on within the industry.

Each local authority is going to have to create its own code based on the national model, incorporating local architectural traditions and community viewpoints. This is obviously a sensible concept, however rigour in ensuring that quality reaches a general benchmark might be at risk of disappearing in a fog of focus groups, where construction and architectural knowledge might come second to potentially more subjective concerns.

The big question of course is whether the quality can be preserved across the board when the numbers required are immense, particularly in London, which the ONS estimates needs 844,000 new homes by 2041. Fewer than 54,000 have been built in the previous two years. Across the UK, new private housing numbers fell over the summer, driven by Brexit uncertainty, but the industry is struggling to get near the 300,000 home target.

Modular could be the answer which delivers on both the quality and speed fronts, and it's being adopted in various pockets of the industry. However, whether the mainstream housebuilding industry wants to, or can adapt to such a big shift in its supply chain in time, is doubtful (law firm Pinsent Masons reckon around 15,000 of the current 200,000 homes built annually are modular). Jenrick may find that builders need much more financial as well as design guidance.

James Parker Editor



ON THE COVER...

intu Watford by Leslie Jones Architecture has undergone a major extension and refurbishment to give visitors a new exciting and even uplifting experience by incorporate leisure amenities.

For the full report on this project, go to page 37





STIRLING PRIZE

Passivhaus council estate in Norwich wins 2019 Stirling Prize

The Royal Institute of British Architects (RIBA) has named Goldsmith Street in Norwich, designed by Mikhail Riches with Cathy Hawley, as the winner of the 2019 RIBA Stirling Prize.

Goldsmith Street is comprised of just under 100 ultra low-energy homes for Norwich City Council and is arranged in seven terrace blocks, modelled on the Victorian streets of the city's nearby 'Golden Triangle' district.

Rows of two-storey houses are bookended by three-storey flats, each with their own front door, lobby space for prams and bikes, and a private balcony. The back gardens of the central terraces share a secure 'ginnel' (alleyway) for children to play together, and a wide landscaped walkway for communal gatherings runs perpendicularly through the middle of the estate. Parking has been pushed to the outer edges of the development, ensuring that people "own the streets, not their cars."

Goldsmith Street meets rigorous Passivhaus environmental standards – remarkable for a dense, mass housing development. It is a passive solar scheme, designed to minimise fuel bills for residents (annual energy costs are estimated to be 70 per cent cheaper than the average household). To maximise solar gain, all homes face south and every wall is over 600 mm thick, and the roofs are angled at 15 degrees to ensure each terrace does not block sunlight from homes in the street behind. Even the smallest details have been meticulously considered: letterboxes are built into external porches, rather than the front doors, to reduce any possibility of draughts; and perforated aluminium brise-soleil provide sun shades above the windows and doors.

The palette of building materials references Norwich's history, such as the glossy black roof pantiles – a nod to the city's Dutch trading links – and the buildings' cream-coloured clay bricks, similar to Victorian terraces nearby. To ensure the windows echoed Victorian proportions but also met Passivhaus requirements, the architects developed a recessed feature, giving the impression of a much larger opening but limiting the

amount of glass. Bespoke steel mesh garden gates and brightly coloured front doors give each home a strong sense of individuality and ownership.

The 2019 RIBA Stirling Prize judges, chaired by Julia Barfield, said, "Goldsmith Street is a modest masterpiece. It is high-quality architecture in its purest most environmentally and socially conscious form. Behind restrained creamy facades are impeccably detailed, highly sustainable homes – an incredible achievement for a development of this scale. This is proper social housing, over 10 years in the making, delivered by an ambitious and thoughtful council. These desirable, spacious, lowenergy properties should be the norm for all council housing."

RIBA President Alan Jones said, "Faced with a global climate emergency, the worst housing crisis for generations and crippling local authority cuts, Goldsmith Street is a beacon of hope. It is commended not just as a transformative social housing scheme and eco-development, but a pioneering exemplar for other local authorities to follow."

EVENTS

AWARDS

Structural Awards 2019
15 November, London
www.istructe.org/structuralawards

CONFERENCE

2019 RSAW Annual Conference 26 November, Cardiff www.architecture.com/whats-on

EXHIBITIONS

Beyond Bauhaus - Modernism in Britain Ends February 2020 www.architecture.com/whats-on

FESTIVAL

World Architecture Festival 04 - 06 December, Amsterdam www.worldarchitecturefestival.com

SEMINARS

RIBA Conservation Course 21 - 29 November, London www.architecture.com/whats-on

TRADE SHOWS

Homes UK 27 - 28 November, London www.homesevent.co.uk

London Build 27 - 28 November, London www.londonbuildexpo.com

AWARDS

Cambridge Mosque comes out on top at Structural Timber Awards

With 16 categories, nearly 250 entrants and over 70 companies shortlisted, the judges for this year's Structural Timber Awards reportedly had an "onerous job" in selecting the winners, said the organisers. The big winner on the night was Cambridge Central Mosque, by a team consisting of timber engineers Blumer-Lehmann AG, contractor Gilbert Ash and Marks Barfield Architects, which scooped the Winner of Winners award.

With a design inspired by both Islamic and English religious architectural traditions, the building features innovative glulam timber forms comprising a 'forest' of tree-like columns. One of the judges described the project as "a remarkable building that pushes the boundaries of glulam design, manufacture and assembly into wholly new areas that suggest huge potential for new building forms to be developed using laminated timber construction methods and products. Rarely do buildings as innovative as this come along and the achievement would certainly justify the accolade of project of the year."

The head of the judging panel and chief executive of the Structural Timber Association, Andrew Carpenter commented on the awards: "The depth of expertise across all categories was impressive and the





exceptional number of entries clearly demonstrates the upturn in the industry. The Structural Timber Awards is a high-point in the construction industry calendar and it is truly inspiring to see so much activity in the sector." The ceremony was held in October at the National Conference Centre, Birmingham.

BOOK

Making our buildings work to achieve global environmental ambitions

EnerPHit, pioneered by the Passive Haus Institute, is the gold standard of performance for existing buildings. James Traynor's practical guide to EnerPHit, published by RIBA, provides architects and designers the tools to retrofit our existing buildings to demonstrate what is possible and help the UK meet its crucial carbon reduction commitments.

RIBA commented: "To meet the ambitious target of reaching carbon zero by 2050, or much earlier, building

owners across the UK will be required to upgrade their buildings to adhere to increasingly stringent energy performance requirements.

"So far, there has been no clear advice from UK Government on how these requirements can be achieved, but the EnerPHit standard offers a very clear methodology.

"Nearly 20 per cent of UK carbon emissions are attributed to the heating and cooling of buildings. By tackling inefficient stock, we can address both carbon emissions and fuel poverty, while providing improved thermal comfort and a healthier environment"

By equipping the reader with key information on EnerPHit, the book aims to give both architects and policymakers a "practical understanding of the most effective benchmark for building performance." Including a range of case studies, it enables architects to "understand how to achieve successful outcomes that are tailored to suit available budgets and programmes."

The publishers conclude: "At a crucial time for the planet, its environment and us, architects and designers have an unprecedented opportunity to make vital changes to the way we live, to be able to successfully meet the climate change challenges facing us."

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CLIMATE CHANGE

Assael becomes first architectural practice to join UN's Climate Neutral Now initiative

Assael Architecture has become the first practice in the UK to sign up to the UN Climate Neutral Now initiative, binding the studio to measure, reduce and offset greenhouse gas emissions going forward.

As a signatory of the UN-backed initiative, Assael Architecture must calculate and disclose the practice's current carbon footprint, including international air travel, and show a "clear pathway" to reducing it year on year. The practice has set a target to be operationally carbon neutral from late 2019.

The current carbon emissions of the practice are then offset financially using UN certified emission reductions (CERs), where Assael Architecture can choose specific projects to support. The project that Assael has pledged to support through the CERs programme is the creation of a hydroelectric power station in Chile, South America.

The UN-certified CERs are carbon credits generated by climate-friendly projects vetted by the UN following rules approved at intergovernmental level and with international oversight, providing a high level of credibility to the offsetting regime.

To help bolster the practice's fight against climate change domestically, Assael has been rolling out a range of initiatives internally to help curb their emissions. These include achieving and maintaining the IS014001 certification, supporting staff cycling schemes, encouraging international video conferencing over international flights and extending the audience of their annual Green Week, where industry leaders gather at the Assael offices to discuss sustainability.



RESIDENTIAL

Baca Architects achieves planning consent for Christchurch resi project

With flood risk being the primary danger to waterfront homes across the UK, Baca Architects has won the go-ahead for two new houses on Christchurch waterfront in a decision that not only "reflects the firm's exemplary approach to flood resilient design," said the firm, "but also overcomes an inherent flaw in national planning policy on building within floodplains."

The houses feature "the latest in sustainable architecture," said the firm. Manufactured offsite, these highly insulated homes are designed to have low carbon footprints and quick assembly.

The interiors, said the firm, will be "bathed in sunlight" and generous balconies will provide shade to full-height glazed windows that afford panoramic views out over the estuary. All bedrooms are located above ground level while the living room, kitchen and dining room are approximately 2.5 feet above the external ground level and outside the flood plain.

All electrical services will be brought in from the first floor and all electrical sockets will be raised. Windows and doors will allow water control and safe egress at multiple locations around the building. In the event of a flood, and should water enter

the ground floor, the internal construction is designed to be resilient to water and to enable effective cleaning and fast recovery.

BACA said the scheme – the first of its kind under the recent changes to National Planning Policy Framework (NPPF) – "challenged the effective prohibition on homeowners, developers and local authorities to re-build innovatively and safely on sites where pre-existing housing stock had already suffered, or was likely to suffer, flooding."

The site is currently designated an area of low flooding risk but is calculated to progress to one of high risk over the next 100 years, and the client wished to replace two dilapidated bungalows with two flood-resilient homes.

While the proposal offered significant improvements in terms of safety onsite, improved onsite drainage and no net increase of development in the flood plain, the project ran into a major obstacle due to changes to the NPPF in 2018, explained the architects. "These aimed to put an end to new waterfront housing developments but in doing so also posed a direct problem for owners of existing waterfront or flood plain homes seeking to protect their properties."



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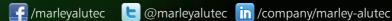
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AWARDS

Autism centre wins RICS 'Project of the Year'

Over 90 of the UK's "community beneficial" schemes went head-to-head for top national accolades at the RICS Awards Grand Final in October, with the UK's first purpose-built centre for the diagnosis, support and research of autism taking the UK Project of the Year title.

The annual awards ceremony "celebrates the UK's most inspirational built projects that are having a significant positive impact on the communities they serve."

The £18m Caudwell International Children's Centre (CICC), set in the grounds of Keele University in Newcastle-under-Lyme, won the Design through Innovation accolade, before gaining the overall UK Project of the Year title for demonstrating "outstanding best practice and proving to be of monumental benefit to its local area and wider economy."

The CICC is transforming the way

people with autism in the UK, and their families, can be helped while also helping to dramatically reduce the waiting time for a diagnosis.

With a 'butterfly' shape roof, the CICC offers inclusive design and sensory features – including curved corridors, colour changing lighting and acoustic control measures – to reduce anxiety for visitors with neurodivergent conditions. It is also attracting worldwide talent in the field of autism thanks to its pioneering research and diverse range of support services for people with the condition.

Earlier this year the landmark building won the 'Design through Innovation' category award as well as the 'Project of the Year, West Midlands' title at its regional RICS heat, which led to the project being automatically entered into the national RICS Awards Grand Final.



RICS Grand Final Judges commended the project team for their collaborative and co-ordinated approach to deliver what they described as an inspirational building of distinction, on time and within budget, while exceeding UK accessibility and sustainability standards.

Chair of the national RICS Judges, David Brooks Wilson FRICS, chairman and CEO at Noble Wilson said, "The average waiting time to be assessed for autism is at least two years, but the CICC aims to help families get a diagnosis within just six weeks. This allows the CICC to provide vital early support services to children with autism and hope for thousands of families that may otherwise have had to wait years for a diagnosis and help in understanding their child's behaviour."

RESTAURANTS & BARS

Boxpark's Shoreham Beachbox plans get the green light

Development company Boxpark has received planning permission to create a landmark seafront dining destination and community cafe on Shoreham Beach.

The Brighton-based firm received approval to create the Shoreham Beachbox at a meeting of Adur District Council's Planning Committee.

It will see a run-down toilet block transformed into a contemporary multi-purpose split level cafe-restaurant with a paved outdoor seating area and roof terrace with coastal and countryside views.

Public toilets will be retained and upgraded within the building while changing rooms, a centre for water sports and community space for up to 90 people will be made available to local groups.

Speaking at the committee, developers

said the coastal setting had inspired the design of the building with the intention of delivering the "best beachfront cafe-restaurant in the UK."

Councillor Brian Boggis, Adur District Council's executive member for Regeneration, said, "There is no doubt that Beach Green is a special place and, providing this new exciting venue is managed correctly, the Shoreham Beachbox can bring immense benefits to our area."

When complete, it is expected that about 25 jobs will be created while developers have made a commitment to use local contractors.

Roger Wade, CEO and founder of Boxpark, said, "Our intention from the start has always been to create the best seafront cafe-restaurant in the UK. With planning approval granted we have now



taken a large step forward to achieving that ambition. We now commit to working with the community to make sure we deliver on our promise.

"I'm confident that our plans will transform this site, turning a run-down block which is a hub for antisocial behaviour into a vibrant destination cafe-restaurant which will put Shoreham Beach on the map."

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VIEW POINT



The Government's announcement that £13bn will be spent on healthcare projects, including six new hospitals, is an opportunity for a radical rethink about health and the built environment, says 'social entrepreneur' Lord Andrew Mawson



BROMLEY BY BOW

Renowned in healthcare design circles, the Bromley By Bow Centre in east London is regarded as an exemplar of an integrated health and social enterprise

The NHS is in a mess, the siloed machinery of the state is outdated and broken. Hospital sites across England are cluttered with buildings which have depended on NHS five year cycles for years, enabling the well meaning architect to earn a crust, but too often leave behind a depressing, fragmented built environment. Frankly, I feel ill whenever I walk on to hospital sites in the areas we are working in.

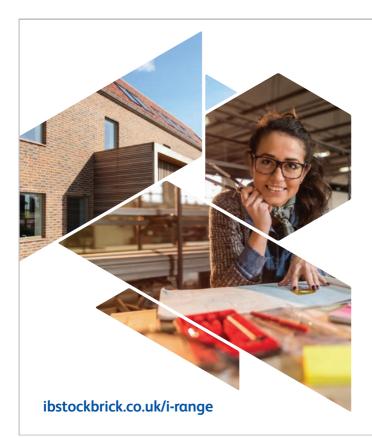
But now there's a golden opportunity for a new approach. My colleagues and I at the Bromley by Bow Centre in the East End of London have been at the cutting edge of the integration and 'place making' agenda for 35 years. We are generating a national and international movement, and infecting NHS culture – encouraging new thinking linking health, cultural transformation and entrepreneurship.

Last year we welcomed leaders from 23 countries to see our buildings and their operating culture. Four years ago, the CEO of Public Health England asked me to take our experience into 10 towns and cities in the north of England, through the Well North programme. This has now evolved into a new social business which is called Well North Enterprises.

In the health projects we have built, the

architect has always been an integral partner. We have encouraged them to challenge traditional NHS briefs, engage with local people and explore with us the fundamental questions about how, why and by whom buildings will be used.

As social entrepreneurs we are also bringing the private sector on board, working with leading practices like YEME Architects in Bradford, led by Amir Hussain, and Ibstock plc, who are rethinking their role in a changing industry. These firms are at the cutting edge of the placemaking agenda. We are encouraging a programme of Corporate Social Opportunity (CSO), seeking 'win win'





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SOCIAL SPACE

The courtyard at Bromley By Bow is one of the features that helps the building feel "more like a monastery than a primary care centre"

opportunities, both economic and social, with businesses.

Our prescription for the future

If we are to have an NHS in 70 years' time, we suggest the following steps, based on hard-won practical experience in east London, and emerging experience in areas across the country covered by Well North Enterprises.

First, design teams must return to the fundamental question raised by the Peckham Experiment in 1948, "what is health?" The NHS closed this amazing and well-designed building in 1950 [the Pioneer Health Centre, where the groundbreaking project was based], saying that its services would now be

delivered by them. They were wrong. Our integrated team discovered many years ago that 50 per cent of patients who used the local GP surgery in Bromley by Bow did not have a biomedical problem, they had a housing, education or employment problem, or they were simply lonely. We're finding similar percentages in the north of England today. The Bromley by Bow Centre is Peckham mark II, but this time with a business plan.

Secondly, we should stop designing and building new health centres. Today Bromley by Bow offers a vast array of services to our local community and 40,000 patients, in buildings and gardens that feel more like a monastery than a primary care centre. They

In the health projects we have built, the architect has always been an integral partner

stretch from conventional healthcare for local residents, to opportunities to set up your own business or work with artists, and from support with tackling credit card debts to help with learning to read and write and scaling the career ladder.

Architects should stop designing and building health centres yes, but that is not to denigrate clinical health. On the contrary, we need to design imaginative integrated buildings that position clinical health within a broad range of services that drive well being in communities. Buildings should encourage a locally blended offer, where doctors sit alongside others, including patients and local residents, to provide what people actually need. It's not about 'what's the matter with you,' it's all about 'what matters to you' – quite different.

Our health centres should be more like a John Lewis store, where the customer is welcomed in, and offered a host of choices. Successful department stores know that a diverse product range makes complete sense for the customer and financial sense for the business – and design their stores accordingly. It is the same principle in integrated holistic centres, where health is about life and living, not just disease and illness.

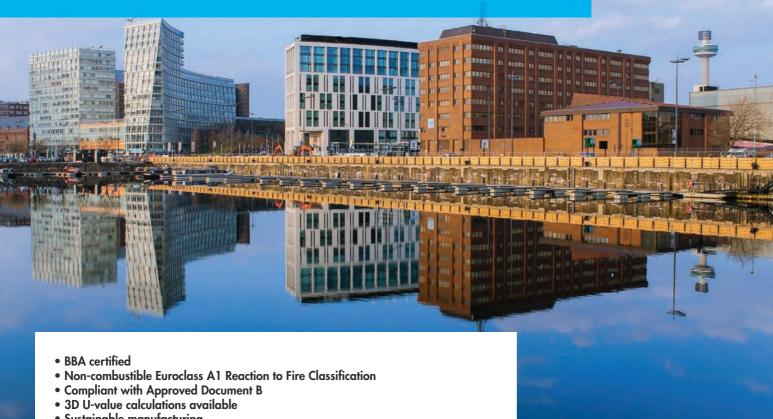
Whether in the NHS or wider society, it's about developing integrated communities. We have built hundreds of projects, focused around health, housing, education and business enterprise. We run site visits entitled 'A Place, A Street, A City' showing what can be achieved and introducing the local people who did it with us.

We are breeding a massive dependency culture in the NHS in an institution that is far from well, aided and abetted by architects. Architects need to help us drop the sentimentality about the NHS and return to the fundamental question: what is health in our increasingly fragmented modern society? Our buildings need to reflect a joined-up world where the campus or cluster becomes the integrating norm and people and relationships matter more than process, strategies and plans.

Lord Andrew Mawson OBE is an Independent Crossbench Peer, and chairman of Well North Enterprises







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PRACTICE PROFILE



T Sakhi

A practice run by two sisters, T Sakhi is embracing the challenges as well as potential of their home city, Beirut, in order to make architectural interventions which help improve urban living in a difficult context

Based in Beirut and Milan, T Sakhi is an architecture and design studio co-founded by Lebanese-Polish sisters Tessa and Tara Sakhi, whose stated aim is to produce "designs that provoke new modes of human interaction, questioning our contemporary understandings of identity and living."

The manifestations of this intriguing – and artistically interpreted – proposition have recently included a "series of urban interventions" across the formerly war-torn city the firm calls home. The project, called 'Holidays in the Sun' saw the firm making a similarly empowered stance to the ironic Sex Pistols song it alludes to, turning the metal security barriers seen all over Beirut into stools and housings for greenery.

The project was an attempt to bring some respite to the citizens of a city not only rife with political instability, but also unfinished construction projects. The practice notes: "The only real public spaces in Beirut are the streets; the city is over-constructed, congested with buildings and construction sites. There is barely any greenery for the citizens to enjoy or to feel free in their own city."

T Sakhi's work gives the local community a chance to engage with what public space there is.

Origins

The firm's genesis occurred "very organically," says Tessa Sakhi. From their time studying for their degrees together, they have enjoyed collaborating on projects. "When our first client came to us (for an interior project), it was only natural to start working on it together. We haven't stopped since then," Tessa explains.

A couple of projects later, in 2016, the sisters decided to set up their own studio, "while maintaining a flexibility for our common and separate interests." Tara admits that their diverse range of skills – centred around architecture but extending into a myriad of creative endeavours – could be a double-edged sword: "In the beginning, people often asked us whether we were architects, designers or artists. Our response was we simply do what we love and what moves us. We are curious to intersect our different interests and watch the results."



FLEETING HEARTS

A transportable structure transforms a Beirut seaside landmark into an open air club © Tony Elieh



HOLIDAYS IN THE SUN

A series of 'urban interventions' brought Beirut citizens greenery as well as furniture © Tony Elieh

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ADAR

For Adar, a restaurant set in a historic Parisian district, T Sakhi wanted to represent Middle Eastern culture through "scents, colours, materials and filtered light"

© Romain Bassenne

T Sakhi puts the emphasis not on different 'disciplines' but rather on "ways of thinking," says Tara, expressed in architecture, product design, installations or even film. Her sister Tessa adds that they enjoy working with craftsmen, designers, musicians, sculptures, writers, and filmmakers, to "enrich the experience of each project," and asserts that they are "fascinated by imperfections, and traces of time on materials, as a benefit."

Clients from a range of sectors have bought into their vision, from pop-up nightclubs to high end restaurants, to private residential projects. Further examples include a glass-blowing workshop in Murano, Italy, and an 'ecstatic experimental dancing space' in Tulum, Mexico. Further raising its international profile, the practice has created its first Lebanese pavilion for the fifth edition of Dubai Design Week's Abwab's architectural exhibit, taking place this month. Tara explains that it will consist of an "interactive wall portraying the socio-political barriers in our society," which will mean a "psychological and physiological journey for visitors."

Sisterhood

Tessa admits that in their early months as a duo, despite their close relationship, "it was challenging to work together, because there were no obstacles or boundaries established between us as sisters." She adds: "It took us a couple of years to understand and calibrate the dynamics of our working duo and to establish healthy boundaries to be inspired and productive."

However, she says that their shared upbringing "helped us acquire a similar way of thinking and adapting to certain situations, as we lived through the same experiences." The studio benefits from integrating their distinct interests outside building design – Tara's passion being films and photography," Tessa's being "social and humanitarian practices."

