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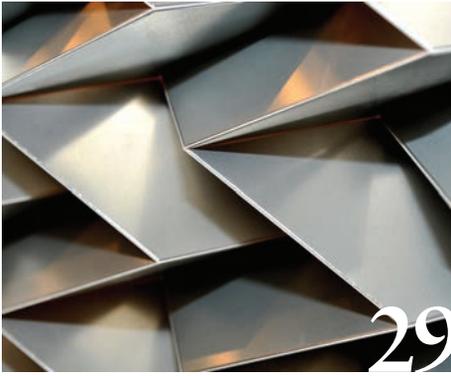
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FROM THE EDITOR



Hello and welcome to your first edition of ADF of 2018, we hope that the start of a new year finds you and your practice embracing the challenges of projects with some renewed vigour, and anticipation for prospects to come.

We are looking forward to bringing you a wide range of reports on interesting projects and thought-provoking features and opinion this year, and also to the two extra supplements we have added to our already packed list. These are Bricks, Stone and Ceramics in March, reflecting the increased interest in the architectural use of brick in particular, as well as variations of stone and ceramics, plus another supplement dedicated to a key area. Composites in Architecture – planned for the November issue, will include a focus on innovative composites for creating weird and wonderful structures.

With this increased focus on materials, we are happy to announce that the event for architects dedicated to looking in depth at materials innovation – Materials for Architecture – returns in its second instalment this April (25-26th, ILEC Centre, London). Organised by the publishers of ADF, netMAGmedia, this event will provide rare insights from designers and manufacturers into innovations ranging from responsive building skins, to the latest on phase-change materials, and even back to basics materials or architecture such as rammed earth.

While at home we are presenting positive examples of current success and endeavour in construction and design, in the wider context there's has been implicit criticism of architecture of the recent past. Taking us away from the worrying geopolitical machinations of Brexit and Trump (which sounds like a malevolent firm of solicitors from a Dickens novel), there has been something of a stark announcement from the AIA, that it will not be awarding its Twenty-Five Year Award in 2018.

The award has been made by the American architects' association for US and overseas projects that have "stood the test of time for 25-35 years and continue to set the standards of excellence for architectural design and significance." European projects such as Broadgate Exchange and the Grand Louvre Phase 1 have featured recently alongside past winners such as Mies van der Rohe and Frank Lloyd Wright.

However there was nothing among the submissions for this year's prize (including buildings from the mid-80s up until 1997) that merited such a title, according to the judging panel. This period is not generally acknowledged as a vintage era, but this is a stark confirmation, and also begs the question of how many buildings since that time will be placed above those, and rated as standard-setters.

James Parker Editor

**ON THE COVER...**

The multi-sport pavilion and classroom complex at Francisco de Vitoria University designed by "architect of light" Alberto Campo Baeza

© Javier Callejas

For the full report on this project, go to page 43

AWARD

Norway to build world's tallest timber building

Currently under construction on the edge of a lake in the small town of Brumunddal, an hour and a half's drive north of Oslo, Mjøstårnet is claimed to be the world's tallest timber building yet.

Spanning 18 floors, the building will reach 80 metres high, and include apartments, an indoor swimming pool, hotel, offices, restaurant and communal areas. Construction is scheduled to be completed in December 2018. Moelven, a Scandinavian industrial group, will supply the timber constructions from local spruce forests required to construct the tower and the swimming pool area.

"The assembly and construction of the Mjøstårnet is nothing short of world-class engineering, and will be managed without external scaffolding, despite the complexity of working at height," said investor behind the project Arthur Buchardt. "We are primarily using cranes and supplementing with lifts as needed. We have reached 33 metres to date, meaning we have 48 metres to go".

The building will sit on the edge of the north eastern tip of the lake in the small town of Brumunddal, a 90-minute drive to the north of Oslo.

On the question of climate consciousness, Buchardt cites a project group established by Norwegian road authorities which investigated the possibility of building the world's longest timber bridge across Lake Mjøsa. "Their studies show that building



with wood instead of concrete can reduce CO₂ emissions by up to 30 per cent," Buchardt said.

Buchardt also believes that the construction sector will evolve in a similar trajectory to that of the automotive industry, stating his belief that by 2032, "it will be illegal to produce and sell cars that run on fossil fuels." Similarly, he expects that by this time climate friendly materials will become an international,

statutory standard.

Buchardt hopes that his ambitions to build the world's tallest timber building will inspire others. Through the creation of Mjøstårnet, Buchardt intends to demonstrate that it is possible to construct large, complex wooden buildings. The planned construction of the Norwegian Government quarter "can become a wooden landmark internationally," says Buchardt.

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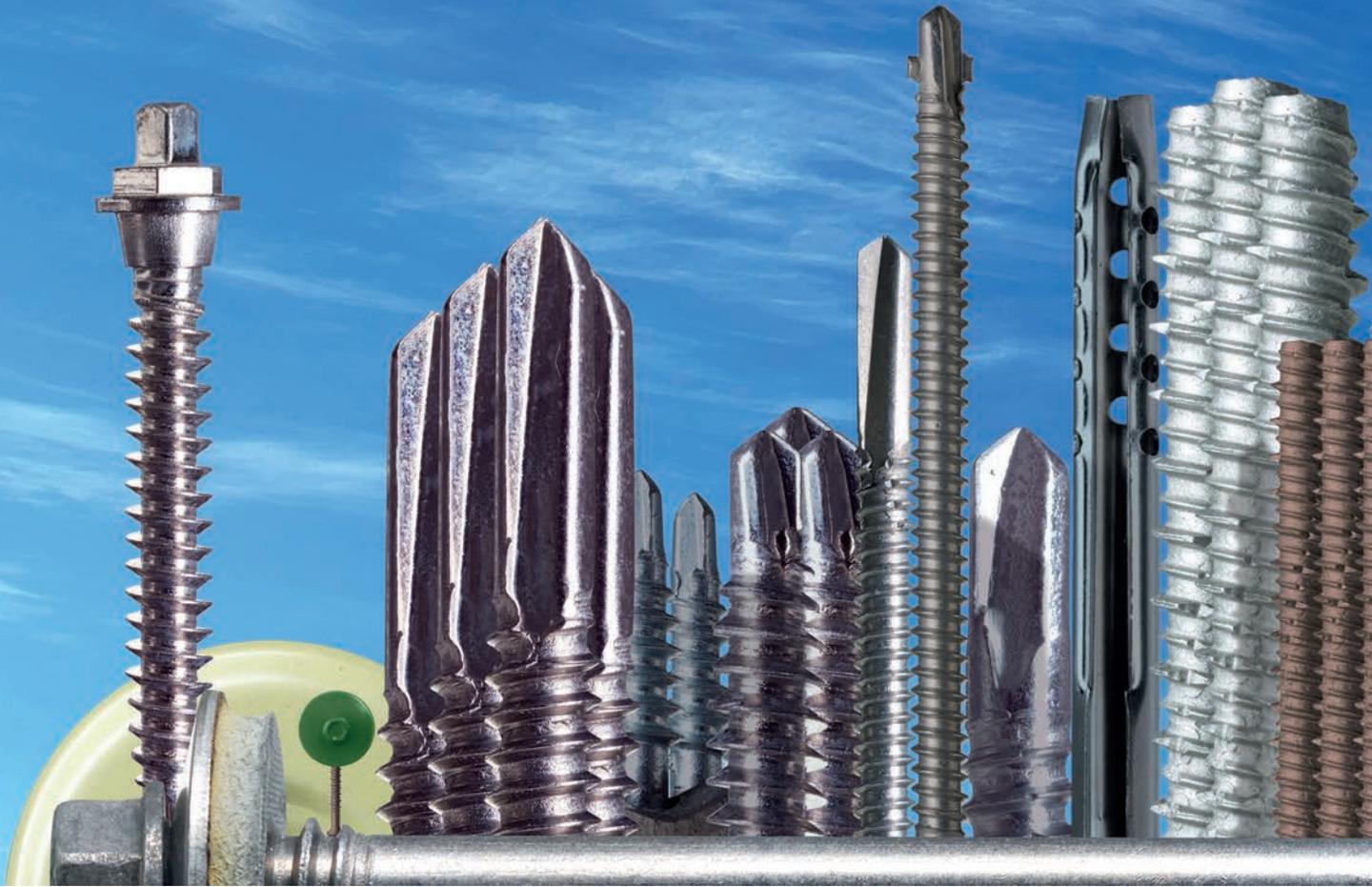
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EVENTS

SEMINARS

Building Britain's Ideal

16 January, London

www.architecture.com/whats-on

Europa 4: France+ Belgium

23 January, London

www.architecture.com/whats-on

WALKS/TOURS

RIBA friends architecture walking tour:

post-war City

27 January, London

www.architecture.com/whats-on

EXHIBITION

Ceramica

28 October - 10 February

www.architecture.com/whats-on/ceramica

RIBA Presidents Medals

10 November - 24 February

www.architecture.com/whats-on/presidents-medals-exhibition-2017-at-riba-north

TRADE SHOWS

Architect@work

24-25 January, London

www.architect-at-work.co.uk

Surface Design Show

06-08 February, London

www surfacedesignshow.com

KBB

04-07 March, London

www.kbb.co.uk

Ecobuild

06-08, London

www.ecobuild.co.uk

UK Concrete Show

21-22 March, Birmingham

www.concreteshow.co.uk

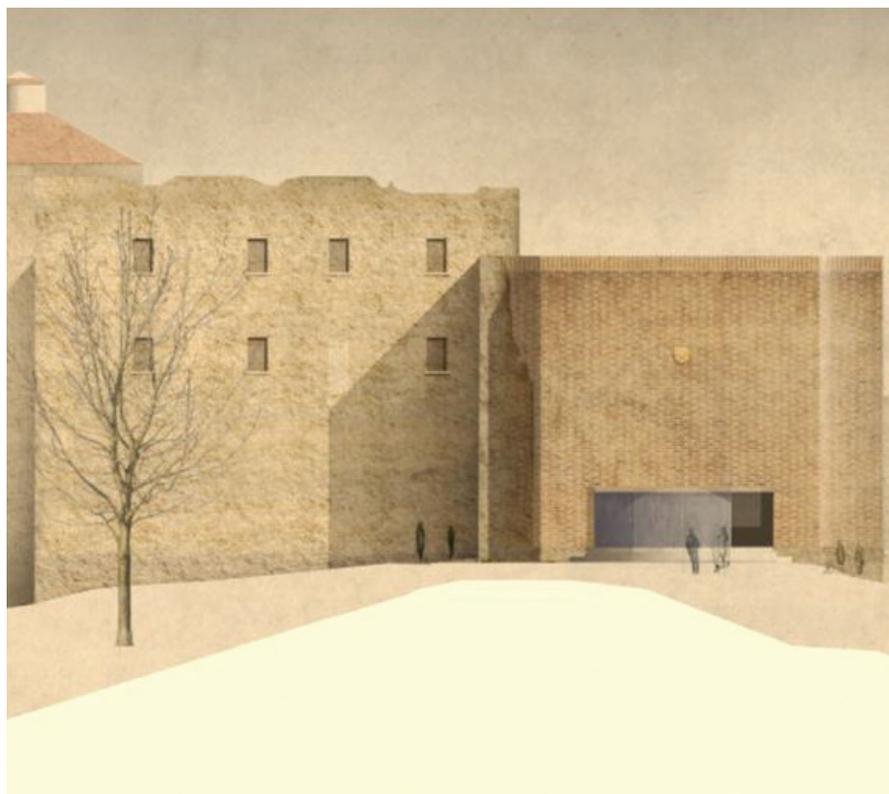
Materials for Architecture

25-26 April, London

www.materialsforarchitecture.com

AWARD

Regeneration of abandoned hill town wins Philip Webb Award



Marta Ascenso, a student at the Mackintosh School of Architecture, has been awarded first place in a design competition by the Society for the Protection of Ancient Buildings (SPAB).

Ascenso's scheme, which won the first prize of £1000, was said to "breathe new life" into the abandoned hill town of Craco in Basilicata, southern Italy, "re-animating it for both visitors and local people".

The SPAB's Philip Webb Award aims to encourage and celebrate new design in the context of historic buildings. The judging panel, led by Oliver Wainwright, architecture critic at *The Guardian*, was impressed by entrants' "enthusiasm to engage with challenging buildings – from ancient monuments to twentieth century concrete constructions," and to see the potential in the "relatively humble, the architecturally modest and the utilitarian, whether military, industrial or commercial."

Ascenso said she was "very honoured" to have won the award. Explaining her

response to the competition brief, she remarked that her project "discusses the idea of ruins as a starting point to explore the town of Craco as an artefact of cultural and architectural identity." The ruin is, in her words, "evocative, stimulating thoughts of what was once there and what is to come."

She continued: "The site's potential lies in the careful articulation of two aspects – to understand what is still relevant from the past and to imagine what could be appropriate in the future." The scheme refrains from "trying to copy what's already there," neither does it "deny what the new has to offer", but it searches for an "in between, a deliberate ambiguity that comes from interpreting tradition."

The SPAB reported that they were delighted to receive a record number of entries from students and graduates representing 11 different schools of architecture across the country.



OFFICES

Planning granted for Make Architects' 27-storey tower in Islington

The London borough of Islington has unanimously voted to grant consent for a new commercial tower development marking the corner of Ropemaker Street and Finsbury Pavement.

The 27-storey scheme, designed by Make Architects for Old Park Lane Management with development manager CORE, reflects a changing culture in commercial offices which focuses on environments that “foster creativity, collaboration and connection among occupants.”

415,000 ft² of Grade A, BREEAM ‘Excellent’ office space will be created across 23 storeys, along with dedicated SME or affordable work space to fill a gap in the market created by the ongoing regeneration in the area, plus ground floor retail. The building steps up to 128 metres at its tallest point and will provide a ‘full stop’ to the cluster of towers that has developed around the Finsbury Pavement and Ropemaker areas.

The building features a series of ‘stepped slices’ that protrude forward and recess back, reducing the mass and defining the bays and the building’s silhouette. With the dimensions shifting both vertically and horizontally, a range of floor plates are created to accommodate different-sized organisations. The various building heights

have created space for five different roof terraces, and the office floorplates also have balconies. Over three-quarters of the office floors will have access to outdoor amenity space.

Frank Filskow, partner at Make, expressed excitement around the project which is “designed to foster a community of business and enhance the wellness of the occupants.”

The ground floor entrance level is “focused on wellbeing and engagement”: designed as a community space for the building’s occupants, the reception desk doubles as a bar, and there are a variety of meeting and work spaces, green walls, established planting, events spaces, cafes and a lecture area.

Tim Sketchley from Old Park Lane Management hailed Ropemaker as an opportunity to develop an office complex that “represents the future for commercial workspace” with its design bringing together “lean and clean” technologies with amenity spaces, “outstanding accessibility” and provision for the health and wellbeing of the people who will work in it. “It is great that the Borough of Islington has recognised what the building will add to the market in the area,” Sketchley remarked.

EVENT

Materials for Architecture returns with innovation at its core



Following on from its 2017 debut, Materials for Architecture will return to the ILEC Conference Centre, London from 25-26 April 2018. Once again the event will combine a conference programme, exhibition, CPD seminars, material galleries and evening reception. Innovation will be a clear theme across every part of the event.

With topics including responsive building skins, rammed earth construction, phase-change and unbreakable materials, the conference programme for 2018 is set to highlight some of the newest, most innovative themes within the built environment. Speakers will come from major architecture practices, engineering firms, academia and more.

The exhibition hall will include an Innovation Zone and highly interactive materials display area, while the evening reception will host a competition where participants will present their research into developing construction materials for the future. The competition will be judged by a panel of leading industry figures. The evening will also give entrants, judges and attendees the opportunity to network.

For more information, please visit www.materialsforarchitecture.com

To register free or subscribe to the Materials for Architecture newsletter to receive industry and event news: www.materialsforarchitecture.com/newsletter

EXPANSION

PLP Architecture opens Japan office

London-based PLP Architecture has opened its second overseas office with a studio in Japan, located in the Shibuya area of Tokyo.

PLP Architecture has been praised for its “sustainable, smart and well-being centred design”, working with leading developers in countries like China, Australia, and Russia, as well as across Europe and the Middle East. Completed projects include The Edge in Amsterdam, quoted “the smartest building in the world” by Bloomberg and Sky Central in London which won “2017 The Best of the Best award” from BCO (British Council for Offices) for the most advanced exemplary workplace.

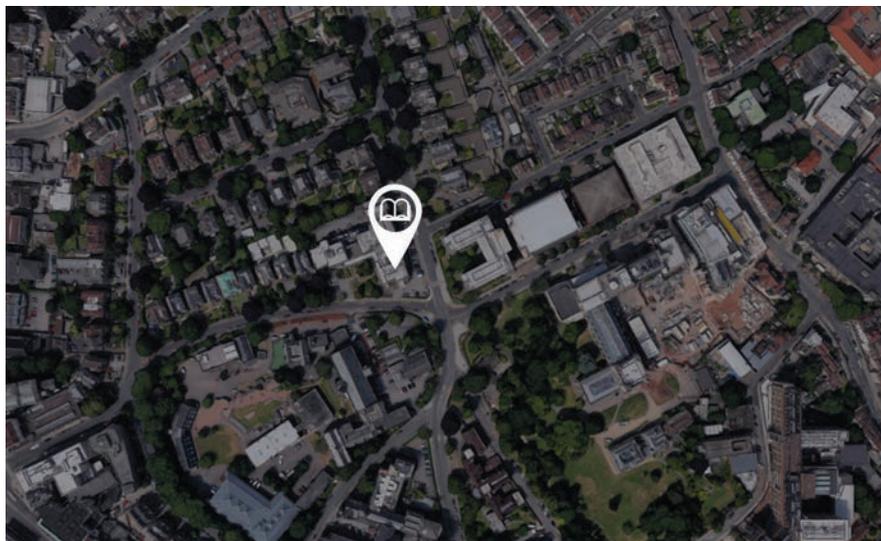
Lee Polisano, president of PLP welcomed the step into new territory, attributing PLP’s choice of location to “the strong local economy and a growing interest in innovative buildings with sustainable, smart, human-centred design ideas.”

“Our expansion is a key step in allowing us to bring to bear our expertise on a wider range of projects.” Polisano noted, “Tokyo is a commercial and cultural hub and we believe establishing our local presence will allow PLP to build a strong foundation in Asia.”

PLP Tokyo office is led by Raita Nakajima, who has worked with PLP for more than 10 years and has wealth of experience in high profile international projects in UK, Europe, Middle East, Japan and South East Asia. Together in close collaboration with London based Japanese director Midori Ainoura and PLP president Lee Polisano, the PLP international team looks forward to serving local as well as global clients interested in opportunities in Japan and South East Asia.

COLLABORATIVE DESIGN

Schmidt Hammer Lassen Architects & Hawkins\Brown for Bristol university library



A new £80m library development is to be built at the heart of the University of Bristol’s Clifton Campus.

