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THÉODORE GOUVY THEATRE, FREYMING-MERLEBACH Architects Dominique Coulon & associés produce some dramatic contrasts to help regenerate a former mining town on the French-German border

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FROM THE EDITOR



seminar at the interiors-focused 100% Design trade show, held recently at London Olympia, saw Karen Cook, partner at PLP, raise a seemingly self-evident but actually increasingly important statement. It should be a given that we would provide places that make people want to go to work, however arguably most of our workplaces don't seem to put the focus on creating a real sense of environmental quality for staff, rather on delivering the basics.

But, in saying "the idea behind 22 Bishopsgate" (PLP's soaring new glass tower in the City) is that "you should want to go to work," Cook was highlighting the challenge for big corporates, that thanks to technology, their staff can do a large amount of their tasks in any location, providing there's decent wi-fias Cook says, "you can technically work anywhere". However she added an interesting note that in industries such as architecture where team working is paramount, operating remotely from the mothership HQ (no matter how practically efficient in certain respects) "is not as productive as you might think."

With the UK's focus likely to intensify on ensuring business are more productive, as we face leaving the EU (we currently lag behind countries like France and Germany on productivity by around a quarter), there could be an increased focus on how to ensure people are in the right place, at the right time. This is unlikely to see a clampdown on remote working as it is bringing huge flexibility benefits, not least avoiding huge commutes. It might instead mean that chiefly collaborative industries, of which architecture is one, will try to redress the balance somewhat to ensure they are maximising their strengths.

While Cook asserts that "most of us work in teams", for the major commercial clients who will take space in 22 Bishopsgate, presumably this is also true some of the time at least. However there is a bigger problem for them, namely trying to attract the best staff internationally. While they may need to be in the office frequently for team working, empowered (and valued) staff can also now be highly mobile, using coworking space for example - meaning, they have choices.

The quality of their headquarters in terms of multiple wellness factors (light, temperature, air quality, views, location, material quality, sustainability, the list is endless), will more and more contribute not only to staff's desire to join a firm, but also to whether they will choose to work there regularly.

In what could increasingly be a buyer's market post-Brexit, EU bases may prove more attractive to financial sector employees with transferrable skills. This is another key driver in the focus on wellness, as not just a 'nice to have', but an essential business driver. The Crown Estate, which has achieved the first Platinum WELL standard for its London HQ, is showing the way. Gaining a benchmark which will be recognised internationally, it rewards the firm for already doing the right things to the highest standards. But it's also the badge of quality to attract future recruits to work within its walls, as well as remotely.

James Parker Editor



ON THE COVER

Théodore Gouvy Theatre - a symbol of renewal in a deprived former mining town on the French-German border.

For the full report on this project, go to page 38 Cover Image © Eugeni Pons

Kuma's V&A Dundee opens



V&A Dundee, designed by Japanese architect Kengo Kuma, recently opened revealing its light-filled interiors to visitors for the first time.

The museum commented: "As Scotland's first design museum, V&A Dundee tells a global story, investigating the international importance of design alongside presenting Scotland's outstanding design achievements."

V&A Dundee took three and a half years to complete and it stands at the centre of the £1bn transformation of the Dundee waterfront, once part of the city's docklands. With its complex geometry of precast planks, their design inspired by the cliffs along the north-east coast of Scotland, the building stretches out into the River Tay – as "a new landmark connecting the city with its historic waterfront," and a new major cultural development for Scotland and the UK.

Philip Long, Director of V&A Dundee, said: "The opening of V&A Dundee is a historic occasion for Dundee, for the V&A, and for the many people who played a vital part and supported its realisation. This is a very proud moment for all involved. "

He added: "V&A Dundee's aspiration is to enrich lives, helping people to enjoy, be inspired by, and find new opportunities through understanding the designed world. After years of planning, we are thrilled at being able to celebrate the realisation of the first V&A museum in the world outside London.

"The museum's light-filled wooden interior and impressive spaces inside have been designed to provide a warm welcome to visitors, described by architect Kengo Kuma as a 'living room for the city'. We are all very excited indeed that we can now welcome everybody into this remarkable new museum."

Kuma commented: "The big idea for the V&A Dundee was bringing together nature and architecture, to create a new living room for the city. I'm truly in love with the Scottish landscape and nature. I was inspired by the cliffs of north eastern Scotland – it's as if the earth and water had a long conversation and finally created this stunning shape."

The delivery of the project has been overseen by the "innovative founding partnership" of the V&A, Dundee City Council, the University of Dundee, Abertay University and Scottish Enterprise. The £80m project was funded by the Scottish Government, The National Lottery, Dundee City Council, the UK Government, Scottish Enterprise, University of Dundee, Abertay University and a successful private fundraising campaign.

Scottish Secretary David Mundell said: "Quite simply, V&A Dundee is the biggest addition to Scotland's cultural scene this century. It is a hugely exciting project – an instantly iconic new building on Dundee's waterfront housing a treasure trove of artefacts."

"I've no doubt it will draw millions of people from Scotland and around the globe in the years to come". The UK Government provided £5m to help deliver the project.

TAYLOR MAXWELL

TEMPLE GARDENS

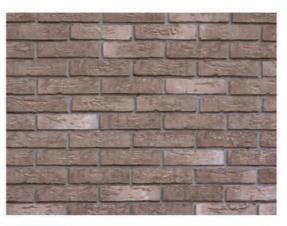




This development has restored and reopened the pub, bringing new life to the village centre and demonstrating that contemporary architecture, inspired by the vernacular, can achieve design which feels rooted in place without resorting to pastiche.



Set on the northern edges of the Mendip Hills in Somerset, Temple Gardens is a regional **RIBA award winning development** designed by Cheltenham based architects Archio.





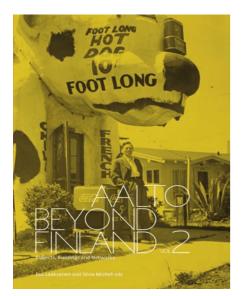
Comprising of nine new houses and ten hotel rooms around a communal landscape, the development has transformed the village centre of Temple Cloud.

The project utilises multiple facing brick types, rubble elevations, dressed stone and projecting cast stone window surrounds, producing a highquality finish that compliments the local vernacular. The specific design that combined a grey buff and yellow multi stock brick supplied by Taylor Maxwell, created a distinctive and unique character, suited to the local rural landscape.

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Alvar Aalto review

Alvar Aalto (1898–1976) was "one of the most internationally oriented Finns of all time," say the publishers of a new book 'Aalto Beyond Finland Vol 2 – Projects, Buildings and Networks.' It features "internationally renowned" Aalto experts discussing Aalto's work beyond Finland, through his projects, buildings and networks.

The critical essays are complemented by an overview of Aalto's travels abroad based on archival research by Teija Isohauta as well as a comprehensive illustrated list of all Aalto's known projects and buildings abroad edited by Esa Laaksonen and Silvia Micheli.

The book, published by Rakennustieto Publishing the partner publication to 'Aalto Beyond Finland. Architecture and Design' (2015), launched at the 2nd Alvar Aalto International Seminar in Rovaniemi.

EVENTS

AWARDS

Structural Awards 2018 16 November, London www.istructe.org/structuralawards

EXHIBITIONS

Smart Art / Smart Cities 4 September - 29 October, London www.newlondonarchitecture.org/whats-on

BOOK

Red: Architecture in Monochrome

'Red: Architecture in Monochrome' is described as a "visually rich exploration into the beauty and the drama of red in the built environment,"and a "ground breaking survey" that demonstrates the colour red's significance in both traditional and cutting edge architecture around the world.

Featuring over 150 buildings spanning almost one and a half thousand years of architectural history, the book "explores the extraordinary diversity of the colour red in architecture," commented the publishers Phaidon. Discover a vermillion-painted temple in Kyoto dating from 711 AD, a medieval City Hall in Germany built the Red Fort in Delhi, vernacular farm buildings in Scandinavia, a bridge in Vietnam, traditional cottages on the English coast, and temples in India.

The book showcases works by some of the world's most notable architects including Daniel Libeskind, Jean Nouvel, MVRDV, Bjarke Ingels, Steven Holl, Frank Gehry and Tadao Ando as well as esteemed artists who explore architectural themes such as Yayoi Kusama, Anish Kapoor and Do Ho Suh. Each entry is illustrated with photography and accompanied by text that explores the function of red in the building's design. The opening essay by Stella Paul introduces the importance of the colour red in art, social history and architecture, providing a wider historical context to this eye-catching colour.

The book's architectural content is interspersed with classic song lyrics and insight-

FESTIVALS

World Architecture Festival 28 - 30 November, Amsterdam www.worldarchitecturefestival.com

SEMINARS

Ethics in Architecture 17 October, Reading www.architecture.com/whats-on

Designing For A Changing Population 30 October, London www.architecture.com/whats-on



ful quotes relating to the colour – from famous names such as Bill Blass, Carole King, Christian Loubotin and Henri Matisse – provide unique perspectives on how red has influenced their work, while also highlighting its impact throughout popular culture.

Following the success of 'Black: Architecture in Monochrome', this visual compendium is a continuation of the Architecture in Monochrome series. Designed to be "perfect for architecture aficionados and all those who appreciate the aesthetics of great architecture", 'Red: Architecture in Monochrome' demonstrates how red is both one of the most traditional – and the most contemporary – colours in architecture.

TRADE SHOWS

UK Construction Week 9 - 10 October, Birmingham www.ukconstructionweek.com

Education Estates 16 - 17 October, Manchester www.educationestates.com

London Build Expo 23 - 24 October, London www.londonbuildexpo.com



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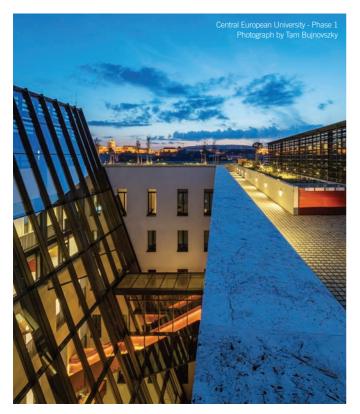
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AWARDS

RIBA International Prize dominated by education

The four buildings in the running for the RIBA International Prize 2018 have been announced. The prestigious prize, which is awarded every two years, rewards the "most inspirational and significant new buildings across the globe and celebrates international architectural talent," commented RIBA.

The shortlist for the RIBA International Prize 2018 is as follows:

- Central European University (Phase 1), Budapest, by O'Donnell + Tuomey – a new university campus in the heart of Budapest that successfully links old buildings and courtyards to create vibrant new spaces.
- Children Village, Brazil, by Aleph Zero

 Rosenbaum a new boarding school on the edge of the Amazon, offering education and accommodation to the children of rural farm workers.

- Toho Gakuen School of Music, Tokyo, by Nikken Sekkei – a new virtuoso music school designed to visually connect, rather than isolate, practising musicians.
- Il Bosco Verticale (Vertical Forest), Milan, by Boeri Studio – the second of two residential towers in Milan in which trees and humans coexist, designed to set a new standard in sustainable housing.

The four buildings have been selected following a rigorous judging process, from a long list of 20 exceptional new projects in 16 countries.

The shortlist will now be finally judged by a distinguished Grand Jury chaired by Elizabeth Diller, partner of acclaimed US firm, Diller Scofidio + Renfro, alongside Joshua Bolchover, co-founding director of Rural Urban Framework; Gloria Cabral, partner of Gabinete de Arquitectura; Peter Clegg, senior partner of Feilden Clegg Bradley Studios and Kazuyo Sejima, founding partner of SANAA.

RIBA president Ben Derbyshire said: "The marker of a truly successful building is the positive contribution it makes to its local context and people. All four of these projects thoroughly demonstrate visionary, innovative thinking and excellence of execution, and positively impacts the communities they have been designed for."

"While these four buildings are in different time zones and continents, like all great architecture they share common qualities – of particular note is their sensitivity to their local environment and their responsiveness to the particular needs of the people that will use them. I am pleased that three of the four projects are education buildings, providing innovative and inspiring spaces for young people to live, learn and achieve their potential. The fourth scheme is a bold approach to the greening of high density urban housing that is already inspiring other cities."

"I look forward to seeing which building the distinguished Grand Jury selects as the winner later this year."

Details of the four buildings shortlisted for the RIBA International Prize 2018 are on the facing page.



Central European University, Budapest

As part of a major redevelopment of the Central European University in Budapest, the architects have added a new limestone-clad building to a street in the heart of the Hungarian capital. Drawing on the city's unique vernacular, the new design skilfully knits together several historical buildings and courtyards to create an internal sequence of spaces and routes. The project brings a total of 35,000 m² of new space to the inner-city campus, and consists of a new library, an auditorium, teaching and learning facilities, study rooms, and a cafe.

Children Village, Brazil

Located in a rural area on the outskirts of the Amazon, Children Village provides boarding accommodation for a total of 540 senior school children at the Canuaña School. The project is largely constructed from locally-sourced timber, and the Brazilian architects exploited the abundant natural resources surrounding the site in an innovative way, thus promoting both economic and environmental sustainability.