When defining a concept for projects, they brainstorm separately, then present the ideas to each other. They then interrogate these collaboratively, and "bounce back and forth our inspirations and drawings until we are both ready to present it to our clients," says Tessa. Tara adds: "It is interesting to observe how two different inspirations can merge into one solid idea."

They are both constantly travelling, whether separately or together, "experiencing diverse surroundings and getting inspired," says Tara. Their familial mixture of Polish and Lebanese cultures, as well as the mix of western and Arabic culture in their home city of Beirut, helps them be "conscious of hybridity" – they say these notions are "at the core of each project we undertake."

The pair say that creating their recent street 'interventions' in Beirut raised interesting issues, in terms of how such projects need to accept how people may want to use designs, but their experience of the city gave them resilience. "People are constantly surprising us with new ways of using our designs," says Tessa. "It is fascinating for us to observe them appropriate the objects according to their understandings, identities and ways of living."

She says that despite encountering "various difficulties" in the installation, "growing up in a country in constant resilience, we learned how to acknowledge any obstacle and transform it to our advantage." The best reward, Tessa adds, was "seeing how different people interact diversely with the installations, bringing them to life and giving more meaning to them. It's all about creating designs that trigger citizens with a feeling of joy, freedom and playfulness."

Recent works

The practice's latest project is a small restaurant and grocery called Adar in the historic Passage de Panoramas located in Paris' 2nd arrondisement. The sisters "looked to demonstrate new and evolved ways of expressing culture in a Middle Eastern restaurant without falling into clichés of orientalism and grandiosity," instead representing it through "scents, colours, touch, filtered light, and taste."

They were inspired by the "raw colours of the landscape," and key features included a central corrugated mesh chandelier containing dried spices, vegetables and flowers, evoking a souk, and a terracotta open kitchen which turns cooking into a "performance."

Another representative project is 'Lost in Transition,' a "fictional sculpture" inviting Beirut's citizens to use constructions comprising metal seats connected by an arch. Together with stools these can be used in various configurations, from eating lunch to reading alone, and are accompanied by a film directed by Ely Dagher (nominated for an Architectural Film Award at this year's Milano Design Film Festival). The practice also created a 'temporary nightclub' which can be mounted and dismantled in two hours, which was featured in another film, by Mounia Akl.

Projects by T Sakhi sometimes employ humour to highlight social issues, such as technology's encroachment on our lives. Tessa gives the example of the practice's "transportable dining experience, which satirically visualises society's obsession with social media," whereas more "tragicomically," says Tara, its Lebanese pavilion references the "psychological walls" that they say dominate Lebanese culture.

Product design is the final piece in the jigsaw that makes up this highly creative firm's work, and provides avenues to explore new materials and ways of using them. It has seen the duo collaborating with materials firms from Murano in Venice, to stone makers in Cairo, to macramé and bejuco in Cancun.

As to the future, Tessa Sakhi gets the last word: "Our future goals will be more focused on creating sustainable structures that use innovative, recuperated and biodegradable materials." The firm's doing this already however, such as in its pavilion currently on show in Dubai, and is delivering the practical, diverse designs that enact its strong ethos.

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NEW ARRIVALS

Rounding up the latest movers and in-house appointments across the industry



DAVID DAVIES SADLER BROWN ARCHITECTURE

Sadler Brown Architecture have appointed architect David Davies to a new position of architectural director, and to its board of directors. Davies, who has worked at the firm's head office for the last five years has been promoted from associate to director. As an experienced architect with strong management credentials, the elevation to board status is "the natural next step within his fast track career, and reward for his continued success in leading many of the creative and innovative design projects being delivered by the group," said the firm. Davies commented, "I am delighted to be joining the board of directors, at a time when we are working on some really fantastic projects for a diverse set of clients."



CEDRIC TANG FARRELLS

Farrells have appointed Cedric Tang as a director of the multi-disciplinary firm. Tang, a registered architect in Hong Kong has worked at Farrells for the past 15 years. Tang will continue in his current role to lead and build Farrells Shanghai office as he done for the past few years and focus on better serving Farrells clients in delivering major-scale Chinese projects. Tang has in-depth knowledge in the planning, design and delivery through all stages from Concept to Completion of urban design, large mixed use commercial complexes and transportation-related projects. Tang specialised in transport-orientated design with integrated mixed-use urban complexes such as Winland Xiamen and Shenzhen's KK100.

ROB PRICE WILL + PARTNERS

Workplace architect and interior design firm Will + Partners has appointed Rob Price as a new partner in its London studio. Price will join Will + Partners senior leadership team in strategically guiding the studio as it continues to grow and take on a diverse range of workplace and architectural projects with a focus on wellness and enhancing performance. Price brings "significant workplace strategy and architectural and design experience," having worked on a broad range of projects for financial, corporate, technology and media companies for more than 20 years. His CV includes previous roles at Perkins and Will, Fosters and Gensler.



JESE MEDINA-SUAREZ WILSON ASSOCIATES

Interior architecture firm Wilson Associates has announced the latest addition to its award-winning team, Jese Medina-Suarez as design director, principal. Working closely with a number of the firm's international outposts, Medina-Suarez will help to expand Wilson Associates' global presence, championing high-end design and client service across a range of target market sectors. Prior to joining the team, Medina-Suarez worked with a series of highly acclaimed, architecture and interior design practices throughout Milan, London, Singapore, and Melbourne, such as Foster + Partners, John McAslan and Bates Smart.

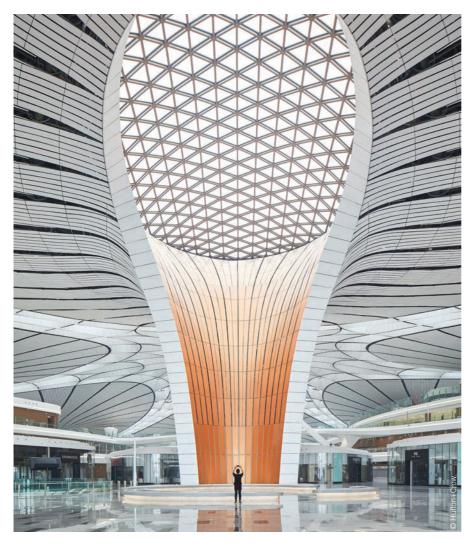


CHARLOTTE BOOTH BE DESIGN

Charlotte Booth has been appointed as associate director of sustainability and wellbeing at multidisciplinary architecture and engineering practice, BE Design. In her new role, Booth will be collaborating closely with the team to provide sustainability management, wellbeing and biophilic design support – through accreditations including the WELL Building Standard – and energy and low carbon strategies to BE Design's clients. Booth said, "We want to embed sustainability and wellbeing practices into the heart of our designs. There's an incredible team here, who are committed to creating exceptional places to live and work in."

INTERNATIONAL FOCUS

Showcasing the latest projects from around the world – visit www.architectsdatafile.co.uk for full information



BEIJING DAXING INTERNATIONAL AIRPORT, CHINA ZAHA HADID ARCHITECTS

Designed by Zaha Hadid Architects, Beijing Daxing is a new international airport in the Daxing district, 46 km south of the city centre. Initially serving 45 million passengers per year, Beijing Daxing will accommodate 72 million travellers by 2025 and is planned for further expansion to serve up to 100 million passengers. The airport's 700,000 m² passenger terminal includes an 80,000 m² ground transportation centre offering direct connections to Beijing. Echoing principles within traditional Chinese architecture that organise interconnected spaces around a central courtyard. Six flowing forms within the terminal's vaulted roof reach to the ground to support the structure and bring natural light in, directing all passengers towards the central courtyard. Natural light also enters the terminal via a network of linear skylights that provide an "intuitive system of navigation throughout the building," said ZHA.



LE DOME WINERY, FRANCE FOSTER + PARTNERS

Foster + Partners have reveled their vision for the Le Dome winery in Saint-Emilion. Nestled in the hills of Bordeaux, the design aims to blend with the UNESCO World Heritage Cultural Landscape of the region. The circular-plan building, which sits at the end of a tree-lined avenue, has a form rooted in a "desire to create a structure that simultaneously looks both inwards and outwards," said the architects. It provides an efficient space for wine production "while engaging in dialogue with the surrounding landscape." The upper level forms the social heart of the building, with tasting tables and entertainment spaces – all wrapped by 360-degree views of the adjoining vineyards.



ENRICO FERMI SCHOOL, ITALY BDR BUREAU

Architectural firm BDR bureau have completed the transformation of the new Enrico Fermi School in Turin. The existing school building, built in the 1960s, has been extended and functionally rethought. A new steel structure "creates an inhabited envelope where the terraces are an integral part of the teaching programme, embraces new connective spaces and works as a passive shield," said the architects. The ground floor is designed as a civic centre, where the different functions are gathered in the atrium, directly connected with the garden and the two entrances. On the two upper floors, the atrium accommodates recreational and collective spaces, and educational activities are organised in clusters.



GRACHTEN OPEN, THE NETHERLANDS MVRDV

MVRDV has presented a plan to the city of The Hague which proposes to reopen the city's 17th-century canals, which were filled in during the 20th century. This "neighbourhood participation" project aims to revive a run-down part of the historic centre of the city – the government seat of the Netherlands. The vision, produced by MVRDV as a pro-bono project in collaboration with various residents' collectives, aims to improve the sustainability, economy, traffic, and water management of the area. MVRDV's vision combines the canals with the 'Spinoza Power 2.0' vision, which was created by the local community and includes a gastronomy route, the removal and renovation of the red light district streets, and a new market hall which replaces a car park.



K11 MUSEA, HONG KONG VARIOUS ARCHITECTS

A group of architectural practices comprising Kohn Pedersen Fox (KPF), James Corner Field Operations (JCFO), Ronald Lu & Partners (RLP), Leigh & Orange, LAAB Architects, AB Concepts and PLandscape have completed K11 MUSEA, a cultural retail destination in Hong Kong's newest purpose-built art and cultural district, Victoria Dockside. K11 MUSEA is the final milestone in a decade long, 28-hectare urban regeneration masterplan designed by KPF and completed in phases over the past decade. The project fuses design details and inspirations from around the world; from the rare Portuguese limestone facades and green living walls, to the Silk Road inspired louvers at the entrance – each element is inspired by "the vision of a contemporary manor house."



XIQU CENTRE, HONG KONG SWA GROUP

SWA Group recently announced its collaborative design of the Xiqu Centre, a new performance venue for traditional Chinese opera located in the densely populated West Kowloon Cultural District (WKCD) in Hong Kong. Working closely with Revery Architecture, SWA's scope of work entailed designing the entire ground level, which features a naturally ventilated open-air interior courtyard. The ground floor also serves as an urban stage, designed to facilitate movement, provide a gathering space and enhance visitor experience. The building's exterior is curved in three planes, with arched openings strategically located at all corners and a lifted facade enabling three main entry areas access to the ground level.



FETTES COLLEGE, CHINA BROADWAY MALYAN

Ground has been broken on a major new school campus for Fettes College in the southern Chinese city of Guangzhou. The new "all-through" school is a partnership between Fettes and Bright Scholar, China's largest school operator, and will accommodate 2,320 students and more than 300 staff, many of whom will live on site. The new campus will include a kindergarten, primary, middle and senior schools with each building "designed to respond differently to the age of the building users," commented Broadway Malyan. "Each house has its distinct building with a unique arrangement, creating an urban village in which facilities are fed from a high street experience we have called the 'learning spine.'"

CPD FOCUS

The latest CPD courses, seminars and documents for architects

TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



In two RIBA assessed seminars, Comar outlines: 'Stand & Deliver: a Study of Curtain Walling' - the design of curtain walling, it's properties and how it is used by specifiers. This seminar aims to offer an understanding of the points of Hll in the NBS specification system, and how best to make use of it. 'Designing Functions & Reliability into *Entrances*' – the issues that influence the function of main entrance design and technology. This seminar aims to offer an understanding of how user expectation influences door design and links this with hardware selection, entrance configuration and floor finishes. 020 685 9685

www.comar-alu.co.uk

FREE FIRE AND SMOKE CURTAIN CPD SEMINARS FROM COOPERS FIRE



Coopers Fire offers a range of free CPD seminars. Approved by RIBA, the seminars aim to educate the fire protection industry and wider building industry about application of fire and smoke curtains in buildings. Aimed at construction industry professionals such Architects, Building Control Officers, Building Engineers, Specifiers and the Fire and Rescue Service, the seminars provide an excellent overview of the benefits of specifying such products. Coopers Fire cover the following subjects as part of the RIBA Core Curriculum; Design, construction and technology, Health, safety and wellbeing, Legal, regulatory and statutory compliance. 02392 454 405

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SPECIFYING HARDWOOD TIMBER EXTERNAL DOORSETS



A RIBA CPD seminar entitled 'Specifying Hardwood Timber External Doorsets', from Urban Front, has recently been updated and is available to architects and construction professionals. Learning aims include information on fitting into Architectural Glass, challenges with maintenance, accessibility, door security, design features, and various regulations that must be met. The CPD is very visual and offers various opportunities to handle samples and lasts approximately 45 minutes plus questions. 01494778787

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SureSet UK Ltd offer two types of accredited CPD's, in person at a location of your choice or from the comfort of your own desk via a fully detailed, 10 minute video. The CPD, accredited by CPDUK will explain the differences between resin bound and resin bonded products and their differing characteristics. Permeable build ups including SuDS (sustainable urban drainage system) is mentioned as well as the different SureSet aggregates and SureSet's own naturally sourced two part UV stable polyurethane resin and the applications it's suitable for. 01985 841180 www.sureset.co.uk

REYNAERS LAUNCHES BRAND NEW RIBA-ACCREDITED CPD



Reynaers is delighted to offer a brand-new CPD course aimed at architects and other construction industry professionals. 'Accessible Solutions for Aluminium Windows and Doors' is suitable for those looking to learn more about aluminium solutions that meet the latest accessibility requirements for both domestic and commercial designs. Accessibility is an essential consideration for today's architects and the new CPD has been developed to equip architects with the knowledge to incorporate the concept into their designs. 0121 421 1999 www.reynaers.co.uk

DURABLE EAVES SOLUTIONS RIBA ACCREDITED CPD SEMINAR



Produced by Marley Alutec, the market leading aluminium rainwater and eaves solutions company, this CPD features: Experienced and knowledgeable presenters; Opportunity to hold the event at your offices; Double CPD points to RIBA Architects; Complimentary buffet lunch. This interactive seminar provides plenty of opportunity for discussion and covers: Aluminium and the environment; Durability and design of aluminium rainwater systems and eaves solutions; BIM, CAD and technical support 01234 359438

www.marleyalutec.co.uk/ resources/riba-cpd-seminar/

SUBFLOOR PREPARATION RIBA CPD FROM MAPEI



Mapei invites you to their RIBA accredited CPD seminar for subfloor preparation, on November 30th at Mapei World London City, Clerkenwell. The seminar will cover a range of things to consider prior to the installation of floor coverings, from testing moisture to identifying different substrates.

A member of Mapei's specification team will be on hand to offer tailored advice and guidance on how surface membranes work, and how to avoid contamination in substrates. The seminar aims to explore British Standards (BS8203/8204) to ensure that no project is hindered by moisture, and will also discuss the consequences of contamination in substrates.

The seminar will finish with a Q+A session where the specification team will answer questions and provide technical assistance for any flooring projects. Network with like-minded professionals in your field over a free buffet lunch and refreshments, courtesy of Mapei.

All of Mapei's RIBA accredited CPDs and presentations last approximate 40 minutes, and provide the information and advice to keep you updated with the right skills and core competencies. ukmarketing@mapei.co.uk www.mapei.co.uk

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CPD FOCUS

The latest CPD courses, seminars and documents for architects

LEARN HOW TO MAKE TILE AND STONE INSTALLATIONS LAST



Tile and stone are not only beautiful, but also incredibly practical covering materials to choose for your architectural projects. Schlüter-Systems has been providing solutions to protect and finish tile and stone since 1966, with UK offices opening in 1993. This global market-leader's breadth of experience is now matched by a variety of learning resources for specifiers in the UK and Ireland - from RIBA Approved CPDs through to Lunch and Learns, educational spaces and even virtual reality (VR).

1) Sit-Down Seminars and Sessions

Schlüter-Systems Ltd's learning programme provides two different options for architects and specifiers, to suit their needs and priorities.

RIBA Approved CPD Seminars

45-60 minutes long, these seminars each focus on a key application area for the tile and stone industry. Five seminars are currently available:

Considerations for Tile and Stone Installations

Offers an introduction to the practical concerns associated with the design of tile and stone installations.

Specifying Integrated Waterproofing and Wetroom Systems

Discusses how you can achieve a watertight foundation for tile and stone that will not only protect an installation, but also the wider project as a whole.

Specifying Integrated Underfloor Heating Systems

Focuses on the modern advances made in this popular arena, discussing hydronic and electric technologies and their capabilities.

Specifying Solutions for Crack-Free Tile and Stone Coverings

Covers the recommendations and essential considerations in specifying problem-free coverings that last.

Specifying External Applications with Tile and Stone

Explores how to counteract the stresses of the environment and achieve functional assemblies.

Lunch and Learn Sessions

20-30 minutes long, these highlyfocused sessions have been crafted to home in on different products within Schlüter-Systems' portfolio. Nine sessions are currently available:

• Schlüter-PROFILES for Walls Wall corners and edge profiles



- Schlüter-PROFILES for Floors Edge profiles for floor coverings
- Schlüter-JOLLY
 Contemporary discreet wall profiles
- Schlüter-TRENDLINE
 Textured tones for wall profiles
- Schlüter-TREP
 Stair nosing profiles for tile and stone
- Schlüter Drain Grates and Shelves
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- Schlüter Finishes to Work in Harmony
 Designer drain grates and shelves
- Schlüter-LIPROTEC
 Illuminated profile technology
- Schlüter-DILEX Movement Joints Movement joints to complement tile and stone

N.B. Schlüter-Systems Ltd's RIBA Approved CPDs and Lunch and Learns are all inclusive of lunch for attendees.

2) Educational Spaces

London: 49 Leather Lane A collaborative showroom between Pentagon Tiles, Schlüter-Systems Ltd and Ardex, 49 Leather Lane incorporates an exhibition space with tactile samples, a fully functioning wetroom and meeting rooms, as well as inspiration abound.

Leicestershire:

The Application Gallery
The Application Gallery is a key
attraction at the head offices of
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where and how its products are
used and the designs possible with
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3) Virtual Reality

Take our 360 VR Tour Schlüter-Systems Ltd's Google 360 Tour with VR functionality offers a more interactive way to understand the company's products. From the comfort of your own chair, you can tour their headquarters, which are packed full of examples of our products in situ.

To explore now, or request a Google Cardboard headset to upgrade your experience to VR, visit www.exploreschluter.co.uk.

Are you interested in finding out more about Schlüter-Systems Ltd's learning resources and how they can help you to achieve better installations of tile and stone? Call, email specifiers@schluter.co.uk or visit the company's website.

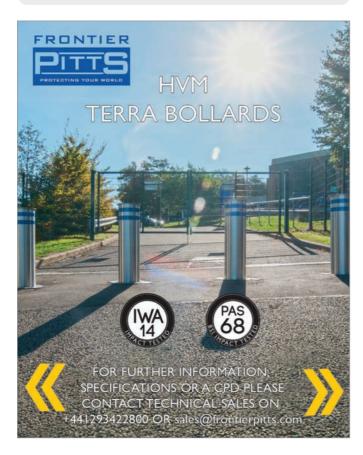
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Crest supplied to best building winner

The Royal Institute of British Architects (RIBA) Stirling Prize Awards took place on Tuesday 8 October at London's iconic Roundhouse to celebrate the very best of new British architecture. The Social Housing Project of 105 high energy-efficient homes in Goldsmith Street Norwich, designed by Mikhail Riches to Passivhaus standards for Norwich City Council won the UK's highest architectural accolade for the best new building 2019. Arnold van Huet managing director of Crest would like to congratulate Mikhail Riches on winning this prestigious award. The Crest team were delighted to provide expert advice on this innovative project. The partnership created high quality facing bricks and a bespoke roofing system that flows without interruption continuously from eave to ridge, for the mix of 45 houses and 60 flats on this exciting development.

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Personalise your space with the new Mapei app

apei's new and improved app has been updated to enhance and personalise areas for installers, distributors, engineers and architects alike, providing brand new, fundamental tools that cover all areas of construction and building.

The new My Mapei area will allow users to register to make an account on the Mapei app, ensuring that their personal area includes the most relevant information to them. Users will now be able to update and change their personal data, keep their favourite products in one place, backlog results from calculators, and access the many services offered by Mapei.

Another step towards staying engaged with customers, users of the app will find it ideally accessible to vital information at just a few taps, providing what is effectively a library for necessary resources for all types of projects.

The complete product catalogue, which features on the app and can be viewed by

product line, has been updated to include brand new products and systems. Mapei's extensive range covers products for ceramics and stone materials, resilient, textile and wood materials, concrete repair, structural strengthening, protective and decorative coatings, EWI, cementitious and resin flooring, products for underground construction, acoustic and thermal insulation, waterproofing, and admixtures for concrete.

Helpful tools such as the grouts and sealants calculators allow for users to estimate consumption rates in accordance with specific project data.

Popular features including an extensive product tutorial video library, technical documentation and the latest editions of Mapei's bi-monthly magazine, Realtà Mapei International provide users with the opportunity to stay informed on all things Mapei.

The world of Mapei in your hands. Available on the App Store and Google Play.



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"Never stop pedalling"

t is with great sadness that the Mapei Group announces the passing of its President, Giorgio Squinzi, who died in Milan on the evening of 2nd October.

Born in 1943, with a degree in Industrial Chemistry, Giorgio Squinzi (a secondgeneration businessman) became the Sole Administrator of Mapei in 1984 after the death of his father, Rodolfo, who founded the company in 1937. Under his leadership, the company grew over the years to become one of the world's leading players in chemical products for the building industry, and currently operates in 56 countries through 89 subsidiaries. The Mapei Group, which employs over 10,500 staff, manufactures across five continents through 83 factories in 36 countries. This internationalisation process began long ago; the Group's first foreign offices opened in Canada back in 1978.

Not only did he devote his life to his family and company, his innovative vision and social work made an important contribution to business associations, the world of sport, and the wider community in his home city and the rest of the world.

In 1996 he was awarded the 'Ambrogino d'oro" (one of the city's highest awards) by the Mayor of Milan for his contribution to the city in the realms of both business and sport, and in 1998 he was knighted for his services to industry. In 2013 the President of the Italian Republic, Giorgio Napolitano, bestowed upon him the honour of being made a Grand Officer of the "Order of Merit of the Italian People".

Giorgio Squinzi held important posts in both Italian and international business associations. He was President of the Italian Federation of Chemical Industries from 1997-2003 and then again from 2005-2011. He was also the leader of CEFIC, the European Council of Chemical Industries, which represents 29,000 companies in this sector, for a two-year period (2010-2012).

He was the President of the Italian Industrial Federation from May 2012-May 2016.