The University of Bristol has appointed a collaborative team formed by British architecture studio Hawkins\Brown and the Danish practice Schmidt Hammer Lassen Architects to design the project for the university’s “revitalisation” of its Clifton Campus. Engineering firm BuroHappold is the third member of the team.

The international competition called for architect-led teams to design a contemporary library, while acknowledging the conservation setting and abiding by the university’s high standard of sustainability.

The team will now begin work to develop a detailed design which will involve consultation with future users of the library and the public as well as a broad range of stakeholders in the landmark project.

Adam Cossey, partner at Hawkins\Brown, noted the potential for the library to have a “catalytic effect on the university’s wider plan to revitalise the Clifton Campus,” intending that the library

provide a “space for knowledge and social exchange between the university community and the wider public.”

“Libraries make a difference in people’s lives”, said Morten Schmidt, founding partner of Schmidt Hammer Lassen, adding “this building will be a beacon of knowledge and it will play a vital part in the life and experience of the University of Bristol and the city of Bristol itself.

Schmidt continued: “It will be a sustainable, contemporary, welcoming, and fun place to be – while remaining in harmony with the rich traditions and history of its surroundings.”

The project intends the new library to help form a gateway to the Clifton Campus, which the university has wider plans to remodel over the next five years to create a welcoming ‘heart’ to the university — for students, staff and members of the public alike.

Professor Hugh Brady, vice-chancellor and president of the University of Bristol, said that the new library would form an “integral part of the academic experience” for students and staff.

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BRIDGING THE GAP

Link for copper towers opens in New York

A skybridge linking two copper-clad towers on New York City's East River has been opened to the public.

The tower duo, simply titled American Copper Buildings, are part of a series of projects resulting from collaboration between SHoP Architects and JDS Development Group.

According to the developers, the announcement marks the first construction of a major skybridge in Manhattan for over 80 years.

A total of 4.25 million pounds of raw copper was used on the buildings' facades, to provide a "warm exterior aesthetic", which will patina over time to mimic the Statue of Liberty's turquoise blue.

The angular form of the towers, standing at 41 and 48 storeys high, has been described as "unconventional" by commentators.

Aside from serving as a juncture between the two buildings, the 100 ft long, three-storey linking bridge includes more than 60,000 ft² of amenities, including a 75 ft long pool on the 28th floor and a resident's bar and lounge on the 29th floor, all suspended 300 feet underground.

SHoP Architects principal Gregg Pasquarelli described the bridge as "the logical solution to create a community between the two buildings", claiming that it



"celebrates the project's location between the river and the skyline."

Residences take advantage of high

ceilings and floor to ceiling windows framing the city skyline and neighbouring East River.

BEST BUILDINGS

RIBA International long list announced

The Royal Institute of British Architects (RIBA) has announced the RIBA International List 2018, a new biennial selection of the world's best new buildings.

The list of projects has been selected from entries to what's claimed as the "world's most prestigious award for architecture", the 2018 RIBA International Prize, the winner of which will be announced in December 2018.

From a chapel wrapped within a forest canopy (Sayama Forest Chapel, Japan) to the renovation of a grain factory into a

new contemporary art museum (Zeitz MOCAA, Africa), from a UNESCO World Heritage Site (Wadden Sea Centre, Denmark, featured in *ADF*, May 2017) to a post-earthquake reconstruction project (Guangming Village, China), the RIBA International List 2018 features 62 buildings from more than 28 countries.

Speaking about the RIBA International List 2018, RIBA president, Ben Derbyshire said that the RIBA International List 2018 "shines a light on the world's best new buildings and most impressive architectural talent."

"Most importantly," Derbyshire continued, "this significant selection of 62 projects illustrates the meaningful impact and transformative quality that well-designed buildings can have on communities, wherever they are in the world."

The Grand Jury, consisting of Joshua Bolchover, co-founding director of Rural Urban Framework and Wayne McGregor CBE, choreographer and lay juror, and led by world-renowned architect, Elizabeth Diller, Diller Scofidio + Renfro, will select the winner.

ASK THE ARCHITECT

Joyce Chan is head of sustainability at HOK's London studio. A champion of innovative sustainable design, she has applied her 12 years plus experience to a range of UK and international projects. She tells ADF why sustainability needs to remain a top priority

WHY DID YOU ORIGINALLY DECIDE TO ENTER THE PROFESSION?

I took a slightly unusual path into architecture. My first degree focused primarily on environmental and sustainable design, and this provided me with a different perspective and training for when I subsequently shifted over to architecture. I was driven to become an architect because I wanted to be the person who draws and manages the projects, and who ensures that the green objectives are followed through.

WHAT DO YOU LIKE ABOUT YOUR JOB THE MOST?

The sheer variety of my role is very appealing. The opportunity to work as project architect on a range of hugely different projects, from a townhouse renovation to a west end office, is something that has attracted me to my current role. I enjoy the variety each day brings, whether speaking at a conference on smart cities or WELL, or heading up R&D into a fascinating sustainability and innovation topic such as community isolation and how we can create spaces that actively engage communities. I also travel a lot with my role, and really enjoy visiting different cities.

WHAT IS THE HARDEST PART OF YOUR JOB?

There are some fantastic new ideas out here, such as building technologies that open up possibilities to use greenery to design a facade that will also provide a carbon absorption role. However, the challenge is always to champion the 'outside the box' thinking against practicalities such as cost, and trying to find a balance. It is however always very rewarding to work with clients that are committed to making a difference in terms of sustainability. I'd also add that finding a work and life balance is also an ongoing challenge, thanks to my two demanding boys who never sleep!

WHAT DO YOU SAY TO CLIENTS WHEN THEY ASK FOR A CLEAR DEFINITION OF SUSTAINABILITY?

I think it is always important to pose the question back to the client, to find out what they mean when they reference sustainability. Do they have a clear commitment to carbon reduction, or are they looking to reduce energy bills? We're always passionate that commitments to sustainability should eventually lead to other great initiatives, such as wellbeing and health benefits.

IS THE TERM SUSTAINABILITY OVERUSED AND MISUNDERSTOOD?

It's not overused, and in fact given its importance I don't think we shout it loud enough! However, it can certainly be



I wanted to be the person who ensures that a project's green objectives are followed through

Joyce Chan, head of sustainability at HOK's London studio

misunderstood. Sustainability isn't simply about introducing more trees or photovoltaics into a development; it is an evidence-based approach that uses the power of environmental design to inform analysis. It can also have many meanings. It's not something that is solely measured by carbon.

WHAT IS YOUR PROUDEST ACHIEVEMENT AND WHY?

I think, for any architect, nothing can beat the delivery of a completed project that you've designed. I've worked on the delivery of many exciting and challenging projects during my career, including on the very first BREEAM airport terminal and on



HOK's office retrofit project at Park Street, Mayfair, London



Park Street's interior – bottom image: aerial view (All images © Chris Ansell @DiffusedLight Photography)

the world's largest corporate research campus. Most recently at HOK, I worked on a smart retrofit at Park Street in London, and enjoyed the challenge of working on an existing, historic building. The office concept was to retain the original townhouse characteristic, but to introduce a playful and chic dimension for the Mayfair professional. The project includes smart technology, which helps the FM team to keep energy demand low. In addition, as part of our wellness strategies to introduce health and fitness considerations into design, we've introduced a roof-light to help maximise natural daylight and make the space even more inviting.

WHAT'S YOUR BIGGEST CHALLENGE CURRENTLY IN DELIVERING SUSTAINABILITY?

It's not enough to just design a good, sustainable building. Subsequently proving its effectiveness in the ways it is used through post occupancy engagement and evaluation is vital, but unfortunately this isn't something that is always requested. The architect is often less involved at the later stages of construction, yet an analysis of energy data and an appraisal of lessons learned post occupancy is so important for designing future projects.



HOW DO YOU MANAGE YOUR WORK/LIFE BALANCE, DOES IT TIP IN THE DIRECTION OF WORK TOO OFTEN?

I'm the mother of two boys, ages four and one, and I'm also currently progressing a Ph.D. programme with the University of Loughborough, while simultaneously working as the sustainable design leader at HOK in London. I'm used to multi-tasking, I thrive on adrenaline, and I find that learning new things every day motivates me enormously. The directors of the studio are very accommodating, allowing me to split my time between work and academic research. I have a very busy schedule at home and the office, and I wouldn't have it any other way!

WHAT DO YOU THINK IS THE MOST IMPORTANT INNOVATION IN SUSTAINABILITY IN RECENT YEARS?

Without doubt, it's data, and our ability to collect and apply it, including to building design and smart cities. It's essential to post occupancy evaluation, with sensors and smart meters helping us to understand and better control building and energy use, and also sometimes helping change human behaviour in relation to the environment, particularly with smart meters. Increasingly, smart technologies are making us more efficient and resilient.

WHAT SINGLE CHANGE/INNOVATION WOULD MAKE YOUR JOB EASIER?

I think there should be more incentivisation from Government for post occupancy evaluations to be undertaken, so that CRC commitments to carbon reduction can be more clearly and regularly demonstrated, and that a broader range of data and metrics can be learned from.

WHAT'S YOUR CURRENT FAVOURITE MATERIAL FOR DESIGN?

It's not so much a material as a construction process. I think that the important role of modular construction, and how we can prefabricate a kit of parts to create much needed affordable housing using plug and play components, cannot be underestimated. BIM would ensure that the quality was controlled, and the materials used would of course be the most sustainable and appropriate to the design.

DO YOU BELIEVE THERE SHOULD BE A SINGLE SUSTAINABILITY MEASUREMENT SYSTEM FOR THE INDUSTRY?

The growing number of green rating systems can be confusing, and it often takes weeks to determine which system should be adopted on a project. However, I don't believe that a one-size-fit-all approach would work. I think we need to create alignment and identify overlaps between the different competing systems such as BREEAM, WELL and Fit-WELL. It's good to be moving towards an increasingly evidence based approach.

DOES TOO MUCH EFFORT GO INTO INITIAL ESTIMATES OF A PROJECT'S SUSTAINABILITY, AND NOT ENOUGH TO ASSESSMENT IN USE?

This is definitely the case. There is a performance gap between predictive energy models and the multiple variables associated with human behaviour and typical building use once occupied. Post occupancy analysis is essential.

WHERE DO YOU SEE THE NEXT BIG CHANGE COMING IN SUSTAINABILITY FOR ARCHITECTS?

It's measuring the non-measurable. For example, in designing buildings we need to look at whether occupant happiness or wellbeing can be a building metric. My Ph.D. focus is also on wellness and building informational modelling, factoring people into the BIM model equation using artificial learning and intelligence. It's a hugely exciting area for development, in both guiding good design and in important post occupancy metrics.

WHAT ARE YOUR GOALS FOR 2018?

Managing the triple challenge of full time work, research and parenthood through the year! I'm also enthusiastic and committed to seeing net-zero projects under construction in 2018. ■



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Incubating a zero carbon idea

An ambitious technology-driven project is underway which sees architects collaborating with the materials sector to find a 'transparent' answer to the housing supply dilemma. Sébastien Reed reports

The Carbon-Free Group (CFG) was founded in 2007 as a critical response to inefficiencies in current processes of innovation in the design of housing. Anthony Morgan, the group's co-founder, explains the challenge posed to innovation in the industry: "One of the problems with any innovation is that it has to take place in a very siloed environment." A key issue is that due to how intellectual property works, innovators don't have the ability to go out and look for applications, or bolt on other technologies to improve an idea.

According to modular panels manufacturer and CFG partner, Tufeco, the construction industry presents particular problems which the firm hopes the CFG can overcome in attempting to innovate a new approach: "The industry often tackles build problems and mandatory improvements by adding layers to existing systems, rather than looking for a whole, encompassing solution."

CFG has been set up to research and develop a more holistic approach to modular housing. It has created a framework whose purpose is to incubate individuals who are developing new ideas, while maintaining a collaborative approach to innovation.

One of the fruits of this is Atelio, a housing concept developed collaboratively by architects Grimshaw, SAM Architects and Tufeco, who have devised a profoundly thought-through vehicle that harnesses a range of technologies to produce a model of future-proof and zero-carbon modular housing.

Materials

At the heart of Atelio is Tufeco's panellised system, made of a reconstituted glass composite and boasting impressive properties. Originally developed for hurricane-proof housing, it is watertight, almost 100 per cent hermetic, and extremely thermally resistant, as Morgan explains: "the most closely akin technology is the re-entry shield of a space shuttle. Outside temperatures can be 16-18 hundred degrees, it's 21 degrees inside, and there's just 55 mm of material in between." Unlike traditional insulating materials, the ceramic GRP technology used to encapsulate the panel works to reflect and expel heat rather than slow its transfer.

The 1.2 metre wide panels are manufactured on a fully-automated linear production line from a glass 'porridge mix', which is sandwiched between layers of GRP before being kiln-fired. The



The Atelio vision empowers a new way of community living, and our design methodology reflects a fresh approach to earth-friendly living

Paolo Vimercati, associate principal, Grimshaw

resulting sheets are then cut to specification within as little as three hours, delivered, and assembled on-site. "From point of order to watertight building, it's effectively two weeks," says Morgan.

Unlike volumetric concepts, Atelio arrives on site flat-packed, avoiding the cost of 'shipping air' from A to B. Construction can be undertaken by just three people, the highest-skilled being a spider crane operator. Two "kickers" place the panels by hand, allowing for a construction time of as little as 48 hours for a three bedroom home.

Architects

Grimshaw added considerable value to the project by applying the practice's BIM expertise, as Paolo Vimercati, Grimshaw associate principal explains: "We are developing BIM elements to enable a clear design-to-production process. This is a parallel work stream we are investigating as research and development in collaboration with Tufeco and the rest of the team."

The architects have also identified a number of typological needs for potential clients and developed housing models as base design templates. In masterplanning test sites, it has placed strong focus on social and environmental considerations. Vimercati explains: "The Atelio vision empowers a new way of community living, and our methodology reflects a fresh approach to earth-friendly living. We have developed a landscape-driven planning concept that encourages a community spirit through engagement with the environment."

Melanie Schubert, partner at SAM Architects, who have designed smaller residential buildings within the project, outlines its design concept: "The houses and apartments focus on natural daylight



At the heart of Atelio is a panellised system made of a reconstituted glass composite material

with large floor to ceiling windows, rooms with dual aspect focused on a connection to nature.”

The first Atelio typologies resulted in small apartment buildings (consisting of twelve one and two bed units) and four independent houses (two bed over one level, two bed over three levels, three bed over two levels, four bed over two levels). Following those, the architects have been developing semi detached and terraced typologies to ensure a wider offering into the market and engage with issues of density in peri-urban sites.

Communal energy

Atelio’s pro-collective ethos is stressed by all parties involved, with Morgan describing CFG as a ‘community-first’ organisation. The buying experience is client-driven, and he draws parallels with buying a new car: “If you want to buy a car, you go and choose your model, in red, with leather upholstery, effectively that’s what we’re going here.”

Housing typologies can be expanded and retracted to give way for extra interior space, balconies, terraces, or more outdoor space. Windows and doors can be placed at the discretion of the end-user, with Grimshaw’s BIM model checking for any potential design clashes. Local planning restrictions are also built into the model, saving legal hassle and further minimising build times.

Accounting for the constraints placed by the British climate on year-round energy generation, smaller buildings can make use of photovoltaics and battery storage to meet their energy demands. Larger buildings, on the other hand, can make use of inter-seasonal thermal storage. Energy is taken from the photovoltaics and pumped into the ground during the summer months, ‘charging the ground with thermal energy’, which is ready to be recovered with a heat pump in the winter months.

In the spirit of zero-carbon, Morgan also sheds light on possible mechanisms of community energy management. CFG are working on the development of a peer-to-peer energy trading

platform allowing people with excess energy to sell that energy directly to their next-door neighbour and vice-versa. Addressing recent Government policy initiatives, Morgan says: “It’s all very well the Government saying we need another two million houses but actually, these are predominantly going to be electrically driven, what’s the impact on the national grid? This addresses those issues.”

When questioned on the longevity of the technology, given fast moving developments in energy management, Morgan responds: “We’re thinking about that too.” Atelio features a central utilities core – an ‘energy cabinet’ – designed to be swapped out as and when any technology becomes obsolete. Being made primarily of glass, the panels are fully recyclable, helping contribute to the circular economy.

Beyond the performance gap

“Typically in the UK, the amount of energy required to run a house post-occupancy is 10 times greater than the original design of the building,” Morgan notes, “building out of materials where they are layered up, there’s an inherent issue in the way that the materials go together.”

The collaboration is also concerned with addressing the performance gap, which is particularly troublesome for the end-users of large house building projects. Atelio combats this by fundamentally compressing the supply chain, as Morgan explains: “It’s a one-stop shop which strips out a lot of the cost.”

He continues: “Traditional D&B contracts are often contractor-led. The primary contractor inevitably has the overall say in the design process. They water down the sustainability credentials of that development and when you actually get to developing and delivering on-site, subcontractors that are taken on don’t necessarily understand what the intention of the original design feature was, and mistakes are made.” By contrast, the Atelio approach is centralised, facilitating full stakeholder engagement, with all parties aligned from day one of the project to create what’s claimed as the “first zero-carbon modular building”.

Accessibility

Despite its nascent nature, Atelio will be available to order in 2018 following construction trials. Despite it being designed to offer zero carbon, the group behind the project claim the delivered cost will be around £136/ft², in line with a traditional brick and block building – and that cost is expected to decrease. “We’re actually at the most expensive now,” says Morgan. “In order to get the economies of scale in the production line, we need to be delivering 2000 houses a year, at that point there’ll be significant supply chain cost reductions,” making Atelio more competitive than traditional housing.

Criticisms of the project have included questions around panels’ limited scope to facilitate architectural design, but Morgan says that Atelio is fully customisable. Curved panels are a possibility, and exterior finishing options are said to be ‘virtually endless’ for clients.