A variety of interacting spaces were designed together with the students in

order to improve their quality of life and refine the bond between them and the school. Children Village is an exemplar of how architecture can stimulate its users, as well as the surrounding community, in a region rich in natural resources but poor in educational opportunities.

Toho Gakuen School of Music, Tokyo

Toho Gakuen School of Music is a famous music college in the suburbs of Tokyo. This new open-plan campus replaced an earlier building on the site, which had a conventional arrangement of cellular practice rooms along a corridor with no natural light. Conversely, this virtuoso piece of architecture has an almost villagelike quality with independent teaching spaces, neat communal spaces, and lots of natural light thanks to exposure to the exterior.

Guided by the imperative of optimum acoustics, the Japanese architects have ensured that each lesson room has a proportion and size requested by each instrument, and is arranged with a void space in between, such as a corridor, to provide acoustic separation. As a result, music from each room can be heard in the corridor, but in the rooms, there is silence.

Vertical forest, Milan

Vertical forest is the second of two residential towers in Milan representing a new approach to high rise buildings in which trees and humans coexist. The project consists of two towers of 80 m and 112 m, planted with almost 17,000 trees, shrubs and plants. This provides the equivalent greenery of 20,000 m² of forest and undergrowth.

A project of urban reforestation, Vertical Forest has wide-reaching environmental benefits. Not only does it increase biodiversity by repopulating the city's flora and fauna, but it even creates its own microclimate to filter fine particles and improve air quality. The building also presents a smart solution to control urban expansion, with each tower constituting the equivalent of a peripheral area of single family houses and buildings of around 50,000 m².

Announced in late November 2018, the 2018 RIBA International Prize will be awarded to a building that exemplifies design excellence, architectural ambition and delivers meaningful social impact. The prize is open to any qualified architect in the world, for a building of any size, type or budget.



A 'homely' mental health scheme

According to TODD Architects, at first glance the new £2.8m Rathview Mental Health Facility in Omagh is not what you would expect. "In fact, it would be hard to know it was a healthcare building at all. And that's the point," said the practice.

Its height, whitewashed walls, slate clad appearance and rural setting all combine to lend it a "homely domestic feel". Completed for client Western Health and Social Care Trust, TODD Architects carefully designed Rathview to break down traditional, preconceived ideas of mental health facilities, offering a "fresh, residential approach" in a peaceful countryside setting.

Situated a rural greenfield site on the outskirts of Omagh, the new 1169 m² facility contains a 12 bed discharge unit and a six bed recovery unit, arranged around two courtyards. Using what's claimed as an innovative design, the unit will increase the range of community-based mental health services, helping those with complex mental health problems on their path to recovery and independence.

Project architect Liam Lennon

commented: "Rathview takes its name from a nearby 'Rath' or ringfort; an ancient Irish chieftain's residence dating back to the Iron Age. Our design approach maintains a dialogue with local history and this facility reflects a contemporary take on the traditional Ulster 'Clachan' – a homestead formation in today's terms. Its welcoming vernacular is a series of defined but linked built elements, consciously grouped, and reading together as one composition."

One storey throughout, the plan design places all habitable rooms on external walls, facing either directly out to the surrounding countryside or onto an internal courtyard, maximising natural light and views of a calm external environment.

The Rathview Mews supported living unit focuses on rebuilding residents' confidence and independence by providing a domestic environment. Twelve individual, one-person apartments are laid out around a central courtyard, with two activity social spaces and a training kitchen.

The six bed Rathview House offers short term care for clients, and the en-suite rooms are specifically designed to balance resident privacy with essential observation and access. Sensitively arranged around a fully enclosed courtyard, the unit includes staff accommodation and communal areas, including a social living room, a TV room, treatment rooms and an ADL room.

The design uses a series of pitched roof forms with flat roofed, predominantly glazed, circulation spaces to visually reduce the building's mass and scale, helping it sit "demurely" in the Omagh countryside. The design also enhances client and visitor experiences by creating views 'to', 'from' and 'between' the internal landscaped courtyards and external surroundings. The restrained palette of materials has white rendered exteriors contrasting against grey slate roofs and wall cladding, with feature elements of brick and timber softening against aluminium framed windows. The cedar wood cladding of the internal courtvards offers a warm feel with glazed infills to encourage as much natural light as possible to flow into the interiors.

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WORLD ARCHITECTURE FESTIVAL

Festival lineup announced

Rem Koolhaas, world renowned Dutch architect and founder of OMA, will give the closing keynote address at the World Architecture Festival (WAF), which is being held in Amsterdam on 30 November 2018. He will follow a "stellar" line-up at the three-day event, which runs from 28-30 November, including architects Sir David Adjaye, Jeanne Gang and Sir Peter Cook.

WAF's programme takes advantage of its new venue, Amsterdam. Various speakers will outline the city's dramatic transformation and how architecture is contributing to it, while Dutch architecture and design luminaries confirmed to speak include Francine Houben, founding partner and creative director of Mecanoo; Kees Christiaanse, founder of KCAP Architects and Planners; and Caroline Bos, co-founder of UN Studio. In keeping with the global focus of the event, they are joined on the speaker's roster by established international architects including Li Xiaodong, Chad Oppenheim, principal

TURNOVER

tp bennett announces record growth

Award-winning international design practice, tp bennett has reported a record turnover of £29.7m and an 3 per cent increase in profit in its financial year ending March 2018. This follows a period of strong growth, strategic appointments to its board and significant investment in its people and new technologies.

In September 2017, the practice appointed Liz Catchpole as non-executive chairman to contribute to the development of the business. It also promoted David Blair, Leigh Dimelow and Nick Hirst as principal directors, who joined the board to create further opportunities for the firm. of Oppenheim Architecture + Design and John Wardle, principal of John Wardle Architects.

The INSIDE World Festival of Interiors, which is co-located with WAF and takes place concurrently in Amsterdam, has also revealed four keynote speakers that will be headlining at the event: India Mahdavi, principal of India Mahdavi architecture and design; Christina Seilern, founder of Studio Seilern; Eva Jiricná, partner of AI – Design; and Maria Warner Wong, cofounder of WOW.

As well as architects and designers from leading global practices, the diverse speaking programme for both WAF and INSIDE includes commentators from leading educational institutions, city planners and media organisations.

This year's programme responds to the Festival's theme, 'Identity' and will include speeches, discussions and debates examining the complex and deep-rooted relationship between architecture, design and identity. Presentations and talks on



Various speakers will outline Amsterdam's dramatic transformation and how architecture is contributing to it

the event's main stage and the festival hall stage in Amsterdam will analyse not only "how architecture can express personal, community, civic and national identity, but also how buildings and places increasingly need to contend with issues around ethnic or gender identity".

The festival's speaking programme will culminate with a live interview with Rem Koolhaas conducted by architectural historian and cultural theorist Charles Jencks, focusing on the current and future notions of global architectural identity.

Providing architecture, interiors and town planning, tp bennett has increased its portfolio in its key sectors of residential and residential-led mixed-use development; whilst continuing its success in interior fit out, commercial offices, student accommodation, hotels and retail-led mixed-use. It has broadened its geographical reach across the UK, with its Manchester office hitting £1m turnover.

Notable projects that have contributed to its success include the BCO awardwinning Porter Building and Bourne Business Park, as well as the 1,200student bedroom scheme, Garden Halls in Bloomsbury. Work for corporate occupiers also remains strong with completed projects for CBRE in Manchester and TfL in London, which recently won the Mixology Public Sector Project of the Year. Projects have also completed for Investec and DLA Piper and are underway for major technology companies across Europe, the Middle East



and North America.

Yvette Hanson, principal director at tp bennett said, "We have experienced a period of growth, thanks to a dedicated and highly skilled team, and are now in a strong and stable position for the future. We have and continue to work on world-class projects and our integration of new technologies such as BIM, Virtual Reality and 3D printing will only enhance our capabilities further, driving efficiency, sustainability and the highest quality design – all of which are at the heart of our philosophy."

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INTERWOVEN VINYL FLOORING

ZHA billboard unveiled



Zaha Hadid Design was commissioned by JCDecaux to "redefine the design language of billboards, and provide a unique communications channel in the capital that integrates contemporary design and digital media."

The Kensington, located on West Cromwell Road in west London, is the first billboard by the practice. The Kensington's high resolution 8 mm pixel pitch screen (26 x 6 metres) will provide visibility and maximum quality of display for brands, framed by the (30 x 9 metres) steel struc-

FIRE

RIBA launches consultation on new fire safety guidance

The Royal Institute of British Architects (RIBA) has launched a consultation on a new RIBA Plan of Work for Fire Safety.

Following the devastating fire at Grenfell Tower in June last year, the RIBA said it has consistently called for changes to building regulations including the strengthening of requirements on cladding, sprinklers and means of escape, and clarification on the responsibilities of those who design, construct and manage buildings.

In Dame Judith Hackitt's 'Independent Review of Building Regulations and

ture. Set in an area that has been landscaped to enhance the local environment with the planting of trees and greenery, The Kensington features integrated lighting that increase visibility for pedestrians.

"Both a civic gesture and a promotional medium, the intertwined, looped ribbon design expresses the dynamism of pedestrian and vehicle traffic movements that intersect at this important London junction," said Melodie Leung, senior associate at Zaha Hadid Design. "The

Fire Safety', which was commissioned by the Government following the Grenfell Tower fire and published earlier this year, she called for "greater transparency, accountability and collaboration" from industry; the RIBA said the new Plan of Work for Fire Safety "directly addresses this call".

The document's 'best practice process map' has been designed to make clear the roles, responsibilities and deliverables for fire safety at each stage of a building's lifecycle. It "places Hackitt Review recommendations within a recognised industry framework," and has been designed to apply to a wider range of building types and scales. Fire safety considerations will be embedded from the start by involving Building Control, the Fire and Rescue Authority, building managers and tenants more closely from an early stage.

The RIBA added: "Following the document's recommended process will strengthen project team accountability through new statutory duties based on the stainless steel ribbon twists as it encircles the screen, defining a varying silhouette when seen from different viewpoints."

"It will be fascinating to see how brands respond to this sculptural digital canvas. This has been a unique collaboration with JCDecaux to develop new possibilities for media platforms; reimagining the billboard as public art," continued Leung.

Spencer Berwin co-CEO of JCDecaux: "Design is at the heart of JCDecaux's DNA, and we are proud to have worked in partnership with Zaha Hadid Design to bring this exceptional vision for a contemporary advertising structure to London. This project underlines how JCDecaux works with the world's leading designers to transform cityscapes for the benefit of the public and the clients."

"We would like to pay tribute to Zaha Hadid's commitment to design excellence and to her team for bringing our joint vision to fruition and to thank our launch partners for their commitment to this unique new advertising structure. We're delighted to have Audi and Coty as our first brand partners, using this powerful new platform as part of their launch strategy for the Audi Q8 and CK Women," said Berwin.

CDM 2015 model. The rigorous review and sign off procedures, and independent inspection, will also help to safeguard fire safe specification and detailing."

RIBA director of practice Lucy Carmichael said: "The Plan of Work for Fire Safety is a vital resource for design and construction teams and building owners, providing much needed clarity on fire safety roles and responsibilities at every stage of the process. We cannot wait for longer term regulatory change to come into force, the construction industry needs immediate guidance. I encourage all RIBA members and other industry professionals to provide detailed feedback on this draft document, which we hope will be an important step to further strengthen consideration of fire safety in all aspects of building design, procurement, construction and maintenance."

The consultation for the draft RIBA Plan of Work for Fire Safety closed on 11 October 2018.

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WELLNESS

Crown Estate HQ achieves first European WELL platinum certification

The International WELL Building Institute has awarded WELL Platinum Certification to The Crown Estate's head office at No 1 St James's Market. The Platinum certification, the first in Europe, was awarded through the Well Building Institute's WELL Building Standard.

WELL is the global building standard designed to enhance people's health and wellness through the built environment. Created through seven years of research and development working with leading physicians, scientists, and industry professionals, the WELL Building Standard marries best practices in design and construction with evidence-based scientific research.

There are only 10 platinum projects globally, including in the US, Australia and China.

EDGE Architecture and Design worked closely with The Crown Estate to deliver an 'environment for today and tomorrow' by designing around and empowering their three principles of progression and professional standing, maximization of collaboration and agility and by placing people at the heart of the business. The result is a WELL workplace environment of the highest performance and certification.

Rachael Cadey, EDGE founder and project principal said, "EDGE was commissioned to deliver the client's vision and objectives and enable their headquarters to become a strategic tool that could help transform and future proof the business. Achieving the highest certifications for health, wellbeing and sustainability were important ambitions in the brief and these required absolute focus, new learning's, rigorous specifications and an innovative use of materials from the whole project team. We are also thrilled that the post-occupancy data is highlighting really positive statistics of how the people love their new space and recognise the positive impact of their new environment on working practices, wellbeing, and productivity."

The Crown Estate earned the distinction based on seven categories of building performance – air, water, light, nourishment, fitness, comfort and mind across two floors of No. 1 St James's Market. These link into a design strategy of 'Active landscapes', which encourages mobility and wellbeing over both floors. The workspaces have been tailored to employee needs and tasks: some social and collaborative, others quiet and private, all flexible and connected to technology.