Giorgio Squinzi's motto was "Never stop pedalling", epitomising his approach to work and life. The expression actually comes from cycling, a passion for which he inherited from his father, Rodolfo. This love of cycling led



Giorgio Squinzi to sponsor the Mapei professional cycling team that won a total of 654 races from 1993-2002, reaching the very top of all the different international rankings. Mapei's links to cycling go way back and still continue today through its partnership with the UCI (International Cycling Union): Mapei is the Main Sponsor of the Road World Championships.

Giorgio Squinzi's love of sport also extended to football. He took over Sassuolo Calcio in 2002, and in just a few years the club was promoted from Serie C2 to Serie A and is now firmly established among the leading clubs in the country's top division.

Opera was another of Giorgio Squinzi's

great passions. He always attended the first night at La Scala in Milan and was a great opera fan. He was a member of the Opera House's Board of Directors from 2016 and Mapei has been a Permanent Founding Member since 2008.

His expertise, precision and passion will now be taken up by his children, Veronica and Marco, who were appointed as Chief Executive Officers in July 2019.

They will lead the group along the path first trodden with such far-sighted vision by Rodolfo and then Giorgio Squinzi.

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Vent-Axia supports 'Net-Zero by Design'



Vent-Axia is delighted to support BEAMA's 'Net-Zero by Design' report. Launched on 10th September 2019, BEAMA's report sets out industry's commitment to meeting the UK's net-zero 2050 target and its view on how to ensure net-zero can be commercially viable for

businesses and consumers. "At Vent-Axia we are committed to energy efficient ventilation design and lowering carbon, we therefore welcome BEAMA's 'Net-Zero by Design' report which sets out a clear route on the road to the net-zero 2050 target that will allow businesses to invest in this future," says Richard Paine, Marketing Director at Vent-Axia.

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New heat recovery unit Vort HRW Mono



Vortice has launched a new single room heat recovery unit which is quiet, efficient, energy saving and anti-allergic thanks to built-in filters preventing the release of pollutants and allergens into the surrounding air. Easy to install and

maintain, the Vort HRW Mono is an ideal alternative to traditional ventilation systems and intermittent fans. Suitable for recessed installation in outside walls of thickness between 285 and 700 mm, it has a low voltage EC motor-driven fan and five speeds. There are two versions of the Vort HRW Mono, manual or RC, allowing the unit to be turned off and on and the mode of operation to be selected.

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Be relaxed about building services design

Much of the complexity of designing, installing and maintaining central heating in multi-occupancy low-rise buildings can potentially now be eliminated. Innovative developments at Gilberts have created a room-by-room solution that combines appropriate ventilation with heat boost. The concept means that in effect, there is no need to provide radiators in the rooms in which the new option is fitted. Further, because the solution is fitted at ceiling height, it liberates interior design and optimises use of floor space. The solution focuses around Gilberts' unique Mistrale Fusion (MFS) unit with an integrated LPHW coil. Just 2 x standard MFS128, or 1 x MFS256, will warm a standard 32 pupil-classroom to all Regulatory requirements. The core MFS appliance provides natural ventilation and uniquely blends the incoming fresh air with the warmth from the exhaust air without the need for a heat exchanger.

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issue has even been delivered! What's more, the Digital Issue includes interactive links to featured companies. Subscribe for free now.

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Helping remain in control of your heating



As the every-day home becomes ever better connected to the homeowner, ESI Controls is releasing a new Wi-Fi controlled thermostat, enabling the homeowner not only to gain greater control of their heating, but to be able to do so, wherever they are. The very latest RTP6 in a stylish choice of colours, provides a clear interface for the user to remotely control heating and water programs, all from

one simple app on their phone or mobile device. In addition, these exceptional heating controls come with a 3-year warranty.

01280 816868 www.esicontrols.co.uk

JACKON's new Bee Centre initiative



JACKON, a leading manufacturer of XPS and EPS solutions for the construction of low energy buildings, is launching a year-long campaign of support for The Bee Centre, near Preston, Lancashire. The campaign starts this month with the donation of 200

beehives to the Centre. With a retail value, including all accessories, of up to £250 each, the beehives are to be used in starter kits for school environmental projects. The initial donation will be followed up with related support activity to be unveiled during the coming year.

01204 221089 www.jackon-insulation.co.uk

New generation expansion vessels



There's an exciting new range of expansion vessels available from Flamco. The Flexcon Premium range benefits from a new and unique plastic membrane, and offers raw materials and energy savings, while offering a 15-year guarantee. That's more than double the previous guarantee, when compared to the existing expansion vessels

available. Flamco has succeeded in developing a unique plastic membrane for expansion vessels of 2 to 80 litres. This innovation makes expansion vessels much more sustainable, in terms of environmental performance and durability, while maintaining high quality.

01744 744 744 www.flamcogroup.com/uk-en

Leading in London

London's leading construction and design show is back, bigger and better than ever before. Spanning two floors, London Build is more than just an exhibition, it's an event jam packed with content, networking and entertainment



27 - 28 NOVEMBER OLYMPIA LONDON



his year, the south east's leading construction event London Build will have a focus on mental health, well-being, diversity and equality throughout the exhibition. In addition, there will be opportunities to get up to date with upcoming major construction projects and opportunities across Greater London and the UK.

What's on?

London Build will boast CPD accredited sessions across eight different summits, hosted by a great line-up of speakers. These sessions will feature training workshops in everything from sustainability and BIM to Advanced Digital and Social Media

Construction Marketing. The extensive programme of over 500 speakers includes the likes of Juliemma McLoughlin the chief planner – Development, enterprise and environment at Greater London Authority, Fergus Harradence the deputy director of the Department for Business, Energy and Industrial Strategy, Gillian Charlesworth the CEO of BRE, and David Speight the project delivery director of Heathrow's expansion – to name a few.

Over 350 exhibitors will fill the venue including Procore, Powerday, Recticel, JLG, BT Openreach, Epson, Panasonic, Bauder, Beaulieu International, Roof Maker, Autodesk/Plangrid, George Boyd/ Saint-Gobain, Wurth, Resapol and Bostik.

LINKEDIN LOUNGE

London Build's first ever LinkedIn Networking Lounge – the event's initiative which enables attendees to network and make new contacts while building their online network.





ZÜBLIN Timber stands for ambitious and pioneered solutions in the

field of timber construction. We are your single-source provider for the development, production, delivery and execution of high-quality timber systems, from simple to complex engineered timber structures and turnkey project execution. Together with our clients we develop efficient solutions and a sustainable quality of life. Stand F41.

The Humans of Construction photography exhibition will be displaying 1,000 of the most influential and inspiring professionals working in the UK's built environment, featuring individuals from a wide array of fascinating backgrounds in the industry, from CEOs to architects, pioneers to students and future leaders.

Networking

London Build is looking forward to welcoming over 25,000 registered contractors, architects, engineers, developers, councils and construction professionals over the two days. We're expecting a high level of attendance from the UK's top 100 contractors and architects, offering an "unbeatable opportunity for networking with peers and clients alike."

The organisers commented: "We want you to leave London Build armed with a wide range of new connections and friends, and make sure you become part of an ongoing exciting and vibrant new community of like-minded professionals".

Networking opportunities include the

This truly is a show like no other, built for those in the industry who want to have fun, be inspired, and meet with thousands of architects, developers, contractors, local councils, housing associations, and more

event's first ever LinkedIn Networking Lounge – an initiative which enables attendees to network and make new contacts while simultaneously building their online network through LinkedIn using QR codes, and a timetable of Speed Networking events.

The event will also be hosting networking events such as Meet the Buyer by Constructionline, CIOB 'Hub in the Pub', Constructing Excellence Club Breakfast, BIM & Tonic, #TeqDen10x10, Diversity in Construction, and what's thought to be the UK's largest ever networking meeting of Women in Construction – plus many more.

An event like no other

London Build believes that doing business should be fun, and includes within the event the Festival of Construction.
Featuring comedy acts, live music, celebrity guests, London Beer Festival and prize giveaways, the Festival of Construction promises to be the biggest festival in the industry, offering visitors the chance to rub shoulders with big industry names and celebrity guests, while indulging in food and drink and enjoying live entertainment.

Charity contests will be taking place across the two days, including London Build's very own world record attempt for the greatest number of Movember Moustaches at one event, to raise funds for men's health.

This truly is a show like no other, built for those in the industry who want to have fun, be inspired, and meet with thousands of architects, developers, contractors, local councils, housing associations, and more!

Register for your free ticket today at www.londonbuildexpo.com



London Build Stand No. F41

Timber Construction Competence

ZÜBLIN Timber, a "House in a Garden" project partner.

Timber Construction Competence

ZÜBLIN Timber stands for ambitious and pioneered solutions in the field of timber construction. We are your single-source provider for the development, production, delivery and execution of high-quality timber construction systems, from simple to complex engineered timber structures and turnkey project execution. Together with our clients we develop efficient solutions and a sustainable quality of life.

www.zueblin-timber.com



Ancon to exhibit at London Build 2019



Ancon will showcase products including Ancon's range of insulated balcony connectors, helping building designers meet their thermal performance aspirations whilst still boasting Class A1 noncombustible insulation, reinforcement and steelwork, making it fully compliant with The Building (Amendment) Regulations 2018. Ancon offer a wide

range of products fully compliant with The Building (Amendment) Regulations 2018 – the Government's ban on combustible materials in external walls. Find out more at London Build on the 27th & 28th November 2019, Olympia, London - stand number C28.

0114 275 5224 www.ancon.co.uk

LONDON BUILD STAND C28

London bricks for London Build



On the 27th and 28th of November, Imperial Bricks is displaying its '50 Shades of Clay' on Stand D29 at London Build. Architects, specifiers, developers, contractors and self-builders can speak to Imperial Bricks for expert advice on brick matching, sourcing an ethical, sustainable

supply and technical queries. All of Imperial's brick products are CE marked, sourced from SEDEX-compliant partners and tested by Lucideon. The range includes handmade brick finishes, glazed brick tiles with crackle effects and a range of on-trend vibrant shades.

01952 750816 www.imperialbricks.co.uk

LONDON BUILD STAND D29

Under Floor Air Conditioning on display



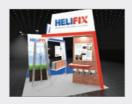
AET Flexible Space is a leading authority on underfloor air-conditioning (UfACTM) with over 25 million sq feet of installations worldwide. We shall be demonstrating the Flexible Space System and Benefits on Stand D7 at the London Build Expo Nov 27-28. Utilising a raised floor as low as 200mm the

system does away with ceiling based HVAC equipment easing design and installation whilst Dramatically reducing Construction and Ownership Costs. Join us to learn more and discuss the possibilities for new build and refurbishments in UK and Overseas.

01342 310400 www.flexiblespace.com

LONDON BUILD STAND D7

Helifix to exhibit at London Build 2019



Helifix will be exhibiting at London Build on the 27th and 28th November 2019, Olympia, London on stand number C28. Helifix will be showcasing their range of concealed, non-disruptive products and installation techniques alongside the Helifix Micro-Pile system, an efficient, economical and non-

disruptive method of foundation stabilisation. The sales and technical teams will be available on the stand to discuss your project-specific requirements and answer any questions you may have.

020 8735 5200 www.helifix.co.uk

LONDON BUILD STAND C28



WWW.ARCHITECTSDATAFILE.CO.UK



A unique event for a diverse sector

With a new home for 2019 at the ExCel in east London, Homes UK will give the UK's residential property sector the opportunity to connect, learn and do business over an action-packed two days this month



OMES UK is claimed by its organisers to be an "unrivalled" event that will look at the entire ecosystem of home building and maintenance for every type of accommodation in the UK, from affordable to market sale and the rapidly growing build to rent, student, co-living and retirement sectors.

It is claimed to be the only event of its kind to unite so many residential players,

"driving collaboration and discussion, and providing a showcase for the latest solutions necessary to deliver a diverse and high-quality supply of new homes to address the UK crisis."

Homes UK also consistently attracts the largest concentrated audience of senior decision-makers (70 per cent of attendees have budgetary responsibility), making it a fantastic platform for doing business.



The show floor is set to host over 200 exhibitors, showcasing innovative products and services

All of the action in one place

The show floor is set to host over 200 exhibitors, showcasing innovative products and services designed for Homes UK's key market. Meanwhile, the extensive conference programme will run over seven varied theatres covering everything from sustainability, design quality and regeneration, to planning reform, Brexit and the sector's future workforce.

The organisers commented:
"Bringing together a programme that
covers every type of residential
accommodation is no mean feat, but we've
curated the best of the sector's expertise
and achievements through over 70 hours of
high-calibre content."

Although now in its eighth year, the ethos of Homes UK hasn't changed – "keeping the design, build and management of great quality homes in thriving communities at its heart." The programme will provide insight on complex challenges while also offering practical advice and success stories led by industry peers.

Choose from topics spanning the entire lifecycle of residential development and asset management. This year, you'll find industry heavyweights and rising stars alongside even the odd celebrity, making Homes UK an event not to be missed. This year's conference highlights include:

 How should we reform the planning system?

- Brexit or bust? What's next for the residential market?
- Design quality: Building better, not just building more
- Hackitt 18 months on: What still needs to change?
- Regeneration: How do we drive quality community engagement?
- Homes for an ageing population: At crisis point?
- Sustainability and the carbon zero challenge
- Health and wellbeing in our homes and towns

Why should you attend Homes UK?

Visitors to Homes UK can learn from case studies on what is working in the sector, gain fresh ideas from international speakers from Vienna, the US and more. They will be able to rapidly expand their network at one of the biggest meeting places for the entire sector with over 6,000 attendees at curated networking events, and keep up to date with product innovations and sector announcements at Homes UK's biggest-ever exhibition of 250 suppliers.

What's new for 2019?

With a focus on rapidly growing markets like Build to Rent, student accommodation, intergenerational and co-living, visitors to this year's event can keep up with trends or research expansion opportunities, while also "reimagining what housing looks like" at the 'Home of 2030' charette led by the Ministry of Building Innovation & Education (MOBIE), and generating ideas by collaborating with students and sector leaders.

Also, with this year's New TECH theatre dedicated to digital innovation and customer experience, visitors will have a one-stop shop to help progress along their digital journey.

Public sector and not-for-profit employees can register for a free visitor pass (a £165+VAT per day ticket fee applies to private sector and for-profit attendees) and start planning their content schedule. Tell us what you're most looking forward to by joining the conversation on Twitter @HomesEvent. We look forward to welcoming you to London's ExCeL to explore the #futureofliving.

Visit www.homesevent.co.uk/register to complete your registration and secure your ticket

BUILDING

INTU WATFORD HERTFORDSHIRE

Extending the retail experience

A major extension and refurbishment to a shopping centre in Watford helps give visitors an exciting and even uplifting experience, including a range of leisure offerings, in a design that carefully blends the project into its setting

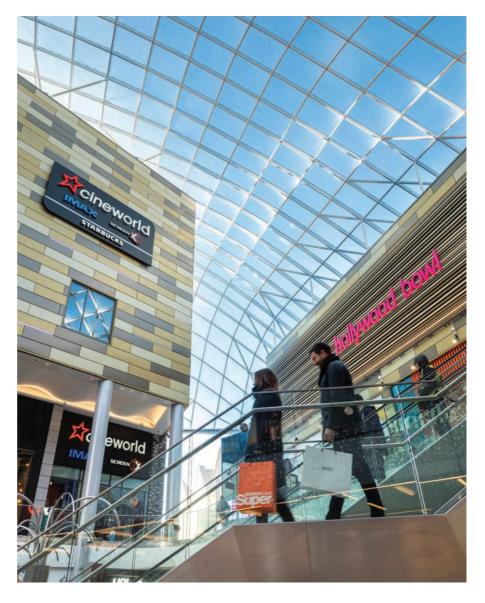
The physical retail sector is addressing a number of challenges, including the convenience of online shopping. These days, the UK's best high street developments and shopping centres are adapting to provide destinations that continue to meet changing consumer demands. This also means they need to be designed carefully to enhance their context.

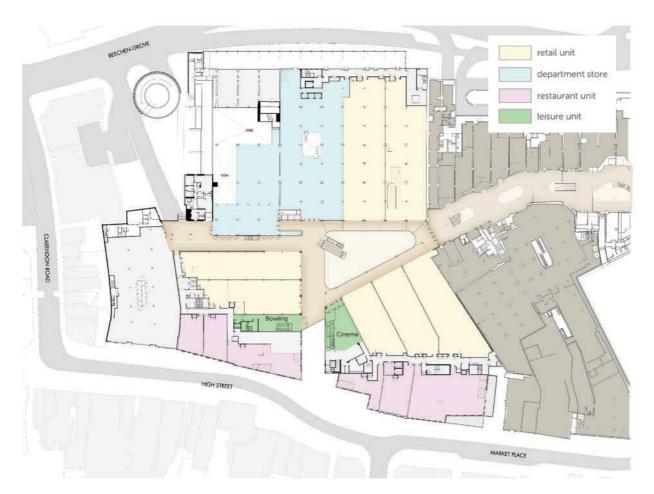
Most new retail schemes, such as intu Watford's extended and improved offering in Watford town centre, incorporate leisure amenities such as cinemas and food outlets. Where this project succeeds is that it successfully integrates the scheme with the existing context, and uses its architecture to enliven the setting but also to provide a human scale and blend with the town around it.

Retail and mixed use specialist practice Leslie Jones Architecture, a practice well known to intu from several previous jobs, was brought in to bring more cohesion and legibility to this key town centre retail site. The development site comprised the 1970s Charter Place, an external shopping precinct that was dated both in its design and its relevance in the current market. Shopping centre group intu, which owned the successful centre next door that had opened in the 1990s, felt it was best placed to transform Charter Place into something which would delight customers and add to its existing offer.

The new scheme would see the majority of Charter Place demolished, and replaced with a purpose-built 400,000 ft² retail and leisure extension to the existing intu Watford centre.

The scheme presented a number of challenges including the requirement to





FIRST FLOOR PLAN

The bowling and cinema begin at the first floor level of the two new volumes within the design, which flank a new entrance from the high street retain and reconfigure key elements of Charter Place, namely the multi-storey car park which was to remain operational throughout the works. This concrete framed building underwent significant structural alterations to accommodate a number of retail units including a Debenhams department store over three floors. In addition to the car park, a grade 2 listed building fronting the High Street was retained and refurbished, creating an ideal new venue for a Côte restaurant.

Project architect at Leslie Jones Cos Constantinou explained to *ADF* that this project exemplified intu's brand values: "We were working on this scheme just as intu's brand was in its infancy, developing a new destination which looked at the brand and tried to build on it."

He adds that the key drivers for the client were to bring "joy, fun and excitement." Constantinou continues: "That gave us a really good brief to work with, it allowed us to bring some little bits of excitement in wherever possible."

He says that while retail development trends are seeing "a lot of repurposing of existing buildings, projects are tending to add in a range of elements beyond retail. "People want to have an experience when they go out, they don't just want to shop, they want to grab something to eat, watch a film; it's more of a day out, so bringing in restaurants and leisure facilities is really important." As well as 11 restaurants and retailers such as Hugo Boss, Hollister and Uniqlo, the new extended intu Watford includes a nine screen Cineworld cinema – complete with an Imax screen – and a Hollywood Bowl 10-pin bowling facility. Hi-tech mini-golf concept Puttshack will also open there next year.

The scheme comprises the extended intu centre – arranged along the high street, a triangular central public events space with a dynamic curving glass roof, and beyond it the remainder of what had been Charter Place, namely the car park building with two levels of retail below. This has been fully refurbished, including the Debenhams store which takes up a large part of the basement, ground and first floor.

"It's so important that schemes relate to their community," says Constantinou.



To this end, the new centre "needed to be much more part of the town." It had to link seamlessly into the existing centre – which it does on ground and first floor levels, but it also needed to be "very permeable, very open to the local community." He says it has achieved this, with improved linkages through from the streets to north and south, and provides better access to bus stops. The central space also provides a new hub for the community, an area that can host events from food festivals to live music.

A twist on tradition

The extended intu centre contains two floors of retail – facing into the central events space, and restaurants facing onto the High Street. Their frontages are broken up into a variety of individual buildings to better integrate the scheme into the local architectural vernacular.

Cos explains: "We articulated the buildings, taking some cues from the existing high street." A number of the new facades have gable walls facing the High Street, and there's even one with a Dutch gable wall, echoing others in Watford town

centre. "Each one is distinct in its own way, and we tried to highlight each of the characteristics of those buildings," for example using glazed bricks as the coping to the Dutch gables.

Sitting above the retail level of the two new buildings (beginning at first floor level) are, respectively, the nine screen cinema, and the bowling, although the brief was just to provide a 'warm shell' for Cineworld – including basic interior structures.

Cos says that the previous Charter Place needed improvement in terms of how it addressed the high street: "It was important to maintain the high street, the existing centre didn't open up as much as it could have." Being a south facing facade, "it really lent itself to creating some external space." Working closely with the local authority, Leslie Jones designed a new piece of public realm allowing the restaurants along the front facade to spill out onto. This was a key part of activating the exterior and helping the development merge with the town.

The entrance to the development is signalled by a further twist on traditional

DIFFERENT CORNERS

The project's entrance is framed by two units which have 'corner gables,' leading the eye into the interior of the new extension



The architects wanted to make the connections between the existing and new additions to the centre "bright and airy," and they arrived at a solution to brighten up the soffits at ground floor level

buildings, providing an architectural statement. This penetration creates two forms, sitting next to the listed restaurant. Both have gable ends, but these are sharply bisected at their corners, the gables 'turning the corner' into the inner facade, with the result being unusual and eye-catchingly playful forms.

This is particularly striking on the precast-clad unit, its gables "leading the eye into the entrance," as well as helping signpost its presence. "As it turns the corner your eye does too, it entices you in," says Constantinou. At night, this unit, which houses the eatery TGI Friday's plus others, is very distinctive, with LED strip lighting placed along the front edges of the gables.

Behind the gable forms, the roof spaces house the copious plant needed to service the restaurant and spaces within – "always a bit of a challenge with commercial buildings," says Cos. The architects resolved the need to enclose these steeply-angled roofs in a pragmatic way that also created an attractive roofline. Instead of using traditional terracotta tiles they arranged long terracotta battens with gaps between them to facilitate natural ventilation of the roof space.

Cos Constantinou comments: "We haven't used that approach before, it hides plant but also creates an interesting roof." He continues: "The planners were happy; we took them on a journey with us, and worked with them closely." He says it helped that one of their key criteria was to create something with human scale on the high street.

The brick fronted volume completes a somewhat symmetrical framing of the entrance, with a similar corner gable, although only slightly returning past the corner. It also has a terracotta battenconstructed roof, but in this case it's brass coloured. "Most of the buildings along the facade have taken the gable design and represented it in a different way," says Cos.

A further significant challenge was integrating a nine screen cinema including iMax into a two to three storey high street. Leslie Jones pushed back the cinema building and used the architecture of the restaurants to mask the larger mass, ensuring a more human scale facing the street.