From a product R&D perspective, Atelio’s resulting proposal is certainly compelling – offering faster and more integrated construction methods resulting in ultra low-energy residences through a process anchored to the end user. And, with the collaboration between architect and manufacturer so central to the project, it consolidates an evolving role for architects. As Vimercati says, “The architectural profession is more and more open to this ‘agency’ approach, and we feel it could gain a lot from it.” ■

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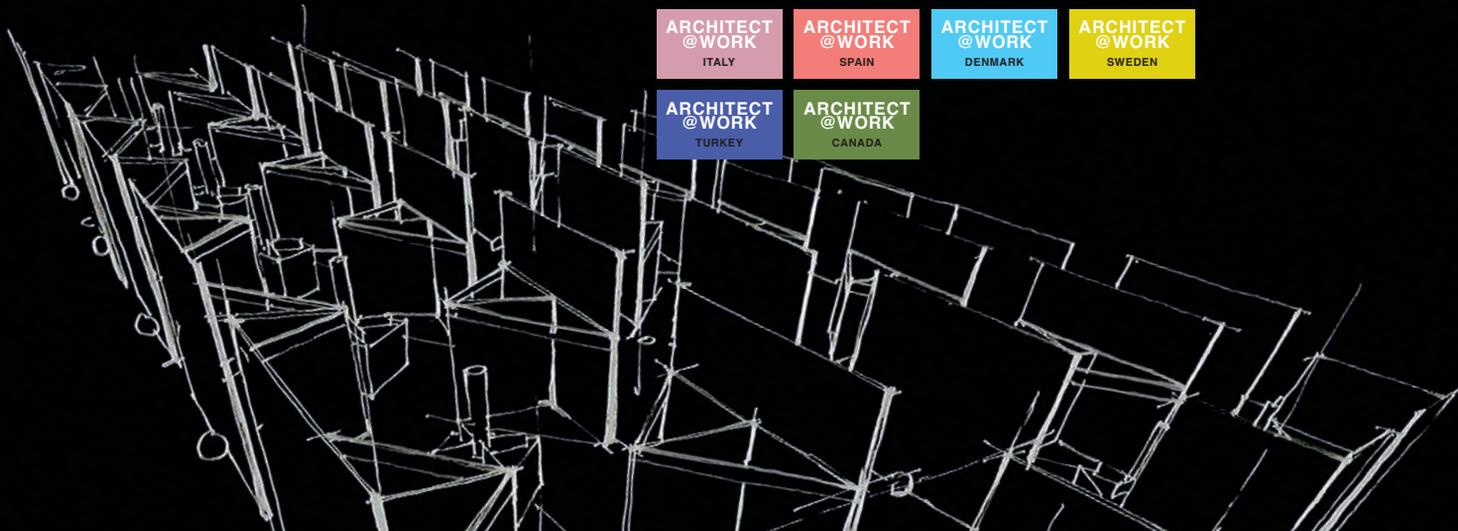
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NEW ARRIVALS

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



THREE SENIOR PROMOTIONS NULTY

Architectural lighting design consultancy Nulty have announced the promotion of senior members of the team within the practice. Emilio Hernandez has been promoted to director and Anna Clara Sandgren (right of pic) takes up the position of associate. They oversee a team of lighting designers and are currently heading up some exciting projects including Newnham College in Cambridge, Selfridges, a high-end residential property in London, Chelsea Barracks and VIVI restaurant at Centre Point. Evina Diamantara has also been promoted to senior designer within the practice. Company founder Paul Nulty commented, "We're exceptionally proud of promoting from within and that we have provided a platform for our staff to mature and grow. These promotions are well deserved and continue to highlight our intent to employ, nurture and develop the best talent within the industry."



TOBY NEILSON BDG ARCHITECTURE + DESIGN

BDG architecture + design have announced that Toby Neilson has been promoted to the position of director of architecture. Toby joined BDG in 2013 and led the design team through key design and delivery stages of the award winning refurbishment of the Sea Containers building on London's South Bank, for the relocation of Ogilvy & Mather and MEC. Prior to this, Neilson worked on a variety of residential, commercial, cultural and mixed use projects throughout the UK, Europe, Hong Kong and China. He started his career at Peter Barber Architects where he worked on a number of award winning urban design and social housing projects before branching out as a freelance consultant on projects as diverse as urban planning in Shenzhen, private houses in Hampstead, a school in Barcelona and a theatre in Hong Kong. Neilson is also leading the development of the architectural internship programme at BDG.

CHIN LIM HKS HOSPITALITY GROUP

HKS Hospitality Group have announced the appointment of Chin Lim as vice president. Previously of WATG, Chin brings his near-20 years' experience creating award-winning hotels and resorts around the globe to HKS where he is specialising in hospitality design. Chin's previous work includes Ritz-Carlton Tamuda Bay, Morocco; Hilton Albion Bay, Mauritius; Viceroy Quinta da Ombria, Portugal; Movenpick Abuja, Nigeria and Raffles Cargills, Sri Lanka. Lim commented: "My approach is to discover and pinpoint the unique cultural and design needs of each individual project I work on; in this way, we are able to create truly stunning places."



YULI CADNEY-TOH BDP

Yuli Cadney-Toh has joined BDP's Bristol studio as architect director. She joins BDP with over 25 years' experience in international architecture including high-rise commercial, aviation, healthcare, residential and broadcasting. She has spent over 10 years at Rogers Stirk Harbour + Partners and recently at Wood Bagot, as well as running her own practice Toh Shimazaki. Yuli said: "I am delighted to join BDP at this very exciting time for the practice. My architectural career has focused on design and ensuring projects are managed from inception to completion to safeguard design intent. I am looking forward to complementing the strong design leadership in BDP's growing Bristol studio."



NEIL USHER UNISPACE

Unispace have appointed Neil Usher as executive consultant based in its London studio, as part of an expansion of its client partnerships' team. With an industry-leading corporate real estate track record and award-winning tenure with Sky as workplace director, Neil has more than 25 years of industry experience to bring to the Unispace team. He spent nearly four years transforming Sky's approach to workplace, agile working, creative hubs and software engineering centres alongside other innovations. Usher explained: "Everyone deserves a fantastic workplace – it's been my passion for many years, during which I've been committed to simplifying our understanding of how we achieve it."

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HIMLARAND, SWEDEN TENGBOM ARCHITECTS

Tengbom has been commissioned to develop a parallel proposal for a scenic upgrade of the waterfront area of Helsingborg, in south west Sweden. With the Himlarand (English translation – ‘Skyline’) project, a private investor is planning for a new hotel and spa facility, but Tengbom’s proposal also includes a spectacular space for the public. Although the building may appear tall, the vertical block’s efficient arrangement leaves minimal footprint, both on the ground level, as well as in relation to sightlines of the buildings behind it. Natural materials such as wood, stone and glass are all an integral part of the concept and are used for the facade and the interiors alike. Himlarand is competing with two other projects by Swedish Elding Oscarson and Danish Lundgaard & Tranberg. Construction is preliminarily scheduled for 2019.

Ref: 8002



OMAN BOTANIC GARDEN, OMAN GRIMSHAW ARCHITECTS / ARUP

Arup, Grimshaw and Haley Sharpe Design (HSD), have collaboratively delivered the engineering, landscaping, architecture and interpretative designs for the Oman Botanic Garden. Covering over 420 hectares, it will be the largest of its kind within the Arabian Peninsula and, it is claimed, in the world. The site chosen for the project is one of only a few locations in the world where the ancient sea bed is still visible after tectonic activity elevated the bed to 100 metres above sea level. Arup and Grimshaw have worked with the existing natural ridges and ravines that traverse the site to design the buildings and walkways within the spectacular undulating landscape. Two of the more sensitive habitats are enclosed within separate biomes to mimic the natural temperature and humidity of the unique external environments. The buildings, along with the garden site, have been designed to achieve the globally recognised sustainable standard, LEED Platinum.

Ref: 6467



TEHRAN INTERNATIONAL AIRPORT TERMINAL 2, IRAN GMW MIMARLIK

Tehran International Airport Terminal 2, designed by GMW Mimarlik, has been selected by the American Architecture Prize 2017 Jury as a winner in the category of Architectural Design/Transportation. Once completed the proposed 175,000 m² terminal at Tehran International Airport will serve a total of 26,5 million international and domestic passengers. The simple and yet dynamic form of the proposed terminal clearly expresses the three main functions of an international terminal; the main processing space for the passengers, commercial areas and the airside lounges.

Ref: 2828



KUTAISI INTERNATIONAL AIRPORT, GEORGIA UNSTUDIO

UNStudio has been invited to design a large extension to Kutaisi International Airport, which has grown rapidly since its opening in 2012. UNStudio's goal for the large extension is primarily to maintain a user-oriented experience where the health and comfort of every single passenger is serviced through the correct application of architecture and spatial design. Facing the task of upgrading the capacity of the terminal it was decided to follow a unique and forward thinking approach that ensures the visual connection of the airport drop off areas of both departure and apron. With airport consultant IATA, five very clear and distinct functional islands were created: departure hall, security area, central passenger hall, back of house offices and arrival hall.

Ref: 1793



SASSETTI TOWER, ITALY L22 URBAN & BUILDING

The new Sasseti Tower designed by L22 Urban & Building is the hub of Milan's newly constructed Fintech district, an urban area aimed at developing innovative, technological finance. Built in 1990-1992 based on a structural design by the engineers Franco Morini and Emilio Pereira from the Morini Progetti associate engineering firm, the building – completely renovated by L22 Urban & Building – has a glass curtain facade featuring an overlapping pattern of slender horizontal and vertical elements designed to focus on both the layout of different levels and the facade's structural grid. The construction floats above an all-glass double-height entrance.

Ref: 4807



BORA RESIDENTIAL TOWER, MEXICO ZAHA HADID ARCHITECTS

With more than 50 floors, Bora will be the highest residential tower in Mexico City, and incorporates over 220 apartments of one, two and three bedrooms. Each floor houses a variety of unit sizes to create an integrated and diverse community of families, first-time homeowners, professionals and retirees. The arrangement and layout of the apartments maximises natural light, ensures privacy and offers panoramic, double-aspect views from all units that are also surrounded by balconies, providing residents with outdoor living areas.

The six apartment layouts surround a central core and are extruded vertically, with the tower's facade articulating the folds and pleats created from the juxtaposition of these six volumes. The tower tapers inwards at its base to increase the areas for leisure, recreation and entertainment, located beneath 'swirling' canopies that transfer the surrounding streetscape vertically, echoing the dynamism expressed throughout the facade. The tower's structure has also been designed for optimum flexibility and ductility, as well as an overall reduction in its weight, to best respond in seismic conditions, with the ten-storey canopies at its base providing additional lateral stability.

Ref: 3641

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020 685 9685
www.comar-alu.co.uk

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Kingspan Insulated Panels is running a RIBA Approved CPD programme on the Fire Performance of Insulated Panels and Rainscreen Façade Systems through a series of workshops and webinars. Aimed at a wide audience, from architects to contractors, the CPD focuses on the fire testing and real-life fire performance of external envelope systems, helping to develop an understanding of the various systems, the requirements they must meet and the proven behaviours of insulated panels in real fire scenarios.
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HECKMONDWIKE LAUNCHES NEW CPD SEMINAR



Heckmondwike, one of the UK's leading fibre bonded carpet and carpet tile manufacturers, has launched a new RIBA approved CPD seminar for specifiers, architects and installers. The CPD seminar, 'what to consider when specifying fibre bonded carpets', is included on RIBA's core curriculum under Design, Construction and Technology, with a General Awareness knowledge level. It will provide participants with the necessary information and essential regulatory requirements for correctly specifying and installing fibre bonded contract flooring.
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Urban Front offer a RIBA certified CPD: *Specifying Hardwood Timber doorsets* which has been updated for 2017 to include for changes in building regulations and to include the more complicated fitting of timber doorsets into frameless and architectural glass. The CPD aims to educate specifiers on all the aspects of fitting hardwood timber doorsets into various private and commercial dwellings. Urban Front also have RIBA certified blogs which you can find on the RIBA website and on Urban Front's website. To make a booking please call Urban Front. 01494 778787 www.urbanfront.co.uk

RENOLIT LAUNCHES NEW RIBA APPROVED SURFACE DESIGN CPD



RENOLIT has launched a new CPD seminar on the flexibility and uses of thermoformable PVC as a decorative surface which illustrates the benefits of PVC films over other decorative surface materials. The seminar provides architects with an understanding about PVC and its common uses within interior construction projects. It informs how to recognize different types of surfaces films, their applications and raises awareness of some specialist applications. 01670 718222 www.renolit.com/design

dormakaba unveils new website



dormakaba has launched its new website. Due to the merger in 2015, the website now provides a single source of information about the company's comprehensive range of smart access and security solutions as well as its industry leading service and support options.

The new website allows for quick and easy access to company information as well as a detailed overview of its products and services. Helping users to navigate, the site has been categorised into: door hardware; entrance systems; electronic access and data; mechanical key systems; lodging systems; safe locks and interior glass systems.

01462 477600 www.dormakaba.co.uk

Service Team growth for GEZE UK



GEZE UK has expanded its service division and created six supervisor positions to work across its regional offices and oversee continued quality and improvement alongside an increasing market share of the UK's

service industry. The field operations supervisors' key role will be to support engineers in the field – ensuring continuity of service and setting quality standards to further enhance the customer experience. Each field operations supervisor will be responsible for a number of engineers, spanning two or three offices.

01543 443000 www.geze.co.uk

AkzoNobel wins big at BCF Awards



AkzoNobel Decorative Paints UK has won both the Sustainable Innovation Award and Customer Service Award at the British Coatings Federation Awards 2017. AkzoNobel's Dulux Academy also received a Highly Commended Certificate

for demonstrating Excellence in Training. The British Coatings Federation (BCF) is the sole UK trade association that represents decorative, industrial and powder coatings, printing inks and wall covering manufacturers. AkzoNobel also received the Customer Service Award for Transformation of a Paints Business.

01254 687950 www.sikkens-wood-coatings.co.uk

Saracen creates 'space'



Saracen Interiors has been awarded a refurbishment contract by Oxford strategy consultancy, White Space following close collaboration with both landlord and client to refine designs, and agree schedules of work, acceptable to all. Work is due to be completed on the 5,000sq ft project at the beginning of December and will include the full refurbishment of first and second floor toilets, partitioning to create offices and meeting rooms;

the installation of new power, data and electric charging points for vehicles; and new flooring and new furniture.

www.saraceninteriors.com

BAL specification team expands with three new hires



BAL, have expanded their specification team with the appointment of three experienced specification sales managers. Joining BAL are Daryl Smallbone, Allan Garland, and Phil Cooper, who will work with architects, designers and contractors to deliver tiling specifications and projects in London, the South West and the Midlands respectively. Daryl has worked with major global leading manufacturers within the construction, off-site prefabrication and interior & design (A&D) markets with organisations such as Nexans, Formica and more recently, AKW, giving him more than 15 years' experience in specification and product sales. Allan has many years' experience in the flooring and tiling sector joining from Burmatex Ltd, promoting the company's portfolio of products through the A&D, interior designer, local authorities, end user, main contractors and flooring contractors platforms to deliver high end specifications. Phil Cooper has joined BAL in a consultancy role to work with architects and designers in the Midlands. Phil is an experienced specification professional with an extensive track record of successfully promoting technical solutions within the built environment.

01782 591100 www.bal-adhesives.com/specifiers

EverEdge edging and planters for roof gardens



2017 saw a huge increase in requests for steel edging and planters to be installed on roof gardens and on terraces. As new build tower blocks go up, mostly in London, potential customers have begun to demand more from their outdoor spaces. To this end, EverEdge have been designing and building planters and edging enabling builders to design in beautiful courtyards

and green roofs for residences and attractive, functional green spaces for office buildings. EverEdge can build planters to specification as well as consulting on the design to help offer the best product at the most cost effective price. Cor-Ten steel seems to be an incredibly popular choice at the moment as a material for these planters. As well as this, EverEdge can offer a

galvanised finish or powder coat the steel to most colours.

EverEdge are set up to be able to offer virtually any design, shape or size of planter to suit any and all projects. All EverEdge products are proudly designed and made in the UK to the very highest standards.

01453 731717 www.everedge.co.uk

Solar shading specialists supercharged with major machinery investment



Louvre and solar shading specialists Solinear are gearing up for growth with a major machinery investment. The company has purchased a SBZ 122 3-axis CNC from global machining experts elumatec. The SBZ is one of the most popular and respected aluminium profile machining lines in the world, internationally renowned for its efficiency, reliability and outstanding overall performance. The acquisition comes as York-based Solinear put plans in place for a major expansion over the next few years. Alongside acquiring the SBZ 122 itself, Solinear have also purchased eluCad, the market-leading machine programming software from elusoft, elumatec's software development arm. eluCad dramatically simplifies the programming of machining centres. Rather than requiring users to input complex code, the product can be operated by quickly and easily entering a few key pieces of data, and the machine will do its work. Alternatively, operators can input free-form drawings for the machine to follow – a function that's exceptionally useful for companies like Solinear, which produces unconventionally shaped products that are completely bespoke.

01347 879046 www.solinear.co.uk

Cistermiser-Keraflo appoints building products specialist to drive its marketing



Cistermiser-Keraflo, a leading intelligent washroom controls and water efficiency specialist, has appointed Mark Schlotel as Marketing Manager. Mark has 34 years' experience, directing strategic B2B and B2C communications for a range of businesses operating predominantly in building products and associated technologies. Having worked for UK industrial groups such as Norcros, Novar (now Honeywell) and IMI plc, Mark is adept at delivering successful launches for new products. Employing a mix of traditional and digital marketing techniques, he has devised and driven integrated campaigns for a well-known shower manufacturer, for differing window system companies and for a global beverage dispense and cooling equipment supplier. He has also overseen the market positioning of a major fire detection and alarm business, which led to an expansive multi-branded role marketing a highly diverse 'intelligent building systems' group. He said: "I just love getting to know technical products in detail, to fully understand their engineering advantages; I'm passionate about it. Then working out the best ways to gain as much visibility as possible across target market sectors".

0118 969 1611 www.cistermiser.co.uk

A sound solution from SE Controls for The Recording Rooms student accommodation

The Recording Rooms, one of Birmingham University's newest student accommodation blocks, is using an integrated smoke and heat exhaust ventilation system from SE Controls to provide smoke free escape routes for more than 250 students.

Located in the Selly Oak area of Birmingham near the university campus, the £12.5 million building was designed by Glancy Nicholls Architects and incorporates 267 bed spaces in five different room styles including cluster en-suite, studio apartments and even a penthouse, as well as a gym and communal lounge.

Within the Recording Rooms, which takes its name from the recording studio that was originally located on the site, there are three individual zones, ranging from three to seven storeys high, with each having a dedicated smoke control system linked to the building's master BMS and fire protection system.

The SE Controls system is designed to



protect the building's four stairwells and corridors on each floor, by keeping them free of smoke and enabling clear escape routes to be maintained in the event of a fire.

Two of the zones, which are three and four storeys high, each has an escape stair core protected by automatically operated side hung windows on each floor and automatic opening vents (AOV) at the head of the stairs. The systems in each zone are operated by SE

Controls OS2 SHEVTEC Controllers linked to the OSLoop Control System.

The seven-storey zone incorporates two escape stairs, which combine a mechanically ventilated smoke shaft with natural smoke ventilation, incorporating automatically operated smoke doors, and side hung windows, as well as AOVs at the head of stairs and tamper proof MCPs.

Michael Scrimshaw, Business Development Manager for SE Controls explained: "The design of the building meant that it was essential to provide effective smoke control in each of the different multi-storey zones. We have a significant amount of experience in code compliant and fire engineered solutions for student accommodation. By combining both mechanical and natural smoke ventilation, we were able to deliver a solution that fully utilises the advantages of both technologies to provide a safe environment for students."

01543 443060 www.secontrols.com

What impact are new Metro Mayors having on the construction sector?