With a central philosophy of 'no offices' the office layout maximises access to natural daylight for everyone and for primary desk spaces to support circadian rhythms, and ergonomic choices to sit or stand. Biophilia is also part of the core design strategy and is visible wherever you sit with key innovative features such as acoustically performing moss creating visually stunning backdrops.

Project features that helped The Crown Estate achieve its Platinum WELL Certification include:

- Procurement of catering to ensure we are delivering a healthy variety of meals for staff;
- Internal green walls and planting to promote biophilia, as well as moss on the walls to control acoustics;
- Filtered water available at various locations to ensure hydration;
- Selection and procurement of furniture, fixture and finishes (e.g. paints, chairs, etc) with low VOC content to maintain healthy indoor air quality levels;
- Provision of different types of workplaces and spaces including a library, contemplation rooms, and provision of a number ergonomic desks to meet the different needs of people;
- High-quality base build features including fresh air rates, visible staircase, acoustic performance, and the location of the building to local amenities, local parks and public transport.



There are only 10 platinum projects globally, including buildings in the US, Australia and China

Judith Everett, chief operating officer at The Crown Estate commented, "We are all delighted that our Head Office in St James's Market has become the first office in Europe to achieve the Platinum WELL standard. When we moved to our new offices we wanted to deliver the very best environment for the people who work at The Crown Estate, and this accreditation shows we achieved that."

"The WELL standard has changed the way we, as an industry, think about how we can have a positive impact on the people who work in our buildings.

"We've worked hard to ensure that our own space here at St James's Market represents the best standards in flexible, contemporary workspace, and this formal accreditation would truly demonstrate our commitment to creating brilliant places – both for ourselves and for our customers. We are exploring ways we can work collectively at portfolio level to make wellbeing requirements are being considered."

Rick Fedrizzi, chairman and CEO of the International WELL Building Institute said, "With its platinum level WELL Certification, The Crown Estate Headquarters at St. James's Market joins a select group of industry leaders worldwide committed to delivering the very best in buildings that advance human health. We congratulate The Crown Estate team, including EDGE Architecture and Design, for their outstanding achievement and dedication to elevating health and sustainability to new heights in ways that help people thrive."

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LONDON DESIGN FESTIVAL

CLT artwork looks at mental health

As part of the annual London Design Festival, that took place at the end of last month, designjunction presented a number of thought-provoking outdoor installations on the Riverside Walkway including Head Above Water by Steuart Padwick.

The British designer made a dramatic change to the London skyline during designjunction in support of mental health with this project, a major installation in CLT. With its panoramic views of St Paul Cathedral and the city skyline, Head Above Water was a 9 m high sculpture on Queen's Stone jetty on London's South Bank.

The 'Head' is "deliberately gender, ethnicity and age neutral and stands as a symbol of hope, bravery, compassion, positivity and change, for those who have come through or are still confronting mental health issues, and the people who support them".

Steuart Padwick initially sculpted a head in clay and then developed the concept into its current form using precision engineered, renewable and sustainable cross-laminated timber panels, provided by Stora Enso. To realise the structure Steuart Padwick worked with structural engineering expertise, Ramboll. It is "a model of sustainable, smart design and build".





THEATRE

Bennetts' West End theatre extension approved

Bennetts Associates has secured planning and listed building consent for the second phase of the Shaftesbury Theatre renovation in London's West End. The proposal includes the redevelopment of public spaces around the Grade II listed theatre and the transformation of its foyers and bars opening out onto, and extending beneath, the newly pedestrianised Princes Circus, and transforming the setting of the historic theatre.

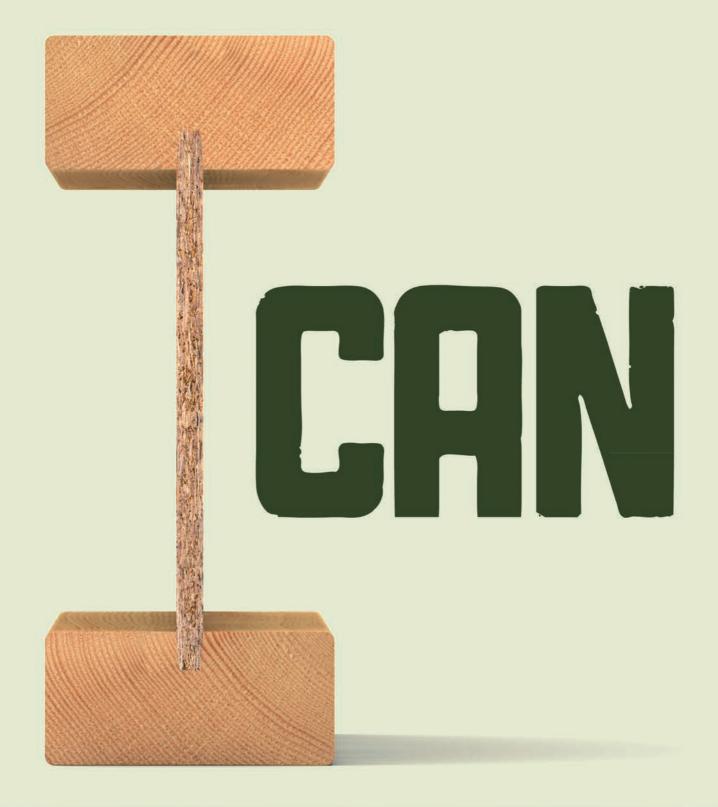
The project follows Bennetts Associates' previous work on Shaftesbury Theatre in 2016 of the fly tower refurbishment, which received multiple awards including the RIBA National Award in 2018. The second phase of the transformation project will secure the theatre's long-term future as an important venue in London's theatreland district. Working in collaboration with the London Borough of Camden's ambitious Princes Circus re-development, the masterplan will also help integrate the restored theatre with the public realm.

The new plans for Shaftesbury Theatre involves the creation of a brand new foyer space below ground serving the basement-level stalls, and the extension and refurbishment of the current ground and upper-level bars. The pedestrianised external space will also enable the creation of a landscaped 'spill-out area' served by a new kiosk. In addition, the theatre's historic auditorium will be restored following new research on its original finishes and appearance.

The design by Bennetts Associates focuses on improving accessibility and modernising the theatre's facilities. The project will increase foyer spaces by 200 m² and add 16 WCs as well as create step-free access to the stalls level for the first time in the theatre's 106-year history.

Simon Erridge from Bennetts Associates said: "The West End's venues must continue to adapt to the needs of contemporary audiences and The Shaftesbury Theatre is an exemplar of this thinking. This innovative scheme shows how joined-up thinking between the public and private sectors can result in better, more accessible and more welcoming spaces both inside and outside our historic theatres."

James Williams, chief executive, The Shaftesbury Theatre, added: "Shaftesbury Theatre is thrilled that the shared vision between Bennetts Associates and itself has been recognised by Camden council in the granting of planning permission. These additions to our beautiful building will make it an iconic theatre in the 21st Century."

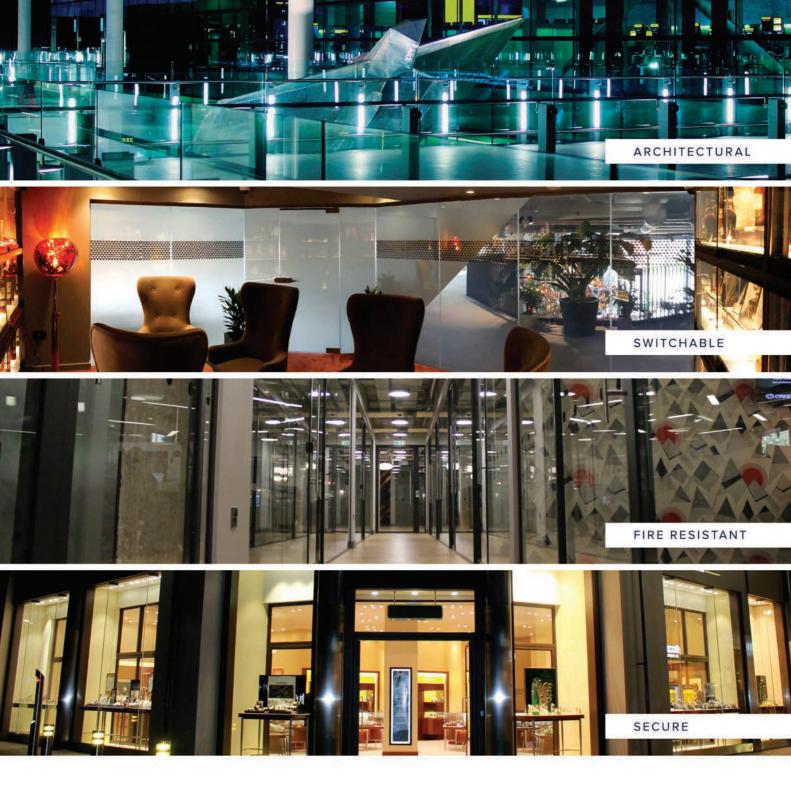


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VIEW POINT



Nigel Ostime of Hawkins\Brown Architects discusses how practices can research and adopt aspects of AI and automation, and thereby stay one step ahead of the robots



bout five years ago, two academics from Oxford, Carl Frey and Michael Osborne, produced a seminal report called 'The Future of Employment: How Susceptible are Jobs to Computerisation?' They examined how machines and digital tech might replace humans, covering 702 occupations, including many construction-based ones, ranging from the design team to the site workers. Architects were actually reckoned to have a less than 2 per cent chance of redundancy, but many site-based workers, like brick-laying and dry-lining, were about 80 per cent likely to be redundant, largely due to the dreaded and increasingly ubiquitous robots.

However, before we architects got too complacent, a couple of years later father and son duo Susskind and Susskind published 'The Future of the Professions', which predicts the decline of pretty much all professions and describes the people and systems that will replace them. In an "internet society," the authors tell us, we will neither need nor want doctors, teachers, accountants, lawyers – and architects (among many others) to work as they did in the 20th century. The book explains how "increasingly capable systems" – from telepresence to artificial intelligence – will bring fundamental change in the way that the "practical expertise" of specialists is made available in society.

So other than sit back and start to see how much we've squirrelled away in our pensions, or hope the Government introduces a universal basic income, what should we architects do?

One of my colleagues at Hawkins\Brown, Jack Stewart, has moved from performing a traditional architect's role, designing and managing projects, to one developing software and writing scripts that can be used in designing buildings and coordinating the digital efforts of the practice as a whole. Tied in with our efforts to raise our skills and experience in design for manufacture and assembly (DfMA) and modern methods of construction (MMC), we hope this will keep us ahead of the curve. So what sort of things is Jack up to?

Coding & cutting

Like many practices, Hawkins\Brown has invested heavily in BIM. The benefits of it are now pretty well understood in the industry,

HERE EAST

A 1.2 million square feet creative hub in London's Stratford, where Hawkins\Brown researches tech including code for optimising design performance

and we are looking for new ways of using it that reach beyond the parametric capabilities and the ability to automate scheduling, costing, programming and so on. So for example we are looking at how data can generate the form. Through coding, not only can we manipulate the data that constitutes our design, but through APIs (Application Programming Interface) and built-in coding interfaces we can also manipulate the capabilities of the software we are using. An API is a software intermediary that allows two applications to talk to each other. As Hawkins\Brown's Jack Stewart says, "We are no longer at the mercy of the buttons that Autodesk give us - we can build our own!"

We are already seeing several projects in the office benefit from this, including the Olympic legacy project Here East in Stratford, east London (pictured above) where we developed a code that allowed us to rapidly 'optioneer' unique designs of glass frit patterns for the building facade, whilst fixing the solar control performance. Once a



We can't stop the march of technology, and architects need to be leading it to ensure our social, aesthetic and professional values are embedded into the new programs

pattern was chosen, the code was then used to automate the setting out of every single dot that made up the frit. (There were about 8 million of them.)

Jack's work at Here East also includes 23 artist's studios built using the Wikihouse toolkit. The studios are arranged as objects – we call it a 'cabinet of curiosities' – on what was a huge steel gantry for plant when the building was originally used as a media centre for the Olympics. The Wikihouse toolkit enables the delivery of modular plywood buildings, precision manufactured using CNC milling machines.

To do this we collaborated with Wikihouse to develop a flexible design tool with which users can alter the design parameters such as roof type, footprint, height and so on – and watch the 3D model regenerate itself live. The construction detail of the Wikihouse system was embedded into the software at the concept design stage and formed the production information that could then be automatically regenerated with each design change. Once it had been checked, the data was sent in the form of cutting files, directly to the CNC machine for fabrication.

More recently, we have been working on a facade colour pattern code dubbed the 'spandrel-iser'. This script was used for the East Village project (also in Stratford, in this case a 525 unit residential tower) and enabled the design team to rapidly test different colour palettes and percentage mixes of colour for over 3000 spandrel panels. A manual process, that would have taken one person weeks to develop a single iteration, became live. The design team could tweak the mixes and watch the 3D model instantly update.