Interiors

The triangular events space at the heart of the development is perhaps its most important gift to the town. Connecting all of the volumes, it creates a flexible,



year-round resource for the public which has already been used to stage major events such as viewings of the Wimbledon and FA Cup finals, as well as a farmer's market. There is moveable seating and lighting fixtures, and the entrances to the cinema and bowling overlook this space at upper level.

Visible from the high street, the continuous curving canopy above is constructed of square panels but has gaps between it and the structure below to allow natural ventilation. It curves downwards towards the main entrance, helping to signal it from within.



The interior of the car park, above the retail units, faces into the space, and rather than leave a mediocre enclosed facade, the architects continued the language of the multi-coloured battens from the exterior. Again having the double-whammy of also providing passive ventilation to the car park, this enlivening wall is highly effective, "bringing in a little bit of joy," and thus fitting intu's brief.

The architects wanted to make the connections between the existing and new additions to the centre "bright and airy," and to this end they arrived at a solution to brighten up the soffits at ground floor level,

which were lower than at first floor.

Says the project architect: "We used techniques to light the soffits to the ground floor, so they gain as much height as possible. They used Barrisol stretch fabric in "quite a dynamic design," diffusing the light from ceiling LEDs, in a format which did not require a great deal of depth, so does not impinge on the space.

The design language of these soffits is echoed elsewhere, such as in the aluminium edging to the concrete slab in the events space, the vertical white stretch fabric in voids within the refurbished existing centre, and the soffit to the bridge link between the

PUBLIC SPACE

The triangular events space connects the new with the existing refurbished buildings, including the car park which is faced in brightly coloured terracotta battens

ADF NOVEMBER 2019 WWW.ARCHITECTSDATAFILE.CO.UK



ENLIVENING THE EXISTING

The project included a thorough refurbishment of the existing centre, including widening voids

PROJECT FACTFILE

Client: Intu

Architect: Leslie Jones Architecture

Structural Engineer: Waterman Structures **M&E:** Hoare Lea

Gross floor area (extension):

400,000 ft² **Cost:** £180m

cinema and car park. The refurbishment was thorough, including stripping the older design motifs, and widening some voids between the two levels to improve sight lines of retail units.

Bringing further interest to the central space, the first floor colonnade has a GRP waveform soffit. "We've used colour and form to inject interest into the surfaces we have available to us," says Cos. He sums up the approach both inside and out as trying to not upstage, but instead enhance the shop fronts: "We still want them to sing as the main point of interest, but you don't want the background to be so monolithic that it feels dull."

The basement below the site was "a vast servicing area," but as well as improving its efficiency, the architects also created new retail space here, a further efficient use of existing structure. "It's so important that buildings are able to adapt and be repurposed and reconfigured, and this concrete construction didn't really lend itself to being reconfigured," he says. Some "clever structural works" were required to address level changes, adds the architect, and shells were created for retailers "that

they could configure really easily."

The fact the majority of the project is naturally ventilated adds to its sustainability credentials, as does its reuse of a substantial existing building, i.e. the concrete car park and basement. However Cos Constantinou asserts that this is under-recognised by official sustainability accreditation – he notes that BREEAM "doesn't include recognition of that." Despite this, the project was designed to achieve BREEAM 'Very Good.'

Conclusion

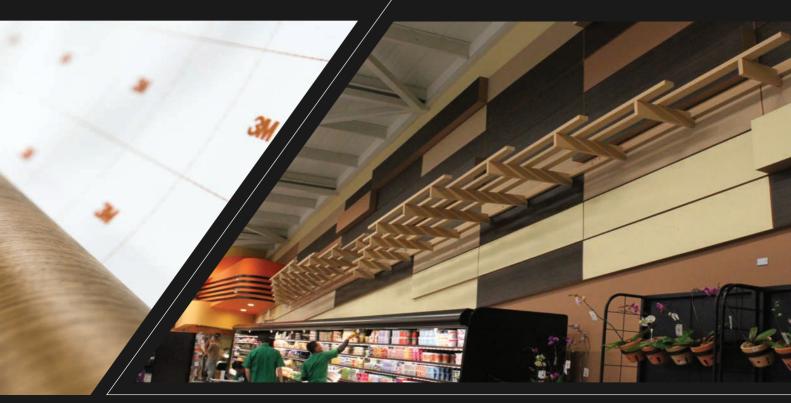
This major extension and refurbishment was finished on programme and to budget, with the full development cost being £180m including £13m for the refurbishment.

Client, public and the retailers have reacted "really positively," says the project's architect, adding that some of their fitouts "have really embraced what we were trying to achieve." However while retail is at the core of this project, it represents a much richer mix of attractions and amenities to help ensure its place as a vibrant, and viable, long term proposition for the town.

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AFTER



RECYFIX® MONOTEC drains car park

new Home Bargains store at Prescot Parkway, Merseyside, opened its doors to customers this Spring. (2017). The 2415 m² (25,973 ft²) store is located just off the Manchester Road, near the M57. It features a wider range of goods such as health, beauty and household items including a 698 m² (7,500 ft²) garden centre. The store's 131 space car park is drained by some 151 metres of RECYFIX® MONOTEC, Hauraton's high capacity channel drainage system.

Hauraton Limited introduced the RECYFIX MONOTEC, system in January 2016. The new Home Bargains store joins the numerous installations successfully completed in the United Kingdom.

Two MONOTEC sizes were installed in the Home Bargains car park's red block surface both channel sizes having a nominal grating width of 100mm. The larger channel has an overall height of 380mm and provides a cross-section of 355.5cm². The smaller channel has an overall height of 230mm and provides a

cross-section of 190.5cm². The 151 metres of channel installed has a total water capacity of just over 5078 litres.

All RECYFIX MONOTEC one metre long channel component is of a sturdy monolithic design where the HEELSAFE grating and the tongue and groove linking system are integral to the channel moulding. The whole unit is made of tough, virtually unbreakable polypropylene (PP) formulated to be very resistant to daily temperature fluctuations from frost conditions to strong sunlight, including the Ultra Violet (UV) spectrum. PP is naturally resistant to de-icing salt. Complying with the requirements of EN 1433, the PP is given its UV resistance by adding just sufficient stabiliser so that the structural strength of the material is unaffected and a consistent appearance is maintained. The MONOTEC channels have a loading category of up to

In addition to the car park drainage, two sizes, 100 and 200, of the company's



RECYFIX® PLUS channels were also installed in the service yard against the retaining wall, the 105 metres of channel being supplied with HEELSAFE ductile iron gratings for a D400 loading category.

Ian Burton, Hauraton's Project Manager for the North West comments; "With a maximum weight of 10.4kg per channel, John Rogers of William Tarr and Co Limited, the groundwork contractor, was particularly impressed with the easy handling of the MONOTEC channels and how robust the product was with no breakages reported during the installation process. Matching Trash Boxes and End Caps were also supplied. All Hauraton surface water drainage systems' comply with European Standards (hENs) and carries the CE mark".

01582 501380 www.hauraton.co.uk



Secure access for jewellery boutique

Boodles, the top-end jewellery store, recently contracted Warrior Doors to develop an automatic entrance solution that would meet their stringent demands for security while also providing a welcoming shopfront. Manufactured entirely from stainless-steel, the bespoke entrance consists of two individual automatic sliding doors, powered by TORMAX iMotion 2302 operators, that work in tandem to create an attractive entrance lobby. This 'airlock' solution is capable of withstanding even the most determined security breach, combining an impressive interlocking system with security glass certified to LPS 1270 1,2,3, to deliver a product that is secured up to LPS 1175 SR3. The Swiss-designed TORMAX iMotion 2302 combines an exceptional life span with assured reliability thanks to the unique, high-torque motor that has been cleverly designed without any of the elements that commonly wear out, such as gears and brushes.

www.tormax.co.uk

Gerflor have 'Eureka' moment!



A recent refurbishment by Eureka! The National Children's Museum in Halifax, West Yorkshire was instigated to redevelop their retail visitor area to expand its offer for visitors. It was an expansion plan that would require 400m² of high-quality flooring from

international flooring specialist Gerflor. The finished project produced an environment truly fit for purpose and would see $300m^2$ of Gerflor's Taralay Impression Control vinyl safety flooring installed in the cafe and shop areas, together with a further $100m^2$ of their Tarasafe TM Super for the on-site kitchen facility which services the cafe.

01926 622600 www.gerflor.co.uk

Forbo sets the bar for restaurant design



The natural aesthetics, durable performance and extensive colour palette of Forbo Flooring Systems' Allura Wood luxury vinyl tiles (LVT) collection have all played a significant role in creating a contemporary, standout environment for Evoo, a new

'barzzeria' in Barnsley, Yorkshire. Allura Wood LVT benefits from advanced production technology to ensure maximum dimensional stability and high scratch and stain resistance, so that the appearance of the floor remains as good as the day it was installed.

www.forbo-flooring.co.uk/flyforbo www.forbo-flooring.co.uk/leisure

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hafele.co.uk/projects



BUILDING PROJECTS

SERPENTINE COFFEE HOUSE HYDE PARK, LONDON

A royal smile

A new coffee house has been completed in Hyde Park, which sports a striking 'biomorphic' design in the shape of a golden stingray. Its architect spoke to Jack Wooler on the inspirations behind the project

A pproaching the bridge across the Serpentine, the famous man-made lake in London's Hyde Park, visitors heading north are drawn into an opening between the trees.

Sitting in this opening, a biomorphic shape arises in the distance, seemingly from the lake itself, its undulating brass-coloured roof capping a porous glass facade which displays the inviting activities of a small coffee house inside.

Its unconventional shape appears as though "a serpentine creature has jumped out of the lake, and evolved into a smiling stingray in flight, welcoming you to Hyde Park," says designer Jonathan Mizzi, founder of Mizzi Studio.

The distinctive Serpentine Coffee House – commissioned by client Colicci (an artisan coffee chain) – is defined by its canopy, which seems to float independently above the glass structure below, "echoing a stingray's flight though water."

This highly individualistic design is at home among the art-rich surroundings of the park, providing visitors to this part of London with a new place to stop, relax, and enjoy the views around – housed inside a permeable, nature-inspired construction.

The coffee house is located just beside the Serpentine itself, which is in the centre of the park, and formed to look like a soft, naturally formed body of water. This emulation of nature which the coffee house backs onto was in fact a direct design inspiration for the 'creature,' alongside the practice's ethos to create buildings "inspired by the natural world and natural processes."

On the approach

When approaching this extension to the lake, there is a gradual "upgrading of earth," says Mizzi, as visitors walk inwards, going from the tarmac of the road, to the tar and chip of the paving area, and then onto the coffee house's grounds, which are based with an earthy and sandy flexible resin-bonded gravel, "immediately letting you know that you're within a demarcated site," explains the architect.

Passing through these grounds, visitors can then enter inside the envelope from three sides of the coffee house, which is surrounded with fully openable glazing to its front, left and right. Inside there is a fairly small front of house, around 30 m², which is flooded with natural daylight during favourable weather.

Users can then step upon the earthy terrazzo flooring of the coffee house's interior, to be met with a simple and efficient solid walnut counter, offering items such as gelato, ice cream, coffees and teas – the counter itself offering visual interest in its triangular reed texture.

The walls behind the counter are covered in deep blue tiles, intended to "blur the boundaries between indoor and outdoor space," alongside green leather upholstered chairs and marble surfaces which reflect the hue of the lake and the surrounding trees and flower beds.

Besides the chairs located in front of the counter, looking around through the glass envelope is further seating – which in fair weather can host over 60 people, the cantilevered canopy providing some shade



SMILE OF A STINGRAY

The cafe's undulating brass-coloured roof has been designed to resemble a stingray with an upwardly curving canopy to produce a 'smile' All images © Luke Hayes

Its unconventional shape appears as though "a serpentine creature has jumped out of the lake, and evolved into a smiling stingray in flight"





TOP

The roof is constructed in rigid GRP foam providing strong insulating properties, with its interior shaped to reference coffers found in classical architecture

and a small level of protection against the elements.

Once in the coffee house, visitors can view what Jonathan Mizzi calls the "dimpled underbelly of the brass smile." He adds: "When you walk in you're engulfed," tells Jonathan, "like Jonah being swallowed by the whale."

This view provides an "uplifting sense of reveal," he says with the texture again proving reminiscent of nature – though this time in more of a tortoiseshell effect. Architectural precedents are not forgotten in the design however – it does not set out to be wholly individualistic. The interior offers a likeness to coffers you'd find in underground tunnels, or on the interior of the Pantheon's dome.

The brief

Looking back now to the site pre-development, when the secluded spot among the trees hosted a less glamorous and visible kiosk at the rear end of the site, it was decided by the Royal Parks authority that a new addition was needed to revamp the site as part of a wider scheme across its parks.

The tender - for which Colicci appointed

the catering contract – was to create a 'fleet' of kiosks and coffee houses for most of the Royal Parks – Green, St James' and of course the Serpentine's home, Hyde Park.

After a design competition was held, Mizzi Studio submitted successful plans, and were invited to join as design partner two years ago, having already developed a seven year, long-standing relationship with the client Colicci.

Part of brief for the group of buildings was that they would be "ambassadors, functional sculptures and way-finders within the parks," and obviously to serve as a refreshment zone along the way.

Jonathan continues: "The brief was that every kiosk would respond to each site individually, and be unique – but, much like siblings, they had to share common genetic features which would holistically tie into a language and identity that you recognise."

When Jonathan and the team at Mizzi first approached the Hyde Park site with this in mind, the key question he asked himself was: "Well, how can we optimise this site layout?"

The existing kiosk of course needed replacing, situated far back from the road



in a kind of cul de sac, and not very visible. "What we did was we pulled our building right to the forefront of the pedestrian line, and essentially drew up a canopy extension to intersect with the paving line at its limit in order to maximise impact and visibility upon the site – pulling people in."

When submitting their ideas for what this building would look like, the clients asked for a 'blue sky' option – giving the architects free rein to design a building as unique as its location – which was in turn accepted enthusiastically.

Design process

The idiosyncratic design – which is now in full operation – was not a random product of architectural fancy, but heavily inspired by its surroundings, function, and the principles of the studio.

Besides the intention to create an amphibious creature, forming "an extension to the lake," the existing architecture in the park significantly influenced the practice's plans.

"Being in one of the Royal Parks," says Jonathan, "whatever we did had to reflect and complement the architectural merit of the buildings around." This is easily understood, the park being awash with culture and monuments; as Jonathan puts it, it's "a real Mecca of creativity." The coffee house is located beside the Princess Diana Memorial Fountain for example, and just across the bridge from the Serpentine Sackler Gallery – not forgetting the numerous sculptures that surround these spots.

Located between such famous and artfully conceived waypoints, Jonathan realised that they "really needed a building that sits well within them."

To enact this, the team wanted to use state of the art manufacturing and design processes to create something that crucially reflected its function, which is essentially a cafe and coffee house, and looked far and wide for design inspirations.

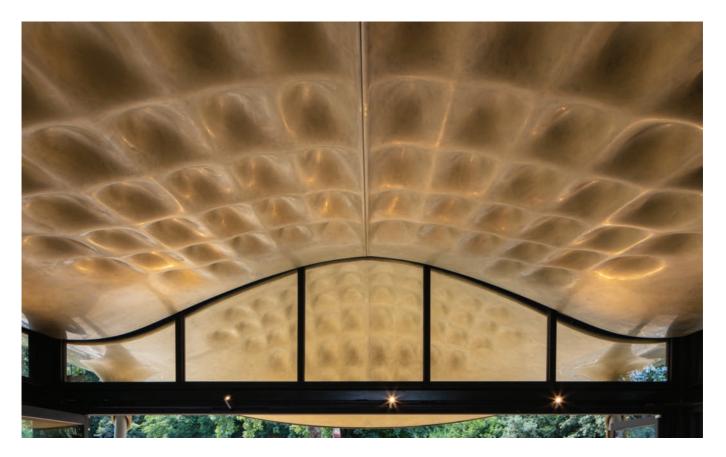
"We looked at the art of tea houses, and the Japanese architecture of pavilions and pagodas," tells the architect. By keeping it aesthetically rooted in London however, this inspiration did not overwhelm the design: "The roof actually has a lot of principles of traditional architecture – you've got a classic dome at the front, which morphs into the eaves of a pagoda."

This roof sits upon a pavilion which, as



LOATING

Largely uninterrupted, fully openable glazing to the cafe makes the roof appear to float above the structure





opposed to private Japanese tea houses, is fully glazed for transparency and lightness, "to give you the sort of uplifting flying canopy, that at the same time sits harmoniously with the design because it is transparent."

Horizontal mullions were however introduced within the glazing to give visitors a bit more intimacy and privacy when siting inside the coffee house.

"It's a very fluid, futuristic looking design," adds the architect, "but with very traditional architectural features."

Materiality & structure

Structurally, the building has six columns and a box frame, with which the practice worked alongside Arup to achieve.

Another party acting in the project was manufacturers of the roof, mouldCAM – which has proved to be the most recognisable feature of the design.

"We wanted to create a brass or copper effect here – heritage materials that are a customary theme in architecture," Jonathan details. "We tried to bring that element of nobility to the site, alongside an earthy materiality – we were very conscious that we didn't want to do a gleaming polished church; we wanted it to feel like it's been

existing on the site for a while."

The practice looked at patinating brass on the roof to remove the 'gleaming' factor, and also to see the human element of hand finishing the whole 100 m² roof. Eventually, the team decided on the final design which, while appearing to be solid brass from the outside, is actually constructed of glass reinforced plastic (GRP), but hand painted with a gel formed of 75 per cent brass dust to give it the desired effect, and retain a human touch.

The construction of this roof is a feat of engineering in its own, with not a single bit of steel or rafters necessary to hold it up.

"The structure is fully inherent of its shape," the architect explains. "The dome takes on the compression forces and leads it to the two columns at the front, and the rear has two reverse arches which sit upon the two columns at the back."

The shape of the building itself helps provide structural strength, with the carbon and glass fibre providing extra support and tying the building together in a bespoke shape which defines the design.

"I think that is what's so liberating as a designer currently – you can really create very free forms of expression through computer-aided design, and then





almost 3D print it," says Jonathan. "It's completely file to factory – it's an exciting time to be experimenting."

Another interesting aspect of the structure is its 270 degree glass wall, which can be opened at any point. This provides huge amounts of natural light, which is also supplemented by an arched clerestory window behind the counter, which lets light in from the back.

When the daylight is no longer sufficient, LED lighting has been run along the interior beams of the structure to provide extra illumination, making the ceiling "really glisten and glow."

The insulation of the GRP roof is actually provided by the rigid foam itself. "Traditionally you insulate buildings with rock wool and rigid from insulation," the architect details, "but we've essentially moulded the whole roof out of an insulation property material."

Welcoming sustainability

All of these design considerations and material choices have added up to provide the park with an "immersive architectural resting, refreshment and contemplation point," which reflects and responds to the park's Grade I listed landscape.

The Serpentine Coffee House is already proving to be a functional and successful part of Colicci's 'fleet,' serving Hyde Park well as its family of kiosks do in the remaining Royal Parks.

Like the others, it responds effectively to its environment, and places sustainability in high regard – in the Serpentine for example the use of carbon fibre removed the need for lots of steel and an elegant roof design reduced the materials necessary, and its sister buildings were made from sustainably sourced oak.

According to Jonathan, this ecological design at the Serpentine has already been very well received by the public and the food and drink retail industry: "It's had a great reception so far – especially within the industry – it's already had quite a few award nominations, and generally when I've been there and spoken to the locals, they've said it's been a big upgrade for them."

He continues: "The concession is for 10 years, and the building has been engineered for 50 years, but we hope that it will stay there forever."

Most importantly perhaps, Jonathan concludes, the client is happy, and revenue is up: "It's proof that if you invest in good design, it can reap financial dividends."

Great Scotland Yard hotel - London

he project to transform the former Scotland Yard HQ of the Metropolitan Police into a prestigious five star hotel in London is now complete. The project demanded architectural ironmongery of the highest standards of performance and appearance. Leading



Architectural Ironmonger John Planck Ltd working in collaboration with Galliard's in house design team selected the door hinges from the SIMONSWERK range.

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The Grade II-listed building has been converted into a 153 Bedroom luxury hotel by Galliard Construction which will be operated by Hyatt under its Unbound Collection. The seven-storey building was the original headquarters of the Metropolitan Police. The home secretary at the time, Sir Robert Peel selected the building as the first headquarters for the Met in 1829. The new hotel features include interior design references to the building's police and military past through the use of shields, emblems and historic details etched into glass and metalwork.

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New 3D BIM service launched by ISO CHEMIE



Foam tape sealing company ISO CHEMIE has extended the scope of its specialist services with the launch of new 3D BIM technology. The move will enable architects and designers to integrate high quality scaled digital information around window and door sealing solutions as part of their 3D visualisations and client presentations. BIM is playing an increasingly significant role in the design and delivery of large and complex fenestration projects and installations in the UK. Product information and specification data from the company's joint sealing tapes, multi-function joint sealing tapes and in-front-of-wall installation systems such as Winframer will be available initially for downloading free as BIM-ready items via www.portal.iso-chemie.eu or an external database. It can also be used in CAD software such as 'Autodesk Revit, while an electronic CAD product catalogue will be available as a supplement to this as more products are at the planning stage. The new service will facilitate the planning, delivery and management of window and door design and installations using a common data model for all participants. All the relevant building data is digitally recorded, combined and interlinked in a model.

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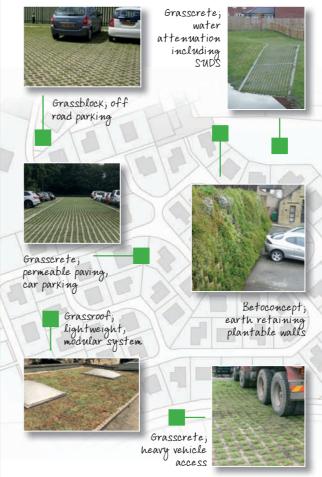


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Opportunity knocks for flood defence solutions

With increased frequency of flooding being experienced across the UK in recent years, Kevin Kiernan of Bowater Doors looks at the impact of climate change and what architects need to consider in specifying flood defence doors

he weather remains one of the most talked about topics in the UK, not a day goes by when it's not used in polite conversation. However, recently it has taken a more serious tone in light of recent flooding events.

Before the autumn of 2018 even arrived and after months of blistering heatwaves, storms Ali and Bronagh reminded us how much damage flash flooding can cause.

In June 2019, parts of the UK were subjected to a month's worth of rain in just 24 hours, once again leaving homeowners, local authorities and housing associations to deal with the expensive aftermath and clean up. Increasing pressures for land has resulted in developers seeking permission to build in areas "at risk" of flooding, but with an unprecedented increase in the demand for housing and an increase in rainfall, it's essential that architects do everything they can to protect these buildings in the future.

