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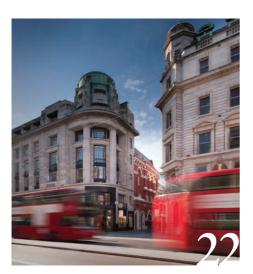
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FROM THE EDITOR



combination of feelings have been experienced by yours truly on the reality of Boris Johnson taking the reins of power – a mix of accepting the realisation of the seemingly inevitable, the undeniable shock of actually seeing him in Downing Street.

The worth or otherwise of his previous achievements remain something of an enigma, and as yet we've heard and seen little more than words and gestures. Was his attempted Heatherwick-designed garden bridge just a vanity project or a heroic failure? Is he a liar or a bumbling optimist? In our regrettably polarised times, it increasingly depends on who you ask. What we do know is we again have novices in charge of the only Government department dedicated to construction (MHCLG), who will need all the advice and strong encouragement the industry can muster to cut through the Brexit noise.

Boris has said little about construction since entering the office, but one of the shocks in his initial purge of Remainers was the sacking of Communities Secretary, James Brokenshire, who was in charge of housing. Only in the job for just over a year (not a bad stint by the standards of some predecessors), he was active in tackling the post-Grenfell fallout, and issues such as residential leaseholds. However his ban on combustible cladding over 18 metres was seen potentially as a knee-jerk reaction sounding the death knell for CLT in tall buildings.

New man Robert Jenrick is a novice in housing. At 37, the ex-solicitor was the youngest Minister in Theresa May's Government, and has few claims to fame beyond owning a few properties in his own right. Apparently he is something of a champion for protecting ancient buildings, but while at the Treasury was also a key figure in pushing huge amounts of new housebuilding in the 'Oxford-Cambridge arc,' to the consternation of protestors.

Esther McVey, replacing Kim Malthouse as Housing Minister, has a much higher, not altogether healthy public profile – mainly from her controversial work on Universal Credit at the DWP. She does however have a background in construction, although her family's firm specialised in demolition rather than building. She's the tenth housing minister to go through the revolving door in a decade.

Boris will talk big on continuing to prioritise housebuilding, but we need to face the facts that there's only one problem he'll be focusing on in the next three months. The task will be down to Jenrick, who will need to edit down a colossal to-do list, as the construction industry lobbies him and his team round the clock. The target remains 300,000 homes – currently the industry is averaging 177,000 a year over the past 10.

He'll need to ensure that no deal Brexit planning includes measures for ensuring that construction sites don't rapidly grind to a halt in the aftermath of a chaotic no deal, as already acute staff shortages are exacerbated. The industry also needs help in terms of how it will be able to mitigate further increases in materials costs from a weakening pound, rather than just passing them on to customers.

The plight of SME contractors, the dearth of apprenticeships, the hollowing out of local planning departments, not to mention the struggle to retain good

architectural staff post-Brexit – these are just some of the issues on the new Secretary Jenrick's desk. Hopefully he doesn't need too much sleep!

James Parker Editor



ON THE COVER...

Inspired by the 'Bamboo Forest' of a nearby national park, the Wuxi Tahu Show Theatre designed by Steven Chilton Architects has been shortlisted for the Future Project Award (Cultural) at the World Architecture Festival. For the full report on this project, go to page 32 Cover image © Steven Chilton Architects



REFURBISHMENT

New life for Hackney almshouses

Tasou Associates, the Islington-based architectural practice, has announced the completion of its latest residential project, the full refurbishment of the Bishop Wood's Almshouses in Hackney.

Working with client Noble House Properties, Tasou Associates has refurbished and restored five historic almshouses on Lower Clapton Road, the heart of one of London's ancient 'villages'.

The collection of Grade II listed buildings includes what has been referred to as 'Britain's smallest chapel' dating back to the late 1600s, and the site has been home to Hackney residents for over 400 years.

Guided by a philosophy that "celebrates the special character of the site," Tasou Associates' team focused on making as little change to the historic fabric of the buildings as possible. The design "works harmoniously with the attractive redbrick exteriors, high pitch tiled roofs an the Gothic revival windows of the chapel," said the practice. As part of the restoration, Tasou Associates reinstated chimney stacks, repointed brickwork, and landscaped the central courtyard. The result is a development of bright, modern one and two-bedroom homes, arranged in their original setting around a shared courtyard. Each new home features an additional bedroom or living space within the loft area, filled with natural light from conservation rooflights. The "fresh" new layout included the addition of a bathroom, kitchen and staircase to each property, whilst the chapel space now features a mezzanine level with a first-floor reception room, overlooked by the stunning 19th century tracery window.

The successful renovation means the almshouses, previously identified as vulnerable, have now been removed from the Historic England Heritage at Risk register.

Commenting on the design, Tom Tasou, director of Tasou Associates, said "We're proud to have played a role in restoring such a special historic site, which faced an uncertain future." He added: "The almshouses project is a great example of our ability to sensitively incorporate modern design techniques whilst respecting the traditional elements of heritage buildings."

AWARD

RIBA launches International Awards 2020

The Royal Institute of British Architects (RIBA) has opened entries for the third edition of the RIBA International Awards, the body's awards made for architectural projects outside of the UK.

The RIBA International Awards celebrate buildings that "exemplify design innovation, embrace sustainable technologies and deliver meaningful social impact".

Architects across the globe who enter will be considered for three esteemed awards:

- RIBA International Awards for Excellence
- RIBA International Prize
- RIBA International Emerging Architect Prize

Previous RIBA International Prize winners include Grafton Architects for their university building, UTEC (Universidad de Ingeniería y Tecnología) in Lima, Peru, and Aleph Zero and Rosenbaum, for their new school complex on the edge of the Amazon rainforest in northern Brazil, Children Village.

The Grand Jury will be led by Odile Decq (Founder of Studio Odile Decq), who will be joined by a diverse panel of international and regional experts. The four shortlisted projects for the prize are visited by two expert panels, with the Grand Jury visiting in person before selecting a winner. The winner will be announced in November 2020.

Entries close on 31 October 2019. To enter or find out more, visit www.architecture.com



EVENTS

AWARDS

Resturant & Bar Awards 03 October, London www.restaurantandbardesignawards.com

Architecture MasterPrize 14 October, Spain www.architectureprize.com

EXHIBITIONS

Open House 21 - 22 September, London www.openhouselondon.org.uk

FESTIVAL

World Architectue Festival 04 - 06 December, Amsterdamn www.worldarchitecturefestival.com

SEMINARS

Cost Effective Sustainable Design Solutions 05 September, Birmingham www.architecture.com/whats-on

TRADE SHOWS

100% Design 18 - 21 September, London www.100percentdesign.co.uk

Offsite Expo 24 - 25 September, Coventry www.offsite-expo.co.uk

Decorex International 06 - 09 October, London www.decorex.com

HEALTHCARE

BOOK

Projects and Their Consequences

Jesse Reiser and Nanako Umemoto are the founders and principals of New York practice RUR Architecture. Their new lavishly-produced hardback volume 'Projects and Their Consequences,' published by Princeton Architectural Press is described as a "genre-blending monograph presenting 30 years of the firm's work.

The 35-page, fully illustrated tome is, say the publishers, "autobiographical, technical, prophetic and meditative." The book certainly does present a "unique view of the intersections of the visionary, the speculative and the practical work of architecture and its relationship to art and culture."

A total of 15 key projects are presented, "tracing innovative, multidisciplinary investigations of form, structure, technique and planning." However there are also interviews and essays, alongside 400 original drawings, collages and paintings. "Multiple, overlapping perspectives describe projects that vary widely in scope and approach."

These include large-scale infrastructure studies for the East River corridor and Hudson Yards in Manhattan, the Alishan Railway in Taiwan, and schemes for cultural institutions including New York's New Museum, the Children's Museum of Pittsburgh, and the University of Applied Arts Vienna.



"Carefully conceived" smaller projects are documented too, from an imaginative water garden, to the Sagaponack House in New York. There are also "thoughtprovoking textual projects," i.e. narrative works that "blur the boundaries of art and architecture," such as a "meditation on language in the context of the Globe Theatre." Reiser is also principal of architecture at Princeton University, and Umemoto has taught at numerous institutions. They jointly authored 'Atlas of Novel Tectonics' in 1996.

Projects and Their Consequences (priced at $\pounds 45$) is certainly of interest not only to those who are keen to know more about what motivates this firm, and the thinking behind their projects. It's also an intriguing demonstration of the multi-dimensional nature of architecture itself (as well as running a practice), from the problem-solving to the highly artistic.

Go-ahead for Medical Architecture's fracture clinic at Princess Alexandra

Medical Architecture has secured planning consent for a new Fracture Clinic at the Princess Alexandra Hospital in Harlow. The new facility will enable the orthopaedic department to expand the range of services provided by the hospital.

Medical Architecture co-designed the layout with clinic consultants who preferred consult and exam rooms laid out in a 'butterfly' configuration, with an exam room either side of a single consultation room. "This arrangement provides an efficient modern clinical environment to support excellent NHS acute services," said the architects.

Bob Wills, director at Medical Architecture commented, "This modest project illustrates how good planning, architecture and technical design can deliver facilities which expand clinical capacity and improve operational efficiency in a complex hospital setting. Patients and staff will benefit from this new purposeful, accessible and



well-ordered building."

Rose Frawley, senior technologist at Medical Architecture said, "Forging a new relationship with the Princess Alexandra Hospital Trust, we have worked closely with clinicians aiming to provide a new standard of excellence for the hospital. By restoring the Fracture Clinic services to Harlow, a bright, therapeutic new environment has been developed with an emphasis on quality and efficiency through good design."

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ASK THE ARCHITECT

Margherita Cesca of Saunders Boston Architects answers *ADF*'s questions on what drives her personally and professionally



WHY DID YOU BECOME AN ARCHITECT?

Art and architecture have always been a big part of my life; from a very young age, I had a creative mind-set, an entrepreneurial spirit, and an older brother that has been running his own construction company since his early 20s - so I've had a figure in the industry that I've admired all my life. Growing up between Italy and Germany, I was surrounded by stunning architecture, heritage and history. My first love was art, but I went on to also study foreign languages and literature for five years at a private Catholic school where I received a full European Diploma in English, German, French and Latin. Despite studying such an intense course, my love for art never wavered, but grew into a love for architecture as well (I think I sketched every corner of that school!). In 2000, I finally decided to enter Università Iuav di Venezia in Venice, and at the age of 25, I became a fully qualified architect.

WHAT DO YOU LIKE MOST ABOUT THE JOB?

The best part of being an architect is having the ability to make an impact. Whether it is executing a project with stunning aesthetics, or providing a solution to certain housing needs; we have the power to visualise solutions, and then make them happen – how extraordinary is that? My favourite part of architecture is that it sits on a line where creativity, intelligence and elegance meet, and it's amazing to work within such a sphere.

WHAT IS THE HARDEST PART OF YOUR JOB?

The trickiest part of architecture can be communication – as highly visual individuals, it's essential that communication is spot on in order for us to understand requirements, budgets and constraints. Being a great communicator is so important in our profession, and it ensures that we are able to deliver solutions that satisfy everyone and ultimately result in beautiful architecture. Communication is both the key and the challenge!

WHAT IS YOUR PROUDEST ACHIEVEMENT AND WHY?

As someone who likes to push the boundaries of design, working on Versace's flagship store refurbishment in New York has to be counted among my proudest achievements. Designing for a



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The need for sustainability is encouraging architects to be more creative with their work, and delve into a whole new area of innovation

client that is, in itself, a symbol of cutting edge design, in New York City, the home of art and design, was like having all of my artistic dreams realised at once. I had a fantastic experience, one that encourages me to always be innovative and creative with design, no matter the type of project I turn my hand to.

WHAT'S YOUR BIGGEST CHALLENGE CURRENTLY?

One of my biggest challenges is ensuring that I'm there for my children as much as I am for my career, and vice versa. Luckily, my kids love art, architecture and adventure, so we get to spend lots of time together exploring interesting places.

WHAT SINGLE CHANGE/INNOVATION WOULD MAKE AN ARCHITECT'S JOB EASIER?

Architecture is a difficult and demanding job, but I love all of the challenges that it

brings with it. I'm excited to see how technological advancements will change the industry, whether this will make the job actually easier is something we will have to wait to see!

WHERE DO YOU STAND ON GENDER EQUALITY IN THE PROFESSION?

Understanding and appreciating that men and women are wonderfully different is the first step to truly embrace diversity and gender equality.

WHAT'S YOUR CURRENT FAVOURITE SUSTAINABILITY INNOVATION?

That would have to be algae! I've introduced this extraordinary innovation into my latest design concept, The Food Academy. It is a biochemical system run by algae that can generate electrical current to power LEDs. The need for sustainability is encouraging architects to be more creative with their work, and delve into a whole new area of innovation.

HOW HAS BIM HELPED YOU DESIGN BETTER BUILDINGS?

BIM has helped me tremendously. One of my BIM-designed projects is currently on site, and it has been an extraordinary journey so far; both in terms of modelling and scheduling components of the building in deeper detail, which allows us a better understanding of the structure in its entirety.

HOW WILL THE ARCHITECT'S ROLE CHANGE IN THE NEAR FUTURE?

In the future, I think architects' roles will become more specific, in line with the increasing use of specialised components within the industry, particularly with technology. However, I hope that the essence of our craft is not lost in the digital transformation; architecture has all of the passion and uniqueness of art, and this can't be replicated digitally.

WHAT ARE YOUR HOPES FOR THIS YEAR AND BEYOND FOR YOURSELF AND YOUR PRACTICE?

This is an important year for Saunders Boston Architects, as we are celebrating not only the practice's centenary, but also its 50th year in Cambridge. Looking forward, the future holds a period of growth for both the company and I – we are looking to innovate in new areas and push the boundaries of design. I'm currently working on developing much larger projects, both in Cambridge and further afield, and I think this reflects our hopes for the practice in the future.

Margherita Cesca is senior project architect at Saunders Boston Architects

PRACTICE PROFILE



Shepheard Epstein Hunter

Shepheard Epstein Hunter may have garnered a strong reputation in its long history, from an initial focus on high quality public housing, but the practice hasn't been resting on its laurels. James Parker spoke to two of its directors

volving, as the firm itself says, from its founders' spirit of "post-war optimistic regeneration," Shepheard Epstein Hunter has maintained the bar at a high level into the 21st century. Its continued achievement in sectors including housing, as well as schools and universities has been validated in around 60 award schemes since the turn of the millennium.

The genesis of Shepheard Epstein Hunter had a very different initial guise – in this case the partnership of architects Derek Bridgewater and Edward Mitchell, formed in 1936. Peter Shepheard became a partner in 1948, and finally Gabriel Epstein in 1955, as Bridgewater, Shepheard and Epstein, the former retiring in the 60s to see Peter Hunter appointed.

Peter Shepheard trained at the Liverpool School of Architecture, when the school's ethos, says director Ann Lakshmanan, was unusual in "encouraging aspiring architects to devote their skills and energy to public sector housing." The firm's initial driving ethos was "practical, simple and robust architecture," says Lakshmanan, and this was a useful adjunct to the post-war national reconstruction effort, naturally providing opportunities in social housing as well as educational establishments. She adds that the approach was "interested in the relationship between natural and built environments, and always people-focused."

When it came to growing the firm to meet demands, the maxim applied was "big enough to do major projects, small enough for the partners and directors to stay close to the work," says director Charles Dokk-Olsen. He continues: "The biggest we have been is around 60 people, but we generally stay smaller than that, and we are able to compete effectively with much bigger practices."

While the firm has grown over the years, it remains important for it to be a "close-knit group of people who all know each other and feel like one team, despite working on many different projects at different stages," says Dokk-Olsen. The office has instigated practical measures to help ensure this happens, for example the whole office (which is in Clerkenwell) gets together once a week to have lunch.

In terms of landmark projects, Ann Lakshmanan picks out the University of Lancaster campus as one which "clearly shows the principles that are important to the practice," and which "perhaps fostered our interest in masterplanning and landscape on a big scale." The greenfield project had an early concept of a "scheme of human scale buildings and courtyards growing from the centre of the site, with a clear circulation pattern of a north-south spine separating vehicles and pedestrians, and canopies and buildings offering shelter." The mixed use programme has a generally mixed layout creating a "lively and active campus," with residential on upper floors, teaching in the middle floors, and ground floors "given over to social and communal uses." She adds that the spine "has allowed the university to grow outwards without losing coherence, and with minimal disruption."

Working practices

The studio takes a flexible approach to deploying staff on projects. Depending on the size and complexity, a director, associate or lead architect is assigned, and each will be hands-on. However, as it's a relatively small team, all staff are required to be flexible, potentially working on a variety of projects, which may be at different stages.



THE FINAL FRONTIER Phase One of Space Park Leicester is a £20m building for research as well as collaboration in 'space-enabled' technologies



LOOKING EAST

The Percy Gee East Wing at the University of Leicester transforms an existing student union building previously refurbished by Shepheard Epstein Hunter

Charles Dokk-Olsen comments on the question of whether this presents a challenge for staff who may be used to more rigid ways of working elsewhere: "Generally we've found that people are open to the range of experiences that are on offer, but there can be a period of adjustment if they have been used to practices that focus more on one aspect, such as front end design or technical delivery."

As well as working on diverse projects, the staff demographic is similarly diverse, coming from a range of countries, and Lakshmanan notes that Brexit hasn't yet dented the enthusiasm of continental architects applying for roles. "We have been concerned regarding how it will impact on recruitment, but we still receive the majority of applications from European architects."

The practice has always put an emphasis on sustainable solutions. However in recent years it has taken an increasingly robust approach to embedding it within projects, via formally including sustainability in the Quality Assurance process it uses. All projects follow a QEMS (Quality and Environmental Management System), but this can be tailored according to the "different values and complexity" that may be present, says Lakshmanan. "It provides a useful checklist for architects in the thick of complex projects, and a reference for less experienced colleagues of issues that should be considered at each stage."

Key projects & awards

The firm has a strong relationship with the University of Leicester, and has two "exciting" major refurbishments on site, says Lakshmanan. These are firstly the transformation of Percy Gee East Wing, where a variety of amenities and teaching facilities are being added – the extended student union building has won awards since its 2010 completion. And at Brookfield School of Business, the masterplan for new collaborative teaching space and ancillary facilities brings a "cohesive link" between Victorian and 1960s buildings, plus a new building "linking the campus together." Another, yet to start, is a £20m space research building, Space Park Phase One.