Jack is not alone in his digital endeavours – another colleague, architect Harriet Redman has developed a digital briefing toolkit. There is huge benefit in learning from previous projects and passing it on to their successors and this is something clients are increasingly alert to. It can be difficult to extract the right information from a project to allow comparison though. Harriet's briefing tool allows us to rapidly evaluate past projects by automatically extracting data directly from BIM models.

This data is then critically analysed to help learn lessons, providing benchmarks from best-in-class buildings that inform area requirements, adjacencies and so on, in our new projects. Having an optimised brief that has been assessed in this way makes it all the more reliable, and reduces the risk of needing to adjust it further down the line.

Harnessing DfMA for residential

We have developed the briefing toolkit predominantly for further education projects.

In the residential sector, my colleague Michael Judd has been developing a family of standard flat types as BIM families that are adaptable across a number of different offsite manufacturing processes. Their design has derived from the same data-driven approach as the education tool, with over 1500 flat types analysed. We are producing this work collaboratively with two other architectural practices for a large housing provider client. This work will revolutionise the ability of clients to implement design for manufacture and assembly (DfMA) processes whilst delaying commitment to a single supplier. The tool will be transformative and streamline the design process in a way that has been unimaginable until recently.

Threat or opportunity?

The prospect of robots taking over our jobs in all spheres of commerce, white collar as much as blue, is becoming an ever more prominent topic in our daily conversations and media debates. But the technology also brings the promise of opening new avenues to explore for those willing to invest. Those who accept the challenge and adapt will thrive, while those who don't may find the forthcoming disruption an existential threat. We can't stop the march of technology – architects need to be leading it to ensure our social, aesthetic and professional values are embedded into the new programs. Hopefully, we can stay one step ahead of the robots.

Nigel Ostime is delivery director at Hawkins\Brown Architects and chair of the RIBA Client Liaison Group

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PRACTICE PROFILE

gpad London

With origins in small residential projects, gpad London is a firm that has proved its mettle through steady growth and diversification. Sébastien Reed speaks to managing director Charles Bettes

The silver lining of gpad london founder and current chair Christopher Ploutarhou's amicable split from his former business partner in 2002 was picking up a series of jobs in quick succession. This clutch of residential schemes plus a shopping centre would be delivered by his new practice following its founding in 2002. In the 16 years since, gpad has grown from a five-strong team of designers into a contingent of 25 helmed by managing director Bettes.

The last year has seen growth rewarded with increasing attention signposted with sector accolades. The top prize at the Evening Standard New Homes Awards for their Wittering House project was accompanied by a British Council of Offices national award for Sovereign Street, an office renovation in Leeds. The two projects are representative of the practice's general remit; it splits roughly 50/50 into residential and commercial.

With this, gpad – an acronym of 'general practice of architects and designers' – are broadening their reach to target sectors including civic buildings, while deepening their knowledge of design of residential and commercial buildings and their clients.

Constructive criticism

The practice is subdivided into three design teams. Bettes leads one, while technical director Jeremy Wiggins and creative director Danny Shafrir lead their own respective teams. "When a project comes in, the three of us will sit down with our commercial manager (Fenja Scarisbrick) and work out which team has the best capacity to take on another job, depending on what stage existing projects are at," explains Bettes.

He confirms that flexibility is the priority, over overt specialisation: "There are no real specialisms between each of the teams. We like to maintain a good range within each one." Making a case for generalism, Bettes argues that keeping each design team open to working on a diverse array of projects facilitates the development of each architect, exposing them to new approaches, elements and typologies. "We want them to work on front-end to back-end, as well as on all different typologies. We try not to pigeonhole people."

The firm's directors have tried to make the most of opportunities to encourage their designers to work critically and question their colleagues' design choices, fostering an analytical culture. Internal







Keeping each design team open to working on a diverse array of projects facilitates the development of each architect

presentations are a regular affair, opening up the architects' concepts and designs to their peers to expose any deep cracks. Bettes counsels: "It's quite difficult encouraging a critical atmosphere, it has to be done in the right way; it has to be controlled."

However, he is a firm believer in open interrogation of theories, which is a key part of the firm's communication-focused ethos. Extending to questioning clients and consultants, as well as colleagues, Bettes sees this as one of the practice's tried and tested paths to success.

Hi-tech workspaces

With approximately half of gpad's projects being in the commercial sector, the practice is constantly searching for ways to optimise the quality of their designs for offices. Using agents to visit newly completed buildings and keeping a keen eye on the events calendar for office-oriented conferences and seminars are two of many strategies that help the firm keep on top of best practice.

Sharing some predictions on future drivers in office architecture, Bettes remarks: "The future is tech-driven, led by a sharing culture." He says offices are becoming more "a place to meet, rather than a place to work," so architects "have to focus on encouraging amenities spaces, and pushing lifestyle to create a place where people can spend a whole day."

Bettes says that one question he frequently asks himself is: "What will people want in two years' time?" Changing times and changing tenants call for flexible designs that best guarantee the longer-term use of buildings. He cites design solutions such as engineering parts of the slab so they can be removed to tailor the users' journey to the tenants' needs: "No two tenants will use the space in the same way".

On the horizon

Straying from the practice's commercial and residential heartland, gpad's competition entry for "reimagining" Old Street roundabout in London has been shortlisted by the organisers, Islington Council. The brief asked designers to devise solutions for the space after the roundabout is removed in 2019 to make way for a pedestrian area.

Playing on the abundance of tech companies nearby, gpad's winning entry envisioned a "digital garden," with an events space at its centre. "We wanted to create something that was very much 'of' the area – lots of hard surfaces, lots of places where you can sit outside, and solar-powered lighting." Long, landscape-format billboards were flipped on their sides and conjoined to create a sort of advertising 'totem pole' with bicycle storage nestled inside.

Further examples of gpad's versatility as demonstrated in forays into public projects are found in their bids for council housing work, as Bettes explains: "We've entered a few competitions to get onto council frameworks, which may lead to larger-scale work. The biggest project we've done is a 35-flat scheme but we'd like to do bigger ones."

Working on larger-scale residential schemes will allow the practice to maintain its upward growth while gaining staff valuable design experience. Although gpad's portfolio is predominantly Londonlocated, more recent projects, such as an office refurb in Glasgow, show the architects' desire to diversify in terms of location.

According to Bettes, one of the practice's principal challenges in the future will be to stay highly adaptable to market forces. Following the 2016 referendum, three of gpad's contracts were put on hold, followed swiftly by two commissions the week after. Although all have now been given the green light, potential volatility has been imposed on the profession. Despite this, the need to adapt to clients' demands means the practice has been on a recruitment drive recently. Things are looking up for this already successful firm.



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HYPERLOOP, THE NETHERLANDS UNSTUDIO

The UNStudio Futures Team (UNSFutures) has presented its vision for the 'Station of the Future' at the first edition of HyperSummit. The HyperSummit was focused on urgency, research and collaboration, with numerous partners speaking about their contribution to the possibilities for realising the European hyperloop. Using technology powered by solar panels, hyperloop will produce no sound or environmental emissions and can provide the necessary energy to power itself. It will be the first ever 100 per cent electric transport system that can safely transport a high volume of passengers from city to city at unprecedented speeds and journey times. The speed of the hyperloop vehicles allows platforms to be curved rather than orthogonal, bringing an inviting organic form to soften the geometry of the module.



NAPOLI AFRAGOLA STATION, ITALY ZAHA HADID ARCHITECTS

New photography has been released to mark the first year of train services at phase one of Napoli Afragola high-speed railway station. The design enlarges the elevated walkway above the eight platforms to transform the station's main passenger concourse; creating an "inhabited public bridge" housing all the services and facilities for departing, arriving and connecting passengers, with direct access to all platforms below. Designed as an extruded trapezoid along its 450 m curved path, the station's elevated concourse is orientated at an angle from the railway tracks to improve its environmental performance. An integrated solar PV array, natural light and ventilation, plus ground source cooling/heating, minimise energy consumption.



INCHEON AIRPORT, SOUTH KOREA LEONARD DESIGN ARCHITECTS

Architectural practice Leonard Design Architects, has won its bid to design a landmark sculpture for Incheon International Airport, the largest airport in South Korea, as part of a wider refurbishment of the award-winning duty-free shopping area. The brief was to create a 'one-of-a-kind' landmark within the terminal space which had symbolic character to represent the new Incheon International Airport terminal. The sculpture is also to house two independent information desks. Ian added: "We took inspiration from the airport itself. We used Incheon's dancing cranes, and their elegant wing form to influence our design."



UNIVERSITY OF BRITISH COLUMBIA, CANADA HOTSON ARCHITECTURE & RYDER ARCHITECTURE

Hotson Architecture and Ryder Architecture have been selected to design a new "gateway" student residence on Student Union Boulevard at the University of British Columbia Point Grey campus in Vancouver. The new \$108m residence building will provide 1,000 beds for upper year students, and contribute to the rejuvenation of the intersection at the north west corner of Wesbrook Mall and Student Union Boulevard that includes existing student service areas, student residences and a large mixed used academic and student housing hub. "The project will introduce more of a urban development around the existing Gage Residences, which will address, reinforce, and animate the street frontages along Student Union Boulevard and Wesbrook Mall," said Kai Hotson, principal, Hotson Architecture. The residence will consist of a number of buildings, totalling an area of approximately 395,000 ft². The project is due to break ground in the spring of 2019 with a targeted opening date of 2021.



SYDNEY FOOTBALL STADIUM, AUSTRALIA BATES SMART

The New South Wales State Government is proposing to demolish the main Sydney Football Stadium in Sydney's south-eastern suburbs and replace it with a new stadium on the same site at a cost of \$705m. However, following "broad public opposition to the proposal, based on the wasteful use of government funds to demolish and rebuild", architects Bates Smart have revealed an alternative proposal which involves constructing a 45,000-seat stadium over the rail yards of Sydney's Central Station. Philip Vivian, director of Bates Smart, commented on the firm's alternative proposal for the stadium: "We propose that Moore Park Stadium's replacement be built over Central Station's railyard; creating the benefits of public transport accessibility, catalysing the development of the railyards to connect Surry Hills to Chippendale, and having broader economic benefits for the state, the city and surrounding neighbourhoods."



NINGBO IF MALL, HONG KONG BENOY

Benoy has announced its second project with Hong Kong China Travel Service (HKCTS) – the Ningbo 'If mall', a "future community-focused" retail and commercial destination whose design has been recently unveiled to the public. The development is situated in the Jiangbei district of Ningbo on a plot bordered by Changxing Road, Hongtu Road and West North Ring Road. Benoy's design is comprised of three major blocks covering an approximate gross floor area of 46,000 m². The planning regulations required strong interfacing with the surrounding urban areas. Benoy's approach resulted in an L-shaped layout with a continuous green, urban space woven throughout.

The masterplan has ensured the retail frontage gains exposure along the well developed Hongtu and Changxing Roads while the commercial business zone interfaces with the green, urban park on the west side of the plot. To ensure continuity throughout the design, the facades of the buildings display a "unique linear form which reference Ningbo's identity as a coastal city". As part of its extensive offerings, 'If mall' will include a sports club, retail, supermarket, cinema, a children's entertainment and education area as well as the commercial business centre. The development also interfaces with a neighbouring residential scheme also owned and developed by HKCTS.



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Pegler Yorkshire has launched its latest Continuous Personal Development (CPD) module aimed at supporting the increase in heat free jointing requirements. The new accredited CPD module, Benefits of Heat Free Jointing, addresses key issues now found on many projects where heat is not permissible. Other online training modules developed by Pegler Yorkshire and, which can be accessed via 'My PY' on the company's website, cover topics such as; Central Heating, Taps & Mixers, Metal Push-fit and Commissioning. 01302 560 560 www.pegleryorkshire.co.uk

NO SMOKE WITHOUT FIRE: UNDERSTANDING FIRE DAMPERS



This CIBSE accredited seminar from Swegon Air Management outlines the need to understand and comply with tested methods when selecting, installing and using fire and fire/smoke dampers. Attendees are educated in damper design, selection, installation, testing, analysis and performance. It aims to highlight and clarify the differences between fire and fire/smoke dampers. The seminar stresses the critical responsibility of all parties involved in the overall sequence from system specification through to compliant installation. 01746 761921

www.swegonair.co.uk

'STEP ON IT!' SPECIFICATION OF ENTRANCE MATTING



Ouantum Flooring Solutions -RIBA approved CPD seminar STEP ON IT! is a presentation and discussion dealing with the subject of specifying safe and effective entrance matting. The CPD presentation includes: What entrance matting is designed to achieve and how to select the right one; How recent BRE guidelines affect the choices for specifiers: Environmental and health and safety considerations applicable to the manufacture. installation and maintenance of entrance matting. 0161 627 4222 www.quantumprofilesystems.com

SPECIFYING HARDWOOD TIMBER EXTERNAL DOORSETS



The latest CPD courses, seminars and documents for architects

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

www.urbannont.com

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

PRESSURE PIPING SYSTEMS CPD SEMINAR GAINS CIBSE APPROVAL



GF Piping Systems has gained CIBSE accreditation for its new CPD seminar - Plastic Piping Systems for Building Technology. The 60 minute introduction to the key characteristics of high performance plastic pipework explains how their strength, tolerance of temperature extremes, and very reliable jointing techniques make them ideal for the most demanding building services applications. These include cooling for data storage or other IT facilities and meeting the growing demand for prefabricated, offsite solutions. 024 7653 5535 www.gfps.com/uk

NEW RIBA APPROVED THERMOWOOD CPD



Silva Timber has launched a new RIBA-approved CPD seminar entitled Thermo Wood: Aesthetics , and Performance which illustrates the uses and benefits of using ThermoWood. Learning aims include information on the material, benefits, applications, finishes, installation and projects. The CPD seminar includes full supporting materials and samples, lasts about 45-60 minutes and includes time for questions. 0151 495 3111 www.silvatimber.co.uk

NEW ARRIVALS

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



JONATHAN ROSS PERKINS+WILL

Global architecture and design firm Perkins+Will has appointed Jonathan Ross as business development & marketing director. Jonathan will utilise his experience to explore new opportunities in the UK and Europe and drive the firm's presence in corporate interiors and architecture across the commercial, higher education, hospitality, culture, urban design, workplace, science and technology sectors.