It came as little surprise that a 2017 WWF study stated that up to 2.5 million homes will be at risk of flooding by 2050

The impact of climate change has been widely discussed and with the weather becoming more unpredictable, it came as little surprise that a WWF study, titled 'Developing and piloting a UK Natural Capital Stress Test', stated that up to 2.5 million homes will be at risk of flooding by 2050.

According to the Government's own figures, nearly two million properties in floodplains along rivers, estuaries and coasts in the UK are potentially at risk of

river or coastal flooding, closely mirroring the statistics provided by the WWF. In addition, a further 80,000 properties are at risk in towns and cities from flooding caused by heavy downpours that overwhelm urban drains, something that has become a frequent occurrence over the years.

Prevention is better than cure

It seems obvious, but floodwater not only destroys possessions, but also causes further damage to the property if left to stand. Ultimately, the duration of the flood and the height of the water will determine how much damage is caused.

Architects therefore need to consider how they can ensure their designs can best withstand the threat of floods to keep the building, residents and their belongings as safe as possible.

Unfortunately, you can never eliminate the risk of flooding entirely, but you can reduce the risk of water getting in. We have all seen countless images of flood-hit homes with sandbags piled high over main entrance doors to try and limit the amount of water entering a property. This is a reactive strategy that if often implemented after the water has risen beyond the threshold and has started to enter a property.

A flood door is one of the most effective forms of defence when a flood occurs, and they are now regularly fitted in 'at risk' properties. Their great benefit is that they are a permanent and discreet solution that requires no intervention by the occupier, yet can prevent water up to a depth of 600 mm from entering.

They operate by using a series of additional locking points that work together to form a seal around the door when it is shut and the lock is fully engaged. The door remains in permanent flood defence mode under these







conditions and requires no specialist operation. They have also been designed to look like a regular composite door to help maintain the kerb appeal of the property.

Flood doors are also one of the most cost effective tried and tested method of protecting a property and preventing the costly damage floods can cause, and will therefore help local authorities to future-proof their properties and their tenants' belongings. Flood doors are also designed to be re-usable; if a flood occurs, it doesn't need to be replaced when the water subsides, it simply needs to be serviced by a qualified door technician to ensure that any pollutants from the water are removed, and that the seals, locks and the installation are in working order should the waters rise again.

Meeting the standards

When it comes to choosing a flood defence door, the starting point is to make sure it has been tested to PAS 1188-1:2014, the UK standard for flood protection products.

All products tested to PAS 1188 are subject to an initial 'type' test and the

facility that manufactures the product is also assessed for quality at the start of the process.

Summary

Flooding is a growing concern for many homeowners in the UK and is potentially devastating for those affected, not only in terms of damage to the building but the risk to life. With a number of studies identifying millions of homes at risk, there is a need to start future-proofing properties now. One of the most effective ways of doing this is by specifying a suitable flood defence door, which will mean it has PAS 1188 certification – the benefits of a 68 mm double rebated door, both in terms of ease of installation and performance are already widely understood.

Flood doors are a cost-effective, tried and trusted method of protecting a property from flooding and the damage it creates, and will therefore help local authorities and developers to future-proof their properties.

Kevin Kiernan is national sales manager at Bowater Doors



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Norbord build sustainable dream home



Lindrick Eco Build, which specialises in energy efficient off-site housebuilding, has used Norbord's CaberDek and SterlingOSB Zero on a project in Doncaster, Yorkshire. The new house has been built for a couple who are approaching retirement and wanted to embrace

the joys of life in a sustainable home. The SterlingOSB Zero timber frame kit enabled the structure of the house to be developed off-site, while CaberDek ensured that construction on-site continued – even with the bad British weather thanks to its weather-resistant properties which provide protection from dirt and rain for up to 42 days.

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Understanding green roofs

The demand for green roof technologies is ramping up, yet they are complex structures that require understanding; luckily a range of information sources are available to architects and specifiers. Amanda de Sousa of BMI UK & Ireland explains more

April by the Greater London
Authority, there are over
1.5 million m² of green roofs in London, and there is a raft of reasons why. Green roofs offer a host of environmental benefits including, reducing storm water run-off, increasing biodiversity, cooling buildings and their surroundings as well as improving water and air quality. There is also a growing body of evidence that shows how they positively contribute to wellbeing, by offering views of nature or by providing an amenity such as a roof garden.

Following the growth of green roofs comes a rise in 'blue roofs' – which retain water – too, often with the two types combined. As more planners demand sustainable urban drainage systems (SuDS), blue roofs offer a way to release the rainwater more slowly, avoiding the risk of over-burdening drainage systems and causing flooding.

In London, as in other cities around the world, planning policy is driving the trend for roofs that do more. In 2008, London's mayor published a guide on living roofs and walls to complement its London Plan. By 2016, over 40 per cent of the UK's green roofs were in the capital. In 2014, current Mayor Sadiq Khan improved on this by declaring his intention to make the capital a National Park City, with green roofs part of the urban greening plan.

Other UK towns and cities are following London's lead. For instance, Cambridge City Council is developing a green roof policy as part of its local plan to increase sustainability. And Leicester's green infrastructure strategy includes plans to encourage more green roofs on both new-build and refurbishment projects.

Yet green roof types, while well established, present design challenges to the specifier and it would be beneficial to up skill in this field – most accessibly through CPD training such as that

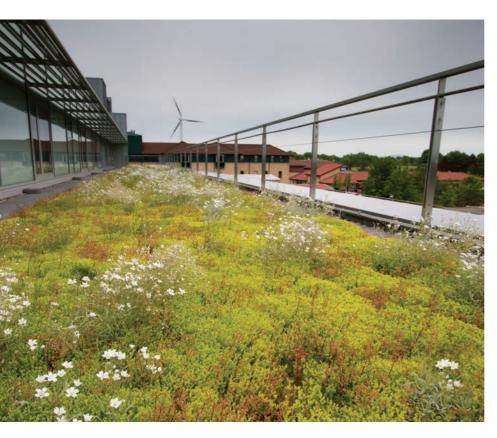


provided by BMI UK & Ireland.

There are structural implications when adding a green or blue roof to a building. A blue roof, for instance, at capacity would add around 1 kN/m² to the loading. New buildings can be designed accordingly but care must be taken with retrofits.

Though green roofs and their design are well documented, there is less guidance on the design of blue roofs, other than that published by the NFRC. However, BS 6229:2018 'Flat roofs with continuously supported flexible waterproof coverings –

Though blue and green roofs add extra dimensions to the uses and value of roofs, they also require an additional dimension of care with respect to roof design, installation and quality control



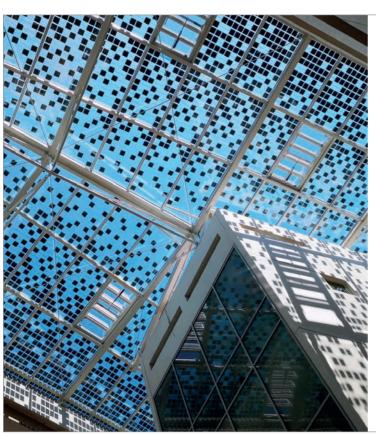
code of practice,' published in November 2018, does make reference to blue roofs and addresses the important issue of falls.

Though blue and green roofs add extra dimensions to the uses and value of roofs, they also require an additional dimension of care with respect to design, installation and quality control.

Typical CPD content would include green specification considerations, including compatible roofing system specification, usage and structural requirements; vegetation and planting methods; maintenance and aftercare; and green roofs in practice. While in-depth, expert calculation and design input should ideally be sought from manufacturers, such CPDs provide an invaluable overview to understanding the nature, options and issues surrounding these structures.

Companies such as BMI UK & Ireland can provide specification, design and technical expertise throughout the process. They can deliver advice and quality assurance during the installation process to ensure that the delivered roof – and amenity – meets the designs module.

Amanda de Sousa is product systems manager at BMI UK & Ireland



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New Simpson Strong-Tie catalogue

Construction connector manufacturer Simpson Strong-Tie has released their all-new 2020 catalogue; a comprehensive product guide which showcases the company's most recent innovations and product line extensions. Alongside the UK's largest collection of connectors for timber and masonry construction, sit numerous new products, including the GPC, Gable Panel Connector, a high movement timber frame tie, decorative and a heavy duty post bases, an adjustable mini hanger, purlin anchor, twisted restraint strap and a 4mm reinforced angle bracket. The catalogue also contains comprehensive technical data, performance characteristics, safe working loads, plus easy to follow installation instructions. Available now in print on request, and online in the Resources / Literature section from the Simpson Strong-Tie website.

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Innovative public housing with Nordic Copper

n exemplar for a new, progressive era of public housing design in London utilises high-quality materials – including Nordic Brown Light copper cladding – as part of its tenure-blind strategy.

Branch Place provides the first replacement homes in the second phase of the Colville Estate Masterplan designed by Karakusevic Carson Architects, part of Hackney Council's innovative housebuilding programme, delivering hundreds of much-needed Council homes for local people through a pioneering model of financial cross-subsidy. The project provides 116 mixed-tenure homes alongside new public routes, play spaces and landscaping.

The two buildings of Branch Place are crafted from a considered palette of high-quality tenure-blind materials including brickwork, timber and Nordic Brown Light pre-oxidised copper. A copper mansard roof, installed by Full Metal Jacket, to the building next to Regent's Canal reflects the roofscape

of neighbouring historic warehouse buildings and marks an entrance to Branch Place and the new Colville neighbourhood.

Nordic Brown Light is part of an extensive range of architectural copper surfaces and alloys from Aurubis with an unrivalled lifespan counted in hundreds of years, no maintenance and full recyclability. With a melting point of 1083°C and 'A1 (noncombustible material)' fire classification to EN 13501-1, copper is suitable for cladding tall buildings, using appropriate constructions. Low thermal movement makes it appropriate for any locations and it is non-toxic and safe to handle and work. Its inherent antimicrobial qualities make it ideal for touch surfaces internally as well.

The Aurubis architectural range includes Nordic Standard 'mill finish' and Nordic Brown pre-oxidised copper, with lighter or darker shades of brown. The extensive Nordic Blue, Nordic Green and Nordic Turquoise ranges have been developed



with properties and colours based on the same brochantite mineralogy found in natural patinas all over the world, and offer various 'Living' surfaces. Copper alloys include Nordic Bronze, Nordic Brass and the innovative Nordic Royal with a rich golden through-colour.

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WICTEC facade system a key element to Kings Cross gasholders conversion



The design team responsible for the visually striking redevelopment of three redundant gasholders in the Kings Cross area of London has made eloquent use of a unitised version of WICONA's high performance WICTEC system for the facades to the apartments created. Within the Grade II steel framework that was restored, the triple glazed and thermally broken aluminium WICLINE window solution provides the occupants with excellent thermal performance and weather resistance, as well as high acoustic control as they look out on the views of the capital. The package was delivered by Italian Project Manager, Frener and Reifer. The Facade Engineer on the project for Arup, Rob Buck, commented: "We provided a performance specification to Frener Reifer who then identified WICONA's WICTEC system as the most applicable to the project's demands. The WICONA facade system met the stringent thermal requirements which were compounded by the penetrations through the facade to support the balconies and solar-shading systems. The primary facade was installed from the floor plate which avoided the potential of clashing with the Gasholder steel framework."

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Sto goes back to school



The tremendous design possibilities offered by the StoVentec Glass rainscreen cladding system have been highlighted by a recently completed project at a leading Midlands school. The **Sto** system was specified for the Wolverhampton Girl's High School due to the strong visual

appeal which matched the architect's vision for the project. "We chose the StoVentec Glass system instead," says Joe Harris of Seymour Harris Architects. "It's tough and scratch-resistant, but it still provided the high degree of reflectivity that we were looking for.

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Profile 22 Optima Flush Casement Windows



Over 500 Profile 22 Optima Flush Casement Windows were installed in a private housing development in Whalley Range, Manchester. The Profile 22 Optima Flush Casement Window more than met the demanding requirements of the development. Jonny Reynolds, Technical Director at Kingfisher

Windows, said: "The Optima Flush Casement Window offers the perfect solution for developments in areas protected by conservation orders that need a window that replicates the 19th-century timber window design, whilst offering modern features and benefits."

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Trinity View Student Accommodation – A Stunning Development



et to become one of the most iconic developments in the city of Coventry, Trinity View Student Accommodation is a stunning new 614 bedroom residential scheme that has been built to bring the latest in modern city living to students looking to place themselves in the heart of the city and University life. Designed by Manchesterbased Day Architectural, on behalf of Crosslane Student Developments, the project is comprised of six new residential blocks surrounded by a private landscaped courtyard, creating a development that is considered not just a place to reside but a place conducive to both socialising and working.

The development 'Trinity View' takes its name from it being able to see the infamous three spires of Coventry from the 10th floor rooftop terrace, and was designed such that each of the six blocks are stepped at different heights of three, seven and ten storeys, rising ultimately to a 20-storey tower in the southwest corner of the site.

With the development residential in nature obviously safety of the student occupants was a major consideration in the selection of construction materials. For this reason, ALUCOBOND® A2 (7,000m²) was specified



for the project, which is a non-combustible aluminium composite panel system, and due to its mineral-filled core, meets the strict requirements of fire regulations in the UK and globally, without compromising the architectural possibilities for the concept and design of buildings. ALUCOBOND® A2 is also impact-resistant, durable and weatherproof. Its proven non-combustible properties make ALUCOBOND® A2 suitable for most applications including residential, retail, public buildings, corporate headquarters and offices.

Ensuring the building made a bold and desirable statement the ALUCOBOND® A2 cladding was specified in 503 Champagne Metallic (10-25 per cent and 40-70 per cent Gloss) and 504 Bronze Metallic finish (10-25 per cent Gloss and 40-70 per cent Gloss). Fabrication was undertaken by BTS Fabrications and installed by Metclad Limited.

Though the project has only recently been completely (May 2019) it has already received wide acclaim and is proving a big attraction with students.

Paul Herbert, Sales Manager: 07584 680262

Mark Winstanley, Specification Manager: 07584 680263
Richard Clough, Business Development Manager: 07760 884369
www.alucobond.com

PROJECT DATA

Project: Trinity View Student Accommodation

Location: Friars Road, Coventry **Facade material:** ALUCOBOND® A2 Champagne Metallic 503 &

Bronze Metallic 504

Construction system: Screwed
Building Owner: Crosslane
Student Developments
Architects: Day Architectural
Fabricator / Installer: BTS

Fabrications / Metclad Limited Year of construction: 2019 Copyright pictures: Brentwood

Group

Metal Technology completes impressive redevelopment project at Victoria Gate, Woking



Leading Northern Ireland-based architectural aluminium firm, Metal Technology, recently supplied its specialist products for work on Victoria Gate, a major redevelopment project in Woking, Surrey. The impressive 63,375 sq ft commercial office building, which was designed by architect firm Scott Brownrigg to combine modernity and functional rationality, used a number of Metal Technology's architectural aluminium systems as part of the refurbishment project. Metal Technology's System 17 Latitude high-rise curtain walling was used extensively to create the desired aesthetic for this building. The design process also involved developing a new triangular capping to further enhance the clean horizontal lines of the building. System 5-20D high performance thermally enhanced doors were also used throughout, both of these products offered the Victoria Gate building designers a wide and diverse range of profiles that delivered structural integrity, weather performance, thermal enhancement, and security. All Metal Technology systems are designed to perform seamlessly together to deliver the desired aesthetic and performance standards.

028 9448 7777 www.metaltechnology.com

Kalwall leads the way in retrofit design



Kalwall® translucent cladding, exclusively available in the UK and Ireland from Structura UK Ltd, has helped transform a former marble processing plant into an amazing space for the University of Tennessee in Knoxville, USA. Designed by Cope Associates, the new Facilities Services Complex has totally revitalised and refreshed the original 1908 building and the use of Kalwall has helped the projects LEED Silver Certification. The project has proved so successful it was named the Collegiate Citation winner for historic preservation in American School and University's annual Educational Interiors Showcase Award. The interior of this 8,500 sq metre building is now bathed with diffused daylight through the Kalwall panels fitted into the original clerestory encircling the central hall. The Kalwall keeps the interior free from glare and hotspots and the stark contrasts of light and shade. It also specifically helps the computer users by keeping direct sunlight and glare off their screens making it more restful and reducing eye fatigue. Furthermore, Kalwall's insulation properties mean 'U' Values of up to 0.28 W/m²K can be achieved.

www.structura-uk.com/kalwall

Aluk publishes guide for specifiers



As it celebrates its 25th anniversary in the UK, AluK has just published a brand new specification guide for its complete range of fenestration products. Available free to architects, specifiers and consultants or available to download via the AluK website, the 68-page guide has been produced to illustrates AluK's collaborative approach to working. It outlines how AluK appoints a dedicated project consultant team to work directly with specifiers, providing expert fenestration guidance through stages two – four of the RIBA Plan of Work and support in the form of BIM and in-house designed REVIT and IFC Objects. It also highlights the two dedicated AluK Design Studios in London and at its factory in Chepstow where the entire product range is on display and where clients and specifiers can meet the AluK team and attend networking and educational events. AluK has always put collaboration, service and support firmly at the heart of its offering to specifiers in the UK, alongside expertise in manufacture and innovation in product design. Its entire product range is outlined in the guide then with full specifications, CAD cross sections and thermal profiles for each system.

01291 639 739 www.aluk.co.uk

Industrial legacy retained and renewed with Crittall



An industrial building has undergone a 21st century transformation with Crittall Windows ensuring that it retains its traditional aesthetic. Herbal House was built in 1928 as the print works for the Daily Mirror. A defining feature of the then six-storey building was its horizontal bands of Crittall steel windows providing extensive daylight for the work carried on in the interior. Existing brickwork and stone detailing was repaired and refurbished and the original Crittall windows replaced with modern equivalents, in this case Corporate MW40s with spandrel panels. Crittall Cold Form Doors and MW40 external and internal screens were also installed in the double-height ground floor. The slim profile of the steel framed windows allows maximum light to enter throughout the more than 100,000 sq. ft of new workspace and they, and the internal screens, also contribute to the effect of a new lightwell that draws light through the building down to lower levels. MW40 features a high-performance double weather seal and is supplied hot dip galvanised with a low maintenance Duralife polyester powder coating. It also offers high levels of thermal and sound insulation.

01376 530800 www.crittall-windows.co.uk



CHOSEN TO PERFORM

Pilkington **Activ Suncool**™ Pro T

Toughenable dual coated glass, with self-cleaning, solar control and thermal insulation properties.

With the Pilkington **Activ Suncool** Pro T, you can offer your clients a truly holistic glass solution. As with the rest of the Pilkington **Activ Suncool** range, the glass has excellent low-e properties, helping to keep the building warm in winter with values as low as 1.0 W/m²k.

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Yet what sets this glass apart from the rest, is its toughen-ability. It provides additional safety and mechanical strength properties, opening up your architectural possibilities.

pilkington.co.uk/activsuncool





Shedding light on daylight modelling

Architectural journalist Gideon Sykes looks at the latest advances in daylight modelling and how it can help architects and specifiers determine the right levels for their projects

aylighting is the art and science of managing natural light to minimise the use of artificial lighting, reduce carbon emissions, and positively affect the performance, mood and well-being of people occupying a particular space.

Designing, predicting and planning for the impact of daylighting in a space is often misunderstood however. Daylight modelling removes the design mystery and determines the daylight requirements for any building.

It is not a new science, but one which is increasingly important as reduced energy consumption is a continuing major consideration – as well as statutory requirements (such as European workplace directives) and personal wellbeing.

Part of the design

It's often a mistake not to use daylight modelling as part of the original concept or design. Consequently, it is beneficial that this service is used early to help achieve the best possible results for the client and to form part of the overall building strategy and goals.

For example, the service can help with the documentation required to achieve BREEAM's health and well-being credit for visual comfort (HEA01) which requires that 80 per cent of the occupied space meets a minimum daylight factor of 2 per cent (3 per cent for 'exemplary' level). It can help architects and specifiers with the following calculations:

- Quantity of light transmitting materials
- · Location of light transmitting materials
- Required transmission level of the light transmitting materials
- · Glare analysis.

Daylight modelling can help achieve an exact brief from the client – for example the lux level requirement or to address concerns about solar heat gain. It can help quantify



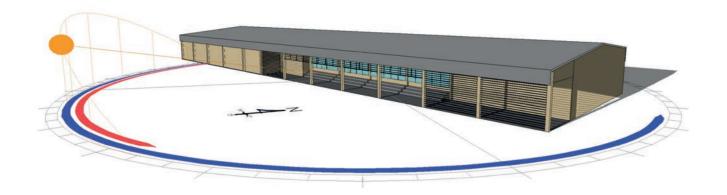
daylight transmitting products, determine optimal light transmission and help with positioning on a building to prevent glare issues and provide interior lux levels.

Reports can be looked at from a cost point of view, and recommendations can be made depending on the results. A good example of this is for 'value engineering', where daylight modelling examples may show that windows can be reduced in size to save money yet still achieve the desired lux levels. The report could include any or all of the following calculations:

Lux level

Lux is equal to one lumen per square metre. In photometry, this is used as a measure of the intensity, as perceived by the human eye, of light that hits or passes through a surface. For example, sports halls and classrooms would be expected to have lux levels of between 300-400.

Daylight modelling may show that windows can be reduced in size to save money yet still achieve the desired lux levels



AN ILLUMINATING TOOL

Radiance illuminance is a tool that calculates how effective daylight penetration is at any time of the day or on any day in the year

Radiance illuminance

Radiance illuminance (measurement of light level) is a snapshot of the ambient lux level (light) at any given time. This tool calculates how effective is daylight penetration at any time of the day or on any day in the year.

Daylight autonomy

Daylight autonomy (DA) is the percentage of the time-in-use that a certain user-defined lux threshold is reached only through the use of daylight. DA is usually given as an annual value but seasonal, monthly and daily calculations can be made. It is the ideal way to achieve optimum natural daylighting conditions for the occupants, predicting when electric lighting may be required and thereby helping to reduce the cost of energy.

Glare pattern analysis

This useful tool calculates luminance (i.e. measurement of glare) within a space. It is used to analyse direct glare or reflected light, such as in sports halls and swimming pools, where it is important to keep balanced light within a space to protect athletes from high contrast light ratios.

The process

Daylight modelling is the way to calculate the most effective daylighting for any type of building. It is calculated using five years' worth of real world weather files at the exact location of the building as well as information on day, time, position and weather patterns.

In addition, a daylight modelling team will undertake this service using data provided by the architect or client. This comprises an indication of light levels required together with building elevations, floor plans and sections.

It also takes into account proposed internal finishes, which could influence

reflectance, the positions of other windows and any external influences, such as tall adjacent buildings or trees.

With this information, the team can look at an individual room or at the overall situation and design the most favourable daylighting solutions.

Case study: Harper Adams Academy

An example of daylight modelling in practice was when Kalwall was specified for the new Weston building at Harper Adams University, near Newport, designed by Michael Hyde Architects. Widely used for cladding and rooflights, the highly insulating system was unique in the way in which it transmits 'Museum-Quality Daylighting'. Here, the translucent panels have been designed to follow the curve of the laminated timber structure.