There are a variety of ongoing major and complex housing projects, such as East City Point in east London. The Atrium Building (153 homes in a 10-storey building in Canning Town with an "innovative atrium space providing circulation and a buffer from the A13") won 'Best High Volume Housing Development in the National Local Authority Building Control Awards. At the other end of the scale, Phase 2 of High Hazels Primary Academy in Sheffield, is "a series of modest interventions that have had a high impact," says Lakshmanan.

Challenges ahead

Looking to the future, Dokk-Olsen says that the unpredictability of the current market is "a major challenge". He reports that the education and housing sectors are seeing "very variable" numbers of opportunities, meaning the competition is intensifying. He says: "We are winning new projects, but on several recent bids, we have scored very highly, but lost on cost, despite submitting what we feel are very competitive bids."

A further challenge with design competitions is that with "clients asking for more during the submission stage," they can be a hefty business cost to absorb – if you don't win. The firm chooses carefully as a result, and is "unlikely to submit for international competitions where there are likely to be hundreds of submissions."

The firm wants to double in size, and grow its masterplanning work, for example in the university sector as well as explore further in the culture and health sector. It looks to have the wherewithal to make all of these a reality.





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NEW ARRIVALS

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





CRAIG SHEACH & BHUPINDER SINGH CHAWLA PRP

Architecture firm PRP has promoted directors Craig Sheach and Bhupinder Singh Chawla to the role of partner. Both are based in the practice's London studio. Craig, who has been with the practice for six years, will continue to work across a number of residential-led regeneration schemes, large mixed-use town centre sites and co-location masterplans. He is currently leading on a number of schemes in London and the south, including a new urban quarter in Reading, the regeneration of Redhill Town Centre, and Lewisham Gateway. Bhupinder has been with the practice for 20 years and has extensive experience in housing and mixed-use projects, including large scale regeneration projects. He is particularly skilled at realising the technical design of projects from inception, through planning to completion for private developers, local authorities and housing associations. Most recently he's been leading on the creation of PRP's first 100 per cent volumetric development on behalf of Pocket Living in Chiswick, and has submitted a regeneration project for detailed planning for Peabody in Lambeth.

Brendan Kilpatrick, senior partner, said, "PRP's London studio has grown by more than 25 per cent over the past six months with an expansion in our masterplanning and town centre regeneration capability. Bhupinder and Craig's promotions recognise their contribution to the practice and enhance our capability in providing an exemplary standard of service and design quality for our clients."



NICK BLAKE SELF ARCHITECTS & WHITE DESIGN

Self Architects and White Design have appointed a new associate director to head up its expanding London office. Nick Blake has worked for a number of leading practices designing and delivering major residential, commercial and masterplanning schemes from concept to completion in the UK and internationally. Nick said, "I am delighted to be joining this exciting architecture and design practice as it looks to further expand its portfolio of work across a range of sectors in London and the south east. In heading up the London office, I look forward to playing an important role in delivering the future growth strategy of the team."



CHRISTOPH ACKERMANN BDP

BDP has appointed Christoph Ackermann to principal. Christoph is an architect in the Glasgow studio, where he leads the higher education, workplace, and science research and technology sectors and is currently working on significant projects including the University of Strathclyde's Learning and Teaching building. Chief executive John McManus said, "We are delighted to invite Christoph to become a principal. His expertise and successful track record in delivering significant education projects, coupled with his ability to develop strong positive relationships with clients, will contribute enormously to the growth of the practice, both in Scotland and internationally."



GRANT GIBLETT RG+P

Multi-disciplinary design practice rg+p has appointed a new director alongside a regional and national award recognition. Grant Giblett, who has been with the practice for seven years, has joined the board of directors in recognition of his success developing the London studio, which is poised to relocate to facilitate expansion. Established in 2012, the London studio initially started with just two architects and Grant has since grown the team to 18, representing specialists in architecture, master planning and urban design. Grant said: "We're working on some really significant schemes across the Boroughs, and are establishing a reputation for thoughtful and innovative design.



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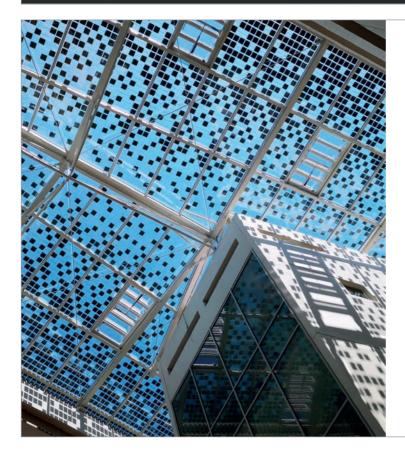


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CLERMONT-FERRAND METROPOLITAN AREA LIBRARY, FRANCE STANTON WILLIAMS

Stanton Williams has been appointed to design Clermont-Ferrand's new library, in collaboration with local practice Marcillon Thuillier Architectes, after an international design competition. The winning design was chosen over proposals by four other practices. Conceived both as a major new library and as a social and creative hub in the heart of Clermont-Ferrand, the new 11,500 m² Metropolitan Library will be the largest in the Clermont Auvergne region of central France. Stanton Williams' concept reimagines the 17th century Hôtel-Dieu hospital building and garden as the new shared home for the Metropolitan Library and its collections. At its heart will be a double height, light-filled central forum, "inserted as a giant glass jewel box" into the horseshoe shape of the existing building. The project will employ passive cooling strategies and will include locally sourced volcanic stone and a timber engineered structure.



CATON FLATS, USA MAGNUSSON

Magnusson Architecture + Planning (MAP) recently announced the ground-breaking for the expansive redevelopment of what is currently the Flatbush Caton Market in Brooklyn. The project, called Caton Flats, will invigorate the predominantly Caribbean American neighbourhood with improved facilities for local vendors. The new development will not only enlarge the market by contributing over 16,000 ft² of retail space on the ground floor, but will also add 255 new units of much needed affordable housing to the area. An additional 10,000 ft² will be designated for retail space, a shared commercial kitchen for use by start-up food businesses, and flexible community space.



SHANGHAI ITC, CHINA Lead8

Lead8 has unveiled its design for the high-profile Shanghai ITC mixed-use destination being by Sun Hung Kai Properties. Currently one of the largest sites under development in Shanghai's city centre, the Shanghai ITC scheme is a "mega integrated" development combining four plots of land. The project will include grade-A offices, a premium retail mall and a luxury hotel, all with direct access to the Xujiahui metro station where five lines converge. Integrating the large-scale destination into the existing urban fabric of the busy district is a series of elevated footbridges being designed by Lead8. The exciting mixed-use development is being constructed in phases with completion expected by late 2023.



HONG KONG INTERNATIONAL AIRPORT, CHINA LEAD8

Lead8 have been appointed as lead designer for the planned Hong Kong International Airport (HKIA) Terminal 1 renovation. Working with Airport Authority Hong Kong, Lead8 will spearhead a collaboration of "internationally renowned" consultants to deliver a "transformative" upgrade to the passenger halls of the 21-year-old aviation hub. Lead8's design scope includes a total overhaul and upgrade of the 49 boarding gates and adjacent areas of the Level 6 departure concourses. Contemporary seating designs with upgraded charging facilities will provide passengers with "convenient and comfortable waiting experiences." Lead8 have also "curated a number of new experiential zones that will provide places of entertainment, relaxation, on-the-go work and general down-time spaces for passengers awaiting flights."



ROW NEW YORK BOATHOUSE, USA FOSTER + PARTNERS

Foster + Partners has revealed the designs for community rowing organisation Row New York's new boathouse, located in Sherman Creek Park on the Harlem River in New York City. The new Harlem Boathouse recalls this tradition with a simple rectilinear structure made entirely from wood. The new building is fully accessible – a generous plaza sits in front of the building. The lower level contains an expanded storage for boats, which is designed to withstand severe flooding events, while the upper level features a large multi-purpose hall alongside changing rooms and classrooms for after school programmes. The boathouse is shaded by a large folding timber canopy that sails over the structure, cantilevering over the plaza and terrace and providing shelter from the sun.



TRENEZIA, NORWAY WAUGH THISTLETON ARCHITECTS

Waugh Thistleton Architects has conceived what they describe as a "visionary project in Norway to create a zero carbon community for all" consisting of 1,500 homes and a cultural hub on Store Lungegårdsvann lake in Bergen. A new boardwalk spanning the lake forms the central spine of the project with a variety of new homes located just behind. Trenezia is "an exemplar of environmental design," said the architects. With a state of the art timber construction, CO_2 emissions from the construction and during the lifetime of the project will be minimised. The environmentally responsive design, low energy consumption, low water consumption and low waste generation form the pillars of the technical design.



WPP CAMPUS, THE NETHERLANDS BDG ARCHITECTURE + DESIGN

BDG architecture + design have completed the new Amsterdam campus for WPP. The Rivierstaete building has been transformed from a large traditional office building into a 19,000 m² "innovative and creative workplace." The exterior of the building, once dominated by white mosaic tiles, have been largely replaced with floor to ceiling windows. The original concrete structure has been maintained, retaining the character of the building. The roofs, which vary in height, have been transformed into terraces for employees and guests, connecting the inside and outside.The spacious eight metre high reception and lobby area is an impressive arrival, with the striking staircase creating visual and physical connectivity.

Safe Access All Areas

James Parker, *ADF* editor, spoke to Access 360's MD James Fisher on how its portfolio of brands provide crucial expertise for architects on specifying safe access within all areas of a building



ames Fisher arrived at Bilco UK 19 years ago. The company had already been in existence for over 10 years and supplied a wide range of products – from roof access hatches to smoke vents and access doors.

James says his tenure at the firm has been a "journey". It's led him to now overseeing the portfolio of brands that comprise Access 360. As the name suggests, Access 360 covers a wide spectrum of access requirements. It brings together the established, and complementary brands, of Bilco UK, Profab Access and Howe Green – roof, riser door and floor access specialists respectively.

Access 360 has strong branding and an informative new website that retains the individual brand identities. James' priority is "engaging with architects". He believes it is critical to ensure architects are fully aware of their role in ensuring correct design and specification when it comes to access otherwise it could result in a contractor making "a priceled decision". Simply put, "If the architect doesn't specify, and the contractor doesn't select the right product, the client could get a health and safety issue."



Three brands under one umbrella

Bilco UK was established when the Manual Handling regulations were coming into force. Specifiers faced the challenge of a legal requirement to ensure that personnel could safely access areas like roofs as well as service voids under floors. For Bilco UK this was simply another dimension to the wide range of considerations required for correct specification.

In 2016 Tyman plc, a leading international supplier of engineered components to the door and window industry, acquired Bilco UK. A year later the opportunity arose to acquire Howe Green Ltd.

Over its 36 year history Howe Green has grown from supplying access covers for supermarkets to being specified for major projects, including London Underground, airports, and Phase 2 of Battersea Power Station's redevelopment.

2018 saw the acquisition of Profab Access. Profab manufacture a range of bespoke products designed to prove safe access to any services going up through the building, including concealed riser doors and wall and ceiling access panels.

Fire safety, and the fire rating of products, has come under intense scrutiny post-Grenfell, including around the interpretation of Building Regulations. Profab has always sought to differentiate itself in this area. James says the firm put "a lot of effort" into its natural smoke ventilators' compliance, and decided to put its 4000 series riser doors through third party testing. As a result, it's "the only manufacturer of concealed steel riser doors that has Certifire accreditation, tested from both sides".

James explains: "We have always been proactive where specification is concerned, whether through the CPD network, NBS or BIM models. Access points must be designed and not just be a shape on a plan. There is a need to understand what the point is being used for and frequency of use. Roofs, walls and floors have become the location for a much wider range of building services. More frequent access for servicing puts an even higher focus on safety."

As Access 360 harnesses the distinct strengths of its three brands going forward, it is well placed to offer trusted expert advice on the key requirements for achieving safe access on a wide range of projects. At a time when the need for better specification and accountability are being put under scrutiny, James affirms that the company is "about guiding people to the right solution."

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Three brands - one objective - safe access all areas

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C-TEC LAUNCHES NEW BS 5839-6 CPD SEMINAR

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Life-safety systems manufacturer, C-TEC, has launched a new CPD-certified seminar. Entitled, 'A Guide to BS 5839-6 2019 Domestic Fire Alarms,' this seminar highlights what's new in the recently updated code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises, with particular emphasis on the revised system of grading for such systems. At the end of the seminar, delegates will also have the opportunity to see demonstrations of C-TEC's vast range of life-safety systems. hush-pro@c-tec.co.uk www.c-tec.com/info/domestic-firealarms-seminar-application.html

A NEW CPD FROM HORNE: LET'S TALK ABOUT HAND WASHING



Considering the march of antibiotic resistance, rightly described as a global threat that equals climate change in terms of its seriousness, the need to break the chain of infection through effective hand decontamination becomes ever more important. In spite of this, hand hygiene compliance - its frequency and technique – in the healthcare environment remains woefully inadequate. Horne Engineering's new CPD seminar raises the question what are the barriers or disincentives, to achieving effective hand hygiene compliance? And how can engineering help? goo.gl/gvzeDZ www.horne.co.uk

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CPD FOCUS

The latest CPD courses, seminars and documents for architects

SPSENVIROWALL LAUNCHES ITS FIRST RIBA ACCREDITED CPD



SPSenvirowall now offers a new RIBA approved CPD which aims to offer guidance on the available solutions for external thermal insulation composite systems (ETICS), which covers insulation, types of finishes, legislation and fire regulations applicable to ETICS.

The new RIBA approved CPD '*Providing a Total Facade Solution*' sets out to help participants achieve their continued learning objectives and to provide those taking part with an understanding of ETICS, and the various legislation and regulations that apply.

RIBA is a global professional membership body driving excellence in architecture, with the aim to serve its members and society in order to deliver better buildings and places and a more sustainable environment.

Developed for architects, specifiers and developers, participants can expect to receive accredited certificates after the completion of the 45-60 minute CPD.

The continuing professional development seminar run by accredited CPD provider, SPSenvirowall, will provide participants with the background of ETICS and how they interact with your facade.

It will cover the characteristics of different types of insulation, its performance and how it works and includes guidance on adhesive, fixings and reinforcement mesh and finishes. It will also set out to provide participants with an understanding of the various legislative documents and fire regulations.

Benx Technical Director, Jon Bourne said, "SPSenvirowall as part of the Benx Group, is continually focused on providing our customers with innovations relating to better products, better buildings & better lives. We continue our journey towards Technical Excellence with the first in a series of CPDs focused on knowledge development of our thermally efficient ETICS facades solutions. We explore Legislation, Design, Sustainability, Health & Safety criteria of ETICS with an all-encompassing range of brick slips and render finishes.

SPSenvirowall is committed to the supply of knowledge and certification to provide the specifier the confidence in the choice of facade."

Available across the UK, the new RIBA approved seminar lasts for between 45-60 minutes and will count towards accredited points on an attendee's CPD portfolio. Delivery of the presentation can be held at the participant's premises, including a complimentary buffet or light refreshments.

To enquire about booking the SPSenvirowall CPD – '*Providing a Total Facade Solution*', please contact SPSenvirowall direct.

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ONE HEDDON STREET LONDON

West End wellness

The Crown Estate's first coworking venture, off London's Regent Street, offers a nurturing environment for small businesses in a refurbished building which is also the first Well-accredited project of its kind. James Parker reports

A new coworking space completed in London's West End is the fifth dedicated flexible office project that architects Barr Gazetas have designed. It is also the first coworking space in the country to be certified under the Well Standard, increasingly popular for rating office employee wellness, the project receiving Gold certification.

Situated on the edge of Mayfair, the refurbished office building sits in the U-shaped side street that graced the cover of David Bowie's 'Ziggy Stardust,' and which is now Regent Street's food and drink quarter, populated by bars and restaurants. The Grade II listed building once housed a historic cinema (the 'New Gallery Kinema', before being adapted for various use including most recently, offices, and it has now been fully refurbished as a hotspot for the 'megatrend' that is coworking.

The project sees client The Crown Estate moving from its traditional role of landlord of a wide range accommodation across London and the UK, to providing fully fitted-out flexible office space which 'members' – i.e. people seeking office space – subscribe to, rather than lease.

It enters a busy and powerfully-marketed field, with the likes of WeWork, The Office Group and LABS all providing competitively desirable coworking space. Particularly suitable to small start-ups wanting absolute flexibility as they grow, coworking offices are increasingly being adopted by larger firms (a 30-strong company now occupies space at One Heddon Street).

The project offers some distinct USPs in this space however. The whole emphasis

within this well-appointed new scheme is on a more relaxed, hospitality-oriented approach to workspace, where kitchens, planting and ping-pong tables are as common a sight as desks.

Managing director at Barr Gazetas Jon Eaglesham told ADF that this fed into the refurbishment's success on the IWBI (International Well Building Institute's) criteria, but he was somewhat shocked to find it was the only UK coworking project yet to be registered under the Well Standard, given the promises of wellnessoriented, worker-friendly environments inherent to coworking's ethos. "It's sort of outrageous really - you'd think the story behind coworking is all about the occupier - it's the best space for you, it's flexible, but actually until now, none of it has been reviewed for how good being inside the workspace is."

The Crown Estate had already plunged fully into the world of Well certification, with its HQ at nearby St James's Market in London becoming the first office in Europe to receive Well Platinum, in 2018. According to Eaglesham, this illustrates how the client avoids a "bolt-on" approach to sustainability and wellness: "They're not decided late, they're always part of the brief, and actually it makes it much easier for the design team, and is cost effective."

Brief

Eaglesham says that the brief from the Crown Estate was "non-prescriptive." Barr Gazetas, who have worked for them on several other schemes, spent three months optioneering ways the outdated office building could be made more flexible. Eaglesham praises the client for how they



LOCATION

Situated on the edge of Mayfair, the refurbished office building sits in the U-shaped side street that graced the cover of David Bowie's 'Ziggy Stardust'

All images © Philip Vile



RETENTION

Emphasis was placed on retaining what was useful from previous interventions, but ceilings were restored, rooflights introduced and light décor applied "gave us enough time to actually look at it properly."

The refurbishment needed to be light-touch in terms of the structural building fabric, due to the building's listed nature. Eaglesham says that the architects' substantial experience in working with listed buildings has taught them that the restrictions are not now likely to be as stringent as in the past: "We try to be aspirational. It's not about saying 'no' to everything any more."

However, beyond restoring the ceilings and applying new light-coloured wall finishes throughout, the emphasis was on retaining what was useful from the building's previous interventions, such as the timber-covered metal staircases. Eaglesham: "We retained as much of the previous fit-out as we could. Upcycling and retaining in office buildings is the right thing to do, including from a budget point of view. It also helps towards the scheme's BREEAM credits."