BETH CAMPBELL WILSON ASSOCIATES

Global interior architecture firm Wilson Associates has announced the appointment of Beth Campbell as its new chief executive officer. With more than 25 years of experience in global design, Beth is "a highly strategic leader who will bring passion and innovation to build upon Wilson Associates' global reputation for excellence," the firm said. A LEEDcertified, registered architect, Beth has a "robust portfolio of high-profile projects".



CHRIS HALL HOLDER MATHIAS ARCHITECTS

Holder Mathias Architects has promoted director Chris Hall to partner. Chris has been with the practice for 15 years and worked on major developments for clients including Crest Nicholson, British Land, Forest Holidays, Dukelease, McArthurGlen and U+I. Alongside a "significant contribution to managing the London studio", Chris has supervised the practice's migration to BIM. Peter Gamble, senior partner at Holder Mathias, said: "Chris's experience and skills are a natural fit for the Partnership. Chris has led a number of significant projects with care and attention to detail, and his promotion will further strengthen our service offer and consolidate our reputation."

Viessmann Vitodens gas boilers awarded Which? Best Buy status for second year



Viessmann has secured a Which? Best Buy status for its six most popular Vitodens gas boilers for the second year in succession. The annual survey by Which? – the UK's largest consumer organisation – conducts robust research in order to "reveal the boiler brands you can trust." Viessmann is also one of only two boiler brands to score five stars for reliability, customer satisfaction, and engineers' recommendations. In the overall brand assessment – based on reliability, customers' scores, and the expert views of engineers – Viessmann scored second place in the table. Which? reports that the survey again resulted in "a huge difference in overall score between the best boiler brands and the worst." Which? conducted the survey in May 2018, questioning just fewer than 12,000 boiler owners and 166 heating engineers who are registered Trusted Traders. The report stated that Viessmann's boilers "have excellent build quality, are easy to repair and even non-incentivised heating engineers would recommend them." Graham Russell, Viessmann managing director, commented: "We are delighted to receive this endorsement for the second year running."

info-uk@viessmann.com

Visqueen provides radon protection for local community centre



The development of a local community centre and all-weather football pitches at Mossedge Village, in Linwood, Scotland has welcomed the donation of **Visqueen** Radon Membrane from the company in conjunction with Grayson Building Products. The development is the result of a campaign by a team of six local women, first to save their initial community centre and then to build a new one that would meet the needs of the town's inhabitants. The project will see the construction of a 3G football pitch and a community centre, directed by the Linwood Community Development Trust. When the contractors tendered for materials Jim Martin, Branch Manager of Grayson Fixings Scotland recognised the value in the project and asked suppliers for donations. Such community projects are valued by members of the Visqueen technical team and so a donation of radon barrier membrane was made, providing the centre with the protection it required against radon ingress. Visqueen Radon Membrane is manufactured from an enhanced blend of polymer films that is suitable for use in the protection of buildings from the ingress of radon gas and also acts as a damp proof membrane.

0333 202 6800 www.visqueenbuilding.co.uk

Dulux Trade Diamond: For when the going gets tough

hile the Dulux Trade Diamond range has been trusted for many years to provide durability and stain resistance for walls, did you know Diamond is now THE complete range when it comes to durable finishes for walls and woodwork with the addition of new Dulux Trade Diamond Satinwood?

Following substantial investment in research, trials and development, the new Dulux Trade Diamond Satinwood has been designed to ensure that professional decorators are able to make the transition away from solvent-based products to water-based, with the added benefit of stain resistance to keep surfaces looking better for longer and completing the durable proposition across interior trim.

Dulux Trade knows the need for quality that the trade demands and that's why we have spent significant time getting our water-borne Diamond Satinwood to deliver an excellent flow for a high quality finish, which being stain and grease resistant, keeps looking good for longer. While being water-based, Dulux Trade Diamond Satinwood is quick drying, and can be recoated in six hours in addition to being non-yellowing and low odour.

According to Dulux Trade market data, there was a 13 per cent increase in waterbased sales from 2017 vs 2016, compared to a seven per cent decrease in the purchase of traditional solvent based paints, highlighting the growth in search for innovative, high quality decorating solutions.

Karen Wilkinson at Dulux Trade explains, "We are continuously looking at ways we can create solutions to help painters and decorators across the country. This range was born of listening to the ambitions and needs of Dulux Trade customers who need to leave every job, proud that the finish is brilliant and it's their name that's on it, in order to keep their customers coming back.

"We've invested and researched tirelessly to make sure that our product quality isn't compromised and our Dulux Trade customers can have the confidence to switch to water-based for good."

So whether you're applying on walls, (Diamond Matt/Eggshell), woodwork (Diamond Satinwood) or floors (Diamond Glaze), the Dulux Trade Diamond range gives



you confidence you'll get great results on application, that keep looking good for the long term.

Surfaces painted using Dulux Trade Diamond Matt and Eggshell can be thoroughly cleaned without damaging the paint. This scrub resistance can withstand up to 10,000 scrubs, that's five times the required rate to qualify for the highest durability rating.

Diamond Matt and Eggshell have been specifically produced to have excellent resistance to marks, scuffs and accidental damage. Applying Dulux Trade Diamond Eggshell - with its higher sheen - in busy areas such as halls, stairs and corridors makes excellent sense.

Next to scuffs, spills are the most likely reason for paint to need re-applying. However, the Dulux Trade Diamond range contains stain repellent technology, ensuring that liquid spills 'bead' on impact.

This means easier cleaning. Diamond Matt and Eggshell come in thousands of colours,

so there's no need to specify white when you're looking for a durable paint solution.

And for wooden floors, there's Dulux Trade Diamond Glaze. This is a water-based, maximum durability interior clear wood varnish. It is a simple one pack system and is ideal for use on wooden floors and other high wear interior wood surfaces. In common with the rest of the Diamond range, it is very durable, up to 10 times tougher than conventional varnish and resistant to common chemicals, alcohol and water.

Increasingly, professionals are looking for new products to stand them apart – a trend recognised by Dulux Trade in the development of its Diamond range.

Diamond means durability. Surfaces will stay looking better for longer, with repainting needed less frequently. Not only does this save money for clients, but it means more for your reputation at the same time.

0333 2227070 www.duluxtrade.co.uk

Bauder achieves prominent Investors in People Platinum accreditation

Bauder has become the first to achieve the Investors in People ('IIP') Platinum standard, the most sought after status in the National scheme, within the Construction of Buildings category.

The Platinum accreditation is the highest accolade that can be achieved and is currently held by only 1 per cent of IIP accredited organisations. There are currently just 78 organisations accredited Nationally and only 23 of these are located in the South of England (figures at September 2018).

The accolade clearly demonstrates Bauder's commitment to its strong Culture and inherent staff wellbeing, personal development and embedded leadership practices.

Andrew Mackenzie, Managing Director, said about the award: "This is a remarkable achievement for everybody in our Company, we are truly delighted. We never forget that our continued success is reliant on our brilliant staff and I am so proud of the team here and everything they do. It is only right that the Company strives to provide the best possible culture and working environment for all employees and the Investors in People accreditation is a great way of seeing how we are doing and where we should focus to make Bauder an even better place to work."

Family-owned company Bauder, supply flat roof and green roof systems within the construction industry, with a workforce of over 160 employees located throughout the UK and Ireland. Bauder had been awarded Gold IIP standard in the two previous assessments and has gained the top accolades since 2012.

IIP was launched in 1991 to raise the performance of UK businesses relative to international competitors. The Investors in People framework defines what it takes to lead, support and manage people well for sustainable results. In September 2015, Investors in People launched the Sixth Generation Standard, to reflect the latest of workplace trends and robust practices



required to create outperforming teams.

The Investors in People Framework is a four stage performance model with nine performance indicators which enable measurement and benchmarking across key business areas such as; Leadingand inspiring people, Living the organisation's values and behaviours, Empowering and involving people, Managing performance, Recognising and rewarding high performance, Structuring work, Building capability, Delivering continuous improvement and Creating sustainable success.

01473 257671 www.bauder.co.uk

Raising awareness of challenges



Representatives of the UK's wood panel sector have met with politicians to discuss challenges facing their industry. An expert working group has been set up by the All-Party Parliamentary

Group (APPG) for the Wood Panel Industry and industry members, **Norbord**, Kronospan and Egger. The working group discussed the challenges faced by the wood panel sector as a result of the lack of security of domestic wood supply; the impact of the biomass industry on the availability of wood to work with; and how the industry will meet UK demand for wood panel products post Brexit.

www.norbord.co.uk

Salice are set for SICAM success



Salice are looking forward to showcasing their extensive product range at SICAM 2018, the international exhibition of components, semi-finished products and accessories for the Furniture Industry, held in Pordenone, Italy between 16th-19th October 2018. With many new products

launched within the last twelve months, visitors to the Salice stand will have much to admire including their stylish Slider M35 Top coplanar sliding system, Mover and Mover Flat vertical sliding system for wall cabinet doors, and Silentia+ hinge.

www.saliceuk.co.uk

Website offers personalised experience



ROCKWOOL UK's new website, powered by Artificial Intelligence, provides you with a central resource for your insulation insights. This sophisticated content rich platform of information, with powerful tools has been designed to support and deliver real value to

everyone in construction, from architect to homeowner. The story gets better, the in-built machine learning of this website means that the more the site is used, the more the platform will be optimised to show highly relevant content and assets whether they are a homeowner, a specifier, or a contractor.

www.rockwool.co.uk

BAL strengthens support team



BAL have bolstered their specification and sales team with two new hires. James Purrett joins the team as Specification Manager covering the Midlands and Wales. He has extensive experience in the bathroom sector, joining BAL from

Venesta – the washroom and cubicles company – where he worked for six years as Specification Manager. Also joining BAL is John Hunter who will work in Specification and Sales in Scotland. Edinburgh-based, John has more than 20 years-experience in the tiling sector including more than 16 years with Johnson Tiles.

01782 591100 www.bal-adhesives.com

OAG innovation leads the way in architectural glazing

rawing on two decades of commercial expertise, and synonymous with quality and innovation throughout the sector, London-based OAG is fastbecoming one of the UK's most sought-after structural glazing specialists.

Now, the company has been appointed to undertake the retail glazing package on the prestigious Battersea Power Station redevelopment. The size and complexity of this package, part of a wider £9 bn scheme, is a testament to OAG's vast structural glazing expertise.

Its portfolio already brims with some of Britain's most complex and high-profile developments – London Bridge Station, the Aviva Tower and 135 Bishopsgate are just some of its more recent projects – and if you're managing a major construction project and need high-end architectural glazing, it's very likely OAG is on your shortlist.

OAG emerged at a time when the market was dominated by firms with a mass-market

ethos, aiming to shift large volumes of off-the-shelf products. OAG's approach was different. Striking glass structures, expertly tailored to the architect's specifications, became the brand's hallmark.

Now firmly established after twenty years as a leader in its field, OAG continues to go from strength to strength. Recent years have seen it complete work on Aviva headquarters, the ambitious redevelopment of London's historic Devonshire Square and Oxford's world-famous New Bodleian Library, as well as help rejuvenate the BBC's former White City studios and the Tate Modern.

Most recently, collaborating with Costain and Network Rail, OAG helped extensively renovate the London transport hub in three phases over four years. This included installing a 275m bespoke glass facade along the station's Tooley Street entrance, with a stylish curved upper tier, and a lower tier consisting of double-height bomb blast glazing.

2018 has also seen the company bring two



decades of expertise to the broader glazing market with Fortiglaze, a comprehensive choice of fire-rated glazed door systems, framed and frameless walls.

Fortiglaze is hugely versatile, with 30, 60, 90 and 120-minute configurations available. It offers both 'Integrity and Insulation' and 'Integrity' only options, all tested up to a BS EN 1634 – 1:2014 standard, allowing it to meet CE European standards, due to become compulsory for all fire-rated products from 2019.