One of the project's key design features was the way in which Kalwall has been used to allow and control the interior daylight, remove glare and shadows, yet maintain light levels and minimise solar heat gain. This was achieved using daylight modelling to predict the illumination levels across the floors. The result is that the privacy of the students is preserved while they benefit from leisure and social areas on two levels.

This roof solution utilises a 0.56 W/m²K U-value panel solution, with only 6 per cent light transmittance. The daylight modelling documented that even with these low transmission figures, lux level requirements were achieved. The main advantage for the client was to bring the G-value figure down to 7 per cent, thereby reducing the solar heat gain to a tenth of that of a standard low E double glazed unit.

Gideon Sykes is an architectural journalist for Structura UK/Kalwall

Excellent performance values by LAMILUX



LAMILUX designed, supplied and installed the 5° continuous atrium rooflight at Cremer Business Centre using the LAMILUX Glass Roof PR60. The remarkable 4,055mm wide x 65m long rooflight was designed using 64 panes, with the largest glass panel measuring 932.5 x 2851mm's and weighing approx. 107Kg's. By integrating double flap

EN12101-2 compliant SHEV smoke vents using tandem opening devices, the glazed roof provides 25m2 aerodynamic free area. Featuring toughened high performance glass, the atrium rooflight offers excellent performance values as expected by LAMILUX.

01284 749051 www.lamilux.co.uk

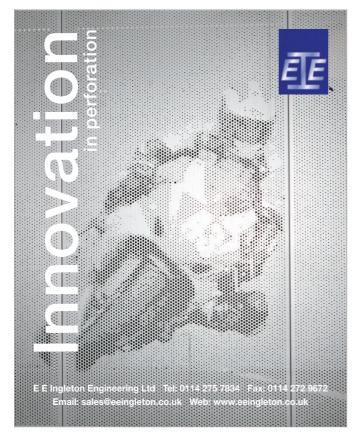
Senior creates a warm welcome



Senior Architectural Systems has delivered the stunning facade package for the new Welcome Building at the Royal Horticultural Society's garden at Wisley in Surrey, working in collaboration with main contractor Buckingham Group and supply chain partner Elite Aluminium Systems.

Senior's slim profile and thermally-enhanced SF52 aluminium curtain walling system has been used to create the glazed facades of the new building, helping to flood the interior space with natural light and perfectly framing the views of the surrounding gardens.

www.seniorarchitectural.co.uk







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Inside and out at Hatton garden

here are many older buildings around the UK that just need a creative eye, some time and attention to transform them into a beautiful modern space. Eurobrick has been leading the brick slip cladding sector for nearly 30 years and has extensive experience of supplying its systems to redevelopment projects that aim to rejuvenate older properties.

Hatton Garden is a well-known commercial area in the Holborn district of London, famous throughout the years for its associations with luxury products and diamonds. Minerva House has an attractive facade, but required extensive modernisation to the structure of the building to bring it up to the modern standards of today.

Developer GPF Lewis Ltd completed the project in 2018 following 50 weeks work with a £5.1m budget. The redevelopment of this landlocked site involved the demolition of the rear part of the building, adding a steel frame extension to the rear to connect to existing floor levels. The project also included



general refurbishment of the existing building and a high-end commercial fit-out throughout the interior space.

Eurobrick supplied circa 400m² of 17mm X-Clad for use both externally and internally, installed by BR Hodgson. Externally, the system was finished with glazed white stretcher and header slips and corners. These slips were fitted in a Flemish bond pattern to match the style of the existing building. For the interior, Islington Yellow Rustica stretcher and header slips were selected from Eurobrick's Classic Range. These were set out in an adapted English bond style and finished with Eurobrick's specialist pointing mortar, Europoint, in light grey.

The whole accommodation now lives up to the building's attractive facade, providing a modern and stylish commercial space.

01179 717 117 www.eurobrick.co.uk







Welcome to CAFÉ ACOUSTICS

Gurgling espresso machines, clattering cutlery, clinking crockery, piped-in music, conversations competing with all of these things and other conversations.

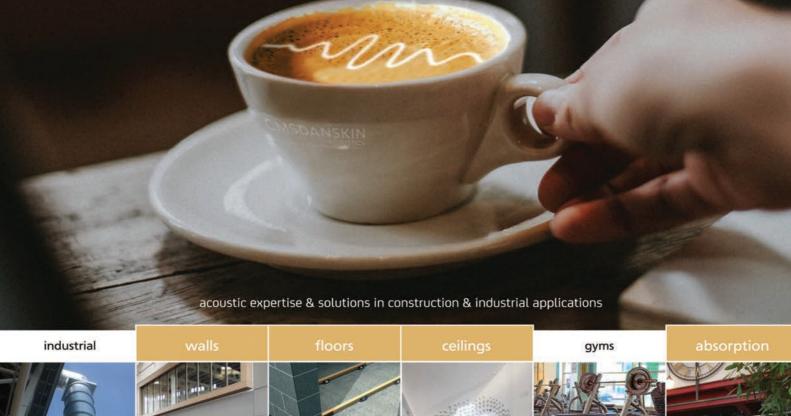
And all of this is bouncing off fashionable wood, glass and metal.

The Lombard Effect in action.

Ambience goes out the window ... and customers go out the door.

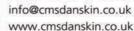
CMS Danskin Acoustics offer a range of sound absorption solutions to tackle this all-too-common problem.

- SuperPhon Acoustic Panels
- SuperPhon Acoustic Baffles
- SuperPhon Acoustic Rafts*
- SuperPhon Art (printed with bespoke imagery)
- · Fade Acoustic Plaster
 - * As used in the visitors' centre café at the Royal Observatory, Edinburgh.











Insulating flat roofs in accordance with new British Standard and fire regulation revisions

he recent review of the flat roof design British Standard and Approved Document on Fire feature new design considerations for insulating flat roofs. Ensure your project requirements are being met by following Bauder's guidance on achieving minimum U-values, thermal performance of inverted roofs and fire safety

BS 6229:2018

The 2018 update of British Standard 6229 – flat roofs with continuously supported flexible waterproof coverings, brings in significant changes that affect the design of flat roofs and the installation of a waterproofing system and associated insulation. The document comprises updated practices that directly impact the design of roofs on new buildings and those to be refurbished.

Minimal U-Values and Control of Condensation

Under the revised British Standard, the minimal U-value levels permitted at any point on a roof, must be 0.35W/m²K (clause 4.7.2). 'At any point' includes the minimum thickness of tapered roof areas and gutter to maintain the thermal performance of a heated building. This is a new design consideration under the standard's revision. In such roofs, the risk of surface condensation is removed if continuity of insulation, including at upstands and roof penetrations exists.

This uplift in the standard looks to eradicate the practice of thinly insulated gutter soles and excessively low points in tapered schemes.

For reference: 0.35W/m²K is achieved using approximately 60mm BauderPIR FA-TE or 100mm of BauderROCK.

Thermal Performance of an Inverted Roof

When designing an inverted roof construction, the principal thermal insulation layer is located above the roof structure and waterproofing, resulting in the waterproofing, structural deck and support structure being

at a temperature close to that of the interior of the building. In order to prevent water from passing around the insulation, through the joints, and reaching the waterproofing layer, where it would have a cooling effect on the building, the correct installation of a Water Flow Reducing Layer (WFRL) is required. However, the construction tolerances and installation of the WFRL can result in a less than desirable reduction of water flow and as such the corrective action is much reduced. The advice Note in clause 4.6.2.2 - Inverted Roofs to counter this reduction suggests increasing the design thickness of the thermal insulation of an inverted roof where a Water Flow Reducing Layer (WFRL) is being relied upon by "not less than 10 per cent". Bauder provides in project specifications both the design thickness for the target U-value plus the advisory minimum 10 per cent increase in thickness for the specifier to choose if they wish to follow the advice.

To ensure comparable tendering Bauder recommends that you should clearly state if you are following the advice in BS 6229:2018 Clause 4.6.2.2

Update to Fire Safety Approved Document B

On the 30th August 2019 the new edition of 'Fire Safety-Approved Document B' (ADB) came into force and with-it considerations that affect insulation within flat roofing design. For a full understanding of the testing procedures, classifications and further guidance, please visit bauder.co.uk/fire-protection-statement.

Specifying roof insulation based on fire performance

Individual construction products are covered within BS EN 13501-1 for which insulation as a separate component will be encompassed and allocated a Class according to their reaction to fire test results with letter classifications from 'A1' through to 'F'. On the whole, materials manufactured from plastics will achieve an 'E' rating, which will include the insulants Expanded Polystyrene

(EPS), Extruded Polystyrene (XPS) and Polyisocyanurate (PIR) and are excluded from 'Specified Attachments' – fixed balconies, but they are perfectly acceptable in a flat roof build-up where the whole build up achieves BROOF(t4).

There are currently a number of 'grey areas' in the legislation that further complicate this. While there are several non-combustible insulants that can be used on balconies or vertical flashings, the waterproofing membrane used will typically be Class 'E'. The MHCLG need to be more specific on their requirement for flat roofs.

Non-combustible insulants, such as cellular glass along with mineral wool, are clearly desirable materials to include in a flat roof specification because of fire performance, and it is important to consider and balance the factors for inclusion within a roof system. In general, non-combustible insulants are not as thermally efficient as PIR insulation and therefore extra thicknesses, increased weight and reduced compressive strength can be a limitation in some applications. PIR has the advantage of being highly efficient, which reduces the height and weight of a roof covering build-up whilst also offering good compressive strength meaning greater versatility on a project.

Within a Bauder warm roof waterproofing system (excluding 'Specified Attachments') the insulation, be it mineral wool, cellular glass or PIR, is not directly exposed and is therefore protected through the performance of the cap sheet and its system classification of BROOF(t4); thus these insulants in-situ all conform to Building Regulations for external fire on roofs in the same way – not one achieving a higher rating than the other.

0845 271 8800 www.bauder.co.uk



Why the UK's cafe culture needs less reverb

Paul Absolon of CMS Danskin Acoustics looks at solutions to reverberation problems in noisy cafes, which are increasingly prevalent in the UK

The proliferation of coffee shops over the last few decades can't have escaped anyone's attention. Even before the arrival of Starbucks in 1998, the growth of the nation's cafe culture was in full swing. Between 1993 and 1997, the number of coffee outlets in the UK increased by an incredible 847 per cent. As a nation, we consume a startling 95 million cups of coffee every day, and the coffee industry contributes over £17bn to our economy, creating hundreds of thousands of jobs.

Given the ubiquity of cafes – not just on the high street but in workplaces, universities, retail spaces, public buildings – why do so many of them test people's patience with dreadful acoustics?

There are two contributing factors. The first is reverberation. The second is the Lombard Effect.

Reverberation

When a sound wave strikes a hard surface, it is reflected. This is known as reverberation. The length of time it takes the 'sound pressure' of this wave to fall by 60 decibels after the original sound has ceased is known as the reverberation time. In some environments, such as auditoria, a certain amount of reverberation is desirable in order to prevent sound 'drop-off.' In most environments, however, it's problematic.

Reverberation is prevalent in environments with lots of hard surfaces. Now, think of your typical cafe environment: all those wipe-clean tables and countertops; those wooden floors; all that steel and chrome coffee-making machinery; all that crockery. Reverberation is guaranteed.

The Lombard Effect

According to the UC Berkeley Phonology Lab Annual Report (2008), "the Lombard Effect is a phenomenon in which



speakers alter their vocal production in noisy environments, such as loud parties or restaurants."

In other words, in an attempt to be heard over gurgling espresso machines, clattering cutlery, clinking crockery, piped-in music and other people talking, we increase the volume and pitch of our voices. This adds to the problem, leading others using the space to raise their voices, which means we have to raise our voices, which leads to an exponential rise in volume. The high levels of reverberation typical to coffee shops massively exacerbate this problem.

Solutions

The reverberation issue is the simplest to resolve; and by solving this problem, you may effectively combat the Lombard Effect by virtue of reducing the overall noise in the establishment.

The reverberation issue is the simplest to resolve; and by solving this problem, you may effectively combat the Lombard Effect by virtue of reducing the overall noise in the establishment





As reverberation is caused by sounds bouncing off hard surfaces, minimising the number of those hard surfaces will be a solid first step. If this isn't possible - and, for hygiene reasons, cafes need wipe-clean surfaces - it's possible to counter the impact of all these reverberant surfaces by adding absorbent materials. The most commonly employed anti-reverberation product is the sound absorption panel. These are fabric covered and are mounted on the walls or suspended from the ceiling. When the sound wave enters the open cell structure or fibrous composition of the panel, it bounces around like a pinball. The friction resulting from each instance of impact is converted into low-level heat, which is absorbed into the material. When the sound wave re-emerges, its energy - and consequently its 'loudness' - is significantly diminished.

A useful measure for the effectiveness of any sound absorption solution is BB93: acoustic design of schools – performance standards, which gives the minimum performance standards required for acoustics in school buildings. Although this document only refers to schools, architects often use it as a benchmark when treating reverberation issues generally.

BB93 requires that the Reverberation Time in a classroom be as little as 0.4 seconds in some cases. So, the sound pressure of the reflected noise has to decrease by 60 decibels in less than half a second. Although this might not be necessary in a cafe environment, it's a worthy target.

Challenges

Some environments are more challenging than others. Recently, CMS Danskin Acoustics had to reduce reverberation issues in the cafe at the Royal Observatory in Edinburgh, a building that is well over 100 years old, with all that entails in terms of adapting to modern Building Regulations.

In such cases, design flexibility is key, fabricating to fit the unusual shapes and angles typical to listed buildings, and even creating sound absorption panels that accommodated antique light fittings.

By taking reverberation out of the 'noise mix' – visitors to the cafe can speak clearly over the other acoustic intrusions, without having to raise their voices and set in motion the dreaded Lombard Effect.

Paul Absolon is technical director at CMS Danskin Acoustics

Childcare institutions with sound design



The design of spaces for children is intriguing because of the permanent influence it can have on them. A new online theme by Danish acoustic panel manufacturer Troldtekt explores through articles and expert interviews how good acoustics plays its part when designing these areas. Of course, other factors such as colour, shapes, robustness and finish also have an impact but so does sound. Careful design considerations are particularly important because a child's environment moulds their perspectives for the future. Studies such as Bronzaft and McCarthy (1975) have shown the effect noise has on wellbeing and learning – This is the reason why the products of specialist manufacturers like Troldtekt are specified to solve the problems of noise and reverberated sounds. If acoustic absorption is ineffective, discomfort and irritation will result from the reverberations. If it is designed well, the participant's interest will increase, as many case studies for new and transformed buildings prove. The benefits of 100 per cent Troldtekt natural wood wool panels include high sound absorption, high durability, natural breathability, low cost life cycle performance and sustainability.

www.troldtekt.co.uk

Townhouse insulated with Spacetherm®



The heat efficiency of a Grade II listed Georgian townhouse in the historic city of Bath is set to be dramatically improved as a result of the introduction of Spacetherm® Multi insulation. The challenge of dealing with heating

inefficiencies, major heat loss and high heating costs are a common problem with many listed buildings and solid wall dwellings. Spacetherm Multi, from A. Proctor Group, is a high-performance laminate specifically designed to be laid directly onto existing floors & walls. The use of Spacetherm Multi has virtually no negative impact on floor space, making it ideal for refurbishment projects where space is at a premium.

01250 872261 www.proctorgroup.com

Classic style meets modern innovation



A new build home has embraced a 'best of both worlds' philosophy by combining traditional aesthetics with the exceptional fabric performance provided by the **Kingspan TEK Building System**. Constructed with innovative Structural Insulated Panels from the Kingspan TEK Building System,

the house enjoys excellent thermal performance, making it both comfortable and efficient. Kingspan TEK Building System panels comprise a highly insulated core sandwiched between two layers of Oriented Strand Board type 3 (OSB/3) and can deliver U-values as low as 0.17 W/m²K without the need for additional insulated liners.

01544 387 384 www.kingspantek.co.uk

Armourcoat Acoustic flies high at new Istanbul Airport

rmourcoat's acoustic plaster system has been specified by UK architects Softroom for the new \$12 billion Istanbul Airport in Turkey. The facility will eventually fly 200 million passengers a year when complete in 2028, making it the world's biggest airport.

The stunning interior design for the Turkish Airlines lounges is the result of an international competition won by Softroom. The brief called for 19,000m² of lounges that embody the national carrier's new brand



philosophy of 'flow' within the airport environment. The lounge design forms a passenger journey that effortlessly weaves the spaces, which include drop-off, check-in and departure areas, of the lounges together. To aid the sound quality within the lounges, the Armourcoat Acoustic plaster system creates a seamless ceiling finish with a class 'A' Noise Reduction Coefficient rating. Its clean and smooth mineral surface adding to the overall design.

In addition, the Armourcoat Acoustic system was installed as large island panels within the 55,000m² Duty Free area operated by Unifree Duty Free in partnership with Gebr Heinemann. The area takes inspiration from the Bosphorus strait in Turkey, with seven sections each selling brands related to its theme including Emporio Armani, Louis Vuitton, Christian Dior and Bulgari.

Designed to optimize the acoustics of interior spaces, the acoustic plaster system comprises of a special mineral wool



composite panel that is bonded onto the substrate and finished with a seamless layer. It offers an elegant marble-based plaster finish while allowing sound energy to pass through the surface. The Armourcoat system, which consists of 80 per cent recycled material, has zero VOCs and achieves class '0' fire rating. The system has also been granted the Quiet Mark Award – the international mark of approval from the Noise Abatement Society Charitable Foundation.

01732 467993 www.armourcoat.com





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Airing the principle of partnering



Ensuring design and aesthetics integrated effectively has enabled an office refurbishment to deliver a smart working environment for Axa Insurance. A fundamental element of the scheme's success has been the partnership between the fit out team of consulting engineer Axiseng, HVAC engineer Keane Environmental, and air movement specialist Gilberts. More than 500 of Gilberts' diffusers

have been utilised throughout the four floors of the project, to create modern, functional, open plan workspaces. Gilberts' GSFE is designed to provide excellent horizontal airflow, and high air change compared to conventional diffusers, so was an ideal base from which to work.

01253 766911 info@gilbertsblackpool.com

BoilerMag protects heating system



The Tea Room at Beamish Museum is the latest attraction to have its heating system protected with a BoilerMag XT industrial filter. G Roe Heating and Plumbing Services Ltd installed the BoilerMag, as well as three Ideal EvoMax 60kw LPG boilers, in the plant room of the museum's Co-Operative buildings block. Managing Director of G Roe Heating and Plumbing Services Ltd, Greg Roe said:

"BoilerMag filters are competitively priced and give constant system protection. We've never experienced any issues with the BoilerMags we have installed; they are a cost effective and practical solution."

0114 225 0624 www.boilermag.com

Panasonic introduces a new era of ECOi



Panasonic has announced its new Heat Pump Chiller series ECOi-W. This new offering provides a wide variety of reliable and powerful HVAC chiller solutions to meet the needs of hotels, commercial and industrial premises. Available in a range of sizes, offering heating and cooling

capacities from 20kW to 210kW and with outstanding energyefficiency, the new ECOi-W Heat Pump Chiller Series has high SEER/SCOP values (average SEER of 3.85 and SCOP 3.32). With guaranteed quiet operation for comfort and a compact footprint, the series is designed and optimised for easy service and maintenance.

www.aircon.panasonic.eu

Efficient water management with CONTI



Functional safety and ease of maintenance are a pre-requisite for large-scale facilities where systems must be kept running smoothly and germ-free. The introduction of the CNX water management system from CONTI+ to the UK brings a system scaleable to the most extensive facility with

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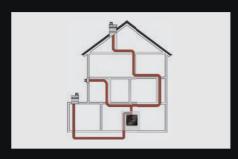
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DRU is an approved CPD provider to architects and DRU fires have many design features that make them ideal for inclusion in architect-led projects.







THE CENTER – The World's most Expensive Office Building

he Worlds 10th Tallest Skyscraper at the time of construction featuring AET Flexible Space Underfloor Air Conditioning is located in Hong Kong's Central Business District and standing at 352m high offers panoramic views of Victoria Harbour. This 80 storey building and prominent landmark was the first building in Hong Kong to adopt underfloor air conditioning throughout and recently gained renewed attention having been sold for the world record price for an office building of \$US 5.2 Billion (37000\$/sqm) attracting rents in excess of £100 per sq foot.

The Column free design offers floor plates of 26000sq ft and permits up to 12 separate tenancies per floor. Each tenancy is provided with its own temperature controlled zone and permits easy out of hours operation. In many cases corporations have taken complete floors and in some cases two or three floors. The modular design included knock out

sections in the floor structure to permit internal staircases to be added if desired for such corporations.

Utilising a raised access floor void as a plenum to deliver conditioned air to the work spaces over 10 per cent height saving was achieved when compared with ceiling based Fan Coils or VAV. The Developer Cheung Kong's FM Company Citybase reported a reduction in energy consumption in the region of 20 per cent when compared with similar buildings, within their portfolio, utilising Fan Coils in Hong Kong.

AET Flexible Space assisted in the initial design and followed through with construction support and a full maintenance agreement to look after the tenants and the 6500 FantileTM units installed over 59 floors of speculative office accommodation. As a direct result of reducing the building height by 10 per cent, 35m in height was saved offering a saving in cost of Curtain Walling alone of approximately \$US 7 million.

Tenants find the system to be extremely adaptable both when meeting space layout changes and personal comfort. Fantiles can be relocated in a matter of minutes to suit the layouts without impacting on the ceiling installation. Commenting on this Anthony Poon of Citybase said that there is no doubt that the Flexible Space System is the most cost effective AC system over time, that he has worked with, when it comes to reconfiguration and upgrade.

The building has gained Class 1 Certification for Indoor Air Quality (IAQ) and won the Green Building of the Year award.

TAX BENEFIT for UK: A little known but highly attractive feature is that the raised floor, when used as a floor plenum, along with all the air conditioning system attracts capital allowances. With the current Government Investment Allowances of 100 per cent write off up to £1 million of equipment, in the first year, Developers can gain a dramatic cost advantage by adopting Underfloor Airconditioning compared to ceiling based systems in addition to the capital allowance granted for the ceiling plenum used for the return air.

01342 310400 www.flexiblespace.com



PROJECT DETAILS

Location: Hong Kong Total Area: 140,000 sq m Air Conditioning System: AET Flexible Space System Underfloor supply air, high level

return air

Building Type: New build **Client:** Cheung Kong Holdings **Architect:** Dennis Lau and Ng

Chun Man **Engineer:** ACE



Put pleasure over procedure

According to guidance published by RIBA, a well-designed bathroom is often the key to dignity and independence. The guidance 'Age Friendly Housing' says "hospital-style bathrooms have made bathing a procedure rather than a pleasure for older and disabled people but safety and practicality no longer need to come at the expense of style". Closomat is a leading brand of wash dry toilets, also known as shower toilets, smart toilets or automatic toilets, which combine integrated douching and drying within the WC so there is no need to manually wipe. Its latest models, the wall-hung Asana and floor-mounted Palma Vita, reflect several of the features and benefits referenced in the age-friendly housing guidance. They deliver contemporary styling with the best performance in douching and drying. The Asana features a low level soft ambient light, facilitating its location in the dark/at night. The Palma Vita is unique in that it can be accessorised, initially and retrospectively, to suit the individual's changing needs.