Despite the relative lack of external interventions (bar a new roof terrace), the interior layout was completely changed. "We opened up the plan as much as possible," says Eaglesham. The building would also be open to the public, via a new cafe on ground and first floor, breaking the corporate mould. This was a high-profile scheme: "All eyes were on this project, hence why we hopefully nailed the interior design," adds the architect.

A Well office

Rather than have a "giant corporate reception," the ground and first floors are occupied by a coffee shop and bar run by Australian chain Daisy Green (here in its Little Green incarnation), Eaglesham says the client's idea of having public lower levels is a "great use of a building." The space is enhanced by a double-height void containing the staircase, which features palm trees. Six trees in total were planted in the office refurbishment, as well as substantial planting on all floors.

The ground floor "repurposes what was an under-used office reception as a public amenity," says Barr Gazetas, Eaglesham confirming that the new coffee shop gives the building a "real buzz." This is slightly

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Curved glass sections at circulation nodes help to bring a further informality to the spaces



moderated on the second floor – the 'arrival' floor for visitors as well as subscribing coworking members, which has been designed as a "tranquil green oasis," to offset the hubbub of Regent Street. In the centre of the floor is a large planted area surrounded by tan leather-covered seating, introducing an informal feel.

There is also a large green wall, a technology-enhanced boardroom, and flexible venue space, the design being "all about people," says Eaglesham. The venue space is designed to rotate between wellbeing classes, coworking space, presentations, and entertainment, as required by members or the client.

Floors three to five are the 'core office floors,' supporting "a multitude of agile working styles," and each providing the same range of features and a broadly similar basic layout. Eaglesham explains: "The client liked the idea that every floor offers the full suite of working styles, rather than – as you would have in a traditional office or some coworking spaces – one floor of meeting rooms, one with amenity and kitchen, and offices on another one. The top (sixth) floor is the exception, providing a hybrid of breakout space, open plan desks, private spaces and a multi-purpose media/screening room.

Each floor has a small social kitchen area (called a 'tea point'), facing the lift. This aids "natural wayfinding," says Eaglesham, and each floor has coworking spaces located to the left, with office and desk space on the right. Between them is a further amenity space, which on some floors house ping-pong tables, or flexible working spaces.

Although each floor has a similar layout, the flexibility for users is wide-ranging. "As a member, you can choose whether you have a fixed desk or an office, and you can specify whether that is a two, three, six or eight person office etc," explains Eaglesham. They also get to use the amenities such as games rooms, hot desking and venue space.

The architects regularly use the British Council of Offices (BCO) 'Guide to Specification' to "set the principles for any scheme," and, combining the BCO's standards with HSE guidelines, their space plan created denser areas of private office space that are offset by open, breakout spaces. Also, WC cores were introduced, providing showers and locker facilities on each floor, as well as accessible WCs.

For the private offices, a "logical, cellular office layout" which follows a grid pattern to enable glass partitions be removed easily, say the architects. These also maximise natural light into the space. Eaglesham comments: "Office interior design is about trying to let as much as natural light through as possible, so there are lots of transparent partitions and glazing." Rooflights have been included – both flush within the floor of the terrace, and to the roof of the sixth floor above it.

Curved glass sections at circulation nodes help to bring a further informality to the spaces. "At the heart of the design is a vital sense of community and wellbeing," says Eaglesham, "interactions are encouraged throughout, with spaces for collaboration, discussion and even relaxation."

There are no artificial plants, but instead a cornucopia of growing ones, meaning plants are visible from every desk. What are said to be "relatively low maintenance" irrigation systems are hidden within the planters as well as in the green wall structure and seating in the second floor welcome area.

In order to help the scheme meet the requirements of the Well Institute (which

grants the certificate), the designers needed to raise the bar from BCO requirements when it came to elements such as fresh air supply (achieved using an MVHR system). Reaching Well requirements means 14 litres per second, compared with 12 litres per second for BCO.

A further constraint from the targeting the Well standard was actually a "nice limitation," says Eaglesham, namely that materials needed to be as natural as possible, and certified. "It makes it harder to find the (natural, durable and sustainable) materials, there's less available to you, but what there is is very nice." Mayfair's "rich past" was used for inspiration, with classic materials such as marble and brass complemented by more modern counterparts like chevron carpet, ash and Douglas fir for flooring and bespoke joinery, and black aluminium for frames to partitions and doors.

Outside

The repainting of the brick facade on Heddon Street (the Regent Street facade is Portland stone) was the only element where the heritage element posed a challenge, reports Jon Eaglesham. "We wanted to take the paint off and restore the brick, but it had deteriorated too much. So we repainted, but it took a very long time to agree the colour." In the end, a lively red was chosen, contrasting with pale stone window surrounds.

The spacious new terrace, accessed from the fifth floor, creates a "rare outdoor amenity in Mayfair," say the architects. It required removing the roof slab, extending the mansard roof up by a metre and a half to protect the space, and rebuilding the party wall. Phase 2 of the project, which is about to begin, will see a pavilion created here to add to the planting and furniture, enable more year-round use for work or socialising, so it "becomes an extension of the building rather than just an outdoor space."

Conclusion

The litmus test of a project like this, in terms of success for its client – located as it is in an expensive part of town – is occupancy, and the rate since completion has been "brilliant," attests the project architect. The spaces have "a real buzz and vibe," says Eaglesham, now seeing a wide range of businesses, from one-man startups to bigger firms, flourishing in its relaxed but professional interiors.

As well as winning the Hubble Awards'



Health & Wellness Award, the project has been shortlisted in several awards schemes. These are the 2019 BCO Awards (London Region), two categories in the NLA (New London Architecture) Awards – Workplace, and the Wellbeing Prize – and the AJ Retrofit Awards (Office 2000-5000 ft² category). The scheme is on the way to receiving its Well Platinum certification, which will confirm it as truly world-class in terms of wellness among coworking offerings.

One Heddon Street certainly represents a big shift for The Crown Estate, which as Eaglesham says, could previously have been seen as "a very traditional landlord client." He concludes that while this arguably remains true, this project shows they are also "establishing themselves as a leader in providing best in class flexible office space."

PROJECT FACTFILE

Architects / interior designers: Barr Gazetas Client: The Crown Estate Project manager: Dendy Byrne QS: Burnley Wilson Fish M&E engineers: Mecserve Structural engineer: Waterman Austin Murphy Contractor: BW Well AP: Cundall Net internal floor area: 22,012 ft² Flexible booths: 13 No. of trees planted: 6 Cycle spaces: 34

A-Hoy matey – is that secondary glazing we see?

The Historic Dockyard at Chatham in Kent, was one of the Royal Navy's main facilities for four hundred years until it closed in 1984. Ownership was then transferred to the Chatham Historic Dockyard Trust to re purpose the site, opening it up as a visitor attraction, as well as including places where people can live and learn. The core of the 80 acre site, houses over 100 buildings and structures dating from the Georgian and Victorian periods, to present day new builds.

The Chatham Historic Dockyard Trust, SEEDA and the Local Council decided to develop the old Joiners Shop into a hub for creative businesses to be based. Many of the building's remarkable original features were preserved and incorporated into the new design. As part of the refurbishment, Kingswood Construction contacted Selectaglaze to provide a solution to augment the thermal insulation of the existing single glazed timber windows in the reception,



office spaces and communal facilities; some of which had to be 30 minute fire rated. A total of 85 units were installed.

In spring 2018, Selectaglaze worked on the offices of the Chatham Historic Dockyard Trust, which is situated on the first floor of the Fitted Rigging House. 25 units were installed, again the Series 20 specified for the majority of openings. The large loop hole

doors in the office that cannot be removed due to the buildings Listed status also required secondary glazing; so three Series 41 double side hung no threshold casement units were installed on door frames to improve thermal retention.

Overall, facilities manager Nigel Howard who has seen much of the redevelopment of the Historic Dockyard Chatham has been thoroughly impressed with the consistent quality of Selectaglaze systems throughout the years. Historic Dockyard Chatham won the 'Best major regeneration of a Historic Building' award at the Historic England Angel Awards in November 2018.

Established in 1966 and Royal Warrant Holder since 2004, Selectaglaze has a wealth of experience working on many building types, from new build to Grade I Listed buildings.

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All of a Twitter

A unique design of ventilation grille from Gilberts Blackpool has helped Twitter achieve its first platinum level LEED (leadership in energy & environmental design) award in the world. The social media brand's European, Middle East & Africa (EMEA) headquarters in Cumberland Place, Dublin, is Twitter's biggest office outside the US. The six storey, 1970s building has been refurbished in partnership with its owners Hibernia REIT to be as eco-friendly as possible. Key elements of the eco refurbishment, designed by MCA architects, have been green roofs, optimised use of glazing, and an energy efficient heat recovery ventilation system. The ventilation throughout uses Gilberts' circular GSFE swirl diffusers with a supplementary coanda plate integrated into exposed building services, supplied by Keane Environmental. Gilberts' circular GSF fixed swirl diffuser a patented design - uses radial vanes behind a perforated face to allow the introduction of high levels of air horizontally across the ceiling with rapid entrainment and intermixing delivering an omni directional discharge with high room induction.

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Kalwall rockets away

Aerospace company Blue Origin's vast new 70,000 square metre factory in Kennedy Space Centre's Exploration Park in Florida is now manufacturing 'Glenn' rockets for launches at Cape Canaveral 10 miles away. Owned by Amazon founder Jeff Bezos, the Blue Origin building features specially-designed Kalwall® translucent cladding which has been used across the top of the building in a clerestory design. Manufactured with a bespoke face sheet to match the corporate colour scheme, 100's square metres of Kalwall transmits high quality diffused daylight into the structure whilst also solving the twin requirements of privacy and security. Interestingly, the use of a bespoke coloured face sheet does not affect the quality of light internally. Kalwall offers complete line-of-sight protection, maintaining privacy for building occupants and operations while throwing diffused daylighting deep into the interior space. It also eliminates shadows and glare and the stark contrasts of light and shade making it safer for within. The system also enhances simplicity in external design by negating the need for blinds, curtains or solar control.

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Heritage venue demonstrates best practice in putting people first



One of the UK's most popular living museums is using its newest attraction to deliver best practice in accessibility, and truly open its doors to everyone. With a £10.9million grant from The National Lottery Heritage Fund, Beamish is able to undertake its Remaking Beamish project, which includes a 1950s Town at the Co Durham site. Closomat – one of the UK's leading providers of assisted accessible toilets – has supplied and installed the Changing Places therein, which enables people who need help – be it in the form of people and/or equipment – to maintain toilet hygiene, Wendy Wilshere, Beamish's Volunteer & Access Co-Ordinator, said: "These fantastic facilities will make a massive difference for visitors who need them, and we are delighted and proud to offer them in our new 1950s welfare hall at Beamish." The Changing Places is installed in the welfare hall – the first building to be opened to visitors in The 1950s Town. In addition, Beamish has gone beyond, achieving an exemplar facility according to British Standards by including a shower, and choosing a wash & dry toilet (a Closomat Palma Vita WC) in place of a conventional lavatory.

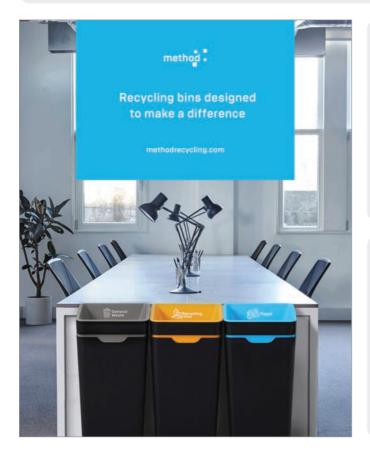
0161 969 1199 www.closomat.co.uk

Stunning tiling of a 19th Century mansion in the gateway to the Highlands



Featuring more than 500m² of tiling on three floors and seven bathrooms, The Gart is a fabulous example of a high quality, modern tiling, completed despite a challenging design brief from the project's artist owner. Valued at £1.75 million, the property required tiling of the highest order with expert craftsmanship to fulfil a challenging design brief that incorporated an array of tile types and intricate designs on challenging substrates. Because the substrate was tongue and groove floor boards, potential issues included weight loading, height build-up, deflection and lateral movement in the floor. To combat these potential issue and to ensure the luxury tiles did not experience any failures, **BAL** Rapid-Mat lightweight uncoupling mat was installed throughout to protect the tiling but also add minimal height to the floors. All floor tiles were tiled with BAL Rapid Flex-One, flexible rapid-setting adhesive, while wall tiles were tiled with BAL Single Part Flexible. All the tiling was grouted in BAL Micromax2 flexible wall and floor grout. "I was delighted to use BAL throughout the project, as it my trusted tiling-system partner," said Wesley Geraghty from Atlas Tiling contractors.

01782 591100 www.bal-adhesives.com



BoilerMag protects Yorkshire Museum



The Yorkshire Museum is the latest high profile building to protect its heating system with a 4" **BoilerMag** XT Industrial boiler filter. The work was carried out by Selby based Frogmech Ltd. Lawrence Walsh, Managing Director at Frogmech Ltd said: "Every commercial heating system should have a

BoilerMag XT fitted. We've tried various brands over the years, but we find the BoilerMag easy to fit and service, well built, and by far the best value for money. We hold our relationship with the museum in extremely high regard; they trust in our expertise and workmanship, and therefore chose a product we can be sure will deliver."

0114 225 0624 www.boilermag.com

Designer recycling bins in leading spaces



Method have redesigned recycling bins for modern spaces. With their proven ability to increase recycling rates, beautiful aesthetic and leading philosophy of Open Plan Recycling, the bins are now featured in leading spaces around the world. Open Plan Recycling brings Method bins out into the open-plan design of modern spaces. Seen in the offices of world-renowned British architecture firm Foster + Partners, the beautiful

spaces of London coworking provider The Office Group, and the historical Sydney Cricket Ground.

www.methodrecycling.com

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BEFORE

AFTER







BUILDING

WUXI TAIHU SHOW THEATRE WUXI, CHINA

Forest canopy

Inspired by the 'Bamboo Forest' of a nearby national park, the Wuxi Taihu Show Theatre near Shanghai marks the entrance to a huge new tourist attraction in its city. Roseanne Field reports

The city of Wuxi sits on the banks of the Taihu Lake in the southern Jiangsu province in China, just north west of Shanghai. Opposite it, on the other side of the lake is the Yixing National Forest Park, also known as the Sea of Bamboo – thought to be the world's largest natural bamboo forest, and the direct inspiration for the exterior of a new theatre in the city.

The theatre forms part of sports and leisure conglomerate Wanda Group's new 'cultural tourism city' – a 240-hectare development comprising theme parks (indoor and outdoor), hotels, a residential area and a commercial centre. It's the latest in a series of this type of project for Wanda in China and, explains Steve Chilton, director of architects SCA, "the theatres are kind of seen like a jewel in the development, the primary cultural draw."

Before the practice were appointed to design the project's external fabric, there was a "previous version" which didn't end up going anywhere. The brief was then rewritten and the budget changed, and the client was left needing to appoint someone at a fairly late stage, and abandoning the idea to run a competition. Chilton had worked with them a few years previously, before setting up his own practice, and so already had a relationship with them. He was approached directly and asked to work on the project towards the end of 2016, "at a point where they needed to produce something fairly quickly to hit their original deadline," he explains.

The theatre, due to open in December,

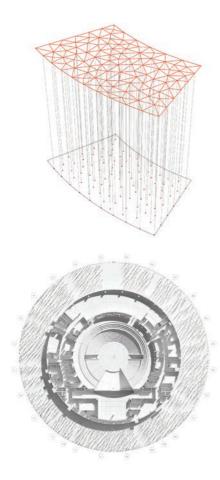
will be the home for a single major spectacle running into the future – a water show created by renowned theatre director Franco Dragone. Known for his work on Cirque du Soleil in Las Vegas and the water shows he's created under his own company Dragone, his joint venture with Wanda will see a number of new shows staged across several venues.

Design inspired by nature

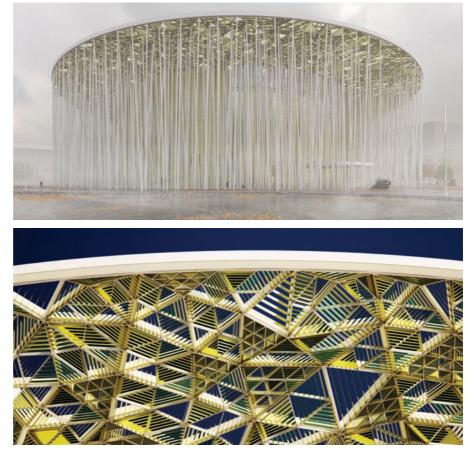
Although each of the 'cities' Wanda constructs is different, many elements remain similar across them. "With the theme parks and residential elements, a certain style is adopted and repeated around the country," Chilton explains. However, the theatres are more individually designed: "They are a kind of magnet to draw people towards their development – they need something to give it an identity."

It was this notion of creating an 'identity' that formed the main brief from the client, along with something that would have a "broad appeal", explains Chilton. "They're not interested in creating modern, abstract architecture." The practice therefore had to search for a solution that would be an interesting visual draw, yet also recognisable and familiar. "They wanted something which anyone can look at and get what it's about," he says.

To this end, the designers followed Wanda's "very symbol orientated" ethos and looked for inspiration in the locality. In this way they could create a building "which resonates with something about the local culture in a way that it's obvious to



The Sea of Bamboo across the lake seemed the ideal place to draw inspiration from, given its familiarity to the residents of the city



everyone what it's supposed to be." At the same time they wanted to ensure the use of local references were not too blatant or pastiche.

The Sea of Bamboo across the lake seemed the ideal place to draw inspiration from, given its familiarity to the residents of the city. "As kids they'll have wandered through this forest, it will be a sort of primal memory for them," Chilton says. The architects discovered it had been used in a scene from Crouching Tiger Hidden Dragon which, admits Chilton, "was quite exciting." They also came across a number of architectural works which had used light columns, and so their final concept - using slim white steel columns to mimic the bamboo - "quickly crystallised around that idea," he says. While he admits it was an obvious local reference point, the architect says "they tried to deliver that in a way where actually it's still interesting as a stand-alone piece of architecture."

Despite the theatre being home to a permanent show, it isn't something they drew inspiration from, for a couple of reasons. Chilton says what Dragone produce will similarly be inspired by the locality and therefore "harmonise with anything we do. They approach it in a similar way." The company also typically include a lot of digital elements, and the show will constantly evolve. "It will continue to develop, so you don't want to take anything from it because it may not be there!"

Although Wanda didn't get too involved in the design itself, they did collaborate with the practice on certain elements. "They set the parameters, it needed to fit within a certain volume," Chilton says. They had to resolve what he describes as "two opposing forces", in terms of both the car park and the building needing to be a certain size. "You had the building wanting to push out and the car park pushing in," he explains.