In early May 2017 six city regions in the UK elected metro mayors, or 'combined authority mayors' to change the political structure in the UK, with some decision-making powers to be devolved to a regional level. Amongst the most high-profile people to be elected as a metro mayor was former Labour leader candidate Andy Burnham – for the Greater Manchester region. Leon Friend, who is Managing Director of prestigious aluminium window and door supplier Hueck believes that the rollout of American style mayors will have a long-term positive impact. The devolution bill, which allows the creation of these metro mayors, is also very flexible and could even facilitate the devolution of a variety of issues from the national government to local authorities in the future. This means that even more opportunities are likely to arise for aluminium suppliers, manufacturers and the construction sector as local authorities are given more and more power to invest their grants where they see fit. Hueck has already supplied its systems to many projects based in central London and Manchester this year.

01217 671344 www.hueck.com

Gatic launches new precision engineered access covers



Gatic Civil Drainage, a global leader in engineered surface water drainage, adds to its range of high performance access covers with the launch of LFA assist lift for rapid access, and Composite solid and vented covers with ThruBeam® technology. The LFA assist lift achieves a load rating of F900 and is designed for heavy duty environments with slow moving traffic, such as aircraft pavements, taxiways of civil airports and dockyards. They are manufactured from Ductile Iron, M-Struts® for a maintenance free alternative to conventional gas struts, and stainless steel grade 304. A key benefit of Gatic's new LFA covers is that they can be lifted and closed by a single operation for easy and quick access to underground services. Other technologically advanced benefits include automatically engaging anti-accidental closure mechanism, a slam latch, a locking feature that requires a single Allen key for opening and an integrated lifting handle. All these features allow for easy access, without comprising user safety or the security of the access cover. Gatic's Composite is a comprehensive system of single duct and multi-span access covers and frames suitable for a load category of up to B125.

01304 203545 www.gatic.com

Kingspan invests in new production lines



Kingspan Insulation Ltd, has announced it is investing €17 million in two state-of-the-art, low waste production lines at its facilities in Derbyshire and North Yorkshire, further enhancing its mechanical engineering insulation products. A further

€10 million investment is being made at Kingspan Insulation's facility near Selby with the introduction of a manufacturing line for Kingspan Styrozone insulation. The new facility will offer even greater choice to specifiers and installers, producing boards in a comprehensive range of lengths, thicknesses, densities and compression strengths.

01544 387 384 www.kingspaninsulation.co.uk

Lintec helps Signbox win



Signbox, won the Décor Award at the British Sign Awards 2017 in November for its signs and graphics project for the London office of Alpha Bank. Playing a key role in the award-winning project was Lintec's UV printable architectural film, which was utilised for iconic

manifestations that appear on the office glazed partitions. Signbox printed 100 square metres of Lintec's UV printable film on an in-house Durst P10-160 press to form glazing manifestations that were applied to backlit glass pods on both sides of the reception desk, as well as throughout the client meeting rooms and general office areas.

01784 438688 www.signbox.co.uk

Hi-spec and Economaire heaters



Johnson and Starley launched its highly successful range of WarmCair condensing warm air heaters, along with its market leading QuanTec range of boilers that can be connected to its warm air heater emitter range the Aquair. These units are highly efficient and will meet all future eco-design regulation requirements. The Aquair takes water from the boiler, and passes it through a heat exchanger which has a fan blowing across it. The Cleanflow

electronic air filtration system, which can remove airborne particles down to one micron from the atmosphere, including cigarette smoke.

01604 762881 www.johnsonandstarley.co.uk

RABScreen showcases new fitting system

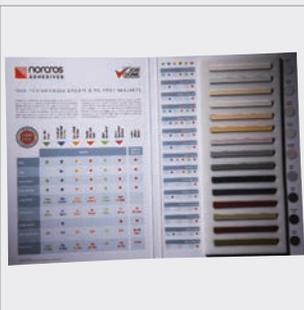


RABScreen, the external air intake screen company, is making its debut at the HVAC & Refrigeration show and will be majoring on its latest easy-to-fit designs. Adding to a range of mounting options for its external screens used for all HVAC equipment and cooling towers,

is the new RABScreen Continuous Attachment System (CAS). This new system comprises easy-to-fit aluminium profiles which can be mounted in a continuous rail of any length, which the border of the fabric screen simply slides into. Using the RABScreen CAS will make it possible to install a 12m long filter system in just over 15 minutes

info@rabscreen.com

Norcros relaunches its 4 into 1 Grout range with new formulations and colours



Norcros Adhesives is relaunching its successful 4 into 1 grout range with new improved formulations, new colours, packaging and marketing support. The new products have been reformulated to be both efflorescence-resistant and water-repellant. The formulations contain Norcros Stop Mould Antibacterial additives to protect against mould and discolouration. The new range has been considerably expanded and now includes a total of 15 colours, reflecting current tile trends, in particular the escalating popularity of wood effect tiles. To assist specifiers and architects at the design stage, the colours of the new range can also now be quoted as RAL numbers. Autumn Chestnut, Forest Acorn, Tropical Ebony and Rustic Cedar are the new colours joining the range. They are also supported by a new A4 Colour Samples folder. This comes on a durable heavy duty card. It includes product and application guidance on all Norcros grouts and sealants, including the 4 into 1 range. It also features sample sticks which can be used to test against actual tiles, providing a real benefit for fixers who are looking to coordinate grout lines with their tiling selections.

01782 524140 www.norcros-adhesives.co.uk

Big Foot Systems lands in India



Big Foot Systems has supplied its Light Duty Frame to support rooftop plant on an office building in Bangalore, the first installation of Big Foot Systems in India. IT company, OPEN TEXT, chose the system as they wanted a neat and standard roof installation

that was quick and easy to install. Selected to support 14 Variable Refrigerant Flow outdoor units on a concrete roof, the four Light Duty frames created a freestanding framework system that is non-penetrative, meaning there is no chance of leaks in the future and there was no need to involve a civil contractor in making concrete on site.

093412 64630 www.bigfootsupport.com

Tiling innovations showcased by BAL



BAL is returning to the Surface Design Show to showcase a number of new products that greatly enhance its offering to architects, designers and contractors. BAL will be exhibiting new full system solutions, as well as the latest innovations to ensure external

tiling solutions are safe, problem-free and maintain the highest aesthetics on Stand 616 in the Stone Gallery. Featuring Gutjahr System Technology, BAL External Tiling Solutions represents a completely new way of designing and constructing balconies and terraces with natural stone, porcelain or ceramic tiled surfaces.

01782 591100 www.bal-adhesives.com

Superior Surfaces – Surface Design Show 2018

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LONDON – 6-8 FEB 2018
www surfacedesignshow.com

Surface Design Show, held at The Business Design Centre, Islington from 6-8 February, focuses solely on interior and exterior surfaces

For over 10 years Surface Design Show has been connecting innovative and exciting materials with an audience of architects, specifiers and designers. It is the place where industry people immerse themselves in the latest materials for the built environment, gain new insights and network with like-minded designers, architects and suppliers.

Christopher Newton, director of Surface Design Show, says: “Materials really matter to architects and designers, that’s why Surface Design Show has become such an important source of knowledge and inspiration. It’s not just the variety of materials being displayed by our exhibitors that excite them,” he notes, “it’s also the presentations, the international Awards and the displays of the most innovative materials currently available.”

Surface Design Show 2018 brings a packed programme of events all designed to inspire and engage. Organised in association with the Royal Institute of British Architects (RIBA) and New London Architecture (NLA), the opening night’s debate will highlight the issues facing young Londoners as they seek to become home owners.

At this year’s event, over 200 exhibitors will show the best in surface design

RIBA president Ben Derbyshire will lead a panel of experts debating the topic, ‘A crisis for the next generation – is London just for the wealthy?’, Peter Murray, chairman & co-founder of NLA will chair the event which takes place from 6.30pm until

7.30pm on Tuesday 6 February.

The ever popular PechaKucha evening, hosted by Phil Coffey of Coffey Architects takes place on Wednesday 8 February at 6.30pm. An informal and fun presentation of inspirational slides, the confirmed line-up includes Hannah Corlett, David Kohn and Jessica Reynolds.

The 2018 show will focus on the theme of residential and transport sectors.

TV Presenter Naomi Cleaver will host ‘Every dream home: materiality and the democracy of ideas’, with speakers Giacomo Ribolla of Johnson Ribolla, Carl Turner from Carl Turner Architects and Meriel Scott from Precious McBane.

In line with the transport focus, Theresa Dowling editor of FX Magazine, will host ‘Trainspotting; is transport design the most challenging of all the design sectors?’ with Paul Priestman from Priestman Goode, Julian Maynard from Maynard-Design, Terry McGillicuddy from Richmond International and Mark Gutjahr of BASF Coatings.

Surface Spotlight Live, which debuted in 2016, is an exciting opportunity for architects and designers to discover the newest and best materials in the industry. The 2018 display will be collectively curated by trend expert Sally Angharad, Treniq, an international interiors network, and Colour Hive who forecast trends and colours.

Colour Hive, creators of Mix Magazine, will present a ‘trend cluster’ featuring surface materials and colours for spring and summer 2019; Disrupt, Drift, Hush and Worth.

Debuting in 2017, Stone Gallery reflects the rapidly growing stone market in the UK and the important relationship between stone and surface design. Officially





Light is a vital partner to surface design, changing interior and exterior surfaces dramatically

supported by Stone Federation GB, the first Stone Gallery attracted exhibitors from Europe and beyond, all looking to link up with the international architects and designers that make London the world's design hub.

Light is a vital partner to surface design, changing interior and exterior surfaces dramatically. Now in its fifth year, Light School, presented by Light Collective and supported by the Institution of Lighting Professionals, will help attendees discover the best of new lighting design and learn about the important partnership between surface and light.

On the third day of the show, Thursday

8 February, the Surface Design Awards will take place. The awards recognise and celebrate outstanding examples of progressive design and the use of innovative surfaces in projects, both in the UK and internationally. Divided into interior and exterior categories there are 13 awards across seven different categories. Each project is judged on a range of criteria including the type of surface, the use of materials and aesthetic design.

In 2018 over 200 exhibitors will highlight the very best in surface design. Returning exhibitors include V4 Wood Flooring, Rimex Metals and Grestec Tiles who will be launching Graficco porcelain tiles, which take inspiration from the architectural grid style. The collection is available in a total of 29 stunning neutral and vibrant shades. Whilst new exhibitors include Bolton Textiles, Daedalian Glass and SoundSpace who design creative acoustics.

Registration to attend the event is now live – visit www surfacedesignshow.com to register.



James Latham returns for SDS2018

James Latham returns to London's Surface Design Show in February, where once again it will be showcasing one of the biggest and most varied collections of interior and exterior surface solutions in the UK. This year Latham's will be featuring a number of exciting new products and range additions for 2018 and as well as its usual stand on the ground level (208) it will also be utilising its permanent Product Specification Showroom which is on the Gallery level of the Business Design Centre at Suite 301. Chris Sutton, Managing Director of James Latham commented, "The Surface Design Show focuses on the latest trends and developments in surface solutions, connecting these materials with an audience of architects, specifiers and designers so it is the perfect platform for us." This year, products on Latham's stand will include; Abet Laminati, Garnica, Egger, Kronospan, XyloCleaf, Valchromat, Accoya, LG HI-MACS, KYDEX and UPM ProFi composite decking plus an exclusive new product launch will be announced with veneer supplier Decospan.

0116 257 3415 www.lathamtimber.co.uk

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SURFACE DESIGN SHOW STAND NO 130

ARCHITECT@WORK 2018

ARCHITECT@WORK, the carefully curated two-day trade show aimed at architects, interior designers and specifiers, will return to Olympia National Hall, London for its 2018 edition on 24 and 25 January

Over 100 leading international architectural suppliers will showcase new products at this year's ARCHITECT@WORK, offering the latest innovations in surface solutions, lighting technology as well as interior and exterior fixtures and fittings. All exhibitors go through a rigorous selection process, with an external judging panel overseeing the product selection to ensure that this is one of the UK's most highly respected trade shows of its kind.

The theme for ARCHITECT@WORK 2018 is light. Everything from practical applications to more artistic endeavours related to light will be high on the agenda for the talks programme. Other show features include exhibitions by the SCIN Gallery, DAPH and World-architects.com, and RIBA's Pop-Up Book Shop for Architects and Designers.

The talks programme spans two days, with each offering in keeping with this year's theme of light. Wednesday 24 January will feature the talks 'Living with Light' at 3 pm; 'Frozen light' at 4:15 pm; and 'Lighting London' at 5:30 pm. 'Living with Light' will see a panel of expert designers showcase the effect light can have in our homes, from artificial lighting to buildings shaped to let the sunlight in and create mood, atmosphere and space, chaired by Dominic Lutyens, freelance journalist, with input from: Christina Seilern, director, Studio Seilern Architects; Tatiana von Preussen, director, vPPR; Jon Miller, founder, Architects' Republic; and Jonathan Tuckey, director of Jonathan Tuckey Design.

'Frozen Light' will explore the long and complex history of photography and architecture. The best way to communicate buildings and spaces to a global audience is to freeze them in a moment in time as light enters the camera lens. 'Frozen Light', chaired by Johnny Tucker, editor of Blueprint, will ask how this is changing in the 21st century, with the proliferation of

The talks programme spans two days, with each offering in keeping with the year's theme of light

smart phones and an obsession with social media. Other panelists will include: Phil Coffey, director, Coffey Architects; Paul Raftery, architectural photographer; and Sam Jacob, Sam Jacob Studios.

'Lighting London' will focus on lighting in its role of shaping our experiences of urban landscapes. The ways we interact with public spaces, bridges, streets, squares, bars and night clubs are being constantly redesigned to inspire and delight once the sun goes down. This talk will be chaired by David Michon, with participation from: Sarah Gaventa, director, Illuminated River; Helen Marriage, director of Artichoke; Simon Keeling & Set Benson, founders of In Situ; and Joy Nazzari, director of dn&co.

Thursday 25 January will navigate through the topics 'Leading lights in workplace wellness' at 3 pm; 'What architects should know about lighting' at 16:15; and 'The art of light and art' at 5:30 pm.

Leading lights in workplace wellness will look at how many of us spend the majority of our waking hours in the workplace where often the lighting is uncomfortable, if not detrimental to our health. Employees understand the importance of health at work and now often choose their future roles based on the quality of life they will get in the office. The questions of why we are so far behind with the design of artificial and natural lighting in the workspace and who the bright sparks are leading us out of the dark, will be addressed. Clare Dowdy, freelance design journalist, will chair this session whose other contributors are: Simon Allford, director of AHMM; Catherine van Der Heide, associate at HASSELL Studio; Inessa Demidova, light-



LAMILUX manufacture high-quality daylight systems for industrial facilities, commercial buildings and industrial shed complexes as well as

private residences. Presenting ways to maximise daylight using beautiful and energy-efficient designs, the focus at stand 22 will include the fusion of daylight an artificial light in a passive house-certified glass element with prismatic glazing and a striking, circular design. **Stand 22.**



Hinge manufacturer SIMONSWERK will be showcasing the latest developments to its comprehensive hinge portfolio and

visitors will be able to view the company's full range of hinge applications and also take advantage of one-to-one demonstrations of the SIMONSWERK online advanced PRODUCTSELECTOR information system created specifically for architects, ironmongers, specifiers, and interior designers. **Stand 46.**



© Marek Sikora



Excel Architectural Hardware is delighted to be exhibiting Scigno pocket doors at this year's Architect@Work

exhibition. The Scigno pocket door system allows the full realisation of the available space without compromising on design or functionality. The pre-assembled system provides fast and easy installation, reducing construction time and costs. Excel Architectural are the exclusive distributor for Scigno pocket doors. Stand 82.

ing designer at Arup; and Linda Morey-Burroughs, director of MoreySmith.

In the session 'What architects should know about lighting', Paul Nulty discusses the role of the lighting designer in contemporary architecture, paying particular attention to common mistakes he often encounters and the innovative solutions that his team employ to create indoor and exterior spaces which are well lit and inspiring. Working closely with clients, architects, interior designers and engineers, Paul has built up an award-winning studio on the basis that collaboration is key to create atmospheric spaces that don't take a toll on the planet. He believes that education and open discourse are paramount to the creation of beautiful environments for everyone. Mat Wating, editor of *mondo*arc* will chair this session.

The final talk, 'The art of light and art',

will examine the way in which cultural venues often lead the charge in terms of high-end design, with huge technical challenges brought about by the requirements for sensitive and beautiful works of art. Visitors to galleries and museums expect inspiring spaces and these buildings often go on to win a raft of design awards. An informed panel of speakers consisting of Anne Fehrenbach, associate at Stanton Williams; Alice Dietsch, director of Amanda Levette Architects; and John McElgunn, partner at Rogers Stirk Harbour + Partners, will discuss their projects and the complex issues they face, both in the UK and abroad.

ARCHITECT@WORK is free for registered trade visitors, and offers complimentary catering throughout the event, encouraging networking and downtime as well as deal-making.

ARCHITECT@WORK UK runs from 1pm - 8pm, 24th and 25th January 2018 at Olympia National Hall. Register at www.architect-at-work.co.uk using code 1490



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ARCHITECT@WORK STAND NO 78

Architects Datafile website



The Architects Datafile (ADF) website is an online provider of past and present products and news items for the architect or specifier. architectsdatafile.co.uk is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they may require. From the website, you can find links to digital issues that have live links to advertisers' sites, as well as daily email alerts to keep you as informed as possible.

www.architectsdatafile.co.uk



Mapei exhibiting at Architect@Work

Mapei will return to exhibit at Architect@Work for 2018 at stand 20. Taking place at London Olympia on 24-25 January, Mapei will be featuring in Interior Finishes, showcasing its Kerapoxy Design and MapeGlitter products. With over 500 possible Kerapoxy Design MapeGlitter colour combinations, creating a unique look for each project has never been easier. Mapei's metallic coloured MapeGlitter is mixed with Kerapoxy Design to form a sparkly metallic grouting mortar suitable for grouting joints in all types of tiles forming a particularly effective look when used with metallic or glass tiles and mosaics. Mapei offer a free, expert specification service recommending materials and workmanship required for your project. The dedicated Specification Team can visit your project on-site, or you can call into Mapei's Specification Centre in Clerkenwell, London. Mapei's tailored specification advice is accompanied with current technical assistance throughout your project, from specification through to installation and post completion.

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MITFORD AUTISM INPATIENT UNIT MORPETH, NORTHUMBERLAND

Challenging stereotypes

The deceptively simple look of a pioneering new autism inpatient unit belies the highly complex set of spaces within, painstakingly designed for a very specific clinical need and helping patients return to the community. James Parker reports



Mitford autism inpatient unit in Morpeth, Northumberland, is the first purpose-built care facility of its kind, and a building designed to tackle a very specific challenge. The residential unit serves adults with severely complex autistic spectrum disorders, for which a new healthcare methodology has emerged which looks beyond managing their conditions for the long-term in NHS facilities to a much greater focus on helping them move back into the community.

Due to the nature of the patients' conditions, the unit is a particularly resource-hungry one, and this was one of the challenges for the Northumberland, Tyne and Wear NHS Foundation Trust and its architect, Medical Architecture. Despite the practice's solid credentials from designing several notable mental health schemes, and its client being one of the UK's largest mental health trusts, this project was demanding to say the least.