01494 492 700 www.oag.uk.com

Flowcrete unveils the fast curing Terrazzo system Mondéco Rapide



Flowcrete has launched Mondéco Rapide, a new resin terrazzo flooring system that delivers a robust, decorative finish in a fraction of the time of traditional terrazzo materials. Mondéco Rapide reduces the overall installation time associated with epoxy or polyurethane resin terrazzo flooring systems by up to 75 per cent. Its ability to combine time-saving benefits with high-end visuals made Mondéco Rapide a key talking point at this year's World of Concrete exhibition in Las Vegas. Based on an innovative technology called PUMMA, Mondéco Rapide brings together the rapid curing power of methyl methacrylate (MMA) technology with the resilience of polyurethane. This combination is what makes Mondéco Rapide such a significant step forward in the terrazzo flooring world. Mondéco Rapide creates a smooth, luxurious finish and its extensive design potential means that custom colours can be installed in completely bespoke patterns. Even the floor's shimmer and shine can be tailored by altering the aggregate blend that goes into the finish. Aggregates such as locally sourced marble, mother-of-pearl and recycled glass are all available to achieve the precise glittering lustre that is desired.

01270 753 000 www.flowcrete.co.uk

Kingspan Environmental Renamed Kingspan Water & Energy



Kingspan Environmental is being renamed **Kingspan Water & Energy**. The change has been announced, in part, to reflect the division's recent focus on water and energy solutions. Its product portfolios will now be grouped under Water Management Solutions (to include wastewater, surface water and rainwater harvesting), and Energy Management Solutions (to include diesel, oil, AdBlue, agri storage, renewables, cylinders and intelligent monitoring solutions). Meanwhile, Service Solutions will continue as a key element to both portfolios, offering an exclusive support package for Kingspan customers. Pat Freeman, Kingspan Water & Energy Divisional Managing Director, says: "For the last 50 years, Kingspan has been creating sustainable solutions for sourcing, storing and protecting water and energy, supporting homes and businesses across the world. It's quite a legacy, and one that we intend on building on as Kingspan Water & Energy." Pat explains: "While we are determined to push forward with innovations and into global markets, our main goal – wherever we are – is to preserve and protect water and energy sources for future generations."

web@kingspan.com www.kingspanwaterandenergy.com

Setting the Standard – SE Controls becomes the first SCA IFC SDI 19 certified company

SDI 19 certification scheme, which has been developed by the Smoke Control Association (SCA) in partnership with IFC Certification and has been introduced to help raise standards across the industry.

Developed to ensure a suitable level of competency is maintained in all aspects of smoke control systems, the scheme also covers a contractor's ability to provide appropriate levels of service and maintenance following installation and commissioning, in line with a building's type, size and use.

Such is the importance of the recently introduced initiative that it is now mandatory for any SCA member involved in the installation of smoke control systems to achieve the accreditation as a condition of membership.

To become certified under the scheme, businesses must demonstrate their experience in fire strategy verification together with the design, installation and commissioning of smoke control systems in accordance with the relevant standards and industry guidance documents, including Approved Document B and BS7346 Parts 4, 5, 7 and 8. SE Controls is the first company to complete the IFC SDI 19 certification process including detailed internal office and external site audits.

SCA Chairman, David Mowatt, explained: "The independent review of building regulations and fire safety supports clear



cultural changes in the procurement, design, construction and maintenance of buildings and building systems in order to deliver safer buildings. Contractors should be responsible for the systems they install and end users should always look to use a capable, experienced contractor."

IFC Director of Certification, Ian Woodhouse, said: "Since the launch of this scheme in June of 2018 we have already received a number of applications and companies are currently progressing through the certification process. This is not only encouraging, but also underlines the



importance that the industry assigns to raising competency standards and improving the quality of companies involved in installation activities. We're proud to be a key part of this initiative in partnership with the SCA."

Will Perkins, Group Managing Director of SE Controls, is delighted with the company's new status and commented: "As a longstanding member of the SCA, we have always maintained high quality standards in all aspects of our business, as well as supporting the SCA's efforts to raise the standards across the industry. This new scheme raises the bar for the smoke control industry and ensures that competence, credibility, quality and skill levels are not only improved, but recognised through the auditing and certification process."

He added: "For over 35 years we have been at the forefront of our industry. Our expertise combined with our range of 'Tested Solutions' enables us to provide compliant products and solutions to the highest level, while also underlining our commitment and responsibility for the reliability of our life safety systems. Helping to improve industry standards has been a long-term commitment for us so it seems fitting that SE Controls has become the first company to achieve IFC SDI 19 and we hope many more will follow."

01543 443060 www.secontrols.com





BUILDING

THÉODORE GOUVY THEATRE FREYMING-MERLEBACH

Post-industrial evolution

A characterful, white form houses the new theatre in a deprived former mining town on the French-German border, standing as a symbol of the municipality's renewal plans. James Parker reports

Freyming-Merlebach is a small town located 100 km north-west of Strasbourg on the border between France and Germany. Its industrial past had however left it with a legacy of unemployment since the coal mines shut in the 1990s, a feature of similar towns across this area.

Despite, and because of the relative levels of deprivation in the town, the authorities were looking to develop cultural solutions to help alleviate the associated social and economic problems. The architects of a striking new theatre for Freyming-Merlebach – Strasbourg-based Dominique Coulon & Associes note that this approach has been successfully achieved in industrial towns in the Ruhr region of Germany, just over the border.

The town's population was dropping significantly, reduced to 13,000 by the time the architects won the 2011-held competition to design a larger 700-seat theatre to replace the historic but dilapidated venue in the town. A number of cracks had appeared due to the presence of disused mining tunnels, and the old 500-seat auditorium was too small, and inadequate in terms of meeting the needs of 21st century theatre and music performance. According to the architects, the town's mayor - who staged the competition - is "highly proactive, and had decided not to give up on the town's cultural scene."

As has been the case with other towns in

the region suffering from the after-effects of industrial blight, the public administration has called on architecture to provide a catalyst for improvement and regeneration. There was a precedent in the town in the form of the Maison des Cultures Frontieres, a cultural centre built in 1984, which had been successfully transformed into a new multimedia library.

However in the case of the new theatre, named after 19th century French-German composer Louis Théodore-Gouvy, refurbishment of the existing theatre wasn't an option due to the site's instability. As a result, a new site was identified to the east of the town centre, on Place des Alliés. The architects comment: "The authorities were keen to give a new boost to this evolving sector of town" – it is close to the new town hall, and a shopping centre."

Since it opened last year, the theatre's 700 seat auditorium would be hosting what is described as a "pluri-disciplinary" programme. The theatre covers a wide variety of live performance, ranging from classical theatre including the use of largescale sets, to contemporary theatre, musical theatre and opera, and dance. The building also houses a programme of events designed for schools and youth participation.

Site

A leading French studio, Dominique Coulon & Associes have an impressive portfolio of projects in the cultural sector,





building on its reputation established with the completion of a theatre in Montreuil in the eastern Paris suburbs, in 2007. Recent completed schemes include the Conservatoire of Music, Dance and Dramatic Arts in Belfort, in the Franche-Comté region, and a new model of Media Library in Thionville, also in Lorraine, and projects further afield such as Library and Theatre in Isbergues, Pas de Calais. Projects are characterised by a focus on precise design, an embracing of materiality, and minimalistic cantilevered forms, plus an intent to create interesting public space internally as well as externally.

The theatre forms part of a broader regeneration of the Place des Allies, also home to the shopping centre, which was in a state of decline. It forms the third point of a triangle with the 'mall' and town hall forming the other two, therefore occupies a prominent civil position.

Two major roads run east-west direction to the south of the site, and the building sits at an angle to a smaller road running alongside it into Place des Allies. Because the site slopes downwards to the south, the architects submitted a design that included a forecourt to the north and a further square to the south west, giving the benefit of new public space for the town accessed off the square.

Design

The building would be viewable from all sides, presenting the opportunity to provide aesthetic interest to visitors and the passing populace from all angles. Due to the theatre being surrounded by modest family houses and other low rise buildings, the architects were careful to moderate their approach while creating a strong visual presence, seemingly without precedent. The result is a strikingly minimalist, angular white form.

The project architect Dominique Coulon tells *ADF* that as part of "setting up an energetic dialogue with heterogeneous urban landscape", the design was developed to have a "strong plasticity," adding: "We wanted the white volumes to stand out from the landscape." He says the intent was for the building "to appear as a sparkling gem; to us the project had to become the symbol of renewal of the town."

Coulon says that the need to distinguish the building from its surroundings was the overarching design ambition: "What mattered to us was obtaining a homogenous white envelope. We wanted the theatre to detach itself from the context, for the building to stand apart and embrace its







radiance." He says that while its threestorey scale is not out of all proportion with the nearby low-rises, the building takes a cue from its immediate environment in creating a contrast to it: "In the end, the building itself makes the context."

The design is distinguished by expansive concrete walls, which despite their monolithic white, form an "animated" set of volumes, as the architects put it. There are also glimpses of the interesting spaces within through glazing that tempt visitors to enter.

The building presents itself as a playfullystacked set of differently-shaped white boxes, the north elevation having a large cantilevered viewing window with floor-toceiling glass, overlooking the square and the town beyond. With its face tilted upwards towards the town, this attractive Dominique Coulon signature helps to offset the necessary square bulk of the stage tower behind.

Facing onto the northern forecourt of white marble 'cobblestones', the entrance is in fact tucked into the top end of the building's eastern elevation, helping signpost the area while being a discreet design choice. This allows its western end to have a characterful composition of recessed areas of glazing and the white exterior of the lobby, whose triangular form protrudes from the main bulk of the building, creating a deep 'crease' where it rejoins it. What the architects call a "rather modest" entrance opening enables the lobby, which is entered at one end and runs diagonally along the north side, to present itself more dramatically as a longer space than would have been the case.

Providing a "streamlined silhouette," the building is constructed from a mix of concrete and steel, with the auditorium having an in-situ concrete frame and the foyer containing the main stair being steel frame. Coulon says that this brought savings in terms of the amount of structure required, which in turn helped the building be cost-effective: "It made us possible for us to respect the budget we were given."

Continuity & contrasts

The lobby is at once subtle and dramatic, covered in off-white uncoloured gypsum plaster, continuing the feel of the exterior but in a softer shade to welcome theatregoers. A beige-carpeted staircase to the auditorium is revealed, discretely located opposite the reception and running around the external wall.

Coulon was aiming for a series of "unveilings" as the building progressively

GEOMETRY

Coulon characterises the foyer as "a giant sculpture in which users experience space in a striking way" Images © Eugeni Pons



AUDITORIUM

The combination of scale and vibrant colour in the auditorium is a dramatic contrast with other spaces © Thibaut Muller

takes on different characteristics as visitors approach, enter and then move through the spaces. "At first we have a seemingly solitary building, twinkling in the town. It hides contrasting inner worlds, the foyer designed as a spectacular and enveloping cocoon, and the colourful auditorium."

Coulon adds: "By leaving the gypsum crude, and laying beige fabric on the floors, we obtained soft and homogenous textures that strengthen the enveloping feeling. Natural light is indirect (apart from via the top floor viewing window), with the natural-hued walls and soffits having a resulting variety of nuances of tone.

There is little to interrupt the sculptural geometry of the foyer – in fact, Coulon characterises the area as "a giant sculpture in which users experience space in a striking way." The reception desk is two stacked concrete oblongs in differing finishes and arranged at a deliberately oblique angle to each other. The seating is minimal although offering a point of vivid red – a hint of what is to come in the auditorium.

Throughout the open circulation spaces, the various diagonal shapes and oblique produced by the building's internal forms offer a more dynamic impression than the more rectilinear and austere exterior. This is particularly effective in the lobby where the angular white stair and ramp enclosures appear to intertwine in the void above. This no doubt helps enhance visitors' sense of anticipation for the performance they are about to witness, but a further, more surprising contrast awaits.

Due to its combination of scale and vibrant colour, entering the auditorium is a dramatic shift after the calm spaces preceding it. "All its strength and energy come from this deliberate break," says Coulon. Arranged very close to each other, there are clashing shades of deep red and pink in the seating, upper circle, and on ceilings, and orange on walls – almost merging in places, and "giving density to the space."

Conclusion

The architects rightly say that this new, fairly avant-garde theatre presents a strong symbol of a town facing the challenges it has to address, and embracing the potential for renewal. The building's dynamic yet clean lines are intended to help lift its somewhat mundane surroundings and provide a sense of inspiration for the community. Its presence, allied to a diverse programme through the year, will hopefully prove to be a worthy example of the power of architecture to effect social change.

Mossley Hill Church Refurb



Comar Architectural Aluminium Systems is delighted to have been part of the Grade II Mossley Hill Church project working in partnership with Liverpool based Denovo Design Architects. The Church Hall windows and doors were replaced with both the thermally broken Comar 5P.i Casement

window system and the 7P.i Rebated and Horizontal Sliding door systems. These aluminum windows and doors offer outstanding weather performance and reduce heat loss through the trademark P.i thermal break ensuring low U-values so energy bills are minimised.