This meant the final building ended up slightly smaller than originally planned, "but that's just part of the design development process," Chilton says. They had the client's full support with the most "'designed' elements" – the building itself, the canopy, and the columns. "They had faith in us. They liked our vision for what it is, what it's trying to be, so it was a good collaboration."

Technical efforts

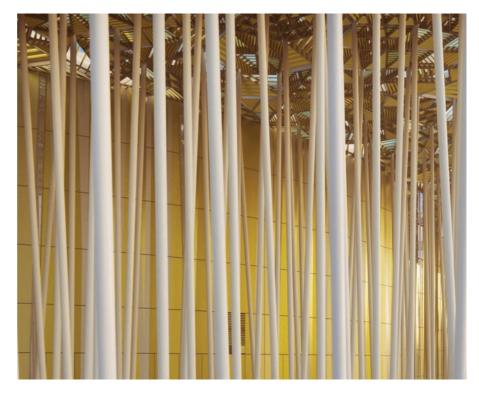
The local area can get extremely hot in the summer. So, although the internal workings of the building, including temperature control, were not SCA's responsibility (a local design 'institute' i.e. office is required for all Chinese projects on this scale - in this case it was Tongji Architectural Design), the practice wanted to help reduce the load on the air conditioning as much as possible. "The columns and the canopy act as a shading device, particularly round the front, where it's mainly curtain wall," Chilton says. "The predictions are there will be a lowering of what the air conditioning usage would have been without those elements.

Once they had a rough idea what they wanted to do in terms of the canopy and columns, the next challenge was getting it to work structurally. "We didn't want the columns to just be there for show," Chilton explains. "We wanted them to be very slender, but also load-bearing and able to hold the canopy up – for us it was really important."

Achieving this meant a lot of hard work with structural engineers Buro Happold. They initially came up with a system where columns could intersect a couple of times along the length to create a structural connection, while maintaining the slenderness the designers were after. "Unfortunately, the programme wasn't going to allow us to develop that as it required far more work onsite," Chilton explains. "There would have been thousands of bespoke connection joints required between columns."

Because of the time pressure making the solution unfeasible, the team settled on a system where the canopy is cantilevered from the building, with the columns providing additional support. Chilton says: "They do help to stabilise it in terms of its torsional stiffness, so there's a certain structural component to them, but regrettably not fully as we had intended, adding, "you just have to adapt."

Despite the change of plan, the hollow steel columns are still 300 mm thick. "What the engineers achieved is still pretty amazing," Chilton says. "They developed a special sliding joint to take up vertical movement, and its still designed in such a way to provide lateral stiffness." The steel columns were all welded onsite and then erected into place – "it happened incredibly quickly once they started work on it, it was interesting to see," says the architect.



Materials

Aside from the steel used for the columns, the practice have utilised a variety of materials. The cantilevered elements of the canopy are steel plates welded together to form triangular 'bays' filled with gold-coloured anodised aluminium louvres, chosen to represent the leaves at the top of the bamboo forest. Each 'bay' is orientated differently and the louvres set at varying angles in order to create a random and ever-changing shade pattern on the building itself. "It's all the same extrusion, it's just been chopped into different lengths and installed at different angles," Chilton explains.

The building envelope comprises two key materials – glass and rendered blockwork. The blockwork accounts for about two thirds of the building. "It's super low tech," Chilton says. "The budget on the theatre is very modest, it's comparable to buildings which would have far less of a visual impact, so we've just tried to use the budget wisely."

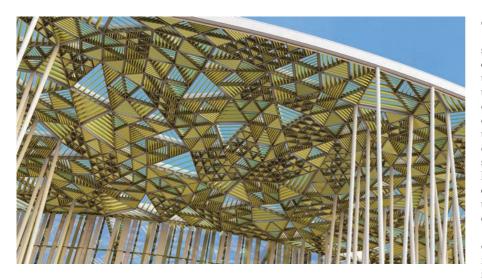
Although there is a large amount of blockwork, the columns obscure it to a large degree: "It gets lost in the visual noise," says Chilton. "Having something which per metre is more expensive than you can afford at the front and something much cheaper at the back, you create a balance with the budget but manage to optimise the

A CANOPY OF STEEL 'LEAVES'

The canopy is made up of steel plates welded together to form triangular 'bays' filled with gold-coloured anodised aluminium louvres

All images © Steven Chilton Architects







PROJECT FACTFILE

Architect: SCA I Steven Chilton Architects Client: Dalian Wanda Group Architecture and Design Management: Wanda Cultural Tourism Planning & Research Institute Co. Ltd Concept engineer: Buro Happold Engineering Theatre consultant: Auerbach Pollock Friedlander Show design: Dragone Local Design Institute: Tongji Architectural Design effect." The other third of the envelope is custom-fritted glazing, "creating a certain depth, so when you're on the outside looking in you almost feel like the space is really receding into it," he explains. This extends the full height of the building above the entrance lobby, a fact that is revealed by a break in the columns.

The budget posed challenges, admits Chilton. "Reducing the depth of the canopy inevitably meant there were less columns, so more of the rendered wall was exposed," he says. "We had to work quite hard on how the columns were distributed so that visually, from an angle, there were always enough of them there to create the effect we were after whilst masking what was a fairly cheap and cheerful wall."

There is an increasing focus on sustainability in China, and as well as the canopy reducing the load on the air conditioning by limiting solar gain, Chilton says the choice of materials will also help. "It's more down the line that the sustainable potential will become apparent," he says. "It's a simple palette of fairly pure materials like raw steel and so in terms of recycling we're confident we haven't built anything that's going to end up in a landfill."

Approaching the finish line

The interior design and layout of the 2,000-seat theatre is something Chilton and his team haven't been directly involved in – and in fact details are being kept somewhat under wraps until the grand opening. The nature of the show means an enormous water tank has to be incorporated with the circular stage, the specifics of which are being finalised by specialist technical theatre consultants APF along with the local

design institute, and the show's creators.

The biggest challenge for his team, says Chilton, was fine-tuning the more complicated elements while sticking to their deadline, and he credits the success to their working approach – and their use of digital tools. "A lot of the elements were designed parametrically, which allowed us to have a certain flexibility to change the design and look at various options," he says. "We produced a 3D model which had all the built components that we could then use to create the 2D drawings in terms of sectioning etc. It was a really efficient process."

The construction started in early 2017, only a few months after the practice were first approached. "We started handing over information which they would start using at the local design institute after a couple of months," explains Chilton. In fact, while the bulk of the design and construction work was agreed early on, there was one detail that caused a slight headache. "Choosing the colours that they were going to paint the back wall with took forever," Chilton says. "Everyone had a different opinion and it just went round and round!"

Despite this, and some minor changes to the glass fritting, the project has so far gone smoothly. "Anything that's had to be updated has been fairly superficial stuff," he says. "When these things run so quickly there's room for error but the team [in China] are very competent, they've done a fine job."

There's a buzz around the project among locals, which Chilton's pleasantly surprised by. "It's doing the rounds on social media in China," he says. "Over the last few years there's been dozens of really interesting buildings designed and constructed so you'd have thought they'd be fairly blasé, but it's great." Since work began Wanda have sold the project, along with several of their other cultural tourism cities, to Sunac, who are now overseeing it with a team transferred from Wanda.

In spite of the time pressure, Chilton says working on the project, which is shortlisted for the Future Project Award (Cultural) at the World Architecture Festival, has been a "pleasurable experience". Being a relatively new practice, they enjoy challenging themselves and finding new approaches, and this project has been no exception. "We just try to reset our approach and find something about the locality or culture," he says. "If we used the same technique or approach every time it would become boring – we try and keep it interesting."





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OFFSITE RICOH ARENA - COVENTRY



The first ever Offsite Expo will bring together the sector's most influential organisations, individuals, commentators and business leaders who are driving the offsite agenda forward, at Ricoh Arena, Coventry in September

F rom 'Rethinking Construction' published in 1998 to the acclaimed 'Modernise or Die' report – the need to improve the construction industry has been well documented over many years. The political landscape is changing, spurred on by climate change, the housing crisis and the urgent need to increase productivity.

These compelling factors have resulted in the launch of Offsite Expo, the brainchild of leading industry experts who understand the vital requirement for a dedicated event that will act as a catalyst for change and drive this growing momentum forward.



"Those who are challenging traditional practices from across the globe will stand alongside our home-grown talent to demonstrate what can be achieved with a progressive approach," say the organisers. "Construction is at a critical crossroads, and it is clear that contractors need to adapt to become more like the innovative disruptors in other manufacturing sectors such as aerospace and automotive."

Offsite Expo brings together the sector's most influential organisations, individuals, commentators and business leaders who are instrumental in progressing the industry. The event will play host to inspiring UK and international offsite manufacturers, component suppliers and digital innovators showcasing a broad spectrum of offsite systems and smart technologies.

Experience – CPD accredited Offsite Masterclasses

In an ever-changing world, the key to success is adapting and embracing emerging best practice principles. The free CPD accredited Masterclasses will be presented by the industry pioneers who are making the headlines, such as Waugh Thistleton Architects. These Masterclasses will focus on key industry innovations and provide a comprehensive and balanced perspective on this rapidly emerging sector.

The Masterclasses are split into offsite and digital technologies categories – these include Pre-cast Concrete, Digital Construction, MEP & Pod, Light Gauge Steel Frame, Skills & Innovation, Hybrid, Structural Timber, Training & Skills, Volumetric Modular and Roofing.

CPDs have become a vital part of professional career requirements for architects. With circa 20 hours of informative CPD accredited content, the Offsite Expo Masterclasses provide the opportunity to learn directly from those who are shaping the future of construction and help fulfil this commitment.

Expect – International Innovation at the Offsite Summit

With sessions chaired by some of the industry's biggest names including Mark Farmer, author of the 'Modernise or Die' report, over 30 international speakers ranging from architects and specifiers to engineers, manufacturers and project managers will participate in the Offsite Summit. Delegates will have the chance to interact with speakers during panel Q&A sessions, structured networking and an evening drinks reception. Advanced offsite approaches and smart technologies are changing the face of construction globally, and we can learn from the way that other countries are addressing similar challenges.

Explore – Smart Technologies

Digital transformation is happening all around us, and whilst other industries have been quick to make the leap, the construction industry has been a little slower out of the starting blocks. But now, the revolution is well underway. Offsite Expo will feature the smart technologies that are changing the face of construction with a range of devices making complicated tasks much easier from virtual reality to smart helmets and digital software efficiencies. The rate of technological advancements is accelerating at such a relentless pace, it cannot be ignored, and the combination of offsite manufacturing and digital construction technologies present a compelling proposition.

Virtual Reality has transformed the way that architects present their visions. It immerses the user by making them feel like they are experiencing the simulated reality first-hand – allowing clients to play an integral part of the design process and 'virtually' enter the building and validate the layout. Augmented Reality, on



the other hand, provides more freedom for the user, because it does not need to include a head-mounted display. Augmented Reality takes the real world and adds elements to it – for example, a new extension could be digitally superimposed onto an existing building.

With over 100 exhibitors, features and offsite technology showcases, Offsite Expo will provide the opportunity to interact directly with smart technology suppliers and full-scale feature builds.

Offsite Connect – the Buyers and Specifiers Forum invites architects

Offsite Connect provides a solution to address offsite construction technology project needs, by facilitating personally selected 'one-to-one' business meetings. The Buyers and Specifiers Forum will provide an opportunity to network with "key offsite industry experts who have a genuine desire to conduct purposeful meetings," say the event organisers. It will also be a chance to learn about the latest offsite product innovations. "This focused approach has proved to be highly successful in creating new business relationships."

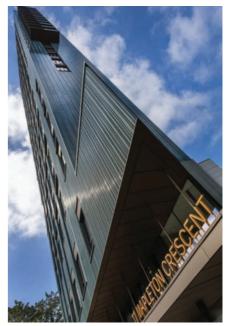
Registration for buyers and specifiers wishing to participate in the Offsite Connect activity can be done online at www.offsite-connect.co.uk.

Register

Offsite Expo will feature a combination of advanced offsite manufacturing approaches and smart digital construction technologies that are transforming the way buildings are designed and constructed. This conference and exhibition will provide the ideal forum for people to engage with key industry contacts, network in vibrant surroundings and acquire new offsite industry intelligence.

To book your free place at Offsite Expo visit www.offsite-expo.co.uk/book The free CPD accredited Masterclasses will be presented by the industry pioneers who are making the headlines, including names like Waugh Thistleton Architects





Double award win for Sika Sarnafil projects at SPRA Awards 2019

Arket-leading single ply roofing manufacturer Sika Sarnafil and two of its Registered Contractors have triumphed at this year's Single Ply Roofing Association (SPRA) Awards.

The awards, which recognise best practice within the single ply roofing industry, saw Exeter-based Progressive Systems Ltd take home the Best Safe Working award for their contribution to The Dunes development (Pictured), while Harlow-based Contour Roofing (Essex) Ltd came out top in the Best Sustainability category for their work on the Temple Farm Development.

Announced at SPRA's fifth annual conference and awards ceremony, held at Heythrop Park, Oxfordshire on Thursday 13 June, this year's awards celebrated both people and projects, with prizes taken home across six project categories.

Progressive's single ply installation at The Dunes, a stunning new beachfront development in Perranporth, Cornwall, was



praised by SPRA for the safety measures taken amidst challenging weather conditions.

Progressive's Levi Stephens, dedicated contracts manager for the project, comments on the win: "We're over the moon to have been recognised for our strong commitment to workforce safety in this year's SPRA Awards. Installing single ply on this job was challenging, not only due to having a large area to cover, but also due to disruption caused by the coastal climate. With strong winds and driving rain, we had to ensure our workers' complete safety was taken into account. However, by combining a systematic and thorough coverage of each roof block, high quality products and the expertise of both our roofers and Sika Sarnafil's technicians, the roofing installation was finished on time and within budget."

Temple Farm Development, a huge multiroof project that saw a 34-hectare scrapyard transformed into new national headquarters for the Watch Tower Bible and Tract Society of Britain, also impressed at the awards. SPRA said the project was a clear winner in its category for achieving a BREEAM 'Outstanding' rating upon completion and demonstrating a sustainable approach from the outset. Additional praise was given for the project's biodiverse green roofing system, designed to boost the local flora and fauna above the Sarnafil membrane, while the contractor was also praised for ensuring the community and environment were respected during installation.

01707 394444 gbr.sika.com

Protect Membranes & Passivent showcase solutions for offsite construction



Protect Membranes is a leading UK producer of high quality, technically advanced construction & roofing membranes for offsite manufacturing. Offering solutions for enhanced thermal performance, airtightness and management of condensation risk, Protect's range includes breather membranes, air & vapour control layers, construction membranes for walls, floors & ceilings, membranes for specialist applications and roof underlays & accessories. Product innovation and superior performance have always been at the heart of Protect's business. This continues with the recent introduction of two new 'Extreme' waterproof breather membranes launched in alignment with the STA Advice Note 18 published by the Structural Timber Association, after consultation with the NHBC. **Passivent**, a sister company to Protect Membranes, is a UK producer of the Hybrid Plus2 Aircool® natural ventilation system. Meeting the requirements of the Facilities Output Specification for Priority Schools Programme Phase 2 (Building Bulletin 93 & 101), interest in this natural ventilation system is growing in popularity, not only within the education sector but also in other commercial sectors where offsite construction is used. Visit us on Stand G7 at Offsite Expo.

www.protectmembranes.com www.passivent.com

OFFSITE EXPO STAND NO G7

Hadley Group solutions at event of the year



Hadley Group will be bringing its expertise in light gauge steel framing solutions to stand C1 at the OFFSITE EXPO this year, as well as being a gold sponsor of the dynamic event. Taking place on $24^{th} - 25^{th}$ September at the Ricoh Arena, Coventry, Hadley

Group will showcase its high-performance light gauge cold rolled steel framing solutions for low rise residential buildings. From advice on floor and wall build ups, to a complete detailing service, Hadley Group's expert technical team will be on hand to discuss any requirements for steel standalone structures and also ensure that they offer optimal performance according to acoustic, fire and thermal requirements.

www.hadleysteelframing.com www.hadleygroup.com

OFFSITE EXPO STAND NO C1

Schueco Awards: More companies than ever

On 27th June 2019 in London's prestigious Saatchi Gallery, just off the King's Road, Chelsea, a large audience of building industry professionals gathered to celebrate the winning and commended projects submitted for the 2019 Schueco Excellence Awards for Design and Innovation. Organised by **Schueco UK** in

partnership with Architecture Today, the Excellence Awards, now in their sixth year, were set up to recognise outstanding contemporary architecture in Great Britain and Eire. The Overall Schueco Excellence Award went to the UCL Student Centre, London, by Nicholas Hare Architects, which was also the winner in the Education category.

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The Soak

ecorative specialists Armourcoat have provided the finishing touches to The Soak, a new bar and restaurant next to London's Victoria Station with an all-day menu that is built around signature soaked flavours through fermenting, pickling, brining and steeping techniques.

With interior design devised by a partnership between creative agency CAB and interior design studio MAS, the grade II listed building retains many original features including a carved leaf design which is now incorporated into the bar interior.

Armourcoat's Koncrete polished plaster finish is used to great effect on the bar front with recessed logo. Koncrete is an urban range of polished plaster colours and finishes designed for contemporary projects. The range offers a wealth of design options to achieve a distinctive modern look including distressed effects or recessed 'shutter' markings.

Outside the building, Armourcoat PPX has been used to repeat the restaurant logo design. PPX is a low maintenance, durable external



limestone render system that can create stunning honed and textured stone like finishes for both new build and renovation projects.

Glh Design Team says, "The look and feel for The Soak has been designed to encompass the building's period features and emphasise the incredible space we have available in this unique venue, and the delicate leaf interior design that has been used throughout is reflective of the beautifully carved foliage on the building's Victorian heritage. The space includes four distinct 'zones', which enables guests to flow throughout different areas of



the venue seamlessly, from day to night, from breakfast to cocktails. We were delighted to work with Armourcoat on this project, and the use of polished plaster finishes to the entrance wall and bar front adds a modern twist to the design. The team at Armourcoat have enabled us to make an entrance with an impact and the rough textured finish on The Soak logo is such an impressive contrast to the smooth concrete of the finish on the wall."