The unit at Northgate Hospital was



established to provide care for people who mainstream mental health services struggle to accommodate, including some who may have been placed in secure units. Patients' conditions can see them being destructive or even violent, so caring for them means a standard staff-patient ratio of four to one, making them 'high tariff' by NHS standards. The design of spaces needed to be carefully considered to provide both a therapeutic environment and also one that is robust enough to withstand attack.

The trust hoped that a carefully designed environment could minimise adverse reactions and help users progress back to the community, ideally between 18 months and two years from admission. The highly specialised nature of this project made the client anxious however; it was building a unit costing £10m for 15 patients, with a design which would be hard to adapt to other uses, so it had to deliver on its business case. As project architect Paul Yeomans tells ADF, "Developing the brief was difficult, because the trust was nervous – what if their tender was taken away, they'd be asking 'what do we do with this now?'"

Part of the business case was that there was a "correlation between the environment and positive patient outcomes," however there was also very little precedent when it came to designing the unit. The only other similar provision in the UK is at the Maudsley Hospital in south London. The design team had to harness all of its own experience, which included an NHS autism unit in Caterham, Surrey, as well as seeking advice from the National Autism Society, and immersing itself in research and clinical consultation to identify the answers. Medical Architecture has a longstanding relationship with the trust behind the project, designing mental health schemes for 12 years, beginning with a £25m unit in Gosforth with Laing O'Rourke delivered through NHS Procure 21.

The practice's strong relationship with the client was key to helping it develop the brief – as well as it having a Newcastle office, set up 11 years ago as an addition to its original London base partly to support the trust's projects. For this scheme it was working with contractor Kier within the current NHS Procure 21 framework (Procure 21+), and it would prove to be one of the most testing projects Medical Architecture has tackled. Helping the client get to the point that "everyone was comfortable" with the design brief and attendant business case took two years.

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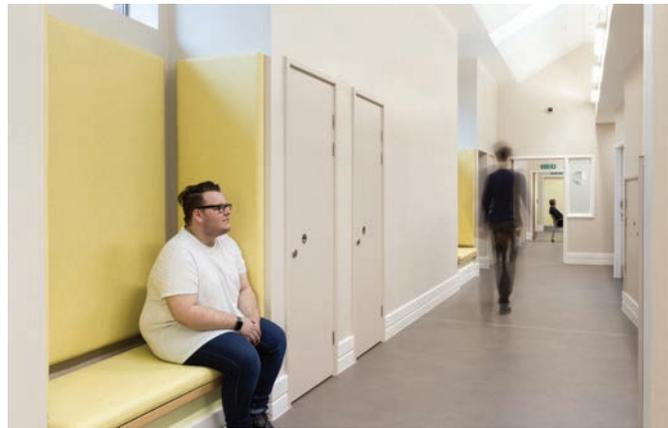
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ABOVE RIGHT

Seating areas in circulation corridors enable patients at the unit to prepare themselves when moving from space to space

Briefing

The architects visited autism units in the UK and reviewed projects in the US, to better understand the care methodology and how service users experienced their environments. Yeomans candidly admits that visiting the trust's existing facilities was difficult: "It's often quite alarming to see the realities of what this condition is all about, patients will hit their heads against walls, or isolate themselves because they don't want to communicate." He adds, "you'd see aggressive incidents, it's quite difficult to deal with."

Given the fact that the substantial numbers of clinical staff at the unit worked closely with service users, the architects "relied on them to guide us on what a good patient environment was," says Yeomans. The architects used a client briefing methodology they had successfully applied in other projects to discover staff working practices so they can optimise the design to varied needs. Called 'Perfect Day', it consisted of a half-day workshop "with a lot of people in the room," says Yeomans, from head clinicians to cleaners, describing what their work consists of throughout the day.

The findings are then fed back to all staff,

increasing the sense of ownership of the design, and this forms the beginnings of the brief. Yeomans explains: "You turn these into diagrams, and get to a point where people are happy and understand the fruits of their labours."

This kind of in-depth consultation was crucial in identifying the key design drivers for such a building, including the 'thresholds of space' that are critical for the facility's service users. Yeomans explains further: "Patients need to prepare themselves to move from one space to another. We created seating spaces along the circulation corridors enabling them to see where they were going to sit, and once they are there, they can see where they're going to go afterwards."

The unit represents a change in the clinical model to assessment and treatment, so that, in Yeomans' words, "there was a pathway for patients to move on." He says: "This was quite a sea change, previously they could have been in here for long periods." The unit replaces the provision at a 1970s building nearby which unlike the Mitford unit, was not purpose-built, and had been "doing the best it could," says Yeomans, with the typical NHS piecemeal additions over the years.

Building form

As Yeomans says, while the building “looks quite simple, it’s actually incredibly complicated.” The accommodation is divided into single and shared flats, in four ‘fingers’, with corridors running north-south alongside rooms and east-west across the top and bottom creating a loop to help staff easily get from one finger to the next. Shared ancillary spaces are ranged along the south flank of the building, including multi-disciplinary team meeting rooms, activity space, a kitchen for occupational therapy, and staff rest areas.

The flats in the two easterly fingers are generously proportioned, and patients live in these when they first arrive. The overriding aim is that as their ability to socially interact with others improves, they move to the smaller individual bedrooms in the other two fingers, which also have shared lounges. Then following assessment they will be able to go back into the community.

Between the fingers are outdoor spaces, and all of the flats have their own access to a private ‘garden,’ laid with 4G artificial turf due to difficulties in maintaining these ‘landlocked’ secure areas. In the westernmost finger, the gardens are shared with other patients, as they get used to spending more time with people, and this is not only a therapeutic amenity, it’s also a cost-effective one.

The unit’s Kalzip aluminium roof unifies the building visually, and also overhangs slightly over gardens to enable patients to sit outside in inclement weather. The roof was an important design feature for staff, to help simplify and clarify its form, says Yeomans: “Because we have quite a complex plan going on, we thought we needed to put a sort of top hat on the building to try and contain a lot of that. Even from the outside people can tell where they are – all the gables come to the end of the building and it’s immediately apparent there are four fingers.” As is common in such sensitive units, M&E servicing access is located in the roof space to avoid any disruption to the spaces below.

The trust funded the construction of a full-sized mock up of a flat, which, says Yeomans, “was invaluable to just test things, work out of sizes were right, and we were able to get things like ironmongery and the kitchen workbench sorted out.” When the building was finished, a group of project team members including estates management, clinicians and Yeomans himself stayed in the unit to see if there were any glitches or equipment faults that





The staff have high praise for the effect of the new building on users

could be resolved, as this would be hard to do once patients had moved in. Designing the flats in close co-operation with clinicians and using Revit ensured that they could be planned out in fine detail.

The corridor design is where some of this building's complexity emerges, as they are broken up at each flat door by square 'knuckles' which on plan continue the line of flats obliquely across the corridor to form seating areas adjacent to each door. As part of tackling users' 'threshold of space' needs, staff can sit here whenever needed, as part of monitoring a patient, have a conversation with colleagues, or sit with patients as a stop-off as they move through the unit. The design provides a high level of flexibility for the staff, as Yeomans says: "Staff can take activities to the patient in the room, sit with them in their lounge, or retreat to the circulation space outside and keep an eye on them."

Environmental factors

Environmental conditions such as lighting and heating can be controlled individually via electronic panels mounted outside the flats. This is critical because severely autistic patients may not respond well to 'normal' temperature parameters and they may need precise adjustment by staff to make a room colder than usual, for example.

The overall goal of the architects was to create a "calm and protective setting that offered comfort and privacy for residents." Part of this is balancing the requirements for daylight and views with the need to ensure that patients are not disturbed by being overlooked. While the patients have views from their flats via their private garden, they are not overlooked within them, and all flats are oriented in the same direction (facing east) to ensure similar light levels through the day for all patients.

In circulation corridors, high level windows avoid overlooking the patients' gardens, but enhance the spacious feeling of the corridors, and also avoid glare for patients. The ambience is helped by natural ventilation and the rounded corners in corridors (although the principal reason for this is safety). The building is rated BREEAM Excellent – thanks in part to its natural ventilation but also the addition of renewables including air source heat pumps and PVs on the roof, plus locally sourced materials.

User safety also meant that blinds were not an option in patients' flats and bedrooms, and instead Medical

Architecture devised a sophisticated lock-back timber shutter which recesses into the wall to reduce the risk of it being damaged by a patient. Shared patient lounges have TV and storage units which can be enclosed and locked shut by staff behind specially created joinery doors if necessary. Yeomans says the decor is deliberately minimal, and "pretty bland", this is important to avoid overstimulating users – "it wasn't that we like beige," he remarks. The idea is that the resulting low-key feel of the environment is a starting point from which clinicians can build, as they work to discover what works with each particular patient.

When it came to acoustics, one of the aspects that emerged from the mockup of a patient flat was that walls needed to sound 'solid' to users to discourage damage by patients, and the modular SFS frame – plus ply and plasterboard – would be a challenge on this front. Therefore a sandwich of different plasterboards and insulation were tested before an affordable solution was arrived at which sounded as robust as blockwork when knocked.

Conclusion

The building won the Best Mental Health Development in the Building Better Healthcare Awards 2017, and was Highly Commended in the European Healthcare Design Awards 2017. The judges of those awards commented on how the unit successfully combines resilience with care: "The project provides a robust and effective working environment that is compassionate to the resident group." The staff have high praise for the effect of the new building on users – ward manager Pamela McIntyre said: "We are witnessing huge impacts on quality of life. Seeing a mother reacting to her son having his first incident-free day in seven years is very rewarding."

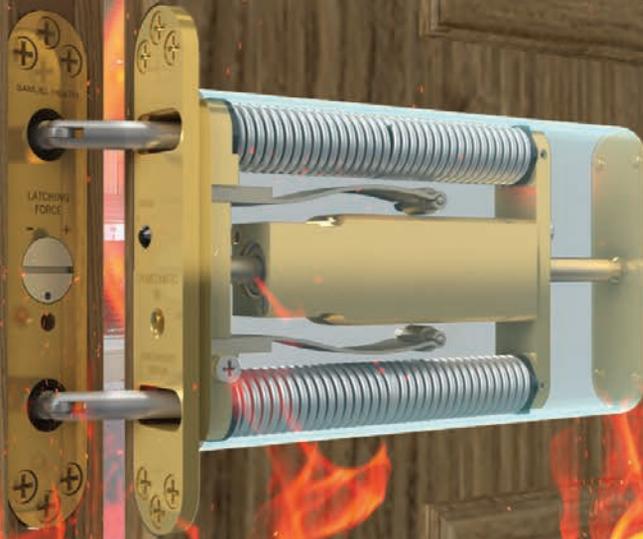
Medical Architecture's Paul Yeomans says that the client seems "really satisfied" with the unit, now that it has been in operation for a year. "It's still early days, but there seems to be a lot of good evidence coming out of it." Of course the ultimate testimony of such a specialised healthcare unit is from its clinicians, and the users, although in this case the latter have difficulty expressing that. However according to one staff member, whereas in the previous building one patient "lived in self-imposed isolation and crawled everywhere, within a week of moving into Mitford he was having a drink with staff in one of the offices." ■

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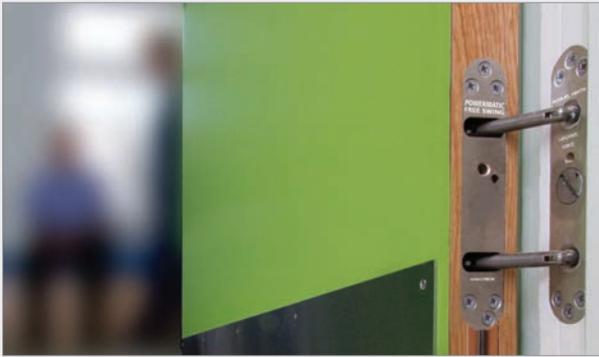
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Energy efficient, intelligent ventilation system improves indoor air quality



Natural ventilation specialist Passivent has introduced *iMEV Total*, an 'intelligent' mechanical extract ventilation system that offers an automated, energy efficient approach to optimising air quality. It is suited to large, multi-residential properties such as care homes and student accommodation where refreshing good indoor air quality is important for occupant well-being. The humidity-sensitive ceiling mounted extracts are flexible and adapt to the ventilation needs of individual rooms, increasing extraction rates as required in different areas at different times, without affecting other areas where ventilation is not needed. With ventilation controlled by the demands of the room environment, no user intervention is required. *iMEV Total* includes a 'constant pressure' fan that runs continuously yet varies its speed according to the humidity levels of the different areas of the building by sensing the pressure in the ductwork. At night, when demand and humidity levels are low and the extract units reduce in open area, the fan speed reduces to the quietest minimum setting. With its constant operation and automatically adjustable fan speed, lower energy usage is achieved.

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Delabie launches a range of mixers with retracting hand sprays



DELABIE have launched a range of mixers with retracting hand sprays in mechanical, pressure-balancing and thermostatic versions for enhanced safety and improved comfort. Each mixer features a maximum temperature limiter. The pressure-balancing version has an EP cartridge which compensates for differences in the incoming hot and cold water supply pressures to deliver water at a constant temperature. If the cold supply fails, the hot water is instantly reduced to a trickle, preventing scalding. The thermostatic version incorporates an anti-scalding failsafe where the hot water shuts off immediately if the cold supply fails and vice versa. These versions are ideal for baby baths in maternity wards and nurseries where safety is paramount. The mixers have a choice of controls. An ergonomic solid lever offers an improved grip, while the Hygiene lever requires no manual contact, improving comfort and hygiene. The new mixers with retracting hand sprays have been specifically designed to limit the volume of standing water in the body. They are fitted with a cartridge and flexible hose with low water volumes. They also feature a transparent hose which can be visually checked for biofilm.

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**BUILDING
PROJECTS**

**MULTI-SPORT PAVILION
FRANCISCO DE VITORIA UNIVERSITY
MADRID**

Playing with light

A minimalist sports pavilion and classroom complex on the campus of a Madrid university has been precision-designed by architect Alberto Campo Baeza to fill the building with light. Jack Wooler reports

The latest project of recognised Spanish architect Alberto Campo Baeza, head professor of design at the School of Architecture in Madrid (ETSAM) since 1986, is a multi-sport pavilion and classroom complex for Francisco De Vitoria University.

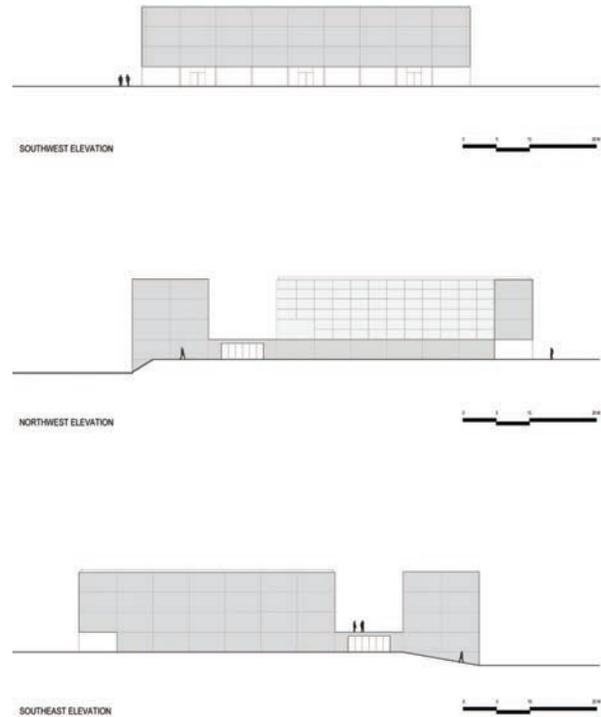
The grandson of an architect, Campo Baeza hails from the port of Cadiz in south west Spain, a city with a rich architectural heritage and a formative environment for the architect. Campo Baeza's career has included several notable international

projects with minimalist tendencies, embodying his phrase "more with less," a reworking of Mies van der Rohe's famous dictum, and exhibiting exquisitely precise design and use of materials. These range from Guerrero House and the House of the Infinite in his hometown, Cadiz, to the Olnick Spanu House in Garrison, New York.

He is often referred to as the 'architect of light,' and this focus on embracing light as the key design element can clearly be seen in his buildings, not least of which the

KEEPING CONTROL

The main sports hall has a combination of opaque, translucent and transparent facades to control light

**TOP LEFT**

The basement swimming pool is naturally lit

ABOVE

A transparent corner of glazing at ground level

ABOVE RIGHT & FACING PAGE

The four storey volume of teaching accommodation is separated from the sports hall volume by a walkway with a patio above

new multi-sport pavilion. In addition to the prominent motif of harnessing light, he also makes comprehensive use of whitewashing. For a minimalist house Domus Aurea in Monterrey, Mexico, for example, Campo Baeza's design features both stark white facades and the careful sculpting of light, using a double-height interior wall covered in gold leaf to reflect light from a high southern window, flooding the room with a golden glow.

Writing on Campo Baeza's career, elected director of the Superior Technical School of Architecture in Madrid, Manuel Blanco Lage, paid tribute to the architect's use of natural light. "I have followed the lines of Alberto Campo Baeza's work over the years in a long series of exhibitions that began with the show entitled, Light is More, vindicating his use of light," wrote Lage.

Something of a showcase of his usual tropes, the architect's gleaming white sports centre in Madrid has already been well-received, winning the COAM 2017 First Prize from the Official College of Architects of Madrid.

Having never worked with the university before, Campo Baeza tells ADF that the clients are "cultivated people," who offered him "almost complete freedom, only limited by budget and time." He reported that the project went "without challenge," due to the practice's forensic approach. "Before

construction began," he explains simply, "we studied everything."

Multifunctional

Directly commissioned by the university, the new edifice houses a sports centre and a separate but linked classroom compound for related subjects taught by the university. Areas for team sports, to train in a gym, and teach students in a more formal environment, have all been incorporated into the building. The sports complex is also intended to be utilised for other university functions, including as a meeting hall.

In terms of maximum height and alignment, the design of the building is restrained, adapted to the general layout of the campus. The architect aimed to clearly differentiate the sports and teaching areas in terms of size and the materials used on each facade.

The two main elements of the structure are joined by a low-rise building, whose roof functions as an interconnecting patio at first floor level. The approximate floor area of the sports hall is 50 x 60 metres, and its maximum height of 12 metres is aligned with the average height of the surrounding buildings.

The teaching area sits at the north east of the site, an extension adjoining the sports hall which is accessible from both



the hall and from outside doors on the north west and south east wings. Located at the back of the hall, on the other side of the internal walkway that connects the two rectilinear boxes, the teaching area matches the height of the main hall, separated into four storeys plus a subterranean zone. Above the walkway, a rooftop patio overlooks both flanks.

The architect further explains the basic layout of the building: “The classroom pavilion is organised by corridors, articulated with staircases.

He continues: “The big box, the pavilion for sports, can be entered directly from the outside, from the central control area, or directly from the changing rooms.”