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

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

www.subscribepage.com/adf

Impressive entrance for council offices



As part of a major refurbishment project, **TORMAX** was contracted to install a prestigious automatic revolving door with automatic swing door to a local authority's Civic Offices in Surrey. The new entrance system provides clear and easy access for all staff and visitors while minimising heat loss from the building, making it a sustainable solution too. The Woking Borough Council Civic Offices have benefited from a significant internal renovation, regenerating both staff and public areas across the ground floor. The impressive three-wing automatic revolving door is driven by the powerful, high torque 5201 operator. Precision engineered at the TORMAX HQ in Switzerland, the 5201 is a technologically advanced drive that delivers exceptional reliability year after year, thanks to impeccable design credentials that minimise maintenance requirements. The swing door is powered by the TORMAX 1201 door drive which has similar reliability credentials and can be found installed in busy locations worldwide. The revolving door also features self-monitoring sensors that automatically adjust door movement to compensate for external influences.

www.tormax.co.uk

Luceco lights the way at Seaton Tramway Station



Luceco has recently lit a brand-new tourist attraction nestled on the beautiful Devonshire coastline. Seaton Tramway operates fourteen narrow gauge heritage trams between Seaton, Colyford and Colyton in the picturesque Axe Valley. The coastal resort of Seaton is the gateway town to the Jurassic Coast, a UNESCO World Heritage Site. This summer saw the opening of a £3 million state-of-the-art facility providing a contemporary building and visitor centre for the award-winning tourist attraction. A state-of-the-art environment required a luminaire to match. Installed by REF Electrics based in Taunton, Ceres, a compact HighBay utilising the latest lens technology, was chosen to light four new platforms within the tram station. IP65 rated, Ceres benefits from a computer designed die-cast aluminium housing with vortex cooling for maximum LED chip performance. This attractively styled HighBay provides over 50,000 hours of operational life and a luminaire efficacy up to of 115 Llm/cW. Available with on/off presence detection options, often a requirement in industrial and warehousing applications, Ceres offers 60, 90 and 120-degree lens variations.

01952 238100 www.luceco.uk



High capacity surface water drainage for Primark Distribution Centre, Kettering

The Primark Distribution Centre, near Kettering was developed by London Metric Property Plc. Known as Thunderbird 2 the $\pounds77$ million facility comprises a 93,000m² warehouse, some $5,000m^2$ of office space and $50,000m^2$ of hard standing with parking for 175 HGVs and 530 cars. A major earthworks operation was necessary to level the ground and create the vast plateau on which the building and hard standings were constructed. With such a large hard standing area an effective surface water drainage system was essential.

Having supplied high capacity surface water drainage channels for hard-standing areas at numerous distribution centres thorough out the UK, Hauraton were confident their RECYFIX® HICAP® high capacity channels would comply with the stringent specification asked for by the contractors.

It was decided to drain the hard standing

area using four sizes of RECYFIX® HICAP® – 100, 200, 300 and 680 because of their overall volume capacities. As well as straight runs of 100 and 200 channels, the 200, 300 and 680 sizes were installed in a step fall arrangement providing an enhanced water volume for these runs of 366,324 litres per metre (l/m). All the sizes supplied had fixed ductile iron, 14mm open slot inlets finished with KTL, a rust resistant coating. All 1229 metres of RECYFIX® HICAP® channel installed complied with loading category Class F900 (900kN).

In addition some 200m of Hauraton FASERFIX[®] KS 100 channel with HEELSAFE ductile iron gratings were also installed in the site car parks requiring a loading category of Class C250 (250kN). The gratings were also specified with a KTL coating.

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CROSSRAIL STATION PADDINGTON

Travelling light

In creating a new Crossrail station at Paddington, Weston Williamson + Partners managed to achieve a high degree of openness, bringing natural light to platforms. As architect Rob Naybour explains to Sébastien Reed, this was not the only reason that this project is unusual in the infrastructure sector

Transport for London's (TfL) latest mass transit project, and hailed as "Europe's largest infrastructure project", Crossrail has seen the excavation of nearly 120 kilometres of tunnel through London, linking west to east from Reading to Shenfield. The development has added 10 new stations across London, as well as numerous refurbishments inside and outside the capital.

For the first time in UK major rail projects history, the entire set of designs for the new stations were developed concurrently out of a Crossrail office on Greenwich peninsula. With leading UK practices such as Atkins, Allies & Morrison, Foster + Partners, Grimshaw, and Hawkins Brown working on the line's architecture, inter-practice collaboration was integral to the design process.

The functional benefits of connecting the new Elizabeth line with international air travel, national mainline rail, and other London transport services made Paddington an attractive candidate for the Crossrail upgrade, despite the inevitable difficulties of creating a new station on the site.

"The adjacency of Brunel's Grade I listed 1854 station posed great challenges", says founding partner Rob Naybour of project architects Weston Williamson + Partners (WW+P) – one of the UK's most respected practices working in infrastructure.

WW+P's previous rail commissions include extensions to the Docklands Light Railway (DLR), London Bridge's Jubilee line underground station, and various masterplans including for Paddington itself.



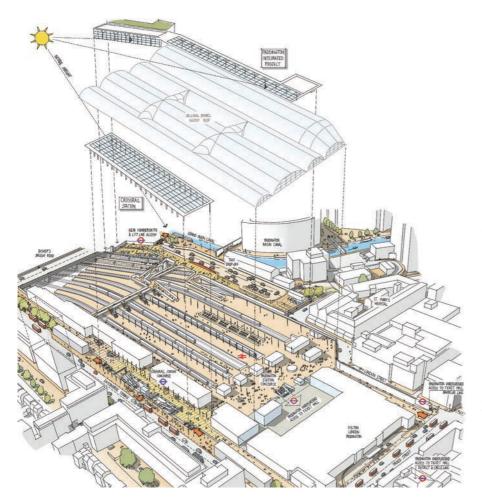
This saw the practice working on the original station, providing a concourse adjacent to Paddington Basin, access to the Hammersmith & City line via a new underground station, plus enhanced taxi facilities.

Gathering a wealth of contextual and practical knowledge of the original station and the surrounding area gave WW+P the edge when it came to competing for the leading design spot on integrating the new Crossrail connections.

However, Naybour admits "it's been a long journey" – his work on the station

UPLIFTING

A gap in the station's roof, covered by the canopy, houses escalators and a pair of glass lifts



EXPLODED

Axonometric drawing showing the entire scheme – the original roof at the centre, the rectangular canopy for Crossrail to the left, and the canopy for the Paddington Integrated element at top began some 12 years ago, upgrading links to the Hammersmith & City Line for TfL. The project's scope (and commensurate workload for the architects) had expanded greatly since its inception: "What was really a very modest commission turned into speaking to various stakeholders, with key parties taking us on to develop a co-ordinated masterplan."

While Paddington Integrated developed the northern side of the station, Crossrail's arrival would see the south side rejuvenated, as part of its brief of "a clear vision" for the rail hub.

An open layout

First glimpses of the new station are offered by a grand, 120 metre-long canopy constructed from 6.1 metre gridded glass elements. With the designers needing to respond sensitively to surrounding buildings, the planar structure was designed to sit apart from the neighbouring, listed Macmillan House.

The station itself is housed within an immense box measuring 264 metres long,

24 metres wide, and 21 metres deep, positioned parallel to and in between the adjacent Macmillan House and Eastbourne Terrace.

A 90 metre-long gap in the station's roof slab, spanned by the canopy, houses two banks of escalators at either end and a pair of glass lifts in the centre. "Normally in these stations, lifts are tucked away round the back, which makes this slightly unusual," remarks Naybour. Both escalators and elevators descend approximately 11 metres to the station concourse.

With nothing but four horizontal supporting props bracing the diaphragm walls and the glass canopy 20 metres overhead, the concourse is open and airy, providing a strong sense of arrival both to pedestrians ascending from platform level and to those descending to catch their train. Four further banks of escalators (as well as the lifts) descend the remaining 10 metres to the platform level.

Five vertical elliptical columns topped with widening capitals are staggered at 18.33 metre intervals across the station's length, bearing the combined load of the concourse slab, roof slab, and the canopy. The architects worked hard to spread these columns as far apart as possible to maximise openness.

At either end of the station are two large plant modules, extending the entire height of the station. Fitted with intermediate slabs between concourse and ground level for increased floor area, the plant areas also accommodate sets of staircases, back-of house facilities and tunnel ventilation plants which can pump 200-300 litres of air per second through Crossrail's tunnels. Overground, the plant areas are flagged by two large box enclosures made of precast glass-reinforced concrete.

Collaborative design

Despite admitting it "sounds rather mundane," Naybour says the 'common components package' arrived at by Grimshaw and Atkins was key to the design of most of the stations, encompassing the look and feel that runs across the whole of Crossrail. It included functional and aesthetic features such as the wayfinding and signage, technical components including safety doors on platforms separating passengers from trains, advertising strategy, and seating.

It was recognised fairly early on in the project that Paddington stood alone among the other stations being designed for Crossrail. The others were being excavated



underneath buildings, while Paddington consisted of a big open-cut box next to a Grade I listed building. According to Naybour, WW+P were on one hand liberated by the model they were working off, but on the other, subservient to Brunel's historic station next door.

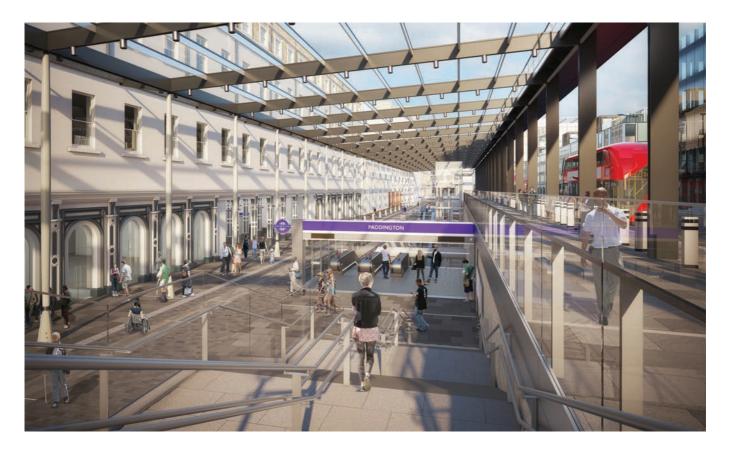
Stakeholder collaboration was a constant feature; WW+P conducted meetings with Heritage England and head of strategic planning at the Borough of Westminster Graham King every three weeks, bringing a transparency to the design process which proved fruitful. "Whenever we were making lots of design decisions, we would present our thoughts and where we were going – that was incredibly useful," says Naybour, "it provides a focus for both the client and the team."

Crossrail's 'modulation' – which describes the scale of standardised panel sizes across a project – was consistently applied at 1500 mm, but Paddington was the exception: "The principles were the same, but we were aligning with a listed building. Brunel's station was set up on a rigorous 10 ft module, so we adopted that."

As well as looking to the surrounding area for inspiration, the designers took an open-minded approach to embracing the visual qualities of the structural engineering at Paddington. The vertical columns were intended as temporary solutions, but in conversation with the design team it was decided that their appearance as well as the cost saving supported the solution of retaining them. Says Naybour: "I think it's very important for architects to take an interdisciplinary approach with these buildings," he continues, "you're working with the engineering, but you're also pushing it."

The integration of interior lighting was one important feature distinguishing the station from its siblings across the Elizabeth line. Picking up on the 10 ft grid, large "inverted mushroom" or "lily pad" shaped light fixtures with an anodised finish are nestled into the circular recesses seemingly scooped from the coffered roof slabs. As well as maintaining a common rhythm across the entire station, these devices mitigate glare and enhance the station's visual identity.

Like the station itself, the structural slabs were built in top-down fashion, being laid on the ground with a metre and a half of concrete poured on top of them and their steel reinforcements. Then – in a move which required archeological precision that was a challenge with a JCB – earth was carefully excavated, chiselled away from The architects worked hard to spread the columns as far apart as possible to maximise openness



It was recognised fairly early on in the project that Paddington stood alone among the other stations being designed for Crossrail beneath to reveal the finished slab. "The concreting work is of a very high quality," assures Naybour.

Over 100 light brown brick panels, some weighing more than 10 tonnes, clad the inner walls of the ticketing hall as a continuation of the original Macmillan Terrace facades. Anodised bronze panels clad the station's supporting columns and the walls of the hall, forming part of the "restrained and earthy" colour palette: "These buildings are around for a long time and one of the key issues is that they are not heavily maintained – mainly due to limited access – so robustness is very important," comments Naybour.

Naturalised light

Before WW+P began work on Paddington, the existing site had become, in Naybour's words, "a taxi hell". Therefore, a significant move within the Paddington Integrated project the firm also designed was relocating taxi access from Eastbourne Terrace to the northern side of the station. It was this re-arrangement that afforded the architects the space to implement the cut-and-cover box model, and in turn to create something unique for the public.

The underground space that Paddington

has is unusual, because it's connected to the street, says Naybour – "a sort of implied public realm." It consists of three levels: Departures Road, directly in front of Macmillan House; the concourse, 11 metres below; and the other side of the gap, Eastbourne Terrace 3.5 metres higher than Departures Road. From Departures Road and Eastbourne Terrace, pedestrians can peer over into the concourse below.