01732 460668 www.armourcoat.com

Kährs to focus on six of the 2030 UN Sustainability Development Goals



Wood flooring and LVT manufacturer Kährs will focus on six of the 2030 UN Sustainability Development Goals: Good Health and Well-being, Affordable and Clean Energy, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action and Life on Land. Over the decades, Kährs has become a leader in providing flooring offering high expectations of quality, design and innovative and sustainable solutions. As the UN sustainable development goals are recognised across global industries, Kährs will integrate six of the global goals into overall business operations. "Kährs' ambition is to contribute to a more sustainable society and we have chosen these six SDG goals in areas where we have the most impact. We are integrating these goals into our business operations and sustainability plan to further support our commitment to offer products that are healthy, recyclable, perform to the highest standards, and based on responsibly sourced materials", says Christer Persson, President and CEO of Kährs Group. Ongoing sustainable initiatives include using more sustainable internal transportations.

023 9245 3045 www.kahrsflooring.com

JS Air Curtains sales team expansion



JS Air Curtains has expanded its team with the appointment of Loredana Groza as its new technical sales advisor. Loredana will be providing support and assistance in all aspects of air curtain design, specification and installation to consultants, contractors and specifiers. Commenting on the new appointment, Kerry Jones, UK and Ireland Sales

Manager said: "We are delighted to welcome Loredana to the JS Air Curtains sales team. The company has experienced considerable growth in recent years and Loredana's appointment will help us maintain the responsive technical assistance our customers rely on."

www.jsaircurtains.com

BLANCO comes out on top at awards



BLANCO UK has been named Best Sink Brand at the 5th annual BKU Awards. The 2019 BKU Awards took place at The Pavilion in The Tower of London where a room filled with the best in the kitchen and bathroom industry celebrated great achievements within the sector.

"Winning this award showcases BLANCO's drive and passion to provide the best in quality and service standards. As the votes are cast by people in the industry – not a panel – it's fantastic to receive this recognition for BLANCO and we would like to thank all who voted" commented John Robinson, Marketing Manager, BLANCO UK.

www.blanco.co.uk

UL and Wintech testing and certification combine to provide best in class

U.K.-based firm that provides testing and certification, a Telford, U.K.-based firm that provides testing and certification services to architects, building owners, manufacturers and others across the built environment community. The acquisition strengthens UL's expertise in the field of building envelope evaluation, testing and certification, and offers greater access to global markets.

Wintech Testing and Certification is a privately-owned firm that offers testing and certification services to the building envelope market. Wintech Testing and Certification's unique laboratory facilities are among the largest in the U.K. and are accredited by the United Kingdom Accreditation Service (UKAS). Wintech Testing and Certification also holds accreditation from UKAS as a certification body operating several schemes involving certification of windows, doors, curtain walls, and rainscreen cladding. Over the last twenty-five years, Wintech Testing and Certification has contributed to many high-caliber projects throughout the United Kingdom and Europe.

"UL and Wintech Testing and Certification have a shared mission and complementary businesses. We are relied upon by the building materials community for the services and knowledge that they need to enhance public safety, meet regulatory demands, protect brand value and successfully access the global market," said Kevin Faltin, vice president of UL Building and Life Safety Technologies division. "Working as one, UL and Wintech Testing and Certification will continue to grow the vision that has brought us together, that of becoming a global leader in the field of building envelope evaluation, testing and certification."

Wintech Testing and Certification's employees will join and strengthen UL's existing building envelope team. The group's building science thought leadership and global center of excellence will be based out of the Telford, U.K. headquarters.

"We are excited by this opportunity to join forces with UL and provide best-in-class services to the building envelope community," said Gailord Nepp, former managing director of Wintech Testing and Certification and now European business development



manager - Building Envelope Services for UL. "Our group's shared reputation for delivering industry leading services and in-depth industry knowledge will continue to strengthen our position as leaders in the field of building envelope evaluation, testing and certification. Joining forces with UL will allow us to significantly accelerate our growth and access to global markets, in addition to providing our clients with a broader range of complimentary services and expertise. Clients can rest assured that customer service and technical quality will remain our top priorities, and that our newly integrated capabilities will deliver even



more value."

The transaction closed on June 28, 2019. Terms of the acquisition were not disclosed.

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Forward-thinking F.H. Brundle celebrates 130 years in business

t all started thanks to a £500 loan between father and son. A wide-eyed Frederick Henry Brundle arrived in London with a dream of making it big and opened premises at 14 Paper Street EC1 - the centre of the Packing Case Trade.

Spotting a gap in the market by selling nails and ironmongery, his attention to detail, careful product selection and quality made him stand out and his name quickly spread across the capital.

130 years on, those hallmarks remain at the heart of leading wholesale supplier F.H. Brundle.

Proud of its history and forward-thinking in its approach, the company has been successfully led by five generations of the Brundle family - Frederick, Frank, Henry, Richard and Michael.

But it has not always been easy. F.H. Brundle had to overcome the Blitz which destroyed their headquarters in Paper Street, resulting in a subsequent move to Hackney in 1940.

The move to Hackney was supposed to be a temporary one, until suitable alternative accommodation could be found.

But just over 50 years later, in 1998, the company moved from its Hackney premises to Stratford, into a refurbished warehouse and offices, only to be compulsory purchased after it was announced London was to host the 2012 Olympics.

F.H. Brundle then moved its headquarters in the spring of 2007 to its present location in Rainham, Essex.

Under the guidance of Richard, Frederick's son, a further five new branches were opened as Richard quickly recognised and spotted opportunities within the industry.

That trait of careful product selection resulted in the addition of welded wire mesh, perforated metal and wrought iron components to name a few – making F.H. Brundle one of the largest independent steel stockists in the UK.

Today, the name F.H. Brundle is synonymous with the same values, quality and competitive prices first established way back in 1889 with the tradition of a proud family history at its core.

But as Michael Brundle, managing director and fifth generation of the family business readily admits, it is the company's





forward-thinking, agile and flexible approach that has ensured it has grown and thrived. Mr Brundle said: "We are incredibly proud to celebrate 130 years in business.

"We have always looked to innovate and evolve our product range, while maintaining a loyal customer base and sustained growth by choosing products at the right price and offering excellent service levels.

"We also continually search the world for product opportunities to bring into the UK. This approach has seen the addition of Pro-Railing, our stainless steel handrail component system, and Marano, a stunning range of anodised aluminium fencing and railing systems that are long lasting, low maintenance and lightweight."

Spotting an opportunity and supporting it with investment has always been key to delivering growth, and in 1998 the company's first website was launched, followed by an ecommerce site in 2010.

This allowed customers to order 24/7 for delivery on one of the company's 60 strong fleet of vehicles that utilise software technology to optimise the best routes, or trade counter collection.

A design office was opened in 2012 to



support the design and development of new systems and products. With the latest advancements in 3D printing, the company in now able to produce prototypes and reduce its time to market for the likes of its Sleeve-Fit Brackets used with glass clamps, which deal with slopes, curves and stairs and can be built without drilling the stainless steel posts.

Most recently introduced is Liveconfigurator, real time design software that helps customers design handrail and balustrades using Pro-Railing products.

A major investment landmark in 2016 was the opening its new distribution centre in Burton-On-Trent, which increased the company's overall warehousing capacity to 500,000 sq ft – the equivalent size of almost 10 football pitches.

Mr Brundle said: "There are not many businesses who survive and adapt over 130 years and a huge thank you goes out to our amazing customers and my incredible team.

"We will continue to work as hard as possible to ensure F.H. Brundle remains at the forefront of the industry."

01708 25 35 45 www.fhbrundle.co.uk

The aesthetics of channel drainage for homes

External channel drainage systems can often be an overlooked factor in many projects, says William Poynter of ACO Water Management, explaining why architects should consider the aesthetic benefits of different options while addressing practical challenges



The significance of drainage systems for housing projects is not always a key design priority for architects. Despite this, there is an opportunity to harness this unconsidered element, through both a choice of material and the type of drainage system, which can add aesthetic value to a house design.

For example, the first thing any developer or builder, and therefore architect, should think about when designing a drainage system for a housing development is where the rainwater will flow. When you're focusing on driveways and paved areas, for example, you need to be aware of the falls on-site and account for channels accordingly. As for doorways and patio areas, threshold drainage is required.

Channel depths are also a factor to consider. Some building sites have restrictions as to the depth of the channel system, which would rule out certain channel sizes. Deeper channels are recommended, especially for driveways, but if that's not possible systems, can be widened to ensure the necessary volume is provided.

Can drainage systems impact the design of a new build?

One of the first challenges for many architects when working on a domestic project is how a quality finish will be achieved for all aspects of the works, One of the first challenges for many architects when working on a domestic project is how a quality finish will be achieved for all aspects of the works, including drainage





including drainage. Understandably, customers want to create a certain appearance for their homes: one that showcases premium quality. Pushing for a specification of a grating element with the right aesthetic can add a subtle yet important touch to a project.

For example, some customers want drainage systems to be subtle and barely noticeable. These systems are inserted seamlessly between brickwork to provide a clean and contemporary finish.

If a bold finish is desired, architects could use grated channels to make a feature of the drainage through mosaic, slotted or lightening gratings. Drainage made from stainless steel, cast iron, aluminium or composite, can also enhance a bold finish.

It is important to consider maintenance and placing access units in a channel run. Most drainage systems are designed for easy jet-wash maintenance but the more discreet drainage options require thought about the placement of access units.

Complete the look

When planning and drawing the design of a new housing project, there are a number of drainage channels which help complete the look, from contemporary stainless steel to antique cast iron, meaning the finish can replicate the initial designs.

There may be some reservations about utilising aesthetically pleasing systems, in case they do not provide the appropriate functionality of what is expected. To caveat this, architects should ensure that any drainage channels that are recommended to fit with the design have the appropriate load class requirements. There are load classes that architects should look out for in a new housing project (namely B 125 and A 15). B 125 rated systems should be installed for private car parks or areas where domestic vehicles will be present. For other areas of the house, such as patios and garage thresholds, A 15 rated drainage is sufficient.

Final thoughts

As well as playing an integral role of the surrounding infrastructure of a building, drainage can also play its part in the design and should therefore be carefully considered by architects. As a final note, grating visualiser tools are available from some water management specialists on the many different options available.

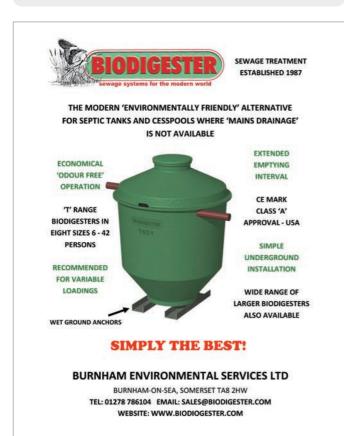
William Poynter is design service advisor at ACO Water Management



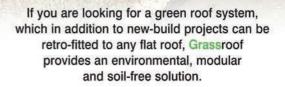
ISO-CHEMIE tape for 'revolutionary' roof

A 'revolutionary' roof on a new £140m distillery and visitor experience centre in Scotland, has been sealed using advanced foam tape technology from ISO-CHEMIE. The Macallan Distillery, built by Robertson Construction on the picturesque Easter Elchies estate in Speyside, has seen ISO-BLOCO T-Max installed to accommodate differential movement of up to 80mm between dozens of the roof's timber cassette sections. More than 5,000 metres of tape has been supplied for the 12,000 sq. m double-curved roof, which features over 380,000 individual components and five mounds to accommodate the distillery's five production cells. One of the largest wildflower roofs in Europe, the structure is also among the most complicated of its type in the world, with each junction and beam featuring a specific name. It has been tested in more than 160 different load conditions, while the 'Swiss Alpine Design code' has been used to understand the effects of wind, snow and ice on the design. T-Max can effectively seal larger joints ranging in width from 14mm to 50mm, providing excellent thermal and acoustic insulation properties.

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Enhanced aesthetics for London scheme



The landmark Sutton Point mixed use scheme has completed involving Facade & Glazing Solutions facade design, manufacture and installation services across its three towers. FGS installed WICONA WITEC 50 aluminium curtain wall system which was specified by PRC

Architects for the top floors of each tower to provide the main feature glazing with spandrel glass and vision with glass to glass corners. FGS also provided and installed WICONA WICSLIDE 160 lifting sliding doors combining excellent thermal insulation with highest functionality and design along with WICLINE 75 EVO windows.

0844 892 2690 www.fgs-uk.co.uk

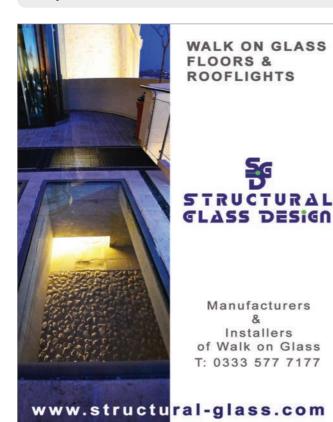
Profile 22 transform housing project



Profile 22 Fully Reversible Windows were specified in the refurbishment of 15 tower blocks in Bristol. The legacy PVC-U windows, doors and curtain walling at 15 high and low-rise blocks owned by Bristol City Council at Eastville, Easton, Clifton, Redcliffe, Shirehampton and Ashton Gate needed to be replaced to improve thermal efficiency, security and aesthetics.

The 70mm Optima casement system offers superb design and easy installation. The slim, chamfered shape is clean, contemporary and attractive, making it suitable for a wide range of applications, including casement, tilt and turn, French casement and French doors.

www.profile22.co.uk



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manufacture and install walk on glass floors/rooflights and drive on glass floors/rooflights wherever your location. For more information please contact the company.

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London design practice showcases style



The headquarters of a leading design practice, located close to The Shard, provide a stylish example of steel windows' relevance to a vibrant urban landscape. Steel Window Association (SWA) member, West Leigh, retrofitted three different systems into the

building. W20 and W40 as well as Schuco Primo profiles, painted in RAL 7024 Anthracite Grey were specified with a satin chrome finish. Measures such as modern weather-stripping and Argon or Krypton filled glazing units with low-E glass ensure the replacements offer far superior energy performance to the original timber fenestration.

www.steel-window-association.co.uk

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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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Award-winning plaster facades in Europe



The Jury of ECOLA Award 2019, organised by Sto and Bundesverband Ausbau und Fassade im ZDB, has awarded four First Prizes on 17 May 2019 in Stühlingen. Prizes in the category New Buildings went to Aires Mateus Architects from Lissabon with "Meeting Centre in Grândola" in

Portugal (pictured) and AIM Studio with "Local Community Center Gošići" in Tivat, Montenegro. Bruno Fioretti Marquez won the category Refurbishment/Renovation/Conversion with the project "Conversion and Extension Schloss Wittenberg" as well as TEd'A arquitectes with their project "Can Picafort - 4 tourist apartments".

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Walk on structural glass floors & rooflights

Reynaers achieves maximum comfort and safety for new London homes



estled in the exciting Kings Cross district of London, Onyx Apartments is a new development that offers residents the best of everything: comfort, ideal location, unmatched views of the city and access to an array of restaurants, bars, shops, parks and galleries. Working closely with developer Taylor Wimpey, contractor United Living and Cross Border partner Skonto Plan, Reynaers has ensured residents receive the highest level of thermal insulation and safety, while also being able to take advantage of the unique London panorama.

Onyx Apartments is an 11-storey building located on the banks of Regent's Canal, which offers 117 bespoke homes with one, two and three bedroom options. The development was designed as a modern, elegant and professional living environment which is reflected in the look and feel of the entire building. Residents are offered a range of facilities, including a 24-hour concierge service, access to a residents' roof terrace, two enticing entrance lobbies and cycle storage.

Comfort and safety were two top priorities in bringing this project to life and Reynaers was brought on board to achieve those aims. The CS 86 'High Insulated' (HI) aluminium window was specified, as it offers an overall insulation value (Uf) of 1.0 W/m²K, making it one of the most energy-efficient windows on the market. RB Glass was also used, an add-on glass balustrade which offers an additional layer of security without compromising the transparency and design of the windows. To further enhance the insulation level of the apartments, Reynaers' CP 155 'Lift and Slide' (LS) aluminium door was specified as part of the project, a product which creates maximum glazed areas while also maintaining comfort.

Commenting on the development, Neil Garner, International Project Consultant at

Reynaers Aluminium UK said: "We are proud to be a part of the redevelopment of Kings Cross district. Onyx Apartments is a great example of a project that combines elements of luxury and practicality, bringing a fresh perspective to the area. At Reynaers, our mission is to enhance the living and working environment and I believe we achieved that as part of this project through the comfort and security that our doors and windows offer the new residents."

Kings Cross has been undergoing major transformation work, with new residential areas being built, in addition to a flourishing variety of green spaces, restored heritage buildings, a bustling food and drink scene and shopping areas. Located in the heart of London, residents benefit from quick transport links to the rest of the city as well as internationally from St Pancras station.

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BUILDER'S PROFILE

Bespoke roof window solutions

Samantha Smith of Fakro GB discusses the 'unrivalled' choice that is now available across the UK roof window market

Is the very way we are designing and building sustainable housing changing? Many of us spend around 90 per cent of our time indoors either at work or at home so it's important to maximise the benefits of building products when renovating. The idea behind sustainable housing is to work with nature and not against it. Therefore supplying the right roof window is crucial. Choose from highly energy-efficient windows to harness the sun's energy during those cooler months or units with ventilation air inlets to provide regular air flow.

When it comes to choosing the right window you will find many differences between product ranges. Some may appear to look the same externally but they might not have an efficient U-value performance, which could have a negative impact. This is just one of the distinctive features to consider when incorporating roof windows into a project.

Roof window possibilities

There are a number of pitched and flat roof windows to suit personal preference and all budgets. Manufactured in many forms such as non-opening, electrical opening and fixed options, there is a solution to cater for all consumers and architects.

For instance, buildings that cannot be extended due to cost concerns or other matters may contemplate balcony windows to enhance space and luxury. Balcony windows allow you to 'push the inside out,' therefore increasing space within a room. Additionally, they also allow a substantial amount of natural light into the room. Consisting of a bottom sash which can be pushed open to create a balcony, the balustrades also complement the design by offering safety. Are you looking for an energy-efficient balcony window solution? These windows can be manufactured with double or triple glazing.

One common problem we face, and that must be addressed, are the levels of natural light entering the room. Natural light benefits the body by boosting its vitamin D levels and helps to increase productivity



more so than artificially lit work spaces. Rather than installing one large roof lantern in the centre of the room, why not look into the possibilities of integrating several roof windows throughout the space? This will draw in natural light from all angles and reel in the benefits of having multiple windows – and don't forget the views too! By supplying drawings this provides technical teams and specifiers with a holistic view of a project and allows them to be involved in the conversation. This is





where an architect is introduced to the possibilities of colour, opening styles and a myriad of ways to deliver natural light, excellent ventilation and design aesthetics.