Below the structure, a vast basement has been employed to provide extra facilities economically. The extra space includes a swimming pool with daylighting, a gym and bathrooms, creating a versatile area to accommodate a variety of university functions.

A walkway encircles the structure, with a small incline in the pedestrian link leading up from the north east to the north western and south eastern flanks. The southwestern facade features a low strip of transparent glass, in which three sets of large doors sit. The transparency is continued around each corner on the northwestern and southeastern planes,

making the front of the building visually accessible from three sides, welcoming users into the building’s main feature, the “box of light.”

Seeing the light

The square sports hall, with its combination of opaque and more transparent facades, becomes that box of light when illuminated by sunlight, or at night with its glowing wall sections.

Continuing his legacy as ‘the architect of light’, each elevation within the composition has been carefully designed by Campo Baeza to control light to the users’ advantage. He comments that the building conforms to all normal standards, despite its highly minimal nature: “Every urban regulation was accomplished, but the simplicity of the box and its parallelepiped shape was still very effective.”

He explained that the manner in which materials were used to control daylighting was intensified during the project, and that in the sports hall volume, different approaches were taken to each elevation in terms of facade materials to enable light to enter, but at an appropriate level. The intense Spanish sunshine needed to be carefully controlled in order to make sure that in attempting to bring in huge amounts of light, the levels are not excessive.

Each elevation has been carefully designed by Campo Baeza to control light to the users’ advantage



GLOWING

The sports hall's opaque facade panels glow at night
All images © Javier Callejas

“In the initial design,” he says, “all four facades were translucent. After many studies I decided to use two opaque facades (south) and two translucent facades (to the north), and the good results confirmed my calculations.

“The materials of each orientation are valued differently, so that the facades of the southern dihedral, more exposed to sunlight, are enclosed in a prefabricated panel, while those of the northern dihedral are in translucent glass.”

This combination of facade approaches allows for enough sun to provide generous light to the interior for the sports activities going on, without the risk of harsh reflection off the many white surfaces.

White

Tying in with his famous degree of attention paid to capturing light, Baeza's work is almost exclusively monochromatic, with his buildings painted in various shades of white. The sports pavilion is no exception, its white concrete finish and towering, near-featureless facades producing a feeling of pristine clarity.

This building's visual simplicity therefore aligns it with the architect's previous creations, encompassing the entire design, from the walls to the white-painted steel pillars and beams.

Despite what is a somewhat austere use of concrete, Baeza produces a feeling of weightlessness in his design, furthered by way the huge glass windows are flush with the building's profile. This is a key part of how the architect keeps such a large building from being overly imposing, and in fact makes it engaging.

In Baeza's words: “painting everything white, with a white floor in wood, produces a very friendly space, that is capable for many different uses.”

Colouring the whole space white of course increases the luminosity of the light within, and it is in the hall that the resulting sense of expansiveness is most apparent. With all the beams and concrete panels on the inside (and the outside) whitewashed, light is reflected across the ceiling, and the whole structure – despite some parts such as ducting being left unpainted, forming an impressive aesthetic unity.

Materials

Keeping the sports pavilion and classroom complex separate, but complimentary, was no easy task. The two boxes are intended for two different programmes with very different needs, while still sharing the same space.

Because of this, the two entities are unidentical twins visually, simultaneously supporting each other, connected by a single base.

Being designed with lightness in mind, the pavilion utilises huge glass panels, unlike the more closed classroom complex and lower interconnecting building which have more conventional windows. Much of the exterior of both segments is glass fibre reinforced concrete (GFRC), its manufacturing method enabling construction in thin sections.

Baeza's sports pavilion provides a striking example of GFRC use in facades for modern high-quality architecture. Unlike steel, glass fibres will never rust, and GFRC is approximately 80 per cent lighter than pre-cast steel reinforced concrete cladding. It offers greater versatility due to its compressive strength and flexural properties, with virtually no limit to the shape or profile that can be created, although in the case of this project, the shapes are very straightforward.

The structure of the pavilion is made of steel, with a grid of pillars and beams on the facades and trusses which fortify the massive roof span. All of this is, of course, painted white. Wide angled beams carry the heavy load of the structure over the basement and swimming-pool areas.

The entire facade facing the central square is designed to be completely permeable, thanks to an uninterrupted horizontal band of doors and openable glass panes. The rest of the enclosure is completed with a grid of translucent glass that illuminates the interior space with uniform light.

Restraint

The guiding principle of this minimalist project appears to have been one of restraint. Both the sports pavilion and teaching complex are free of any extraneous embellishments, and as has been stated, do not impinge on the scale of the other buildings on the campus.

Campo Baeza himself reportedly fends off any assertions that light is some kind of repeated refrain that he employs as an architect. He argues instead that light is a universal theme, inherent to architecture itself and which must form a key part of every project, and of which no one can claim agency over.

Whether or not light should be seen as his trademark, one thing is clear, that Campo Baeza has demonstrated a highly thoughtful approach to capturing it, and this box of light will illuminate sports and learning at this university in the future. ■

Kent County Cricket Club 'bowled over'



The Kent County Cricket Club wanted to develop the facility they had at The County Ground in Beckenham. To ensure that a fabulous training surface would be made available to the Kent County Cricket Club they turned to Architects PDP London

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01952 750816 www.imperialhandmadebricks.co.uk



Resin bound Seagull crest

A giant resin bound Seagull crest welcomes B&H Albion football fans to the Amex stadium in Brighton. Paul Barber, Chief Executive of the Albion noticed a crest at Manchester City, liked the idea, but bigger and bolder to create a real sense of arrival for the fans. Clearstone was chosen for the project as they are a specialist resin bound surfacing company with expertise in producing custom paved logos. The crest was created in Vectorworks CAD program, from which intricate templates were laser cut for the seagull, its beak and the lettering, which were then carefully pinned in place by Clearstone's installation team. Then in-filled with white and blue RAL coloured pigmented quartz to match the team's home kit colours. Finally a seal coat of resin was sprayed on the crest and anti-slip glass sand was applied as a finish. It took around eight days to complete.

01273 358177 www.clearstonepaving.co.uk

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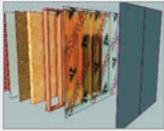
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for an energy efficient project; controlled manufacture creates almost zero waste, and a faster build schedule reduces carbon emissions. Stuart Wilkie, Managing Director of Wernick Buildings commented, "This project is a great opportunity to show what offsite construction can achieve, and how innovative energy saving technology can be brought to the commercial market."

www.wernick.co.uk

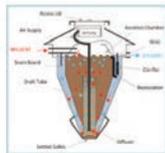


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Roofs that strut their stuff

James Potter of Waind Gohil + Potter Architects looks at the potential to take a fresh look at roof design and create more sophisticated structures

On the island shores of Papa Westray lies the Knap of Howar. Having visited this remote corner of the Orkneys I feel qualified, sort of, to confirm this archaeological site as slightly underwhelming were it not for one fact: the Knap of Howar is approximately 5,000 years old and the best preserved house in Northern Europe.

Mindful of this, it's hard not to be impressed at how intact it remains. But the one pesky stumbling block limiting the Knap of Howar's ability to get an up to date EPC is the absence of a roof. Like everything on these windswept islands, if it stands above two metres tall it's an open goal for mother nature to blow it flat or away altogether, so it's unsurprising that all but the semi-sunken stone walls is long gone. Yet to understand the design of these remarkable buildings is to understand the missing roof.

This would have been the most daring and sophisticated element of the construction. Timbers or whale bones forming a tent like structure, lashed together and faced in hide and turf. One can't help but wonder whether plastic membranes and sedum are that far removed from these ancient origins given how much time has elapsed.

Roofs as a building element are no more important than walls, but the primary weathering element of any shelter is the roof and the fundamental of any building is to give shelter. On that reasoning they are special, and, as a young(-ish) firm, roofs are something we have attempted to look at with fresh eyes.

At our New Oak house design the roof structure was a mixture of stressed plywood skin and oak struts to stiffen, the former allowing us the opportunity to free up the positioning of the latter. None of it was feasible without an engineer (Webb Yates), architect and contractor working closely with the final pattern of supports agreed on site, not on the computer.

Of course, there were other equally valid ways to form this roof, however that in no way renders the decision to implement the chosen structural system as defunct. There is simply a wider choice of materials and struc-

tural techniques available now to form a roof from and in turn create something individual.

Roofs, by their nature, produce ceilings. These often plain surfaces can be expansive and undervalued, but their simplicity belies their importance. Earlier this year we completed our competition winning 'Skyhut', a simple wooden cabin for glamping in the Welsh wilderness. Wales has some of the darkest skies in Europe, making it ideal for star gazing: at the touch of a button an actuator raises the unassuming roof leaves and the ceiling pivots to the vertical revealing views of the stars from the comfort of a bed – if it's not raining.

What's interesting about the Skyhut isn't the technical feat of building an opening roof but the perception of the same little space, with and without a roof. When closed the cabin is well insulated and comfortable in all seasons, but with the roof open it's as if the 'building' has gone and one is left in a field next to some sheets of plywood.

We are a long way from reaching the dizzying heights and refinement of, say the fan vaulting of Westminster abbey, but in our own way we seek new yet functional ways to express the *raison d'être* of a roof. Perhaps a little more consciously than those of old...or perhaps not?

For example, how did the oak framed roof of the ancient barley barn at Cressing Temple remain so fine? Unlike the Neolithic Knap of Howar the barley barn remains very much complete and the oldest timber barn in the world. But I remain sceptical as to whether the craftsmen who made it just happened upon such a handsome structure: someone had their eye on the prize in medieval Essex.

Indeed, whether the contractors building the Knap of Howar were looking to find joy in the expression of a truss is anyone's guess but they still made the roof the most exciting part of the house, or rather the roof demanded or facilitated the most interesting construction, who knows?

James Potter is a director of Waind Gohil & Potter



Roofs, by their nature, produce ceilings. These often plain surfaces can be expansive and undervalued, but their simplicity belies their importance

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Aggregate Industries introduce Spanish Blue Slate to its Roofing Range

Aggregate Industries has introduced an addition to its range of Roofing products. 'Bradstone Azul' will complement its existing offer of high quality Roofing tiles, after seeing a rise in demand of Spanish Blue Slate. Bradstone Azul slate has been specifically selected for its aesthetic, promising to add character to any new external roof, extension or new build property. The authentic slate is in high demand amongst the UK residential market. It incorporates a distinctive colour that is on-trend, whilst also offering exceptional strength and durability. The product has been specifically chosen not only for its attractive, textured look, but for its minimal grading requirements. Not only can the slate be used for residential properties, but can also be utilised for commercial buildings. Every pack offers consistency with each slate measuring 500 x 250mm, weighing 1.1kgm and offering a nominal thickness of 5-6mm.

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Rendered beautiful

Rachel Wilson of K Rend discusses the rise in render's popularity for new buildings, and its use in creating desirable as well as long-lasting finishes

Once a favoured product for existing buildings, rendering has now become a mainstream finish for new builds, with its ability to provide a longer lifespan combined with good looks.

Whether you want to achieve a traditional or more contemporary finish, render complements natural materials such as wood cladding, natural stone, red brick and metal. In renovations, render can repair the signs of ageing easily and update or maintain an aesthetic for the future.

Thus render has a cosmetic as well as practical role to play. A good render forms textures and colours that give a building a unique and distinctive character, as well as year round protection to help strengthen its overall performance. It should always be considered early in the design process however, with the amount of exposure, movement and construction requirements taken into account.

Rendering external walls can also help towards creating a healthier building. Hydraulic lime renders provide excellent long-term performance but also offer a permeable surface, allowing vapour to pass through the building. This is preferable to a sealed surface like traditional sand and cement plaster, which locks in moisture creating a more favourable environment for damp. External walls are then breathable and able to regulate humidity, creating a healthier environment. Creating a breathable building is very important, as controlling humidity of the building will limit damp and erosion problems.

There are many renders on the market and choosing the right one is crucial to get the desired texture finish and lifespan from the product. A lime-based render is a more flexible, softer product helping buildings adapt to the small changes that may happen when they expand and contract in changing weather conditions.

One example of the innovations available is the use of silicone technology as an integral part of the cement based render system. The different ranges on the market come in standard colours, with special

colours also available upon request using the natural colour system (NCS), offering something for every design.

Some of the ranges consist of silicone thin coat which has a very fine texture finish and is suited to lightweight systems such as external wall insulation. It is available in three different textures with a particle size between 1 mm to 3 mm thickness.

Silicone scraped texture provides an attractive range of one coat applications plastered directly onto block work. This is achieved by floating to a level surface and then scraping back, removing 2 mm of the aggregate to leave a uniform texture.

Lastly, silicone roughcast can be applied as a low maintenance alternative to dry dash and traditional painted finishes.

Once applied, a coloured render eradicates the need for periodic painting, meaning the building is ensured a freshly rendered appearance for a prolonged period with little continued maintenance necessary. This is a key way to ensure the building continues to represent the concept you originally envisioned.

Correct application of the product is crucial to ensuring the best performance and avoiding costly mistakes which, in turn, secures the quality of the finished projects. In fact, render has been included as one of the changes to the charter on the latest 2017 NHBC standard. This is to support house-builders in raising and maintaining the standard of builds across the UK.

The UK render market is estimated to be worth £100-120m annually and continues to demand innovation and technical development from all suppliers.

The onus is on manufacturers and suppliers to provide detailed technical information on performance, suitability and application to decision makers supporting them in their decisions and throughout the build process. The level of customer service should be a key differentiator when deciding which render supplier to work with.

Rachel Wilson is the digital marketing executive at K Rend



A good render forms textures and colours that give a building a unique and distinctive character

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Since 1992 when **Anglia Lime Company** pioneered the use of lime in East Anglia through training courses and the distribution of lime materials, new awareness has brought about an ever-increasing use of lime in both old and new buildings. Anglia Lime Company can offer a sustainable lime-based solution, whether you are repairing plaster in your 15th Century cottage, re-pointing Georgian brickwork, installing a lime concrete floor or looking for a pre-coloured, spray applied finish for the most modern of buildings.

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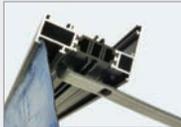
Metal Technology and the art of education



The £35m Northwood School in the London borough of Hillingdon specialises in the performing arts for its 1,080 pupils and the new building gives visual expression to this focus while embracing its general learning areas and sports complex. Rising to three storeys on a building footprint of 9,800 square metres, the school features **Metal Technology** System 17 HR capped curtain walling, in conjunction with System 5-20D doors, System 4-35 casement windows and System 23 louvres. The combination of these systems delivered a fluid design that linked each section of the school into an aesthetically coherent whole and contributed to the sustainability and security objectives of the design. All Metal Technology systems are designed to perform seamlessly together to achieve the desired look and performance standards. Used individually or together, they offer complete design flexibility for creative aesthetics with the assurance of superior performance, structurally, thermally, acoustically and in terms of safety and security. For more information, please contact Metal Technology by calling or visit their website.

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Longworth Chooses SFS Fasteners



Longworth is working with SFS in the construction of two iconic towers in the heart of Birmingham, one clad in brass, the other silver. The partnership agreed on the supply and installation of an Alucoil Larson ACM FR – Brass Brushed panel with a fire-rated mineral core. This drained and back-ventilated rainscreen cladding system for Tower 1 was fitted with an Nvelope bracket and rail system and powder-coated SLA3 frame fasteners, SLA 5 fasteners, as well as SX3 and SX5 A4 (grade 316) stainless steel fasteners from SFS.

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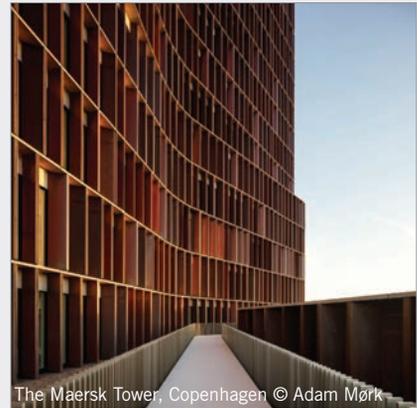
Architectural Copper Awards Winners Announced

The results of the 2017 European Copper in Architecture Awards 18 have been announced. The Maersk Tower research complex in Copenhagen, designed by C.F. Møller Architects and characterised by its grid of copper fins, was the outright winner. Two infrastructure projects were Commended and the Hydropolis water sculpture pavilion in Wrocław, received the Public Choice prize.

The eighteenth iteration of these biennial architectural awards recognises the growing influence of copper and its alloys in modern design. But it also exposes to a wider international audience inspirational projects, some of which might otherwise go unrecognised. The 2017 judging panel consisted of four architects, all recipients of previous Copper in Architecture Awards: Ebbe Waehrens (BBP ARKITEKTER, Copenhagen), Maxime Enrico, (LAN, Paris), Ville Hara (Avanto Architects, Helsinki) and Craig Casci (GRID Architects, London).

The Award winning projects were assessed from 35 entries from photographs, drawings and architects' descriptions. Overall architectural design, response to programme and context, importance of copper to the scheme and copper treatment were all considerations. The judges initially selected a shortlist of 8 projects that stood out from the rest and then went on to choose the overall Winner and two Commendations. In addition, registered copperconcept.org visitors voted on-line for their favourite shortlisted entry, resulting in a clear Public Choice Winner.

A unanimous judges' choice, the Maersk Tower research complex in Copenhagen, designed by C.F. Møller Architects, was the clear Winner. A major landmark building prominent on Copenhagen's skyline, it nonetheless delivers on many other levels as well. The conceptual development of its complex programme offers a fresh, more openly interactive research building typology



The Maersk Tower, Copenhagen © Adam Mørk

enabling interdisciplinary functions to work across and between floors and departments. Its response to urban context is impressive with a gentle curved form making it slim, elegant and sympathetic to its surroundings. And its qualities extend to exceptional detailing throughout with an innovative use of gently animated copper fin facades that moves in response to the solar gain and defines the building.

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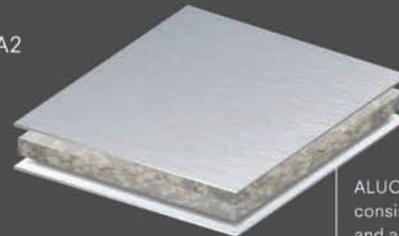


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Crittall makes powerful statement



The first bar to open at London's iconic Battersea Power Station redevelopment features Crittall steel windows whose appearance chimes perfectly with this former industrial landscape. The interior of the new bar/restaurant, features bespoke furniture and lighting modelled on original designs referencing the period from the 1920s – 1950s. Into this design palette Crittall Corporate MW40 windows and doors with robust steel glazing bars were installed as the natural choice. Crittall MW40 fenestration can accept up to 30mm thick glazing providing excellent acoustic as well as thermal performance.