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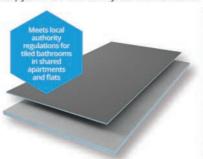
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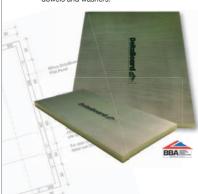


Delta Board

High Performance Construction Boards

DeltaBoard is a multi-purpose lightweight construction board, designed for the application of all tile types, cement based screeds and synthetic renders. DeltaBoard is manufactured using high density extruded polystyrene which provides excellent insulating properties. The extruded polystyrene core has a factory applied reinforced cement coating which provides excellent impact strength, sound reduction and fire resistance making them ideal for construction

DeltaBoard is easy to use and can be fixed using cement based flexible tile adhesive – solvent based or ready mixed adhesives MUST NOT be used. Alternatively DeltaBoard can be fixed using dowels and washers.







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DeltaTray

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DeltaTrays are lightweight, waterproof, robust shower tray formers manufactured using high density XPS as its core element with a factory applied reinforced cementitious coating that creates an impact resistant ready to tile surface. DeltaTrays provide the perfect solution for the creation of "walk-in" level access shower areas and modern wetroom environments.

DeltaTray Thames and DeltaTray Trent are available in a extensive range of sizes. Increased resistance to point loading enables the use of mosaic tiles as small as 20mm x 20mm. Increased flow capacity and undertile drainage makes the Thames and Trent range the perfect solution to suit the most demanding wetroom project.



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A bathroom that you cannot part with: a bathroom for life has sustainability written all over it.



RENOLIT ALKOREN Cubanit Grey Suedette Matt



RENOLIT ALKOREN Cubanit Grey Suedette Matt is a warm colour which is ideal for bathrooms and interior furniture.

Finished with the popular Suedette Matt surface it has a distinctive feel with an aesthetically appealing finish.

The mocha undertones create a harmonious combination when used alongside woodgrains with grey content.

Alternatively, mixing with an elegant blue and olive green create a modern day vintage revival style which is perfect in bathrooms as illustrated.

Cubanit Grey is matched to Egger U750 ST9.

01670 718222 www.renolit.com/design

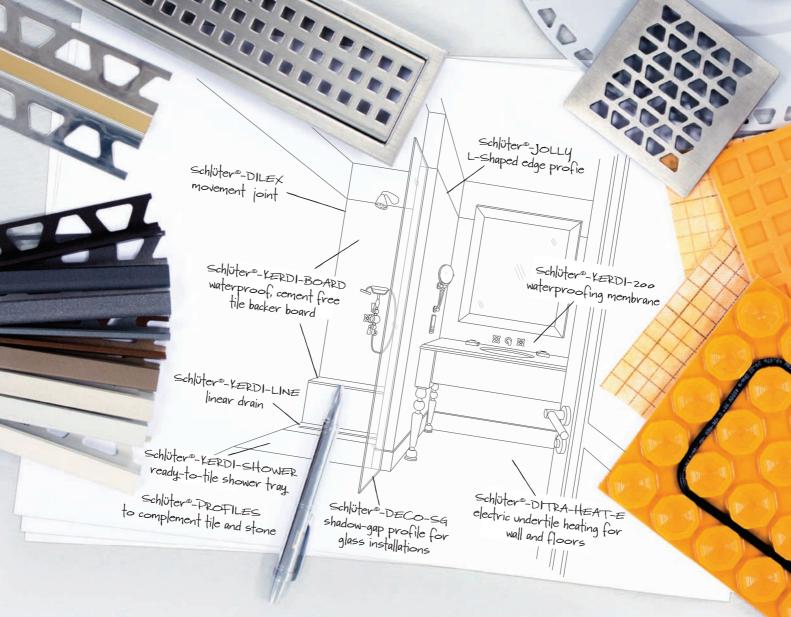
Horne - Supporting Independence



Horne's CARE shower, in use widely across the NHS, extra-care, dementia care and Changing Places facilities, now offers enhanced inclusive design, promoting further support and independence for its users. The robust yet lightweight rail is a brand-new design; a durable core of anodised aluminium, treated with hard-wearing polyester paint, is fixed to smooth and tactile solid injection-moulded elbows and wall fixings. The riser grip/release mechanism epitomises inclusive design; combining fishing-reel technology for a finely controlled friction grip and a custom-designed spring for its low-force release. Painted an inclusive deep orange colour, the rail offers valuable support and optimum visibility – colour and contrast – especially useful to our ageing population. Why orange? Yellow is calming but, tonally, contrasts insufficiently with recommended pale wall backgrounds. Although inherently darker, red is aggressive and often associated with heat and danger. Sharing the best of both, orange is highly visible – offering appropriate tonal contrast that is also warm and earthy, reminiscent of the natural world. The Horne grab/riser rail is expected in production from Q2 2020.

01505 321455 www.horne.co.uk





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Mapei's Keraquick adhesives range

apei's Keraquick range features three versatile and quick-setting adhesives, offering solutions to wall and flooring installation projects with ceramic tiles, natural stone materials, mosaics and porcelain.

Fast-track ready Keraquick S1 is the ideal adhesive for bonding to cement-based and calcium sulphate-based screeds, concrete, plywood overlay, existing unglazed ceramic floor tiles, cement-based renders, gypsum plaster, plasterboard and tile backer boards. Keraquick S1 develops high bond strength between two to three hours after mixing, and is suitable for interior and exterior use in heavily trafficked areas that need to be quickly back in service such as supermarkets, showrooms, airports, motorways services and other public buildings. Non-slip and deformable, it is also ideal for rapid installation or renovation of swimming pools, bathrooms, showers, kitchens, as well as industrial plants and refrigeration units.

This versatile adhesive will allow tiled floors to be subjected to light foot traffic after just two hours, and full service conditions



after 24 hours. For heavy duty floor areas, a minimum of seven days should be allowed for the adhesive to cure.

Proving to be just as adaptable, Keraquick Ultrafast S1 is the ultimate rapid-setting cement based adhesive also for interior and exterior use when installing porcelain,

ceramic or dark coloured non-moisture sensitive natural stone materials to floors and walls. This improved formula is composed of a mixture of special cements, selectively graded aggregates, synthetic resins and setting accelerators that develop a high bond strength after just 60 minutes for an ultra-rapid installation.

Completing the range is Keraquick XL Fibrelite, a fibre-reinforced, high yield, cement based adhesive best for fixing larger tiles up to 1500 x 1500mm. For use in large commercial environments, it is for interior and exterior bonding of ceramic and porcelain tiles, as well as marble and natural stone materials that are not sensitive to moisture. Due to this, Keraquick XL Fibrelite can be applied over wet and electrical flooring heating systems to provide extra comfort for your flooring projects.

All adhesives in the Keraquick range are both frost and water resistant, making them ideal adhesives for projects this winter!

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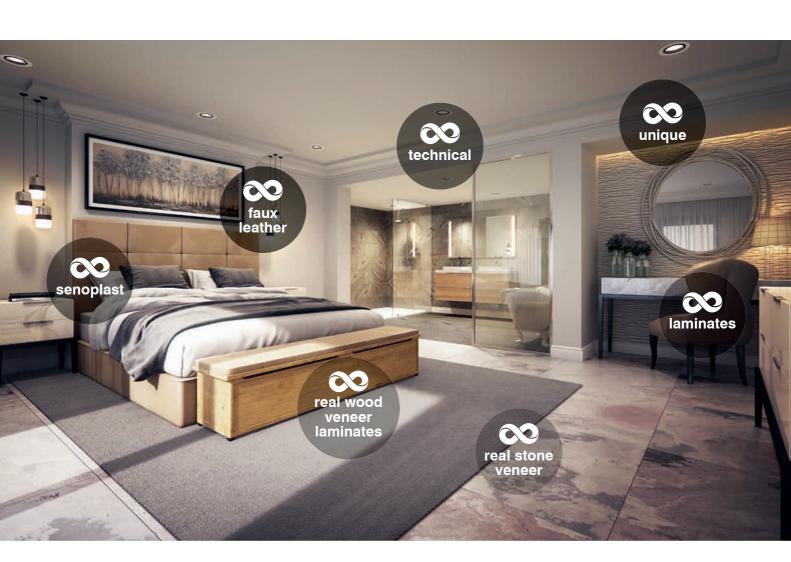


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Reeded glass shower screens from Agata



Curves, colour, style and intricate detail can be found in the bathroom, from industrial to new-deco creating the bathroom has become on an interior designers dream. Now reeded glass is set to be the next big thing in bathroom design. For years the bathroom has been a whiteboard, a fully functioning backdrop, white bathtubs, clear glass shower screens

with barely visible joins. The reeded glass shower screen from AQATA brings with it an aura of sophisticated elegance. The 2000mm high panels of 10mm thick glass can be framed in chrome, gold or matte black, matching towel rails are an optional extra.

01455 896500 www.agata.co.uk

CCL Wetrooms launch Tilesure



CCL Wetrooms have launched Tilesure, a new Butyl Waterproofing and Decoupling Membrane, suitable for waterproofing wetroom floors on timber and solid floors. Tilesure is an evolution of the market leading RIW Tilesafe

bitumen-based membrane. Tilesure is a 1.4mm self-adhesive membrane with decoupling properties of 12mm, ensuring that any movement in the floor substrate is accommodated, preventing the grout and floor tiles from cracking. Tilesure is quick and easy to apply, compatible with silicone sealants and creates a secure waterproof barrier that is guaranteed to remain waterproof for the life of the wetroom tiles.

0844 327 6002 www.ccl-wetrooms.co.uk

Duravit – high tech bathrooms



Duravit and Philippe Starck present the new generation of shower-toilets, the SensoWash® Starck f Plus and SensoWash® Starck f Lite. Both can be conveniently operated, either with a handy remote control or via an app on your mobile phone. The technology is

now housed within the ceramic body ensuring a clean a minimalist design. The flat seat now has a height of just 40mm and the white cover located behind it forms a flush-mounted unit: contemporary design and comfort-enhancing technology in perfect harmony.

01908 286680 www.duravit.co.uk

Kaldewei Superplan XXL



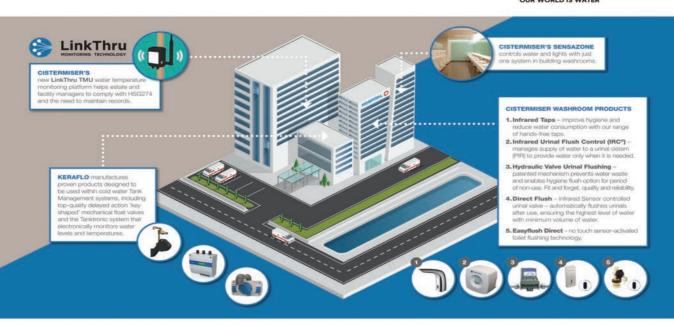
The floor-level Superplan XXL shower surface, made from Kaldewei steel enamel, comes in a wide range of dimensions for maximum flexibility up to 1.8 metres. Available in a range of colours, including the exclusive matt shades of the Coordinated Colours Collection and with optional surface finishes

including Kaldewei Secure Plus anti-slip finish, near-invisible, anti-slip finish which ensures safe footing in the shower without detracting from the design. All Kaldewei steel enamel bathroom solutions are 100 per cent recyclable and are supplied with a 30-year guarantee. Visit Kaldewei at Sleep + Eat 2019, 19th-20th November at Olympia London – Stand B40.

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NOVELLINI







Novellini returns to Sleep & Eat

For the second year in a row, Novellini will be exhibiting at the annual Sleep & Eat event at Olympia London From 19-20 November



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Direct Flush – a fresh approach to washroom hygiene

Toilets are an obvious source of harmful germs. Cisterns store water in ideal conditions for bacterial development and these bacteria are released in an aerosol plume during flushing, but they can also spread back through the pipes and colonise the system.

The alternative to cistern-flush mechanisms is a direct flush system which connects directly to the water supply. A self-closing valve discharges a pre-determined flush volume without the need for stored water. By employing system pressure to rinse the pan, there is no water stagnation, scale deposition or build-up of impurities upstream of the flush mechanism.

Direct flush improves hygiene

Water Supply Regulations (1999) require the pan content to be "cleared effectively by a single flush of water". Gravity-fed cisternflush mechanisms may not have sufficient dynamic pressure to ensure a hygienic rinse with a single flush, and a 40 to 60-second refill time exacerbates the problem. Replacing the cistern with direct flush valves has several hygienic advantages. Firstly, the flush volume can be adjusted to the dynamic pressure to ensure an effective single rinse. Where necessary the flush can be adjusted for ecological or smaller children's WC pans. This reduces the aerosol flush plume, prevents unhygienic splashing and avoids the risk of slipping on wet floors. In addition, since there is no refill time, the full flush is instantly available for subsequent users, delivering an effective flush every time.

Hygiene can be further improved by installing an electronic flush mechanism. For example, DELABIE's TEMPOMATIC Dual Control direct flush valve has a user-activated conventional push-button flush. However, an automatic sensor also detects their presence and flushes the valve automatically if the user forgets. An intelligent rinsing system identifies the duration of use and flushes accordingly. There are 3 programme options, including an ecological setting with a reduced flush length equating to a lower flush volume.

Electronic flush systems have the additional benefit that no manual contact is required, so the toilet is accessible to any user, regardless of age or level of independence.

Furthermore, an automatic duty flush can be programmed to flush the pipework every 12 or 24 hours when not in use, preventing stagnation and reducing biofilm development.

Fit for purpose

Cistern-flush toilets are usually installed through habit but, although they are ideal for domestic usage patterns, the mechanism comprises plastic components that cannot cope with the regular and intensive use experienced in public buildings. Heavy-handed users can easily break fragile mechanisms. Depending on water quality, watertight seals which are sensitive to scale and impurities quickly wear out with repetitive use. This inevitably leads to leaks and reduced flushing capability.

According to Thames Water, a leaking toilet can waste up to 400 litres of water a day, and a leak in a cistern-flush toilet is very difficult to detect. The resulting maintenance is time consuming and problematic, especially where cisterns are installed on frame systems behind IPS panels. However, with direct flush systems, any leak is very easy to identify and remedy.

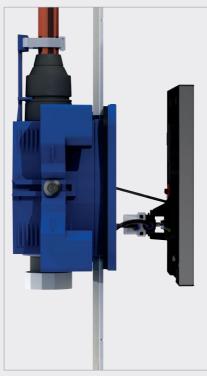
Direct flush mechanisms, designed for public washrooms, are much more robust. The hydraulic timing mechanism on DELABIE's TEMPOFLUX 3 relies on water pressure to operate, so there is no metalmetal or metal–plastic friction. A self-cleaning timing groove reduces maintenance and extends the operational lifespan to over 500,000 activations. Furthermore, the cartridge is standardised and can be exchanged simply by isolating the water supply via an integrated stopcock.

Challenging perceptions

Contrary to popular belief, direct flush toilets can replace cistern-flush toilets in refurbishment projects. If the header pipe is close to the installation, only the branch pipe run needs to be changed in the majority of cases. Although the methodology for calculating pipe sizes for cistern-flush is different to that for direct flush, the pipework sizing is similar due to the principle of calculating simultaneous use.

A direct flush activates for seven seconds, whereas cistern refill is between 40 and 60





Number of WCs installed	Number of WCs used simultaneously
3 valves	1 valve
4 – 12 valves	2 valves
13 – 24 valves	3 valves
25 – 50 valves	4 valves
50+ valves	5 valves

seconds. Although the effect on demand is cumulative, the shorter duration of the direct flush means that in effect fewer valves will be operating simultaneously. For example, based on a dynamic flow rate of 1.5 litres/second, DELABIE estimate that for a block of 20 direct flush toilets, three out of 20 will be activated simultaneously.

Easy to install

Another major concern is the ease and convenience of installation and ongoing maintenance for direct flush systems, especially in recessed applications. DELABIE has patented an innovative housing that can be installed on IPS panels or solid walls up to 120mm. Unlike conventional housings which are cut flush to the wall, this housing features a collar with an integrated seal which provides a watertight seal against the wall finish. The housing is cut to size in front of the collar and any leaks or condensation evacuate in front of, and not behind or into, the wall. The collar also provides support for the wall actuator plate which conceals the whole mechanism and has an integrated electronic unit for sensor models.

The flush valve is supplied in two kits, the hydraulic connection is made from the exterior with temporary caps to replace the sensitive elements while the system is purged. The mechanism and electronic unit are then connected inside the housing, but can be easily accessed for subsequent servicing. A backflow prevention device is also incorporated within the housing and, in the event of backflow, any water will evacuate in front of the wall.





Direct Flush systems offer a hygienic alternative to cistern-flush WCs, reducing the risk of infection in commercial washrooms. Designed for intensive use in public environments, they provide a sustainable solution that manages water consumption and adapts to the usage demands of public facilities, plus they are easy to install and maintain. Breaking the habit of specifying domestic style cisterns will deliver long term dividends in terms of improved hygiene, sustainability and reduced maintenance.



Hygiene by Design

In public washrooms, a suspended WC pan offers a stylish, contemporary design. However, there are distinct functional advantages for the healthcare sector. A suspended pan offers an additional hygiene benefits, since the overall toilet surface area is reduced and access for cleaning beneath the pan is improved.

Supported on a frame system, a suspended WC pan is ideal for installation in confined spaces or service ducts. The pipework and all fixings are concealed and, where the mechanism is also recessed, the working parts are inaccessible to users reducing potential vandalism.

User access and comfort is also improved as the adjustable bracket on a frame system ensures that the WC pan can be installed at the correct level for compliance with the DOC M Building Regulations for wheelchair-accessible toilets (with the pan height 480mm above floor level).

One further hygiene consideration is a rimless WC pan. Designed for maximum hygiene, the bowl is quick and easy to clean, with no inaccessible places where bacteria can take refuge. The adjustable flush volume on the direct flush system is the ideal mechanism to complement a rimless WC pan, guaranteeing an effective rinse without splashing.

01491 824449 www.delabie.co.uk







What's driving washroom design?

Neil Jeffery of Franke Water Systems takes a look at some of the key trends in commercial washrooms, from product design and materials to sustainability, saying that designers need to take a holistic approach to create spaces that stand the test of time

The washroom is such a central part of any hotel and restaurant experience that a poorly designed or poorly maintained one can turn a five-star review into a three-star disappointment.

It's not simply a matter of hygiene standards, which should be faultless as a matter of course. It's also about making sure the sense of style that gets so much attention in the guest rooms and interiors, are also incorporated into the washroom designs throughout the building.

Balancing passing fashions against the expected service life of a washroom may be difficult. However, there are certain long-term trends we are seeing that practically guarantee a washroom will still stand out as a stylish, contemporary environment for years to come.

Getting back to nature

One of the most significant movements of recent years has been biophilic design; incorporating natural elements such as plants and dried flowers, organic materials like sisal and untreated wood, or stones, pebbles and running water features in washroom design.

Proponents of biophilic design point to research that shows getting closer to nature, even indoors, can reduce our levels of stress, bring down our blood pressure and heart rate, and improve general wellbeing.

Whether that's universally true or not, designers have responded by incorporating a wide range of natural motifs into their plans to move the washroom away from being a hard, unyielding environment to one much more attuned to our more organic instincts. The message is clear: 'Hygienic doesn't have to mean clinical' and in the room that's used for the most natural bodily functions of all, nature has a big part to play.

The console washstand

Oddly enough for an age that saw even showing the faintest hint of leg as



shockingly daring, the console washstand is widely associated with Victorian bathroom design. Today, of course, the basic principle of two legs supporting the front edge of the basin while the rear edge is fixed firmly to the wall has been endlessly reworked to fit in with any era or design trend.

That means designers can lean on the console in every kind of project, from an Edwardian boutique hotel to a city centre basement bar where distressed surfaces and unfinished wood are all part of the urban appeal.

Their rise in popularity is down to the need to create an impression of space in smaller washrooms. Swapping a bulky, enclosed vanity unit for the much sparser frame of a console instantly creates additional depth from wall to wall.

Less an aesthetic consideration than an obligation for everyone working in the built environment, sustainability is perhaps the most important driver of all for washroom design





However, it may not be space that's particularly usable, and it does mean tiling the back wall all the way to the floor – something that doesn't have to be factored in with a solid unit.

In most cases, it also means exposing the sink waste assembly, but this doesn't have to be a bad thing; with the wide choice of high-gloss chrome units available today, even this piece of utilitarian plumbing can be turned into an attractive design feature.

Attaining sustainability

Less an aesthetic consideration than an obligation for everyone working in the built environment, sustainability is perhaps the most important driver of all for washroom design.

The washroom is, after all, where the most water is used and wasted in practically every business. And with climate change science pointing to the fact that water scarcity will be an everyday reality in the UK by 2040, it falls to washroom designers and product manufacturers to find ways of saving water wherever they can.

The good news is that there is a wealth of products and systems available to help

specifiers achieve that.

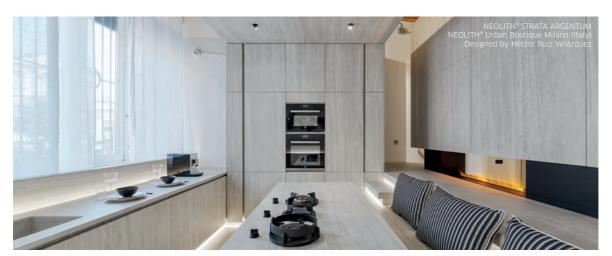
Timed push button and electronic sensor taps that shut off automatically after a set period; tap aerators that limit average flow rates to around 1.8 litres per minute; waterless urinals that cut water consumption by up to 90 per cent compared with conventional designs; vacuum flush or dual flush WCs that use less water with each flush; and greywater systems that reuse waste water from bathing and washing to flush toilets.

Because water scarcity and greenhouse gas emissions are closely linked, energy efficiency in the washroom also has a part to play. Here, designers can opt for a number of energy-efficient innovations, including PIR-operated LED lighting and low energy hot air hand dryers.

Sustainable doesn't have to mean utilitarian. With an ever increasing range of products that satisfy the style choices of their clients as well as saving water, designers can go on creating washrooms that add to the customer experience while preserving vital resources for generations to come.

Neil Jeffery is group specification manager at Franke Water Systems





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A "Klutch" Solution for Devices in Washrooms

Research has suggested that as many as 57 per cent of Brits admit to using their mobile phones while in the washroom. Historically, options for temporary storage of electronics in washrooms have been limited – in the absence of a specialised accessory, some users may place their smartphones or tablets on wet counters or on other surfaces, potentially compromising hygiene or device safety.