Aesthetics

It is important for those renovating a property to be given the option to choose how they would like their roof windows to look, whether that's structurally or aesthetically. If you are looking to coordinate existing external features with your roof windows, the sky's the limit. Colours from the RAL classic palette can be manufactured to your specification and there's your design brought to life. What if you are looking for an alternative size? Again, this is possible.

To continue offering unrivalled choice, manufacturers have had to consider consumer needs. For instance if a window is required in a room with higher levels of humidity, a PVCu window would be an excellent choice. PVCu roof windows offer low maintenance as the outer pane is designed to be easy to clean.

Many of us spend an increasing amount

of time on our smartphones; in 2018 *The Telegraph* reported that 78 per cent of the UK population spent 24 hours a week online using mobile devices. This has driven the need for smart home technology, and roof windows are not immune. Technology now enables you to walk through your door and open your roof windows via an app, a choice that didn't exist 10 years ago.

Another simple example of convenience is the location of the handle. Roof windows are manufactured with handles either at the bottom for ease of operation or along the top sash to keep out of reach of young children.

Why is choice imperative?

Should all building projects consider alternative solutions? Well, why not, if it is available? We believe providing you with choice allows you to create a beautiful masterpiece, using all of the unique features that come with a roof window.

Samantha Smith is marketing executive at Fakro GB

Senior's in good shape at new sports complex



The new sports complex at the Solent University in Southampton has been kitted out with a high-performance aluminium fenestration package from **Senior Architectural Systems**. Designed by Architecture PLB, the University's new sports building offers a range of facilities for both students and the general public. The flagship scheme features a striking facade design which not only complements both its natural environment and the style of the neighbouring buildings, but also showcases the attractive slim sightlines offered by Senior's aluminium glazing systems. The main tower block is wrapped in perforated veil cladding which is punctuated by Senior's thermally-enhanced SPW600 aluminium windows. The effect of the cladding means that during the day, some windows are concealed while others provide a glimpse of the activity taking place within. At dusk, with the addition of artificial light, the building is transformed as all the windows become visible. On the smaller sports hall building, the dark brickwork facade design has been balanced by Senior's Hybrid timber aluminium windows which help to flood the interior spaces with natural light.

www.seniorarchitectural.co.uk

Creating vibrant office spaces



The VELUX Modular Skylight system were installed as part of a lighting and ventilation strategy led by BAM Construction and AHR Architects for the Ministry of Defence's new UK Hydrographic Office. Modularised and prefabricated, the modular skylights simplified a complex specification for

natural daylight, first-class ventilation, and modern aesthetics in a central atrium area at the heart of the new development. Minimising the building's energy use for both lighting and temperature regulation was a key concern, which led to the VELUX Modular Skylight system being agreed as the most suitable product for this specification.

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Roofglaze was selected by London Eye architects Marks Barfield and main contractor Gilbert Ashe to design, manufacture and install 63 bespoke Flatglass rooflights for this outstanding project. These rooflights provide nearly 300m² of natural daylight to the

building year-round, increasing the energy savings that underline the sustainable, eco-friendly ethos of this development. Prototypes of the large 7.29m² single-pane rooflights undertook rigorous testing at the BRE (British Research Establishment), proving their Class 1 Non-fragility compliance to CWCT TN66 & TN67.

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Technology benefits for all

Challenges can arise when specifying tailor made external door access solutions that suit a wide range of users. John Hardman of dormakaba reviews the solutions available, and how technology can help specifiers identify the right option

A ccess control solutions have existed for many years, however, it's certainly the case that the recent rapid pace of technological advancements and innovations has increased the capabilities of products which are on the market today.

As any specifier will know, no two buildings' access requirements are the same. This is especially true of organisations and projects where multiple buildings are managed under one entity, such as university campuses, hospitality complexes or large shopping compounds. With a variety of offerings available, specifiers can find themselves lost in what seems like an overly complex set of solutions, however recent technology can ensure clients' needs are easily met.

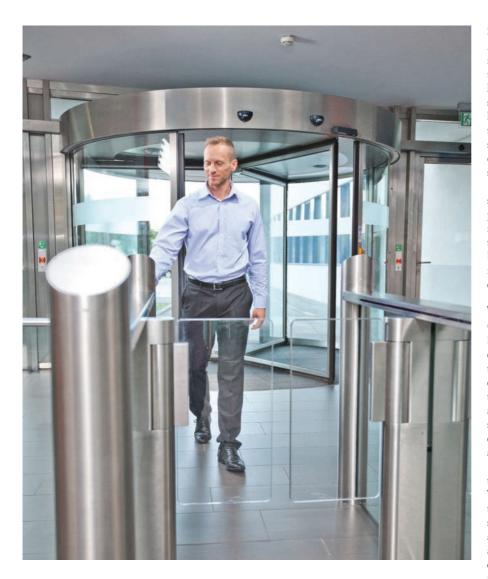
In the clouds

Cloud-based technology is one of the most significant innovations for access control. Utilising an online platform to manage user access across single and multiple sites, these systems require minimal investment in IT infrastructure to function and operate successfully.

Integration of new software based solutions can be costly, time consuming, and inconvenient to those using the site, especially in situations where 24-hour access for authorised individuals is required. For cloudbased systems, internet access is all that is required to get everything up and running, and provides a simple, centralised interface for managing user profiles and privileges.

This is ideal for campuses and multibuilding complexes, especially those with high turnovers (e.g. students graduating from university while new students enrol), as it allows tailored access to be established for different people or groups for specific buildings – so access requirements can be added, amended or withdrawn in real time. This also allows access to multiple buildings with one access medium – such as a smartcard, key card, or a fob.





With a variety of different offerings available, specifiers can find themselves lost in what seems like an overly complex set of solutions, however recent technology can ensure clients' needs are easily met External access can also be further controlled at certain times of the day for specific groups. For example, in a university scenario, accommodation would need to be accessed consistently by authorised residents, whereas learning and research buildings (particularly laboratories or those that contain expensive equipment) can be restricted at night, either totally, or partially with only those with authorised permissions being able to gain access.

Furthermore, with a full audit trail function, these systems can record movements of users through authorised areas to allow complete peace of mind for site managers.

Another benefit of cloud based solutions is that new features and updates can be applied and implemented with immediate effect, rather than waiting for locally installed software to be updated.

Smart phones for smart access

Mobile access via smart phones can now be incorporated into access control technology using supported apps. With smart phones having become a constant within today's society, people are much more likely to have their device on their person at all times and are less likely to loan it to somebody else for use – unlike a key card or fob device – which contributes to a secure environment.

Smart phones also include additional security functions such as numerical passcodes and passwords. The most recent innovations in mobile phone technology allows users to choose biometric verification, such as fingerprint or facial recognition – further enhancing security.

Virtual specification

Of course, cloud-based technology should be combined with robust physical entrance systems to ensure complete and total security solutions are specified for external entrances. From sliding doors to turnstiles, there are a range of solutions and it can be a difficult undertaking to specify one that works not only with your end client's requirements, but also the architectural vision for the building.

This is where Virtual Reality (VR) technology could prove incredibly useful. The construction industry is aware of technology such as BIM, in which specifiers can drag and drop products into a fully digitised building plan. This allows any issues to be identified prior to construction, and minimises the margins for error once on site.

VR can allow users to fully immerse themselves in a computer-generated world, which would include being able to see products in action in a variety of buildings and situations, and gain more information about the products' inner workings. This additional access will ensure that specifiers make better informed decisions at the specification stage.

With a wide variety of applications and the unique security requirements of each one, there can be challenges when specifying the correct solution. By considering secure cloud-based technology and modular construction advances such as VR, specifiers can ensure the most robust security method is in place for their clients.

John Hardman is electronic access systems product marketing manager at dormakaba

Educational Copper

ordic Brown pre-oxidised copper from Aurubis forms part of the restrained palette of natural materials defining the new St John's Primary School, Ealing, London, designed by Conran and Partners with detailed design by executive architects Gibberd.

Conran and Partners' idea for a new school grew out of their proposals for the ongoing regeneration of Green Man Lane estate. With an exchange of land, the existing school could remain operational while a new one was constructed. Configured as a three-storey structure, the new school building sits along the site boundary edge, creating a strong street form and conveying a mature learning environment while giving the school its own distinct identity.

The entrance is demarcated by a floating, oblique form – clad in Nordic Brown copper with defined vertical seams – informing the design detail throughout. A glazed corner provides transparency and signifies both the main school entrance and the circulation axis through the building. The strong vertical emphasis of the street elevation will set the school apart from the proposed neighbouring residential components of the development.

A restrained palette of natural materials has been selected throughout the new school – from weathered buff brick to the Nordic Brown pre-oxidised copper – to reinforce the design narratives. These materials provide robustness and warmth, while blending seamlessly with the material palette of the wider masterplan for Green Man Lane estate.

Nordic Brown products are pre-oxidised at the Aurubis factory to give straightaway the same oxidised brown surface that otherwise develops over time in the environment. The thickness of the oxide layer determines the colour – either Nordic Brown Light or the darker Nordic Brown – and the darkening oxidisation process continues in the natural environment.

Other Nordic Copper surfaces include Nordic Standard 'mill finish'. Nordic Green and Nordic Blue are factory-applied patinas developed with properties and colours based on the same brochantite mineralogy found in natural patinas all over the world.



Essentially, they enable designers to determine both the colour and intensity of patina for each project with 'living' surfaces: as well as a solid patina colour, other intensities can be created revealing some of the dark oxidised background material.

Aurubis copper alloys include Nordic Brass – also available pre-weathered – Nordic Bronze and the innovative Nordic Royal with a long-lasting golden colour.

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Over 13 Schöck product variants at Hendon Waterside

inimising energy use buildings, by improving thermal performance of the building envelope, has become increasingly important in the drive for sustainability and energy efficiency. And the prevention of thermal bridging is critical with structural attachments such as balconies. Ineffectual insulation at the connection points means local heat loss, with more energy being required to maintain the internal temperature of the building. This is an important aspect of thermal bridging, but there are other issues. Low internal surface temperatures in the area of the thermal bridge can cause condensation. Leading not only to structural integrity problems with absorbent materials such as insulation products or plasterboard, but the potentially serious occurrence of mould growth. So for any large-scale project involving a variety of different balcony types, the prevention of thermal bridging is particularly important.

Challenging variety of balcony types

One current project with a challenging variety of balconies is Hendon Waterside in North West London, a mixed tenure development. Situated alongside the Brent Reservoir (known locally as the Welsh Harp after a public house which used to stand nearby), the scheme involves the regeneration of a 1960s housing estate being built in six phases and scheduled for completion in 2027. The masterplan will deliver around 2100 new homes consisting of social, affordable and private housing. These are being constructed

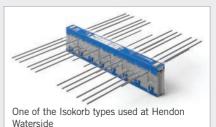


in twenty-three blocks, varying in height from three to twenty-three storeys – along with an imposing tower building of twenty-eight storeys. Also planned are new public parks, a primary school, community centre and commercial space.

Hundreds of Isokorb variants in the range

The many balconies involved vary in their design demands and to ensure that thermal bridging is minimised, Schöck has supplied over thirteen different product variants. As the leading international supplier of structural thermal breaks, Schöck has a solution to practically every connectivity detail with the hundreds of variants available in its Isokorb range. The products at Hendon are for concrete-to-concrete and provide optimum solutions by using varying tension bar arrangements. For example, one type provides cantilever balcony connections and





transfers both negative moments and positive shear forces. Another is a load-bearing thermal break element for transferring shear forces on supported balconies, recessed balconies and for occasional peak shear forces. Others transfer positive shear forces with point support, or transfer positive shear forces with point support and zero stress connection.

Totally verifiable performance

In addition to concrete-to-concrete, the comprehensive Isokorb range also offers solutions for concrete-to-steel and steelto-steel – and even a maintenance free alternative to wrapped parapets. A requirement that the temperature factor used to indicate condensation risk (fRSI) must be greater than, or equal to, 0.75 for residential buildings, is easily met by incorporating the Isokorb. Products meet full compliance with the relevant UK building regulations, have NHBC approval and offer LABC Registration. There is also the security of independent BBA Certification.

01865 290 890 www.schoeck.co.uk

ALUCOBOND° PLUS | A2

ALUCOBOND® is the original aluminium composites material



- ALUCOBOND[®] PLUS and A2 have been in continuous production for over twenty years.
- 3A Composites, the manufacturer of ALUCOBOND[®], has only promoted and sold fire retardant material since 2013, pre-dating regulation changes.
- ALUCOBOND[®] PLUS and A2 were tested to BS8414 large scale tests pre June 2017.
- 3A Composites is member of the MCRMA and furthermore collaborating with National & European Authorities to enhance regulations and standards.
- 3A Composites has strategic partners enabling comprehensive training on design, fabrication and installation.

Maurice Wilkes Building, Cambridge | ALUCOBOND® PLUS Silver Metallic 500 & Bronze Metallic 504 | BCR Infinity Architects | Argonaut | Middlesex



For rear-ventilated façades, we recommend ALUCOBOND[®] PLUS (EN classes B-s1, d0) or ALUCOBOND[®] A2 (EN classes A2-s1, d0) in combination with non-combustible mineral insulation. This combination shows no flame propagation or critical temperature rise,



Sales Manager UK / IE Paul Herbert +44 75 84 68 02 62 paul.herbert@3AComposites.com www.alucobond.com

and even exceeds the requirements of BR135.

Specification Manager UK / IE Mark Winstanley +44 75 84 68 02 63 mark.winstanley@3AComposites.com

Business Development Manager UK / IE Richard Clough +44 77 60 88 43 69 richard.clough@3AComposites.com

Nordic Copper skyline crowns the new Ram Quarter

The new Ram Quarter mixed-use development at the heart of the London Borough of Wandsworth is highlighted by its rooftop cladding of Nordic Green Living 1 pre-patinated copper, reflecting the site's industrial heritage.

Greenland Group UK, the developer of Ram Quarter, was keen that the site's material specification should help to reflect the history of the site and deliver high-quality design and long-term durability.

EPR Architects, the appointed architectural practice for the scheme, was tasked with ensuring that the development design complemented both the industrial character of the site and its transformation into a residential neighbourhood.

Inspired by old copper brewing vessels, the architects decided to clad the upper two floors of the tallest residential buildings in Nordic Green Living 1 copper. Adjacent to the old brewery complex, a playful vertical expression was added to one of the new buildings – a nod to the industrial vats that were once housed on the site – raised from the ground, with softer rounded corners and vertically-ribbed profiled Nordic Green copper cladding.

In addition to Nordic Green, extensive Nordic Blue and Nordic Turquoise ranges have been developed. All these surfaces form an integral part of the copper and are not coatings or paint, and ongoing changes will continue over time depending on the local environment. As well as the solid patina colours, 'living' surfaces provide various intensities of patina flecks revealing some of the dark oxidised background material.

Other Nordic Copper ranges from Aurubis include Nordic Standard 'mill finish' and Nordic Brown pre-oxidised copper, offering lighter or darker shades of brown determined by the thickness of the oxide layer. A wide choice of Nordic Decor mechanically applied surface treatments is also available. Nordic Copper alloys include Nordic Brass – which



can also be supplied pre-weathered – Nordic Bronze and the innovative Nordic Royal, an alloy of copper with aluminium and zinc, enjoying a rich golden through-colour which remains very stable.

01875 812 144 www.nordiccopper.com

Added protection where needed from Crittall MW40



Crittall's Corporate MW40 steel windows can be specified where superior air, wind or water resistance and greater sound attenuation are required. Offering the same high-quality appearance as the company's successful Corporate W20 range the MW40 variant can accept glass up to twice the thickness as its stable mate. Either double, or triple glazing up to 32mm thick can be installed with a consequent higher level of thermal or sound insulation. This is achieved while retaining the same slender steel profile for which Crittall products are renowned thereby ensuring maximum light ingress. Corporate MW40 features a high-performance double weather seal and is supplied hot dip galvanised with a low maintenance Duralife polyester powder coating in a range of RAL and BS shades. It is available in a wide range of configurations and its special properties are proving particularly attractive in the education, hotel and healthcare sectors as well as other commercial settings where thermal and acoustic properties are a major concern. The windows can be installed with solar control, laminated security or sound control glazing as required and the window has found favour with architects for both new build and heritage style replacement windows.

01376 530800 www.crittall-windows.co.uk

Metalline shines on Centre of Innovation



Architectural fabrication specialist **Metalline** worked closely with Associated Architects, Glassolutions and United Anodisers to produce a range of bespoke rainscreen panels in anodised silver and a striking two tone striped anodised bronze to enhance the brick and glazed facade at

The University of Leeds new Nexus Innovation and Enterprise centre. The two tone bronze effect is a first for the UK and one that Metalline rigourously tested and trialed in conjunction with partnering anolisers. Over $3000m^2$ of aluminium rainscreen panels were supplied in varying lengths up to 4000mm length x 2000mm wide.

01543 456 930 www.metalline.co.uk

Promat UK boosts technical support



A new online product selector and 'Glazing For Life[®]' technical brochure launched by **Promat UK** provides the latest technical guidance on the design and specification of fire resistant glazing. The easy-to-use new Promat UK glass product selector takes specifiers

through the essential questions which need to be asked to make the right choices for fire resistant glazing at the design stage. Promat UK's new 'Glazing For Life[®]' technical brochure provides greater insights for anyone seeking guidance on how to choose fire resistant glazing, and the numerous different solutions to consider from Promat UK.

0800 588 4444 www.promat-glass.co.uk

New Duragrain sectional doors from Garador



Garador has introduced an entirely new range of sectional garage doors. The new Duragrain range is a completely new concept where a realistic timber, natural stone or metal illustration is printed onto the outside steel surface of the garage door. These new designs offer customers a more graphical alternative to the paint and timber effect finishes currently available on the market.

Garador's Duragrain range is comprised of 24 decorative colour finishes, which are comprised of 5 incredibly realistic natural stone decors, 18 authentic treated timber decors and 1 metal decor. The development of this new printing technology opens up a whole new realm of possibilities for garage door panel design, with the most unusual and unique surface finishes now possible.

Duragrain will only be available on Garador Premium Linear Large door styles, and the door will be fully insulated with PU-foam at 42mm thick, making the door ideal for properties where the garage is used as a workshop or gym or for storing equipment.