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Hinkley Point recognised in Glazing Awards



The collaborative work between Deceuninck and Dempsey Dyer has been recognised in the glass and glazing industry's national awards: The G-17s. Reaching the finals of the coveted Commercial Project of the Year, the works are being celebrated for the UK's largest ever single

block modular contract: Hinkley Point Campus. Managing Director Rob McGlennon comments, "The construction sector has been driven over recent years to innovate and develop new commercial solutions that eliminate waste, time and cost. Innovation is precisely what we are able to showcase on the Hinkley Point Campus development."

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Rooflight maximises light



Architects overcome opposition to add mansard roof extension to London mews house. After a particularly contentious and protracted planning process, this semi-detached, red-bricked house finally boasts an impressive third storey extension as a result of the erection of a mansard roof. The installation of **Glazing Vision's** elegant sliding-over fixed rooflight above the stairwell, together with four additional fixed rooflights, has maximised the light streaming into this new living space. For more information on Glazing Vision's sliding-over fixed rooflights or advice for your next project visit their website.

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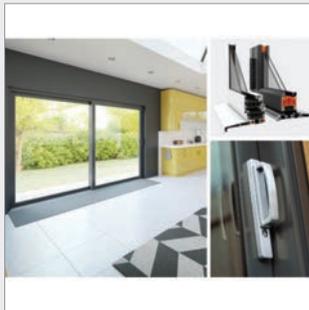
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Complete WarmCore suite achieves PAS 24



The new WarmCore Inline Patio Door has successfully been tested to meet PAS 24:2016 standards, making the whole suite of thermally efficient aluminium products PAS 24 compliant. All WarmCore windows and doors, including the SV slim vent window, flush sash windows and bi-folding doors, have been tested to PAS 24 standards, meaning they all meet the requirements of the Secured by Design security scheme. WarmCore products combine a full width thermal core with a powder coated aluminium exterior for the dual benefits of a hardwearing finish and excellent U-values of 1.4W/m²K for bi-fold and patio doors and 1.3W/m²K for windows. Phil Parry, Head of R&D at supplier **Synseal Group**, said: "As with all our WarmCore products, we designed the inline patio door with PAS 24 standards in mind, developing a bespoke bi-directional locking system unique to us which is secure to these standards when locked not only internally but externally too. This is a specification consideration which is often overlooked, and we believe we have the only patio door which offers this guarantee with standard hardware, without the need for plunge bolts or additional hardware."

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Kalwall® creates a flight of fancy



Kalwall® translucent cladding from **Structura** has been used in a stunning project at Raleigh Durham Airport in North Carolina designed by architects Clark Nexsen. The brief was to transform/refurbish the aging 1981 Terminal 1. Nicknamed the 'blue box', the original rectangular building was constructed using blue corrugated metal making it dark and uninviting while the inside was haphazard with a poor passenger flow. In a £50m scheme, a stunning new terminal has emerged from a complete redesign with everything from the curbside to the interior space. On landside arrival, a Kalwall canopy system provides shelter and links access points while a Kalwall translucent facade is utilised to clad the main terminal building. Its unique ability to diffuse natural daylight into the interior means the new TSA screening facility now has complete privacy for the sensitive areas while bathing the interior with natural, glare-free light. Kalwall is frequently specified for this type of prestige project where high-end performance and quality need to be coupled with aesthetics, practicality and a long life-cycle.

www.structura-uk.com/kalwall

Senior's sleek finish adds style to Royal Enfield's new R&D facility



As one of the world's oldest and most famous motorcycle manufacturers, Royal Enfield is known for creating modern classics and the company's cool and contemporary style has inspired the design of a striking new technology centre in Leicestershire, which features a range of aluminium glazing solutions from **Senior Architectural Systems**. Designed by LE1 Architects, the highly glazed facade of the impressive two storey research and development facility has been created by leading fabricator and installer Unique Window Systems Ltd for main contractor Stepnell. With the need to maximise the flow of natural light whilst ensuring a comfortable internal working environment a key requirement, the attractive slim sightlines and enhanced thermal performance of Senior's popular SF52 aluminium curtain wall system was the perfect choice for the building's dramatic glazed entrance. To complete the fenestration package, Senior's slim profile thermally-broken SPW300 aluminium windows were also specified, alongside Senior's high-performance SPW500 and SPW501 aluminium doors which are ideally suited to high traffic applications.

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Off-site construction has facilitated the quick erection of an Early Years Centre for an Ofsted ‘Outstanding’ school. The building envelope was successfully completed in just over two weeks, with the help of the Kingspan TEK Building System of structural insulated panels.

The Kingspan TEK Building System panels have been fixed to the glulam frame on the walls and roof, which provided a secure building envelope that was then sealed with a breather membrane to make it watertight. Kingspan TEK Building System panels are light which ensured there was less structural stress on the school building.

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DRU Maestro 75 Tunnel gas fire reveals a world of possibilities



DRU has released an exciting new addition to its Maestro collection of contemporary gas fires. Maestro 75 Tunnel is a spectacular ‘see-through’ fire that can be installed into false chimneys, room dividing walls and other architectural features. With modern homes being increasingly open plan, it provides a solution for home owners as a room divider or to create a stunning focal point that can be appreciated from both sides of the living space. It features the impressive DRU Dynamic Flame Burner system, which generates exceptionally high and dense flames, together with the exclusive DRU Eco Wave app, allowing the owner to control the flame pattern and gas consumption from a tablet or smartphone. With the fire being constructed almost entirely from glass, its appeal is further enhanced by Clear View non-reflective glass, which renders the glass almost invisible. The Maestro 75 Tunnel includes the exclusive DRU Easy Release door system, allowing easy access to the interior of the fire for routine cleaning and maintenance. The balanced flue system of Maestro 75 Tunnel means that it can vented through an outside facing wall or through the roof.

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Optimum technologies for future-proofing homes

Architects can please builders, benefit end-users, and be kinder to the environment, by keeping up to speed with innovations in home heating, as Christian Engelke of Viessmann explains

The architect's responsibility to future-proof homes for inhabitants – at the same time as keeping construction costs down – isn't always easy. This is certainly a challenge when deciding upon technologies for indoor climate control.

The optimum options for energy efficiency, minimally disruptive maintenance, or ease of installation, are changing fast. Space-heating solutions can no longer be unthinkingly repeated from one job to the next without questioning whether they're still the best. The most popular of all domestic heat generators, gas condensing boilers, are a perfect example of this. Here are five future-proof technical features that environmentalists, end-users, installers and maintenance engineers will all appreciate.

New push-fit connections for quicker installation time

It's not only materials that cost money in house-building, but also labour. That's why architects' clients – builders – love labour-saving processes, and why they'd be glad to know that new tool-free push-fit systems now provide a boiler for operation in just five simple steps. By installing the boiler on the bracket of an installation jig, all heating water and domestic hot water pipes are already securely connected to the network without the need for clamps or soldering, and the only threaded fitting necessary is in the gas connection.

Self-calibrating automatic combustion controller

It's now also possible to eliminate the need to manually change the gas valve or gas injector if the boiler has to be changed over from natural gas to liquefied petroleum gas using automated controllers. These labour-saving benefits are gained by specifying a boiler with a self-calibrating automatic combustion controller.

Smart energy management

The integral control units of domestic boilers are beginning to give information detailed enough to help control energy consumption. Recent innovations include easy-to-use touchscreens providing continuous information about gas consumption and boiler power. Because historic data is easily retrievable, it can also be used to modify user habits and reduce energy costs.

Automatic flue gas adaptation

This feature ensures optimum boiler performance by adapting to variations in ambient air pressure. This matters because air flow into a boiler is affected by ambient air temperature and long flue runs, and adverse wind conditions can prevent the boiler from running at its desired output. Now there's a sensor that detects these fluctuations and adjusts the fan speed accordingly, ensuring that the boiler always runs at 100 per cent when required.

Dynamic pause time optimisation

A boiler's burner typically remains off after each operating cycle until a minimum time period has elapsed and the boiler water temperature has fallen below a predefined limit. This is known as the pause time. With dynamic pause time optimisation, however, an algorithm evaluates the rate at which the boiler water temperature increases during the switching interval, then matches pause times to this. This results in fewer cycles and pre-purge phases, extending burner runtimes during spring and autumn – and that means lower standby losses due to low average boiler water temperatures; improving efficiency, reducing energy consumption, and lowering emissions.

Christian Engelke is technical director at Viessmann



Space-heating solutions can no longer be unthinkingly repeated from one job to the next

Underfloor Air Conditioning upgrade



AET Flexible Space, a leading provider of underfloor air conditioning systems has recently completed commissioning new equipment installed in the refurbished office buildings at the Cathedral Hill Campus, Guildford. AET supplied

CAM-C 15 and CAM-C25 downflow units, and 25 TU4 Fantiles as the original equipment to Building 1000 Cathedral Hill in 2001. This was for the 286 m² Atrium area of the 1500 m² building; the occupier at the time was the serviced office specialist, Regus.

01342 310400 www.flexiblespace.com

Rotherham care home keeps warm



Sheffield based plumbing and heating firm Pro Plumbers 24-7 has installed a new heating system in a care home in Rotherham, including a BoilerMag XT industrial boiler filter. The filter has achieved outstanding results for the care home, ensuring the new heating system is clean and efficient by preventing the build-up of ferrous oxide and scale. The BoilerMag XT is ideal for large heating systems, providing heating system protection by preventing the build-up of ferrous oxide and scale, reducing energy bills, increasing boiler life, and reducing maintenance call outs.

0114 225 0600 www.eclipsemagnetics.com

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SLPB Run-back timer and thermostat

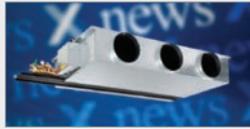
SLVT Run-back timer with adjustable thermostat

SLTI 7-day timer with adjustable thermostat

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 or visit our website: www.consortepl.com

New TROX PWX fancoil range redefines



TROX has announced the launch of a major new fancoil range – the TROX PWX Series – which brings to the market a 25 per cent to 35 per cent energy efficiency improvement over alternative models, with outstanding acoustic performance, and BACnet-enabled integrated controls packages as standard. The TROX PWX fancoils are supplied with specially-designed on-board controls packages, as standard. Two different STD controls packages are offered. To find out more information contact TROX by calling or visit the website.

01842 754545 www.troxuk.co.uk

Wi-fi wall mounted air con units



LG has launched a range of wall mounted air conditioning units with a plethora of new features including embedded wi-fi, and compatibility with its multi-split range. In addition, the 10-year compressor warranty that already applies to its single

split wall mount units is now extended to include the multi split range. They are all quick and easy to install and operate from as low as just 19Db, offering fast heating and jet cooling. Full details of the LG single split and multi split air conditioning options and LG's complete range of heating and energy solutions is available on LG's website.

HVAC.marketing@lge.com partner.lge.com/uk

Vortice ensure air quality for school



As Grange First School in Gosforth embarked upon a school extension project, ensuring good ventilation and air quality was an important element both for the comfort of the teachers and children and for their learning. The new classrooms for Early Years

have now opened and the Vortice heat recovery systems installed have proved a great success. The NRG units are all floor mounted as they are situated within resources store cupboards in the classroom, which have skylights to allow in natural daylight. This also means that the units are easily accessible to enable filter changes.

01283 492949 www.vortice.ltd.uk

Be relaxed about building services design



Innovative developments at Gilberts have created a room-by-room solution that combines appropriate ventilation with heat boost. The concept means that in effect, there is no need to provide radiators in the rooms in which the new option is fitted. Further,

because the solution is fitted at ceiling height, it liberates interior design and optimises use of floor space. Gilberts' unique Mistrale Fusion unit with an integrated LPHW coil. Just two standard MFS128 or one MFS256, will ventilate, and, warm, a standard 32 pupil classroom to all Regulatory requirements re air quality.

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Complete filtering solution to HVAC users



Four UK companies have recently teamed up to provide a complete filtering solution to HVAC users. RABScreen, Galebreaker, DHD Cooling, and GVS Filter Technology, all specialists in their fields, have come together to offer comprehensive filtering and filter screen systems for HVAC equipment. RABScreen external filter screens have become a proven method of protecting all air movement equipment saving energy, time and money through their external fitment. Further information is available from RABScreen by visiting the company's website.

info@rabscreen.com

SL single-zone controllers from Consort



Consort Claudgen has introduced three new wireless controllers which can be connected to one or multiple SL heaters to form an SL heating system. All controllers have comfort and setback temperature settings. The SLPB and SLVT controllers have a control button with status indicators and a 4-stage run-back timer. Additionally, the SLVT have temperature control buttons and a digital display to show the set temperature. The SLTI features a 7-day timer with three heating periods per day with an electronic lock to prevent tampering with controls.

www.consortepl.com

Excellence in Innovation Award winners



EHC is delighted to have won the Lanarkshire Business Excellence in Innovation Award for the second year in a row. The innovative EHC Solar PV Ready Electric Radiator system makes use of an intelligent controller to ensure when the occupant is not using any of the energy being generated by the PV panels it is diverted to either their Hot Water Cylinder or to EHC Ceramic Radiators. This innovative system provides a background heat during daylight hours until the main central heating system is required. The innovative radiators are the latest addition to the well-established and proven range.

info@electric-heatingcompany.co.uk

Is your building ready for winter?



As part of its commitment to winter safety and the provision of simply installed, energy efficient heat tracing products, Raychem has launched five videos to guide users through a number of common winter issues that can be

easily overcome by using the correct Raychem products. The videos are complemented by a winter safety blog which highlights winter problems and suggests the ideal solutions, and a landing page where customers can download an infographic giving eight steps to prepare their heat tracing system for winter.

lp.pentairthermal.com/winter-safety

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District heating systems



Paul Sands of Stokvis Energy Systems reflects on the reasons social housing landlords are returning to the use of centralised heating systems. In recent years our social housing sector has 'rediscovered' an appetite for district heating after decades of adverse publicity and seemingly cheaper alternatives had persuaded many landlords to replace the systems. There was no single Eureka moment but rather a steady stream of economic and technical reasons which emerged, all of which in some way pointed towards the benefits of district communal heating.

www.stokvisboilers.com

Panasonic provides healthy air



Panasonic's latest generation of ceiling-mounted PACi and ECOi 90x90 indoor cassette units have been developed to satisfy customer demands for an air conditioning system that provides energy savings, maximum comfort and healthier air. Panasonic's 90x90 indoor cassette unit boasts exceptionally efficient performance. The intelligent ECONAVI sensor technology is a key feature of the new 90x90 cassette, as it enables the unit to save energy and provide a healthier environment. The nano™ purification system within the cassette unit ensures that the air that is emitted from the unit is clean and fresh.

www.aircon.panasonic.eu

Breathing life into Centre of Excellence



Open plan has been taken to extremes in a European Centre of Excellence, but it's proved no obstacle for the ventilation strategy. To the M&E team's brief, air movement specialist Gilberts developed an advanced draught-free solution to the refurbishment and refit for Uber's European Centre of Excellence, using air movement principles more commonly employed in aircraft and Formula 1 engineering. Architects Healy & Partners designed a contemporary work space for the software house's premises in Limerick, with the open 'feel' extending to removing ceilings and creating symmetrical exposed services in the offices, meeting rooms and break-out areas. Consulting engineers Metsec and supplier Keane Environmental worked closely to develop a ventilation strategy that would ensure adequate airflow with a comfortable, draught-free internal environment. In response 160 of Gilberts' circular GSFE fixed swirl diffusers, specially fitted with coanda plates, have been installed throughout the four-storey building. The diffusers' 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.

01253 766911 www.gilbertsblackpool.com

Wood veneer grill ceiling

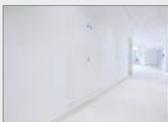


Hunter Douglas has supplied another premium ceiling to an award-winning office development in the heart of London. Hunter Douglas supplied a wood grill ceiling in 2015 when one of the floors at Cannon Place was refurbished. It was specified again when work was undertaken on floor six. Working with Kent-based installation contractor Integra Contracts, Hunter Douglas fulfilled the tight deadline to supply 450m² of

wood veneer grill in European oak. The Hunter Douglas wood veneer grill ceiling is very easy to install and can be demountable.

01604 648229 www.hunterdouglas.co.uk

Aspex supplies innovative doorsets



Aspex has secured two major contracts to supply doorsets to two of the largest high-tech companies in the world. The Novista Riser Steel doorsets have been fitted in Facebook's new London offices and Novista Riser Timber have been fitted in ARM's new global headquarters

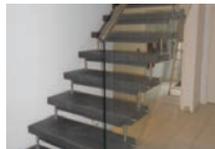
in Cambridge. The Novista Riser system is available with either a timber or steel door leaf and is suitable for a wide variety of projects with single, double, triple, and quadruple combinations available. It can be factory painted to any RAL colour or primed to allow on-site painting for precise colour matching with the adjacent wall.

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The case for precast staircases

Jeremy Milbank of Milbank Concrete Products looks at reasons for specifying concrete staircases and what factors to bear in mind when doing so



There is no such thing as a standard precast staircase

Precast concrete staircases have the twin compelling benefits of being highly durable and fireproof, as well as being able to accept a variety of finishes. This is why they are a popular option for architects in a wide variety of settings, however there are a variety of factors to bear in mind if you are considering going for precast concrete as an option for your project.

One of the key practical plusses on site is that precast concrete staircases eliminate the disruption associated with the formwork and propping needed for in situ flights, also because they are manufactured in factory controlled conditions they tend to be of higher quality. Precast staircases can be installed in a day and provide immediate access to upper levels for following trades.

There is no such thing as a standard precast staircase however. All are bespoke products, with risers, goings (the horizontal distance between the face of the first and last risers) and widths tailored to meet the requirements of a particular section of a building. Flights can be supported at each end on cross landings spanning the width of the stairwell, or have attached top and/or bottom landings. Some straight flights are manufactured with integral intermediate landings. Where headroom is not an issue, winders can be accommodated by thickening the intermediate landings, but where headroom is limited, full storey-height flights with swept soffits can be produced.

There are a plethora of choices, and which is right for a particular project will depend on the set of key parameters in each case. In the following paragraphs, some of the other important aspects of precast concrete staircase design and construction which need to be interrogated by specifiers are covered, to help with thinking around which option to pick.

Waist thickness is governed by the span to depth ratio together with the amount of cover to the main reinforcement needed to meet durability and fire resistance requirements.

The span to depth ratios, set out in Eurocode design codes, ensure that total deflection is limited to one two hundred and fiftieth span, and normally limits the part of deflection occurring after construction of finishes to the lesser of one five hundredth span or 20 mm. As a result, flights spanning between cross landings can have a thinner waist than those with attached landings.

Normally 20 mm cover is sufficient for concrete stairs inside buildings with one hour fire resistance.

Most precast stair manufacturers will have a selection of moulds on which a flight may be manufactured. These may include:

- Flights cast the normal way up, on ramps which are adjustable in pitch; these flights will have trowelled treads and ex-mould finishes to other surfaces;
- Flights cast on their side, so that only the string is trowelled.

Alternatively, the flights can be cast upside down; these flights will have a trowelled soffit and ex-mould finishes to other surfaces.