To address these modern patron behaviours, Bobrick had developed the new B-635 Klutch Mobile Device Holder: a modern, unique and practical solution for keeping mobile devices safe and secure anywhere in the washroom, including within toilet partitions and cubicles, in common spaces or any other private area where storage is desired.

Klutch's sleek, compact design "klutches" mobile devices for safety and fits with any décor. Its easy installation makes it suitable virtually anywhere in the washroom and integrated bag hook holds up to 136 kg, able to accommodate multiple items. Klutch features a three-year warranty and is



accessibility compliant, requiring no grasping or twisting of the wrist to use.

020 8366 1771 www.bobrick.com/klutch

Bradite's Floor-it floors the competition



Coating specialists **Bradite** will launch the market's fastest drying floor paint at this year's Painting and Decorating Show in November. Floor-it is a new single pack product that is re-coatable in just one hour. Formulated for use in light to medium-traffic situations it is ideal for factory walkways and general shopfloor usage where speed of completion

is a major consideration. Floor-it is a high-performance ambient crosslinking water-based acrylic floor paint that has no odour. It is suitable for use internally or externally on appropriately prepared concrete, wood, metal, or asphalt floors.

01248 600 315 www.bradite.com

Designer Contracts 'exquisite' collection



Designer Contracts has introduced a luxury new carpet collection to its extensive portfolio of floorcoverings. Exquisite is a two ply, soft pile carpet constructed from 100 per cent polypropylene with a soft fleece backing. Said Designer Contracts md, Peter Kelsey: "Carpet is still the number one choice of flooring

within the home, and with this in mind; Exquisite has been designed to meet the needs of homeowners looking for something super-soft and comfortable underfoot. It also provides the all-important, easy-to-care-for properties that so many families require."

01246 854577 www.designercontracts.com

Patient-centred ethos boosts wellbeing



Altro revisited Hillingdon Hospital, London, to see the lasting impact of products used to create patient-centred, healing, safe and homely environments in several departments. Altro Serenade™ acoustic smooth flooring was used, with large nature scenes reproduced on Altro Whiterock Digiclad™ to create a patient-centred biophilic design, to bring the outside in. Altro Serenade is ideal for spaces where comfort underfoot and impact sound reduction are

paramount for patients. Along the walls of the gym is an image of a bluebell wood, in Altro Whiterock Digiclad.

01462 489 516 www.altro.co.uk

Let the light flow with steel screens



Steel windows can be used in a number of ways throughout the home. Each structure offers solidity without being overpowering and exposes more areas of the home to sun light, reducing the amount of blue light used and allowing homeowners to reap the benefits of natural light. Members of the Steel Window Association offer a UK wide service for the repair and replacement of various types of old metal windows, doors and

screens, as well as being able to manufacture new fenestration which fully meets the requirements of the Building Regulations.

www.steel-window-association.co.uk

Get a head start with Rapid Level CT 3220 from Mapei

Rapid Level CT 3220 is the latest addition to Mapei's extensive product range, offering a levelling compound that promises a quick drying time of just 45 minutes prior to the installation of ceramic and porcelain type tiles. Suitable for internal use, Rapid Level CT 3220 is used for levelling, smoothing and infilling differences between 3 and 20mm in a single application.

Rapid Level CT 3220 must be primed, and is designed for the installation beneath ceramic tiles. It is suitable for levelling a variety of substrates including new and existing concrete, anhydrite and cementitious screeds, stone and ceramic tiles, and can also be used over boarded timber floors. In addition, it can also be used in areas subjected to castor wheels and onto screeds with incorporated underfloor heating systems.

Its impressive application allows up to 20mm per coat without any shrinkage, cracking or crazing, and develops very high compressive and flexural strength, in addition



to resistance to indentation and abrasion.

In its pre-mixed form, Rapid Level CT 3220 is a grey powder consisting of special cements with rapid setting and hydration, together with graded silica sands, resins and special additives. A fluid and easily

workable mortar when mixed with water, the smoothing and levelling compound provides a high bond strength to the substrate, as well as offering ultra-fast drying.

0121 508 6970 www.mapei.co.uk

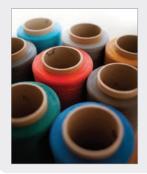
Faster, Stronger, Quieter, Easier



With a strong and rigid core and integrated sound-reducing underlay beneath a high-performance vinyl wear layer, IVC's LayRed 55 is engineered to overcome your flooring challenges. The only plank to combine strength, comfort, acoustics and design; LayRed 55 is constructed from 12 layers, each with an important part in ensuring this floor can overcome everything from subfloor condition to speed of installation, acoustics, wear and ease of maintenance. At the heart of LayRed 55 lies a rigid vinyl core with the world's only dual-layer glass fibre reinforcement. Nontelegraphing over uneven subfloors, the core also has a compact vinyl top layer that combats indentation and impact damage. LayRed 55 is available in 14 original wood looks (131.7 x 18.9cm) and in eight stone effects (60.96 x 30.33cm). From grey woods through to dark, rustic timbers and cool concrete looks; LayRed 55 is ready to take on the challenge of commercial interiors looking for natural authentic natural looks without practical drawbacks. Made in Belgium using 30 per cent recycled materials, LayRed 55 is an engineered LVT that combines strength, comfort, acoustics and design for a floor that works for today's demanding commercial interiors.

info@ivc-commercial.com ivc-commercial.com

Soil resistance, structure and longevity - It's in the DNA



INVISTA, maker of Antron® carpet fibre, has used its latest technology to develop Antron® Lumena DNA™, a breakthrough in high-performance carpet fibre for the commercial sector. Developed to answer a demand for fibres that prolong the lifecycle, maintenance and looks of carpets, INVISTA used its knowledge of polyamide type 6.6, coupled with an enviable understanding of structure and manufacturing processes to create Antron® Lumena DNA™, a carpet fibre that provides easy maintenance, stain, fade and soil resistance and a long life. The polyamide type 6.6 construction of Antron® Lumena DNA™ brings a tight and strong molecular structure to make it hardwearing with high appearance retention. This same structure also makes it hard for dirt to stick and stains to permeate into its fibres. Built-in soil protection negates the need for costly and repeat carpet treatments and creates a cleaner indoor environment. The structure of Antron® Lumena DNA™ uses the best in Antron's multi-hollow core light diffusion technology to enable soil hiding capability. A broad spectrum of 300 colour options, from rich neutrals and vibrant accents is introduced during the manufacturing stage resulting in permanent stain and fade resistant colour.

www.INVISTA.com www.antron.eu



Case study: Maxim 10

Maxim 10 Offices get maximum energy efficiency from CP Electronics & AKD

Located in Eurocentral, Scotland, Maxim 10 provides 60,000m2 of office space over several floors. As part of the Maxim Office Park complex, it contains a wide spectrum of room sizes and functions.

Installing the Vitesse Modular system enabled all lighting control needs to be met with a simple plug-and-play solution, with the combination of its 2-way and 4-way starter modules. Mid-range PIRs, with increased detection patterns deliver energy control for larger building spaces, while standard PIRs are suited to smaller areas with 7m detection patterns for efficient motion sensing.

"From start to finish it's been pretty much a seamless and trouble-free project. Most importantly the end client is suitably impressed with the ease of operation and pleased with the knowledge that the building is as energy efficient as possible."

Keith Groom, Managing Director at AKD

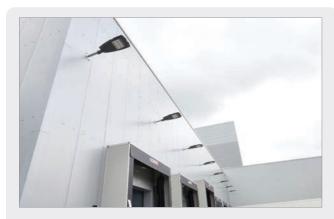




www.cpelectronics.co.uk/news +44 (0)333 900 0671



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Luceco lights Muller Expansion Project

Muller has recently completed an extensive expansion project building a chilled produce manufacturing facility in Telford. Luceco LED luminaires have been installed in many areas including the cooling tunnel, dispatch, goods in and general plant areas, the installation work carried out by Lorne Stewart Engineering based in Birmingham. In many cases, the luminaires were required to be IP65 rated, robust and capable of DALI dimming with connection to a central battery system. Ceres Extra HighBay luminaires were selected for the principle production areas. IP65 rated, Ceres Extra benefits from a computer designed die-cast aluminium housing with vortex cooling for maximum LED chip performance and provides over 100,000 hours of operational life and a luminaire efficacy up to of 140 Llm/cW.

01952 238 100 www.luceco.uk



Salice pocket doors power ahead

In keeping with its policy of continuous product improvement, Salice has introduced an updated version of its industry–standard pocket door system. Designated Exedra, the new version incorporates a linear magnetic damper that gently controls the movement of the door as it moves smoothly and silently into and out of its recess. In addition, a Smove piston cushions the door as it closes onto the cabinet. Walter Gosling, Branch Director for Salice UK Ltd commented: "All our pocket door systems are now supplied in the Exedra version and like the previous systems, are made to measure and fully assembled ready for installation. Their customer friendly features have seen a healthy month-by-month increase in sales in 2019".

www.saliceuk.co.uk





New Stair Nosing Profiles: Wide Q-Range Stair Nosing



The experts at Quantum Flooring Solutions are constantly looking for ways to improve the functionality of its specialist products and, following an extensive programme of research and development, they've now hit upon a unique design which will considerably improve user safety on the nation's staircases. Unlike conventional stair nosings which are manufactured with two separate pieces of narrow tread, Quantum's brand new concept features a single expansive layer of slip-resistant PVC across the entire upper surface of the carrier, crucially creating a greater area of grip than any other product available. This new Wide-Tread addition to the top-selling Aluminium Q-Range is perfect for installation in all types of public and commercial buildings, and is especially suitable for high footfall locations including schools and hospitals. It is also fully Equality Act compliant; its exclusive broader design and choice of 25 distinctive tread colours help to generate a far more obtrusive ladder effect on the staircase, maximising visibility and security. A free site survey and measuring service will prove just how cost-effective this industry-first, new product development can be for your projects.

0161 627 4222 www.quantumprofilesystems.com

Fresh water from FONTAS-S II filter tap



One of the impressive innovations in BLANCO's new Smart Tap Collection is the BLANCO FONTAS-S II Filter. An integrated BWT multi-stage filter purifies the water, reduces limescale and heavy metal content and, thus, enhances the taste. BLANCO filter systems provide three options – warm, cold and filtered cold

water – in this multi-functional tap. The BLANCO FONTAS-S II Filter is notable for its pull-out spout. This spout allows flexible use around the sink, making it easy to fill household appliances. It is unique to the market because of its separate nozzles and two pipes within the spout – keeping the filtered water perfectly pure from the first drop to the last.

www.blanco.co.uk



The Pool House, Warwickshire

Kerakoll products were used throughout for the installation of the porcelain, marble and limestone tiles and bathrooms in this modern house on a beautiful site overlooked by Oversley Castle. Barry Montacute, the Contracts Manager at Tile & Flooring commented: "We now specify Kerakoll products for all of our projects. We are very impressed with the performance and the green credentials of the product range. Kerakoll [is] always available for advice with all of our projects and I personally value this service." All wet areas were waterproofed using the Laminate No Crack Waterproofing system for the floors which uses Biogel adhesives to form laminated bonds between both the substrate and the Aquastop Green membrane and between the membrane and the tile covering. Nanodefense Eco was used to waterproof the shower walls before tiling. The choice of adhesive and grout depended on location and the need for speed dictated by access for other trade: Biogel No Limits and Revolution were both used alongside Fugalite Bio and Fugabella Eco Flex. The overall result is extremely impressive.

01527 578000 www.kerakoll.co.uk

VitrA Tiles' new on-trend collections



VitrA Tiles is reinforcing its position as a leader in the manufacture of innovative tiling solutions, with two new ranges launched at Cersaie in September. CementMix (pictured) and Wood Collection introduce new materials and textures, demonstrating VitrA

Tiles' expertise in ceramic design and technology. The ranges are suitable for either residential or commercial environments, ranging from kitchen and living spaces to swimming pools and terraces. CementMix is a tile system based on cement. The second new range, Wood Collection, is inspired by nature and organic tree patterns.

01235 750990 www.vitra.co.uk

Deanestor completes £1.1m contract



Deanestor has completed a £1.1m contract for the supply and installation of furniture and fittings for over 1,600 rooms for the new Royal Papworth Hospital – the UK's leading specialist heart and lung hospital. The contract is Deanestor's 15th healthcare project

for Skanska. The fixed and loose furniture was manufactured and pre-assembled at Deanestor's factory in Mansfield. A highly durable white finish for the wall and base units was specified for the clinical areas with light grey laminated worktops. All these items were designed for longevity and to meet stringent infection control requirements.

www.deanestor.co.uk/healthcare

Resiblock are the Top Shot at quay



Resiblock have provided the 'ultra' protection for the Gunwharf Quay Shopping Centre through their Resiblock Ultra Matt sealer. Following initial sealing works in 2018, Resiblock have now provided the sealing solutions for

the entirety of the 800m² plaza. Resiblock Ultra Matt is the top of the range commercial product from Resiblock and has previously been used at sites such as Disneyland Hong Kong. Resiblock Ultra Matt combines sand stabilisation, stain protection and colour enhancement which enables the product to deal with the needs of almost any client.

mail@resiblock.com

Green Screens installed on new housing estate provides instant impact

reen-tech has supplied 36 1.8m x 1.2m green screens to Kings Landscapes as part of their extensive landscape plans for a new housing estate in the historic town of Wellingborough in Northamptonshire.

Bovis Homes, an established name in British building is building homes on the Stanton Cross estate which is being heralded as an exciting, brand-new community. Once complete it will provide more than 3,650 new homes, 1.5m sq ft of industrial, leisure, retail and office space and create around 3,000 new jobs. It will also bring new public parks, schools, a doctor's surgery and much more.

Leading Landscape Contractor Kings Landscapes was contracted to complete the extensive landscaping on behalf of Bovis Homes. This included finding a way to screen off a concrete retaining wall which was visible from the road. They wanted a solution that would provide instant impact and turned to Green-tech for advice.

Green-tech suggested and supplied their Ivy Green Screens which are perfect for landscaping work or projects where an instant privacy green fence is required. They are simply inserted into the ground without the requirement for pot or planter and they have specially selected growing media which contains controlled release fertiliser and wetting agents to aid rapid establishment.

Ian Davis, Contracts Manager from Kings Landscapes commented, "The installation went well. Fresh topsoil was installed and trenches dug ready so the installation was quick and easy. The location was next to a balancing pond so the operatives had to wear harnesses, lanyards and life jackets to ensure their safety during the installation. The screens are very effective and we would definitely use them again."

Green-tech's green screens are cost effective, quick to install and are excellent alternatives to fencing. They are available in a range of heights, up to three metres.



01423 332100 www.green-tech.co.uk

ERA's lockdown provides peace of mind at Kingsland School



In a world where terror is an ongoing threat, Kingsland School, in Kingstanding, Birmingham, is one of the first to fit Lockdown from ERA, the UK's first emergency barricade device able to lock down a door in seconds in a crisis situation, helping to protect school children. Designed to provide high performance security in the event of a threatening situation, Lockdown is ideal for schools as it is simple and easy to fit, making doors inaccessible to intruders and creating a safe hiding place for students and teachers in the event of an attack. Lockdown's unique design ensures it is stronger and more robust than a regular lock as it secures the full door, not just at one point. Additionally, unlike a thumb turn lock, where the room can be accidentally or mischievously locked by students, Lockdown is always intentionally deployed. Carol Stephenson, school business manager at Kingsland School said: "Initially, we were attracted by how easy Lockdown is to deploy – we had a demonstration and could immediately see it had been designed with simplicity in mind – something that was incredibly important to us. We decided it was the right product for our school of 327 pupils."

01922 490 000 www.eraeverywhere.com

Grass Concrete Ltd explain the growing trend for soft green landscapes



Converting traditional hard landscaped car parks into softer landscaped green space applies to both commercial car parks and domestic driveways. Specifiers can turn those large parking areas into sustainable green vistas with sustainability built in. With new builds or on extensions to existing car parks, developers are enjoying a bigger green envelope by the adopting grass paving car parks. To achieve the green vistas, maximum and sustainable grass cover is best guaranteed by a system that promotes permeability. The depth and shape of the soil pockets therefore has a critical part to play if grass cover is to be sustained. Both Grasscrete and Grassblock offer substantial capacity for soils and root systems to promote maximum grass coverage. The permeability features of grass paving addresses SUDS issues where hard landscaping can provide too much run-off, whereas the more permeable grass paving mitigates surface water run-off and its implications for the local storm water network. When cast-on site is not an option Grassblock provides easy install precast blocks. Wakefield based Grass Concrete Ltd and the proven Grasscrete product has become the generic name for permeable grass paving with over forty years of installations.

01924 379443 www.grasscrete.com

ADF NOVEMBER 2019 WWW.ARCHITECTSDATAFILE.CO.UK

Case study confirms that SuDS cost less

The trade association Interpave has published a new case study which demonstrates that sustainable drainage systems (SuDS) – including concrete block permeable paving – should cost less than conventional piped drainage, both initially and in terms of maintenance.

Interpave's new case study revisits the SuDS scheme at Lamb Drove in Cambourne, Cambridgeshire. This scheme demonstrates the use of as many SuDS techniques as possible, including concrete block permeable paving, used in combination to form an effective management train. The Monitoring Project measured the performance of the SuDS over time, compared with that of a conventional piped drainage system on another nearby development, similar in size and density.

Overall, both capital and maintenance costs – and therefore whole-of-life costs – associated with the Study Site were much lower than those for the conventional piped drainage system Control Site. The Monitoring Report noted capital cost savings of £314 per home and also suggested 20-25 per cent



lower maintenance costs than traditional drainage on the Control Site. Having said that, further potential cost savings were also noted.

In addition, monitoring of pollutants,

biodiversity and resident satisfaction is testament to the SuDS, notably concrete block permeable paving delivering a gradual flow of treated water to open SuDS features further down the management train. The Monitoring Report also confirms that: "The permeable pavement infiltration study specifically illustrates the robustness of the performance of this feature to limited maintenance. The infiltration capacity of the permeable pavement is able to adequately cope with the highest recorded rainfall intensity at the Study Site."

Interpave's new case study on this Monitoring project, including photos showing how the scheme has developed over time, is now available to download from Interpave's website www.paving.org.uk – an essential resource covering all aspects of design with precast concrete paving, including an inspirational project gallery and case studies, supported by background information for all design stages, as well as for CPD.

0116 232 5170 www.paving.org.uk

Advanced protects the engineers of tomorrow at important research centre



Four networked MxPro 5 fire panels from global systems leader, Advanced, are now protecting one of Serbia's most prestigious higher education facilities. The project at the University of Belgrade's School of Electrical Engineering, involved installing a fire system to reliably protect lives and property while respecting the value and authenticity of its 1920s features. This meant overcoming various problems presented by outdated construction methods, inaccessible areas and high ceilings. Thanks to their performance, quality and ease of use, a network of three of Advanced's 4-loop and one of its 1-loop MxPro 5 fire panels, including over 1000 Argus detectors, were chose to protect the entirety of this top educational and scientific institution, including the facilities of Civil Design, Mechanical and Electrical Engineering. Electrical Engineer, Radomir Kerkez, at TVI Ltd, said: "The flexibility of Advanced's fire panels to adapt to sites both large and small is what makes us choose them time and time again. Advanced products make even the most complex installation challenges straightforward and we can always rely on them to deliver complete protection."

0345 894 7000 www.advancedco.com

New Anti-Ligature TV Cabinet Improves Safety And Prevents Damage



Contour have launched a new range of TV cabinets for secure mental health environments to protect expensive flat screen TVs from being damaged in challenging locations. Anti-ligature product specialists, Contour have identified LCD TVs as an anti-ligature risk and have also been told by estates professionals that these fixtures were vulnerable, leading to time consuming and costly replacements. It was reported that broken and damaged TVs were a source of agitation and frustration to service users, increasing complaints for staff to deal with. Contour's new anti-ligature TV cabinets provide a safe and attractive solution to this problem improving safety and security whilst ensuring service users are happier. Televisions are an important factor in the well-being of patients in mental health facilities, especially when stress and anxiety levels of patients are high. Contour recognises that service users in either mental health environments or SEN schools seek comfort in hyperstimulation; experiencing items through, at times, heavy touch. Therefore the cabinet is built for durability as well as safety.

01952 290 498 www.contourheating.co.uk/anti-ligature-tv-cabinet

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WINDOW CONTROLS





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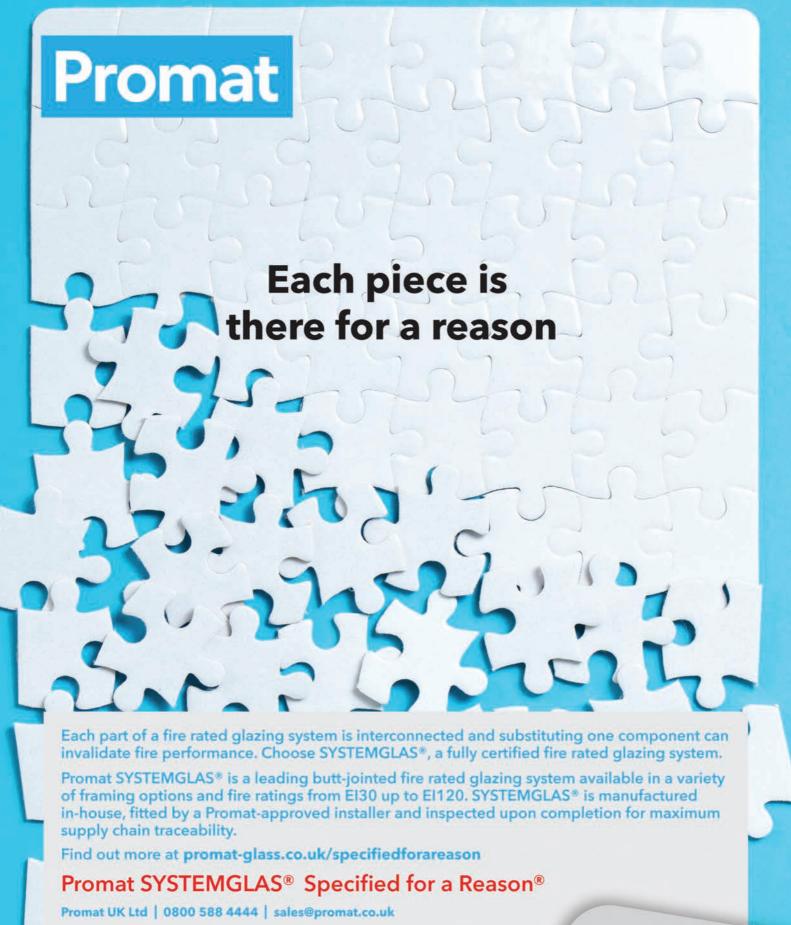
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