01935 443709 www.garador.co.uk

Library facility open all hours



Delivering a highly functional, yet stunning entrance solution to the Cochrane Building at Cardiff University, **TORMAX** was contracted by Ian Williams Ltd to install a combination of advanced automatic door systems. A single-leaf swing door leads into an internal lobby area that is formed using an elegant curved automatic sliding door. The entrance to the library is directly off this lobby, allowing staff and student access at all times, even when the main part of the building is closed off by securely locking the curved door. Both doors are powered by Swiss-designed, TORMAX iMotion operators, ensuring precise, whisper-quiet opening and closing that is appropriate for an important study area such as this. Reliability is unsurpassed thanks to a unique design feature of iMotion door drives which negates the need for parts that often wear out, such as gears and brushes, considerably reducing maintenance requirements and unscheduled down-time. Out-of-hours, the curved automatic door can be securely locked, restricting access to the Cochrane Building. The curved sliding door is powered by the iMotion 2202 door drive while the swing door is fitted with the iMotion 1201 operator.

www.tormax.co.uk

Metal Technology delivers global standards



Metal Technology were chosen to deliver its specialist glazing systems for the striking new Cookstown headquarters for engineering firm, CDE Global. For the impact required, Metal Technology's System 17 Silicone Pointed

Curtain Walling was extensively used as it provided a seamless glass facade. This visually impressive system offers a diverse range of profiles that offers structural integrity, weather performance, thermal enhancement and importantly can only be seen on the inside of the building. Metal Technology's frameless opening casement windows were also used to provide continuity in the glass facade appearance.

028 9448 7777 www.metaltechnology.com

New college to benefit from Wraptite®



The new campus of the Southern Regional College in Armagh, Northern Ireland is set to benefit from the superior airtightness performance qualities of the Wraptite external air barrier system from the **A. Proctor Group**. Specialist building contractor

Felix O'Hare required a high-quality air tightness membrane and Wraptite System as an external air barrier as opposed to an internal air barrier system. Wraptite is the only self-adhering vapour permeable air barrier certified by the BBA and combines the important properties of vapour permeability and airtightness in one self-adhering membrane. This approach saves on both the labour and material costs.

01250 872261 www.proctorgroup.com

Kingspan adds glitz to apartments



Kingspan Kooltherm has been installed as part of the conversion and expansion of a former office building, adding luxury accommodation to Birmingham's historic Jewellery Quarter. To insulate the ceiling of the basement and an undercroft below the

ground floor over 650m² of Kingspan Kooltherm K110 PLUS Soffit Board was specified. To insulate its external walls, 57.5 mm Kingspan Kooltherm K118 Insulated Plasterboard was installed. The product combines vapour control, 12.5 mm plasterboard and a premium performance insulation core in a single product.

01544 387 384 www.kingspaninsulation.co.uk

Insulation performance and daylighting



New research from building consultants, Peutz B.V., has revealed that by using higher performing insulation within rainscreen and cavity walls, it is possible to reduce construction thicknesses and achieve noticeable improvements in internal natural light levels. Its findings are explored in full in the updated Daylighting White Paper from Kingspan Insulation, available for download. The findings

showed that in all scenarios, the constructions using Kingspan Kooltherm insulation achieved improved average daylight factors. The percentage improvements can be viewed in Daylighting White Paper.

01544 387 384 www.kingspaninsulation.co.uk/daylighting

TROX air conditioning solution perfect for London project

For the prestigious redevelopment project at 21 Dartmouth Street, London, a premium occupant experience was essential to complement the enviable location. The installation of a TROX air conditioning solution, including TROX X-CUBE air handling units (AHUs), and X-AIRCONTROL modules, with the X-AIRCONTROL Zonemaster, is enabling the building to achieve outstanding levels of efficiency alongside elite levels of comfort.

The 21 Dartmouth Street building is situated in the heart of St. James's Park, between Buckingham Palace and the Palace of Westminster, a short stroll from Sloane Square's series of specialist boutiques. The address features a magnificent new rooftop, a majestic lobby and modern business amenities befitting its architectural grandeur. A total of 53,000 sq ft of office space is offered across nine floors, naturally commanding an extremely high degree of occupant comfort. When specifying the air conditioning system for the building, the main contractor, mac-group, and their M & E services consultants, Max Fordham, required a solution which would combine optimum comfort conditions with outstanding environmental performance. The solution, provided by air conditioning specialists TROX UK, incorporates precision-engineered air handling units, and provides the latest VAV capability featuring advanced zone control technology to deliver best-in-class energy efficiency and occupant comfort.

At the heart of the system are two TROX X-CUBE air handling units. Each X-CUBE incorporates TROX's integrated controls package, whereby damper actuators, pressure, temperature and humidity sensors as well as heat recovery control and fan control strategy are linked into the X-CUBE digital control network. Both units incorporate thermal wheels with pre-programmed strategies, selected to meet



BVU efficiency in accordance of the ErP 2018 standard. This is the highest level of smart technology, combining pre-set algorithms, developed by TROX, to facilitate rapid reactions to changes in building load.

01842 754545 www.troxuk.co.uk

'Stand alone' ventilation solution optimises offsite capabilities



As offsite construction growth outstrips traditional methods, **Gilberts Blackpool** has introduced a solution that simplifies incorporation of building services. The company's MFS (Mistrale Fusion) provides a stand-alone unit, requiring no ductwork or plant, to ensure a comfortable ambient environment within each space- in air quality AND air temperature. It means one MFS delivers ventilation, cooling and heating as needed, with no external connections. Once on site, annual design consumption of just 34kw per classroom means that Gilberts' MFS can cost as little as \pounds /classroom/year to operate. Installed through an external façade or window, Mistrale MFS mixes internal and external air to ventilate the internal space. Each MFS unit features a mixing damper within, modulating airflow to allow the new, fresh air to mix with the warm exhaust air, thus utilising its heat without the need for an exchanger. The integrated low energy fan energises to blend the internal air, ensuring an even distribution of airflow, with control over temperature and CO₂ levels within, and maintenance of a comfortable internal environment for occupants.

01253 766911 info@gilbertsblackpool.com

Mapei's Mapetherm System adds to the scenery



Two of **Mapei's** complete external wall insulation and protective coating systems have been specified and installed on an impressive house renovation on the coast of Downderry in Cornwall. Mapei provided RGB Supplies with a specification for installers F. D. Hall & Son Ltd., which required delivering a uniform finish across two very different substrates. To provide thermal benefits and to align the original timber frame substrate, Mapetherm EPS Plus insulation board, with Mapetherm AR1 GG insulation adhesive and smoothing render reinforced with Mapetherm Net was used over the existing masonry construction. A new timber framed structure was added to the building and finished with a Mapetherm Thin Coat render only system; consisting of Mapetherm AR1 GG with reinforcing mesh (Mapetherm Net) and Mapetherm Plus System, which incorporates Silancolor Base Coat and Silancolor Tonachino Plus 1.2mm applied to a cement board. To provide a uniform finish, both systems were completed using Mapei's protective and decorative coatings, Silancolor Base Coat and Silancolor Tonachino Plus 1.2mm, the ideal solution for a structure exposed to the extreme elements of a coastal location.

0121 508 6970 www.mapei.com

JS Air Curtains fit in at 1 Rebel Gym



JS Air Curtains has recently supplied two Rund air curtains to 1Rebel boutique gym in Victoria, London. Described as a "Ride studio like no other" the 1Rebel gym at Victoria fuses amazing sound systems and lighting with a full body bike workout. JS Air

Curtains' Rund air curtain was chosen by architects as its cylindrical design perfectly complements the industrialised and futuristic interior, and could be suspended with inverted goal-post like supports. The units were installed by mechanical contractors, TMI Mechanical Limited, who also provided the ceiling mounted suspension arms.

www.jsaircurtains.com

Comfort Cooling for High School



Blackheath High School recently invested £18 million to provide new state of the art facilities including a new library and resource centre, and **AET Flexible Space** supplied an underfloor air conditioning system to provide comfort cooling

for students in the new learning zone. Underfloor air conditioning makes use of the plenum beneath a raised access floor to distribute conditioned air. At Blackheath High School, a single CAM-V33 Direct Expansion downflow unit serves the air conditioned zone, and the conditioned air is supplied into the space by 14 TU4 Fantiles.

01342 310400 www.flexiblespace.com

Panasonic introduces R32 Big PACi Series



Leading the change to R32, Panasonic has introduced the R32 Big PACi Series. The series, available in 20kW and 25kW capacities uses R32 refrigerant, includes a water heat exchanger option and supports Panasonic's 'full switch to R32' initiative and Environmental Vision 2050. Business

owners making the switch to R32 PACi can also benefit from energy and cost savings, thanks to a higher energy efficiency performance of up to 10 per cent with R32. Due to the water heat exchanger connection, this solution is an ideal alternative to traditional boiler systems for small retail spaces and office projects that are environmentally conscious.

www.aircon.panasonic.eu

Latest news, views and more



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monthly CPD Focus and fortnightly ADF Newsletter offer updates on products, services, events, and learning opportunities available from a wide variety of manufacturers and suppliers.

www.subscribepage.com/adf

NEW FOR 2019 THEVICTORIAN 3 COLUMN



Procolor from VitrA Tiles – design your projects in colour!



The ProColor range from VitrA Tiles comprises contemporary and attractive colour options for today's designers and specifiers. This range is ideally suited to the architectural specification market because it contains 38 RAL colours of fully-vitrified tiles, providing modularity and consistency for designers. The RAL system allows for standardisation of colour, including coordination and contrast where required. RAL colours in tiling allow architects and designers to coordinate colours throughout their residential and commercial projects and to build innovative and creative use of colour into their designs. ProColor includes all the most commonly used colours from white through different shades of green, red, greige, blue, lilac, brown and black. Tiles are available in a choice of modular sizes from 2.5 x 2.5 through to 30 x 60. All sizes, except 30 x 30 and 30 x 60, come in gloss, as well as a matt finish, and are in a non-slip format. The full range is available for immediate delivery from stock via VitrA Tiles' distribution network. "Our competence to produce RAL colours is a big advantage that we can offer to UK specifiers," says Ken Aston, UK & Ireland Sales Manager at VitrA Tiles.

01235 750990 www.VitrA.co.uk

Altro Ensemble brings design freedom to new mexican restaurant



Altro Ensemble[™] modular flooring system has been fitted in a new 76-seater Mexican restaurant in West Vale, near Halifax, adding an edgy and stylish chic to a village that's fast becoming a destination for diners and drinkers. Taquito's Restaurant, Tapas & Tequila Bar is one of a clutch of new, sophisticated dining and drinking venues – benefitting from the vision of interior designer Vanessa Thornton, of Vanessa Thornton Interiors. She said: "The flooring was crucial to the new venue, because it needed to be stylish and gorgeous, working with the design themes, but also fit for purpose, hard wearing and practical." Altro Ensemble modular flooring system is the next generation of luxury vinyl tiles. From colour blocking to geometric patterns, with a range of plank and tile sizes and textures, Altro Ensemble gives design freedom to create luxurious floors for commercial interior spaces. With 57 options to mix and match, the modular flooring system has natural wood and stone designs and bloc colours too. Vanessa adds: "Using Altro Ensemble flooring has really opened my eyes to what can be achieved with it, both in terms of the design possibilities, and also for durability and reliability."

01462 489 516 www.altro.co.uk

New collections from CTD Architectural



From hotel lobbies and restaurants to residential projects, encaustic and colourful tiles are being increasingly favoured by designers, specifiers and developers. New for 2019, CTD Architectural Tiles has introduced two new ranges to its extensive product portfolio – BeColors (pictured) and Meraki. Combining a multitude of colours, shapes, sizes and patterns, the new porcelain wall and

floor tiles are guaranteed to create statement features within any manner of commercial or residential space.

0800 021 4835 www.ctdarchitecturaltiles.co.uk

Scottish school redesigns floor with Gerflor



St Columba's is one of Scotland's highest achieving schools, which is consistently ranked within the top ten independent schools in Scotland. Extremely high standards were therefore a priority when carrying out the two flooring renovation projects. The refurbishments included installing

200 sqm of **Gerflor** Taraflex Multi-Use (6.2mm) in Wood Grey in the hall and 100 sqm of Mipolam Elegance Raspberry Grey in the corridors, with both areas completed on schedule. Both Taraflex Multi-Use and Mipolam Elegance's patented surface treatments also allow environmentally-friendly, low cost cleaning routines.

01926 622600 www.gerflor.co.uk

Polyflor is proud to be green



Commercial and residential vinyl flooring specialist **Polyflor**, has recently published its 14th annual Sustainability Report which outlines the UK manufacturer's environmental performance over the past year. The 114-page report gives a

detailed account of the sustainability milestones that Polyflor reached in 2018, delves into the company's green credentials and explains how Polyflor is fully committed to producing environmentally preferable flooring, with a focus on sustainability through the six-step life cycle process. The report also highlights Polyflor's involvement with charities and the local community.

0161 767 1111 www.polyflor.com/sustainability

Affinity255 Propels Bar into 1960s



Ark Interiors' objective to provide a nostalgic 1960s aircraft impression in keeping with the history and location at The Propeller Bar & Grill, Humberside Airport, was enhanced with the installation of **Polyflor's** Affinity255 in the shades Dappled Oak, Flamed Chestnut

and Seasoned Grey Oak. Affinity was the ideal choice for the project that combines nostalgic features with a contemporary finish. This beautifully engineered collection of high design luxury vinyl tiles is developed for heavy traffic environments and is an eclectic mix of authentically reproduced wood plank designs.

0161 767 1111 www.polyflor.com

Vicaima bring an added dimension to development

The village of Bramcote in Nottinghamshire, has been a popular place for home owners with discerning taste since Victorian times, so it's little wonder that is now attracting fresh interest for twenty first century living with the select Baxter Green development by William May. Envisioned by internationally recognised Leonard Design Architects and set in the former gardens of Grade II Listed St. Johns College, Baxter Green introduces



outstanding low-density luxury housing surrounded by tranquil countryside. Once complete Baxter Green will have 40 residential properties varying in sizes from apartments to five-bedroom houses, with ample sized living space and all fitted with Vicaima quality interior doors.

Long established and regional house builder William May Developments have used Vicaima's Dekordor 3D finished doors throughout, alternating within particular house types, between a textured grey face with horizontal decorative grooves and a rich Dark Cedar finish.

Dekordor 3D adds a new dimension to interior design, with highly attractive horizontal grained textured laminates in a range of on-trend and contemporary colour tones. This durable range can be further enhanced, with the addition of glass panel doors, face grooving or even metallic inlays, to create individual statements for apartments or traditional homes. All of the Dekordor 3D



collection come in a choice of cores and can be supplied with added performance including fire doors which are compliant with the most rigorous fire door regulations, acoustics and security doors where required as part of a complete door and door frame kit.

01793 532333 www.vicaima.com

Flowcrete puts on a flooring masterclass at the University of the West of Scotland



The University of the West of Scotland's (UWS) new £110 million Lanarkshire campus has installed floors from Flowcrete UK that convey the open, multifunctional and collaborative ethos of the site. The new Lanarkshire facility, based in the Hamilton International Technology Park, was designed to be at the cutting edge of sustainability while creating a vibrant and contemporary venue for learning, research and innovation. Resin flooring manufacturer, Flowcrete UK, provided the university with colourful, fit for purpose surfaces that reflected the site's energetic atmosphere. Over 1,000m² of the decorative, methyl methacrylate system Flowfast Terrosso was applied. This fast curing flooring solution was used in Signal Grey and Dark Grey to cover the majority of the public-facing areas, particularly in the expansive atrium. In addition, $350m^2$ of Flowfresh MF was also used in a number of bold colours, including Ochre, Dark Green and Dark Blue. This resulted in wide sections of flooring in complementary shades that perfectly suited the location and reflected the campus' interior design scheme.

01270 753 000 www.flowcrete.co.uk

Hammering home the need for sophisticated student accommodation



With the standard repetitive fixtures and fittings no longer ticking the box for student accommodation design, Maxwell Green Design Ltd enlisted the help of **Forbo Flooring Systems** to breathe a new lease of life into the communal areas of iQ Student Accommodation's new property in Hammersmith, London. The result is a contemporary and fun interior that will satisfy the sophisticated needs of today's students for a long time – so much so, that it went on to be awarded the Highly Commended status in the Fly Forbo 2018/19 competition. Lisa Green, Director of Maxwell Green Design Ltd, commented: "Within the main Atrium space, we specified Forbo's Tessera Layout and Outline carpet tiles in a plank format. With this choice, we were able to create a bold, monochrome striped design that would lead the eye naturally through the space and to the various study and break out areas." Lisa continued: "Within the screen room we required a softer aesthetic, so we decided to opt for a different floor covering. We chose Forbo's Flotex Concrete planks as the velvety texture provided a comfortable feel underfoot, while being durable enough to cope with food and drink spillages."

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

Beautiful new washrooms at Abacus HQ



Abacus Bathrooms has transformed the female bathrooms at the company's Harrogate HQ; showcasing a stunning portfolio of products. The wall hung WC complements bespoke White Marble Elements basins which feature the innovative Infinity Tray drain. The

elegant White Gloss Marble Trex3 tiles open up the space by reflecting the natural light. Features include the Trend 2 designer press panel and wall mounted taps – all in brushed bronze. Recessed storage units with LED lighting also offer extra space for luxurious items, such as diffusers, turning the bathroom into a deluxe space.

www.abacus-bathrooms.co.uk

New NOVA flatpack



British manufacturer, **Pland Stainless**, has created the new NOVA range of stainless steel lockable cabinets, designed to be available as an easy to build flatpack unit or, if preferred, they can be supplied in a factory built rigid format. The new Nova cabinet offers a reduction on

cost of around 40 per cent when compared to the Pland range of welded cabinets and when delivered in a flatpack format, is available in 48 hours from stock. Nova cabinets come in varying widths as standard including a single door cabinet 450mm and 600mm in width and a double doored cabinet 900mm and 1200mm in width.