Curved stairs and storey height dog-leg flights can be awkward to transport and will require extra strapping to ensure that the load is secure when being taken to site. Also, because of the flight shape, it may only be possible to carry one or two units, which may be considerably less than the vehicle's maximum load capacity, hence haulage costs will be higher.

Each element of a precast stair may weigh over a tonne, so will require a crane to offload and hoist into position. Most elements are simply supported, although bolted fixings can be provided to cater for progressive collapse details. In the absence of intermediate supports, curved stairs will require temporary propping before forming a moment connection to the supporting structure, either by means of in-situ concrete stitches or welded angles.

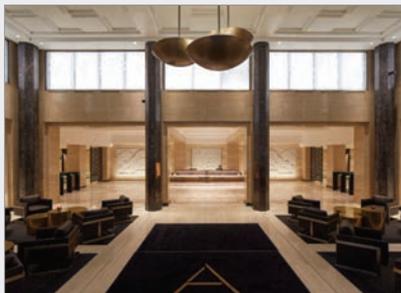
Jeremy Milbank is the technical consultant at Milbank Concrete Products

Mapei ceramic products installed at the Adelphi Bank, London

Mapei products have been used for the redevelopment of the Adelphi building, working with Stone & Ceramic Ltd to install travertine stone floor and wall cladding within the reception and lobby area, covering approximately 700m². Mapei products were also used throughout the toilet areas where approximately 850m² porcelain tiles were installed to both walls and floors.

The imposing Grade II Art Deco building located in London's West End, was built in 1938 and designed by Stanley Hamp. Heavily refurbished in the intervening years, Architects Aukett Swanke aimed to return the building back to a level of grandeur aligned with the vision of the original architect whilst improving upon existing office spaces.

A redeveloped ground floor reception incorporates feature artwork and retains the building's original Art Deco history and style. Mapei products were used to prepare the floor before wall and floor coverings were



Mapei products installed at The Adelphi © Edmund Sumner

installed. Mapei's Ultraplan Renovation Screed 3240 is a fibre reinforced self-levelling compound designed for renovating existing floor substrates and can be used in both commercial and domestic situations. Keraquick S1 adhesive in white, alongside Latex Plus and Ultracolor Plus grout in shades White (100) and Cement Grey (113)

were used in the reception area to install travertine flooring and Italian-sourced stone for wall coverings.

Porcelain tiling to the wall and floors in the bathroom and shower areas were also installed using Mapei's Keraquick S1 adhesive together with Latex Plus admixture to obtain a high performance, fast setting, and highly deformable adhesive. The bathroom areas were finished using Ultracolor Plus grout in shades White (100) and Cement Grey (113).

Mapei's fast drying flexible liquid membrane Mapegum WPS was installed in the project for waterproofing internal surfaces. The flexible anti-fracture membrane was applied before the ceramic and stone tiles as a rapid waterproofing solution. The ready to use product waterproofs so that floor covering may be installed after only 12 hours, proving advantageous where a fast track system is required.

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'1000 Companies to inspire Europe'



Offsite Solutions, has been recognised as one of the London Stock Exchange Group's 1000 Companies to Inspire Europe. The report is a celebration of the most dynamic, high-growth businesses across Europe. To be included in this prestigious

listing, companies need to show consistently strong revenue growth over a minimum of three years, significantly outperforming their UK peers. Earlier this year, the company announced a record order intake in the history of the business. This unprecedented performance is a 50 per cent increase on the same period last year.

www.offsitesolutions.com

Lyndon makes a splash with colour



After several years in the cold, interiors are starting to feel the heat from vibrant colours that are staging a comeback. At the

helm of this change is Lyndon by Boss Design who has unveiled a striking new range of coloured painted frame options for its acclaimed collections of wooden furniture. Whether it's to echo corporate branding in the workplace, or to simply add colour to a hospitality scheme, Lyndon has introduced seven refined painted frame colours to provide a welcome break from the neutral look that has reigned supreme for several years.

www.lyndon.co.uk

Architects Datafile website



The Architects Datafile (ADF) website is an online provider of past and present products and news items for the architect or specifier. architectsdatafile.co.uk is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they may require. From the website, you can find links to digital

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Just 48 hours from start to finish



Bradite have introduced a tough, fast drying new protective coating system for the commercial and industrial sectors that allows contactors to complete a job in just 48 hours from start to finish. Part One of the system is high performance he two-pack, water-based ES40 Floor Primer designed for use on interior dense, power floated, non porous concrete, ceramic and terracotta tiled floors. Part Two of the system is Bradite's new Rapid PW74 Coating and Floor Finish, which used in combination with ES40 Floor Primer can provide a traffic ready floor space in just 48 hours.

01248 600315 www.bradite.com

Camaro create homes away from home



Luxury vinyl tiles from Polyflor's Camaro PUR flooring collection were used to create homely accommodation for visitors at Staycity Aparthotels Paragon Street in York. Approximately 5500m² of Camaro PUR wood effect luxury vinyl tiles in the

White Limed Oak design were chosen. The updated Camaro flooring range includes 30 stunning, authentically reproduced wood and stone effects. Camaro flooring also features PUR polyurethane reinforcement which is cross-linked and UV cured to provide enhanced protection from everyday wear and tear.

0161 767 1111 www.polyflor.com

Polyflor heads to the seaside



Wood effect luxury vinyl tiles and hardwearing Polysafe safety flooring from Polyflor were chosen to create a nautical inspired interior design scheme for the brand new Copperfish bar, restaurant and takeaway in the seaside destination of Mumbles Pier in Swansea.

Heavy commercial Affinity255 PUR luxury vinyl tiles in the rustic Cross Sawn Timber design were used for most of the restaurant floor area, with random planks of the Aspen Pine and Flamed Chestnut designs added in to create a unique reclaimed timber look.

0161 767 1111 www.polyflor.com

Novus gets historic building shipshape



Novus Property Solutions has reconfigured one floor of the prestigious Cunard Building in Liverpool to create a modern training facility which reflects the building's heritage. The historic Grade II Listed building has long been a distinctive landmark in

Liverpool. Striking the balance between restoring the building's original features while creating a practical modern space was one of the main challenges of the project. The team unearthed some issues with the ornate coving and cornices. Novus had to carefully repair and preserve the coving before repainting.

www.novussolutions.co.uk

New Conglomerate tile flooring at Gatwick Airport is plane sailing



A major project to lay around 7500m² of new conglomerate flooring and screeding at Gatwick North Terminal has been completed by National Federation of Terrazzo, Marble and Mosaic Specialists (NFTMMS) members DMC Contracts and In Opera Group. According to Federation spokesperson Brian James, this is a perfect example of NFTMMS members successfully completing a project in a high profile, high footfall area. To ensure both the quality of the installation and that testing was undertaken at all stages, DMC Contracts introduced Inspection and Test Plans which were administered for each bay of work that was completed. The tile chosen for the flooring by the client, Gatwick Airports Ltd, was manufactured by fellow NFTMMS member, In Opera Group, and has been used at Gatwick for more than 15 years. The installation processes involved screeding, incorporating movement joints, applying adhesive and laying the tiles. Throughout the installation the floor was thoroughly checked to ensure that there were no sudden irregularities, undulations, steps, ridges, bumps, ripples, rocking or lipping. The main contractor for the project was Balfour Beatty.

www.nftmms.co.uk

Accessible guidance



With the growing need to make homes adaptable so occupiers can remain independent, and in their own homes, new guidance is aiming to help get it right. 'Design Guidance & Considerations for a Domestic Accessible Toilet' has been produced and published by Closomat. The white paper gives advice to ensure that the key aspects affecting the functionality and practicality of a bathroom/wetroom and toilet, as occupier needs change, are considered. It even addresses the details as far as both new build and retrospective adaptation, in terms of legislation and 'best practice'.

0161 969 1199 www.clos-o-mat.com

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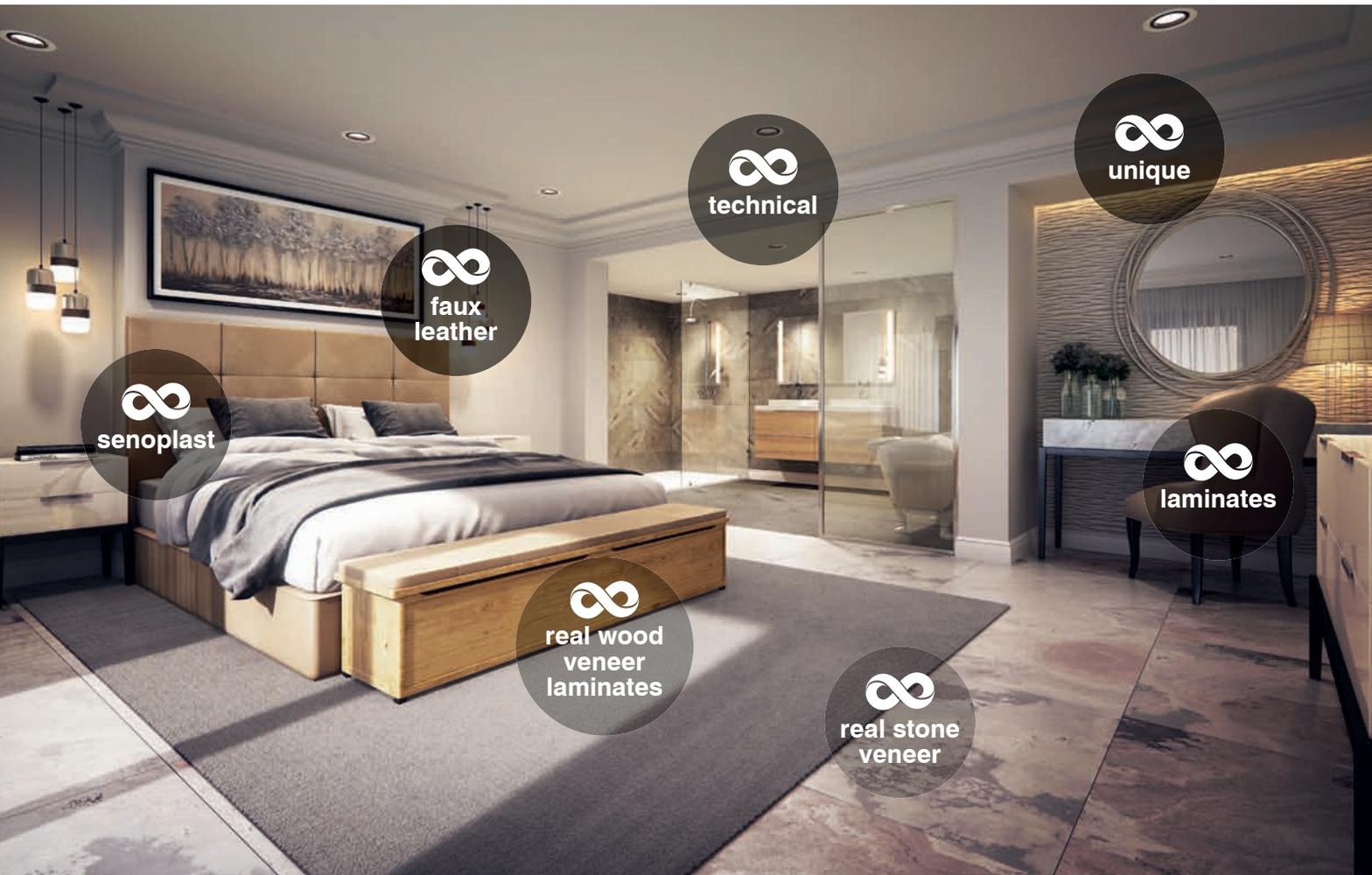


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New Effast Pro Flow[®] Butterfly Valve

Polypipe, a leading manufacturer of high quality valves and fittings, has launched the Effast Pro Flow[®] Butterfly Valve range.

Key features of the Effast Pro Flow[®] Butterfly Valve

Each Pro Flow[®] Butterfly Valve features a certified EDPM main gasket that covers the entire body, protecting it from chemical substances. The design of the valves' internal profile also ensures a completely secure seal. All valves are actuator ready in accordance to ISO5211, easy to actuate without extra components, and require just two bolts to disassemble the handle.

The closing system of the valve includes a safety lock which offers fine tuning capabilities thanks to the regulating plate, which delivers 19 different position options for the disc, for precise flow regulation. The regulating notch plate/handle can also be removed for the mounting of an electric or pneumatic actuator, or for the fitting of a manual gearbox.



The T Series

The T series valves are PPH butterfly valves. They feature a PPH glass fibre reinforced body that offers high mechanical resistance and smooth operation across a wide range of temperatures, from -15 up to +95 degrees. The valve's High Temp PPH disc boasts a unique shape that increases the disc's resistance to abrasions and stresses, making this product particularly suited to heavier industrial applications involving aggressive fluids. The T series Pro Flow[®] Butterfly Valve can be supplied with a FPM gasket upon request.

The P Series

The P series valves are PVCu butterfly valves with a patented high flow PVCu disc with an optimised profile. This design allows for a linear flow and greater flow rate in comparison to traditional discs, delivering one of the greatest flow rates on the market. The external surface of the P series valve is free from edges and ribs, reducing pressure drop, whilst ensuring resistance to corrosion at varying temperatures. The P series valves can also be supplied with a FPM gasket upon request.

The H Series

The H series valves feature a strong PVCu disc and body, and a zinc plated carbon steel stem, making them resistant to chemical stresses and to corrosion at varying temperatures. Like the P series valves, the H series products feature an offset disc which allows for a linear response and excellent flow rate regulation. For more information contact Polypipe by calling.

01622 795200 www.polypipe.com

Plaswood gates to complement fencing



Plaswood has launched a range of gates to complement its existing and extensive range of environmentally friendly fencing products. Made from 100 per cent recycled plastic, Plaswood gates offer a

smart, stylish and green alternative to traditional timber gates. Unlike timber, Plaswood products are impervious to the influence of water or damp and therefore will not rot, splinter, crack or degrade with age, offering purchasers a trouble and maintenance free alternative to timber products. Available in jet black and earth brown the single and double gates come with a galvanized frame.

0333 202 6800 www.plaswoodgroup.com

No more Class 0 & 1 spread of flame



Due to recent fires in high rise buildings, finally, we are getting enough attention to the problems surrounding fire spread within cavity voids of cladding systems. Because of this, more and more Architects and Contractors are looking to fit suitable protection within their cladding system.

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The right surface drainage channels for the job at T2 Trafford Point

Situated near to the M60 and M62 motorways, T2 Trafford Point is a newly developed distribution facility on the edge of Trafford Park, Manchester. The 7712m² warehouse has upwards of 1440m² associated office space including an under-croft and reception area. The facility features cycle parking, a 91 space, 3500m² office car park/access road and a 7400m² service yard for manoeuvring, parking, loading and unloading Heavy Good Vehicles' (HGVs).

Surface drainage required at T2 Trafford Point office car park access road and service yard required the specification of high capacity and very robust channel systems capable of withstanding the daily passage of cars as well as the massive twisting forces exerted by the tyres of manoeuvring HGVs.

Hauraton RECYFIX® MONOTEC 200/450 channels were installed in the asphalt car park. With a nominal grating width of 200mm (Channel internal



dimension) and an overall height of 450mm a channel provides a cross-section of 746.1cm², so the 134 metres of channel installed in the car park has a total water capacity of just over 9996 litres and a loading category of up to Class D400. The MONOTEC one metre long channel component is of a sturdy monolithic design where the HEELSAFE grating and the tongue and groove linking system are integral to the tough, virtually unbreakable polypropylene (PP) moulding.

In addition to the car park drainage, two

sizes of RECYFIX® HICAP® channels were also installed in the concreted service yard; 78 metres of HICAP 150 and 120 metres of HICAP 300. Both PP moulded channel sizes were supplied with factory fitted 28mm wide slotted ductile iron gratings for Class F900 loading category. The 198 metres of channel installed in the service yard has a total water capacity of just over 24156 litres.

With a maximum channel weight of 23,4kg per unit, both the RECYFIX® MONOTEC and HICAP channels were well within the weight limitation for manual lifting so made the contractors job on site just that little bit easier. For a given area to be drained, these ranges of high capacity channels also mean fewer channel runs, less excavation work, reduced foundation concrete needed and substantially less after care; benefits appreciated by the groundwork contractor, PP O'Connor and site manager.

01582 501380 www.hauraton.co.uk

Balustrade in service at new fire station



Improving accessibility is a recurring theme in the specification of Neaco's products and so it proved again when the company's balustrade was called into service for entrance ramps at the new cutting-edge Hull Central Fire

Station, designed by Jefferson Sheard Architects. Jefferson Sheard Architects' Project Lead, Mark Fannon commented: "Health and safety and accessibility are always key drivers on all of our designs. Neaco's balance of form and function enabled us to fulfill our brief with a cost effective solution, whilst achieving the desired aesthetic."

www.neaco.co.uk

Decorative Wall & Bollard Lighting



Luceco Decorative Wall and Decorative Bollard LED luminaires are ideal for modern and creative exterior lighting. Suitable for many applications, this luminaire range is also at home in residential and domestic settings. 9W and 10W respectively, equivalent to a 26W PL lamp, both luminaires provide indirect light distribution and 30,000 hours of maintenance free, energy efficient exterior illumination. Decorative Bollard comes ready for root mount installation and has an attractive anthracite IP65 aluminium housing with polycarbonate optic providing a stylish and sleek appearance.

01952 238100 www.luceco.com

'Legendary' Resiblock stabilises and protects



During the Summer of 2017, John O'Flynn Developments utilised Resiblock's 'Legendary', Resiblock '22' joint stabiliser, to stabilise and protect paving at a prestigious housing development in Oxfordshire. Bloor Homes used circa 1600m² of Charcoal-coloured Concrete Block Paving as the roadway for this newly developed estate. As such, Resiblock '22' was recommended as the sealer of

choice, as it's sand stabilisation capabilities will prevent paving failure induced by sand loss, caused by the constant trafficking of the area, environmental elements and cleaning regimes.

custserv@resiblock.com

Yorkshire grown Laurel Hedge Blocks



The ultimate in Instant Hedging, these heavy Laurel hedge blocks have been trimmed twice per year for many years making them so dense that they cannot be pushed through and, unlike a fence, they cannot easily be climbed and won't blow down, offering instant privacy and maximum security. Grown in Yorkshire, so guaranteed to be hardy and free from imported diseases. Available sizes range from 150-175cm tall (approx 90-100cm wide) to 300-350cm (approx 120-160cm wide – mechanical handling essential). For more information please visit [Wykeham Mature Plants](http://WykehamMaturePlants.com) website.

www.wykehammatureplants.co.uk

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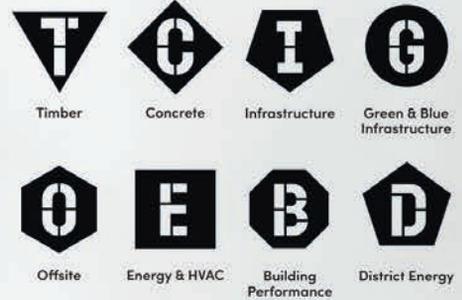
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