0113 263 4184 www.plandstainless.co.uk

Bathroom pods for UK's first vineyard hotel



Offsite Solutions, a bathroom pod manufacturer, has provided high specification bathrooms for the first vineyard in the UK to open a dedicated hotel. Llanerch Vineyard Hotel is located in the Vale of Glamorgan near Cardiff and offers five-

star accommodation, providing a gateway to tourism in Wales. The hotel owners specified two pod designs from Offsite Solutions' extensive library of bathroom solutions. Commenting on the project, Ryan Davies, Director of Llanerch Vineyard Hotel, said: "Pods were recommended to us as being faster on site and good quality. We think the new bathrooms are just fantastic and exceptional quality."

info@offsitesolutions.com

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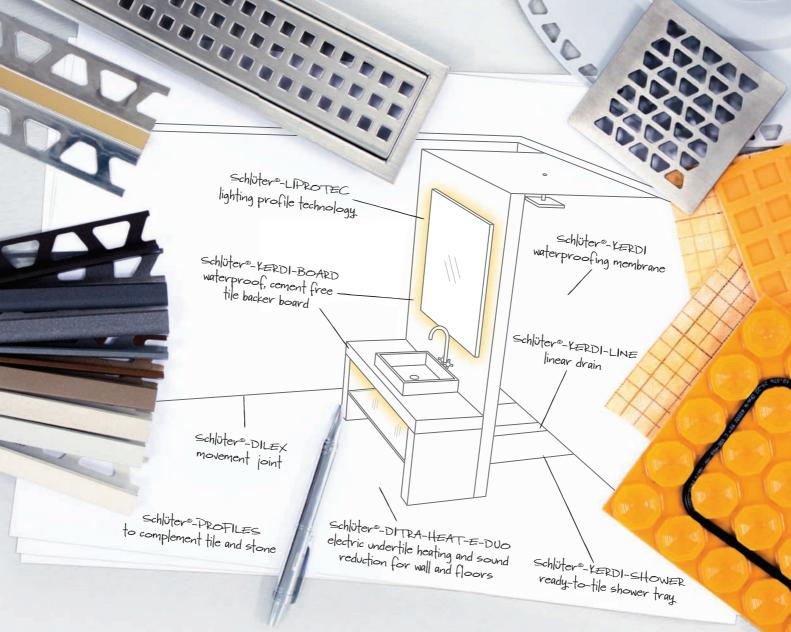
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Schlüter Solutions Help to Create Statement Surrey Wetroom

complete Schlüter-WETROOM system, along with a number of other Schlüter products, helped in the creation of a sophisticated wetroom at a luxury home in Esher, Surrey.

The owner was embarking upon a renovation and extension of his existing home. This included a refurbishment of the residence's 4.8m x 2.7m master en-suite.

Enlisting the services of Quell Bathrooms, the client set out the fundamentals of what he wanted – bath, shower and double basin with storage. He then gave free reign to Managing Director of Quell, Vincent Pope, to come up with a few ideas from which the final design was selected.

The resulting wetroom utilised a number of different products from Schlüter-Systems, in order to ensure a sound finish for the client's considerable investment.

AREA: Floor (drainage) and walls ACTION: Minimalist drainage and complete waterproofing underlay

Integrated linear drain wetroom kit, Schlüter-KERDI-LINE-WRKL, was used to provide guaranteed waterproofing and drainage for the bathroom.

This kit consists of a waterproofing and sealing kit, shower boards, drainage channel and support plus a tile support grate.

The waterproofing and sealing kit contains Schlüter-KERDI waterproofing membrane, plus Schlüter-KERDI-KEBA sealing band, Schlüter-KERDI-KERECK pre-formed corner pieces and Schlüter-KERDI-COLL sealing adhesive. The KERDI membrane from the kit was used to waterproof the back wall and around the shower wall. The rest of the room was done out with Schlüter-KERDI-BOARD waterproof backerboard in 10mm thickness. All joints and junctions were sealed with the aforementioned set of sealing products.

The 800mm linear drainage channel was installed in an intermediate location, sloped to from both sides using the Schlüter-KERDI-SHOWER-L and Schlüter-KERDI-SHOWER-LS pre-sloped shower boards. The drain is designed to be tiled to in-line with the rest of the floor – in this case with wood-effect tiles – resulting in a discreet solution.

"Since we started using Schlüter's wetroom kits three years' ago, we've had none of



the problems we would get previously", says Vincent, "We wouldn't deviate from them now as they offer a comprehensive and trustworthy solution to prepping a wetroom".

AREA: Floor ACTION: Providing heated surfaces across the room

The timber floors of the project had already been insulated, so Vincent installed the original Schlüter-DITRA-HEAT-E electric underfloor heating system. "It's great that you can use this system throughout the whole of a room, including the shower area", says Vincent, "Often this isn't an option with other systems".

Continues Vincent, "In refurbishment work, it's always a struggle to keep floor build-ups low – but with the Schlüter-DITRA-HEAT-E system, all build-up is contained within the height of the membrane so there are no unexpected surprises".

AREA: Walls (wood-effect tiling) ACTION: Providing appropriate edge finishing for external corners

Vincent used chrome-plated brass finishing profile, Schlüter-QUADEC-MC, to provide finishing against the wood-effect wall tiles. He also used the matching Schlüter-QUADEC-MC/EV corner pieces to finish the corners of the 1-metre-high shower wall. "Schlüter trims give a great finish for tile edges and neatly cover the edge of tile", comments Vincent, "Plus the corner pieces give a good looking finish that avoids sharp edges – important as we were finishing a low wall that could be a source of injury if finished with mitring".

AREA: Walls (white ceramic tiling) ACTION: Providing appropriate edge finishing for external corners

Schlüter-JOLLY-AC in a Matte Brilliant White (MBW) finish was used to finish edges in wall areas where 1000mm x 330mm ceramic tiles were installed, including around window reveals and product boxing. Three quarters of the edges of Quell's custom-built niches for the project were also edged with the MBW trims, with QUADEC-MC to the inside edge of each as part of a wood-effect feature shower wall.

Schlüter was able to provide many of the solutions needed for Quell to give their client a statement bathroom to be proud of. For more information on how Schlüter can help with your tile and stone projects call 01530 813396, email pr@schluter.co.uk or visit www.schluterspecifier.co.uk.

Operating across the whole of the South East of England, Quell offers luxury bathrooms designed and installed to the highest standard. Creating everything from extravagantly charming bathrooms through to stripped-back modern wetrooms, they take your spaces to the next level. For more information, visit www.quellbathrooms.com.

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Protect and survive

Sally Osmond of Frontier Pitts discusses the importance of impact testing for product solutions for defence against vehicle-borne attacks, and looks at relevant regulations

In the UK, and indeed the rest of the world, the current terrorism threat is constantly changing, meaning that vulnerable sites need to be constantly assessing the risk. One method of terrorist activity is vehicle-borne attacks, ranging from ram-raiding to suicide missions. Site owners and operators need to protect their assets, including property and people, from such attacks with the appropriate protective security, including vehicle security barriers (VSB).

The generic types of VSBs include: gates (bi-folding, hinged and sliding), arm barriers (rising and swing), bollards (rising, static, shallow and removable) and road blockers (surface mounted, shallow and deep).

There are a range of standards that relate to the impact testing of barriers, which help identify the most suitable VSB for each individual site. The standards specify test criteria, including type of vehicle and speed that the VSB is capable of stopping and immobilising. Those responsible for securing a site at risk of a vehicle attack, such as designers, planners, architects, security managers or facilities managers within the public and private sectors, need an understanding of these standards and where to get advice on the measures to put in place.

Such advice can be found by the manufacturers themselves, some manufactures can provide CPDs on helping architects identify what are the most suitable measures to put in place and how to compare all the different standards (and therefore the products) available in the market. These CPDs can also provide guidance on installation of VSB and the standards relating to the installation.

Risks posed by vehicle-borne improvised explosive devices

A car bomb, or truck bomb (VBIED), is an improvised explosive device placed in a vehicle then detonated. It is commonly used as a weapon of terrorism and normally kills the occupants of the vehicle (suicide



bombers), people near the blast site, and to damage buildings or other property. A vehicle bomb acts as its own delivery mechanism and can carry a relatively large amount of explosives without necessarily attracting suspicion.

Impact testing of vehicle security barriers

The Centre for the Protection of the National Infrastructure (CPNI) produces the Catalogue of Impact Tested Vehicle Security Barriers (CITVSB), containing the impact tested products it has tested through its research program – against the key standards. This is the key catalogue in the UK and any manager of a key critical national infrastructure site in the UK should contact CPNI for a copy or further information. The PSSA Hub is an additional key resource.

There are various specifications for the impact testing of VSBs. From the beginning of 2014, the UK government's "elite VSB testing programme" has impact tested products under International Workshop Assessment (IWA) 14. This replaced the British Standards Institution (BSi) Publicly Available Specification (PAS) 68, however products tested under this specification have been given 'grandfather rights' and remain There are a range of standards which help identify the most suitable vehicle security barrier (VSB) for each individual site, which specify test criteria, including type of vehicle and speed that the VSB is capable of stopping and immobilising





on the Catalogue of Impact Tested products. Although the above list of requirements can be daunting, we are available to discuss all details of any project in more detail and advise accordingly. We would also welcome the opportunity to provide a CPD to any architectural organisation.

International Workshop Agreements: IWA 14.1 & 14.2

The IWA14 specification is now the main standard in the UK that all manufacturers use to test their product developments.

IWA 14.1 and 14.2 are new international ISO International Workshop Agreements that combine and update elements from PAS 68, PAS 69, ASTM F 2656 and CWA 16221, as well as new content.

- IWA 14-1:2013 is the International Workshop Agreement which specifies the essential impact performance requirement for a VSB and a test method for rating its performance when subjected to a single impact by a test vehicle not driven by a human being.
- IWA 14-2:2013 provides guidance for the selection, installation and use of VSBs and describes the process of producing operational requirements (ORs). It also gives guidance on a design method for assessing the performance of a VSB.

Publicly Available Specification: BSi PAS 68

BSi PAS 68 is the latest Publicly Available Specification from the British Standards Institute (BSi) for vehicle security barriers. It has become the UK's standard and the security industry's benchmark for HVM (Hostile Vehicle Mitigation) equipment, and is the specification against which perimeter security equipment is tested as part of the ongoing research to prevent VBIED (Vehicle Born Improvised Explosive Device) attacks. BSi PAS 69 complements this specification by providing guidance on the installation of the tested product.

Who can help

When designing the landscape, key importance should be given to the asset of the site and potential threats. For instance, when designing a Public Realm or Crowded Place venue, the threat could be a vehicle as a weapon (VAWs). What speed could a potential hostile vehicle reach on the run up to the site? Could landscaping to avoid a clear run up to the asset help?

If the site, or neighbouring site, you are designing is at risk from VBIEDs, the National Counter Terrorism Security Office (NaCTSO) has published Security Advice that can help. Each police force across the UK has a number of Counter Terrorist Security Advisors (CTSAs) which are headed by the NaCTSO (The National Counter Terrorism Security Office). Additionally, the Centre for the Protection of the National Infrastructure can offer further advice.

Conclusion

The correct specification and control philosophy is the basis for a well design system that meets all the site-specific requirements. It is important to install a product that has been tested to the latest specifications and standards recognised by the Government for critical national infrastructure sites, and imperative that the product installed is the impact tested product.

Alongside the impact test specification will be an installation guidance specification, for instance IWA 14 impact tested products installation guidance is IWA14-2, and PAS 68 impact tested products installation guidance is PAS 69.

It is very important that a qualified and highly experienced installer, preferably the manufacturer of the product, should install and commission the product so that it meets the IWA14-2/PAS69 specifications. For all automatic equipment it is also imperative that the products are also maintained according to the manufacturers guidance and usage of the product.

Sally Osmond is brand & development manager at Frontier Pitts

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Promat SYSTEMGLAS® passes 30-year UK milestone



This year marks the 30th anniversary of the first UK installations of SYSTEMGLAS[®], the complete fire rated glazing system from **Promat UK**, and demand is stronger than ever. The 30-year milestone is proving to be an important factor behind the increasing interest in SYSTEMGLAS[®] from architects, specifiers, interior designers, clients and contractors who are seeking assured passive fire protection in their glazing, partitioning and building interiors. The market-leading system, which is supported by Promat UK's '360° Wheel of Assurance' encompassing full control and traceability through design, manufacture, installation and completion inspection, is suitable for a wide range of applications including offices, residential, retail spaces, public buildings and transport interchanges. Providing integrity and insulation (EI) protection from EI30 to EI120, SYSTEMGLAS[®] has now been used in a vast number of projects in the UK and Ireland since 1989. Ian Cowley, Regional Director (UK and Scandinavia) at Promat says: "With three decades behind it, SYSTEMGLAS[®] has proved itself in the market as a trusted solution for passive fire protection.

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Nationwide supply of high security bollards



Macs Automated Bollard Systems Ltd specialises in the nationwide supply of high security bollards and PAS68 vehicle restriction solutions. The company provides a range of PAS 68, IWA 14 bollards and

hostile vehicle mitigation (HVM) options, using crash rated and internationally accredited bollards that are specifically designed for use in highly sensitive and vulnerable areas at risk of hostile vehicle borne threats. The bollards are designed to withstand a higher usage and physical impact than standard systems, while still maintaining the same unobtrusive aesthetic to fit in with the local surroundings.

enquiries@macs-bollards.com

Rise in security planter interest



Governments, architects and urban planners are increasingly turning to trees to help improve air quality and address climate change in cities, but they are also being used to keep people safe too. Securiscape is reporting increased inquiries from

organisations hoping to use its designer PAS 68 street planters, designed to foil hostile vehicle-borne attacks, to grow trees. The self-watering technology behind modern planters means that providing the trees are of the correct variety then they can happily survive in urban locations, such as London, where Securiscape installed a row of PAS68 planters, finished with a bronze patina shroud, outside the Broadgate estate.

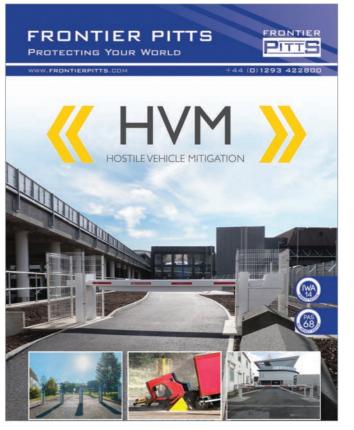
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Macs Automated Bollard Systems Ltd specialise in the nationwide supply of high security bollards and PAS68 vehicle restrictions solutions. With the requirement to secure town and city centre pedestrian areas, along with other sensitive areas, from extreme threats such as terrorism and aggressive criminal attack, a common measure used to minimise the opportunity for such threats is the implementation of high security infrastructure. We provide a range of PAS 68, IWA 14 bollards and hostlie vehicle mitigation (HVM) options, using crash rated and internationally accredited bollards that are specifically designed for use in highly sensitive and vulnerable areas at risk of hostile vehicle borne threats. The bollards are designed to withstand a higher usage and physical impact than standard systems, whills still maintaining the same unobtrusive aesthetic to fit in with the local surroundings.

For more information on any of our services, please visit **www.macs-bollards.com**, or to talk to one of our advisors call **0161 3206462**





Plaswood raised beds - for the sustainable gardener



The latest product range from **Plaswood** has been designed with the sustainable gardener in mind. Made in the UK from 100 per cent recycled plastic, Plaswood raised beds and planters provide year-round vegetable or flower space that require no maintenance painting or preserving, will not rot or splinter with age, and will outlast any timber alternative. A great choice for any garden, allotment, school or communal area, the flexibility of the new modular design offers custom made sizes to suit an individual's need or preference. The 1m long panels are available in colours black and brown. Plaswood raised beds will enhance any outside space, whatever the size. Due to the product's robust weather and waterproof credentials the raised beds will withstand the harshest of winters and can be enjoyed all year round. The Plaswood recycled plastic product range nurtures nature by diverting plastic waste from landfill, rivers and oceans. At a dedicated recycling and re-manufacturing site in Dumfries, plastic waste is remanufactured into second life products, such as raised beds, planters, outdoor furniture, decking and much more.

0333 202 6800 www.plaswoodgroup.com

Bridging the gap: the hidden strength of carbon reinforcements



The catastrophic failure of Genoa's Morandi bridge in August has only served to highlight how ageing bridge structures must have a maintenance regime that can ensure the safety of road users. In the UK, rail and road bridges are subjected to many types of loadings and other influences including corrosion which has to be properly managed to maintain safety. With nearly 100,000 road road and rail bridges across the country, what proven solutions are available to ensure this vital infrastructure is fit for the future? Testing is a vital part of bridge repair and protection specification. It can be carried out using various techniques including a basic visual survey, hammer testing, chloride analysis techniques, carbonation testing, concrete-to-reinforcement cover surveys and half-cell potential testing. These assessments will help play a part in Sika's preparation of any project-specific specification offering. Sika provides bridge owners and their maintenance managers with the right design and planning tools, followed by well-designed and proven refurbishment solutions and systems to considerably increase the time between necessary maintenance and repair cycles.

www.sika.co.uk

Sealer of choice for Town transformation



Resiblock has batted away the competition to become the sealer of choice for Waltham Cross, New Town Square. The project sees the transformation of the vehicular turning areas, south of the Eleanor Cross monument, into a high quality, family friendly town square. Through rigorous testing, Resiblock were able to show the superiority of Resiblock Ultra Matt in comparison to a number of alternatives, by providing

higher levels of both stain protection and sand stabilisation. Resiblock's previous success at Bedford Square in Tavistock and Havelock Square in Swindon, further showed that Resiblock was the best sealer of choice.

mail@resiblock.com

Lights on at West Kype Farm



When West Kype equestrian farm in Lanarkshire needed to replace its existing floodlights due to an overheating issue, **Megaman's** Ensio integrated LED floodlights were the ideal solution. The manufacturer provided an energy efficient fixture

with a lower heat output than the previous lighting solution and an asymmetric light distribution design which reduces shadows that can often spook horses. Designed as a true replacement for metal halide lamp floodlights, Ensio 180W LED Floodlights have helped West Kype Farm to overcome a major operational issue at its site and reclaim its position as the premiere equestrian centre in Scotland.

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SPORTFIX[®] components installed at redeveloped UCC Mardyke Athletics Track

Receive rain water has to be removed quickly and reliably from sports fields and competition areas. The SPORTFIX[®] drainage channels and other components offered by Hauraton comply with the latest standards and also meet IAAF requirements. It is essential sports facilities are designed and equipped to prevent serious injury to sports people if falls or accidents occur.



The University College Cork (UCC) has redeveloped their Mardyke Athletics Track in Cork City, Republic of Ireland. The new facility is part of a $\in 10$ million budget included a new synthetic eight lane, fully floodlit, running track built to the IAAF standard with an additional 3720 m² (40,000 ft²) added to the original arena. The arena now includes an indoor 60 metre running track, a performance analysis suite, two additional gym areas with over 140 additional pieces of the latest gym equipment and three additional fitness studios.

Hauraton SPORTFIX[®] drainage channels with aluminium finishing edges were installed around the perimeter of the IAAF, 400 metre track and along its straight. A steeple chase water jump kit was also installed plus Hauraton SPORTFIX[®] Sand traps and soft edging were installed around the long jump pit.

Tim Connolly, Managing Director of Hauraton Limited points out, "Our SPORT-



FIX[®] range offers products that not only meet the requirements of the IAAF for athletic tracks, there are drainage components for artificial turf playing fields, service channels and retractable shafts for cable management with drainage systems for grassed football fields".

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