The advantage of this configuration is that passengers are kept above ground for as long as possible. While the canopy provides shelter from the elements, its transparency facilitates, in Naybour's words: "A visceral connection with the outside world," further intensified by a sprawling, nature-inspired artwork overhead.

The design team set "quite an open brief" for artists to provide works for the spaces. Three were interviewed, and the decision to commission Spencer Finch was "almost unanimous". Picking up on the practice of cloud categorisation, Finch's dynamic artwork – Cloud Index – depicts a cloudscape, printed across the glass canopy itself.

As a result, daylight casts shadows over the public realm beneath which change over the course of the day. "Sometimes there'll be clouds on top of clouds, sometimes the sun will shine through, casting shadows, sometimes you'll see buildings through clouds, and at night, of course, it'll look completely different," says Naybour. Due to the nature of the artwork, the canopy had to be painstakingly pieced together like a jigsaw, lifting the 220 prefabricated glass panels, each weighing over a tonne, into their respective places using cranes and suction cups.

In addition to enhancing passenger experience, the considerable amounts of natural light entering the station reduces energy use. Compared to the embodied energy expended during the station's construction, the amount required to run it "is really tiny," says Naybour. Crossrail worked directly with the BRE to put together its own energy standard, which is reflected in the use of LEDs and recyclable waste storage.

Security

Despite the overarching design driver being openness, safety and security were also a crucial factor in what is a busy London location, particularly in the canopy design. Strict blast-proofing requirements were imposed on top of the structural criteria, demanding complex engineering and even testing with explosives. To gauge precisely how the structure would react in the event of an explosion, a replica bay was constructed and taken to Cumbria to be tested using actual detonations.

In further security-conscious interventions to the external public realm, purpose-built benches and bollards have been included to blend in with the visual language of the canopy's cigar-shaped steel columns. Positioned around the void, they block the trajectory of cars or buses potentially leaving the Eastbourne Terrace roadway, or delivery vehicles in Departures Road. Naybour notes: "You're trying to deal with these big technical issues, but in an elegant way that doesn't look heavy handed."

Commitment to concept

The sheer scale and abundance of variables that must be considered in such high-use and long-life civic projects as Paddington's Crossrail station is bewildering. They combine heritage, conservation, transport integration, way-finding, servicing and security – few other typologies are so intensive in what they demand from the architect.

However the rare opportunity to design for such a choice plot in London was matched by WW+P's distinctive design



concept for the station, as Naybour summarises: "We've created a building that you can walk past at 3 o'clock in the morning and look straight down into an underground station. It's unusual."

The station was due to be open in December, but this was recently put back to autumn 2019, following Crossrail's announcement it needed more time to complete further "infrastructure and extensive testing" across the central section of the Elizabeth Line. The new building will then assume its critical daily role as a link in the Crossrail chain, helping to transport some 200 million passengers each year.

Perhaps chief among the design achievements of this complex scheme was providing an underground station with such a highly unusual degree of openness. Despite all of the plusses, Naybour coyly admits to frequent questioning during the project over what would happen if people threw rubbish down into the station from above. His straightforward response: "Well, you have to go and pick it up."

It's impossible to solve everything with design, but WW+P's attempt to bring the underground closer to the surface has delivered a unique transport hub sure to make Londoners proud.

LIGHTNESS

The station has a grand, 120 metre-long canopy constructed from 6.1 metre glass elements

PROJECT FACTFILE

Client: Crossrail Contractor: Costain Skanska Architects: Weston Williamson + Partners Structural engineer: AECOM Landscape architects: Gillespies Cost: Bechtel

CLADDING WRAPS

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Glimpse the future at the UK's premier construction event



The UK's premier event dedicated to the built environment returns to Birmingham's NEC between 9-11 October, with a vibrant display of products, knowledge, speakers and experts for anyone involved in design and specification to take advantage of

Fire safety performance, affordable housing, smart buildings, ventilation, floorcoverings, sourcing timber, building tall and building regulations – just a taste of the topics architects, specifiers and designers are expected to be on top of, and just a small example of what's on offer at this year's UK Construction Week (UKCW).

Delve into the future

Architects and specifiers with a passion for technology, gadgets and the future won't want to miss out on the Future of Construction Hub, in collaboration with Birmingham City University. Visitors can immerse themselves in digital construction, 3D printing, robotics, AI and AR and modern methods of construction, then get 'hands on' in Coventry University's state of the art construction simulator.

The 'Future of Construction' theme flows throughout the event via an Innovation Trail. Go on an unmissable journey of pioneering ideas and products from Canon, Containex, Kore Wireless, Okappy, Soudal, Timber Structures and Yu Energy.

The Internet of Things is available for all to experience at Gooee's IoT Arena at Building Tech Live, with partner companies including Aurora Lighting.

Be inspired

There's something for everyone within the exhibitor list, including: IDS' quick to lay vinyl flooring collection; Crown Décor's niche luxury laminate brand from India; and Decorative Panels Lamination's new mirror, veneer and fabric designs.

Other exhibitors include: BLFA, Bruag, Fibo UK, Formica, Pfleiderer, Impress Surfaces, Rothoblaas, Hanson Plywood,



Morland, Rockwool and Soyang Europe.

Visitors can make the most of their time by arranging an exhibitor meeting via their profile pages on the UKCW website.

See & feel for yourself

Experience offsite construction in person at the Offsite Theatre, supported by MPBA and the Structural Timber Association. Offsite construction specialist, VisionBuilt, is constructing a two-storey offsite solution, comprising a ground floor domestic apartment and first-floor student digs.

The Offsite Theatre will also house discussions on topics including hybrid concrete solutions and factory-built bathrooms.



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SEE FOR YOURSELF

One of the joys of trade shows is being able to see and touch products in the flesh After something a little smaller? This year's Timber Expo has challenged Carwyn Lloyd Jones to build and bring to UKCW the tiny 'house of the future' for all to experience. A concept that is making waves this year, visitors can share their thoughts about whether smaller homes and shared communal buildings are the answer to the affordable housing crisis.

Build in quality

Not to be missed is RIBA president Ben Derbyshire exclusively launching the Quality Risk Tracker, developed in partnership with the CIOB and RICS, at RIBA, labelled Building in Quality.

Other UKCW seminar programme highlights for architects, designers and specifiers include:

- Digital Construction Hub delving into BIM maturity for all of the supply chain with BIM Direct
- Offsite Theatre discussing factory-built bathrooms

- Building Tech Live Theatre, delivered by Voltimum and ECA, with topics such as cybersecurity for smart buildings from Professor Prashant Pillai
- Timber Focus Theatre, delivered by TRADA, covering how tall we can build in wood
- Surface and Materials Hub, discussing trend and colour forecasts with Formica.

Other UKCW highlights include:

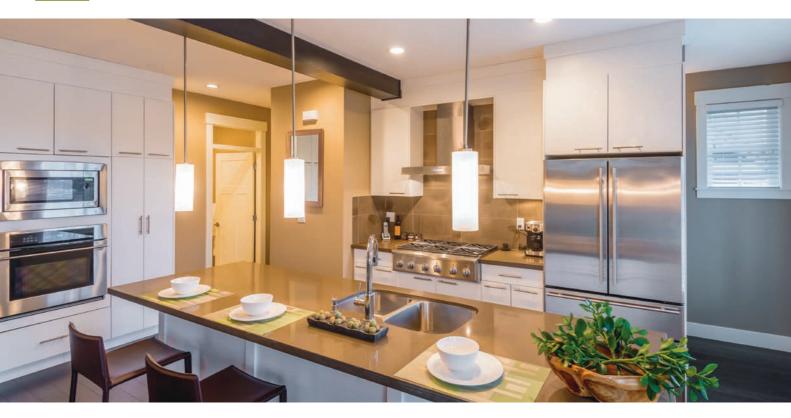
- Free CPD sessions covering building regulations, daylight and ventilation, Passivhaus, fire doors and more (Booking is essential)
- The UKCW Stage hosting high-level discussions from speakers including Barbara Res, the project manager behind Trump Tower; Lord David Blunkett; and Kunle Barker – leading what is sure to be a provocative discussion titled 'Political correctness has gone mad?';
- Announcement of the UKCW Role Models campaign winner; and
- The Beer Festival, sponsored by Velux.

To book free tickets for access to all UKCW Shows, visit www.ukconstructionweek.com. To keep up to date follow UKCW on Twitter at @UK_CW or using the hashtag #UKCW18

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Dakea drives into UK Construction Week

BBA puts spotlight on standards



Quality in construction will be the focus when the **British Board of Agrément** exhibits at UK Construction Week (Birmingham NEC, October 9-11th). BBA Chief Executive Claire Curtis-Thomas will discuss Quality in Construction Post-Grenfell and BBA Technical Excellence Director Paul Valentine

will deliver a CPD presentation on the consequences of poor installation practices with a focus on external wall insulation systems. These two events will form a backdrop to the BBA's on-going discussion of procurement practices within the industry.

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UKCW STAND B620

Distinctive exterior for Europe Technopark



The Skolkovo Innovation Centre in Moscow contains the largest Technopark in Europe. Surrounding the Technopark is 350,000sqm of apartment blocks, each with its own distinctive exterior. Helping to give the residential blocks of the Technopark their

individual identities are VIVIX[®] by Formica Group panels. Beyond contributing to the visual identity of the Miro and Tetris blocks, the VIVIX panels increase the thermal efficiency of the residential buildings by helping them achieve optimal energy performance and regulate humidity. VIVIX can increase the life cycle of a building.

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UKCW STAND B954 & M350

Leading NEC Bir featuring products competit exception reduction

Leading roof window manufacturer, **Dakea** will be exhibiting at this year's UK Construction Week at NEC Birmingham from the 9th to the 11th of October. The company will be showcasing an innovative stand, featuring the impressive Dakea truck. Visitors to the stand will be able to get hands on experience with Dakea's products and will also have the chance to win prizes through an interactive chatbot and social media competitions. Ultima, Dakea's premium roof window will be the prominent range on display. Ultima is an exceptional roof window with the range surpassing technical requirements and incorporates a unique noise reduction system, which mutes up to 50 per cent of traffic and rain noise. Ultima provides an increased level of durability and comfort; with category II hurricane resistance, its external pane is extra thick and toughened, while the internal pane is laminated to ensure full impact protection and a lifetime warranty against hail damage. Alongside the key products, Dakea's stand will also feature the return of the Dakea's products, an interactive showroom where visitors can view short presentations on the best of Dakea's products.

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UKCW STAND B510



London Build returns

London's leading construction and design show, London Build, will return to Olympia on 23 - 24 October

Since its launch four years ago, London Build has established itself as the largest construction show for London, covering all sectors within the built environment. After reaching full capacity in the Central and West halls, London Build will be moving to Olympia's National Hall for this year's show.

This is not your average construction event. The organisers of London Build believe doing business should be fun, and have included within the event the Festival of Construction. It includes entertainment, comedy acts, celebrity guests, a Bavarian Oktoberfest beer festival, competitions, prize giveaways, live music, street food and much more!

The extensive exhibition will feature over 300 exhibitors, including Bentley Systems International Limited, Daikin UK, Kingspan, G-SMATT Europe, Powerday, Topcon, British Steel, Blok N Mesh, Aedas, RedSkyIT, Johnson Controls, Ideal Standard, Procore, Trimble and Catnic. Hundreds of leading suppliers will be showcasing their latest innovation products and services across nine specialised zones: Buildings, Infrastructure, BIM & Digital Construction, Fire Safety, Interior and Fit-out, London Design, Product Innovation, Site Machinery & Equipment and Sustainability.

Each zone acts as the focal point for eight 'Summits' – with over 200 hours of free CPD conference and workshop sessions discussing the latest developments, challenges and opportunities across the UK's built environment. This is your one-stop-shop to gain all your CPD points over two days.

Over 240 speakers at the event include senior representatives from Greater London Authority, Crossrail, Homes England, Heathrow Airport, Tideway, Mace, Laing O'Rourke, Costain, HS2, Skanska, Land Securities, Balfour Beatty, Transport for London, Clancy Docwra, TateHindle, L&Q, Space group, Sir Robert McAlpine, David Miller Architects, Sweco UK, HKR Architects, Zaha Hadid Architects, Royal Docks Team, Paradigm Housing Group, Mott MacDonald, Arup, AECOM, Kier Group, Mace Group, Scott Brownrigg, Bouygues, Canary Wharf Group, Vinci, Interserve, Wates, Skanska, BPD and many more.

London Build is extremely active in the promotion of inclusivity, diversity and equality in the industry. The annual Women in Construction Morning Networking session, now in its third year, will take place on 24 October, attracting thousands of empowering women working in construction. This is the largest gathering of women in construction in the UK.

The involvement of 100+ high profile partners such as Constructing Excellence Club, Constructionline Meet the Buyer, The B1M Networking, BIM Open Mic and Passivhaus, enables London Build to continue delivering on the exciting content as well as high-level networking for all in attendance. The Built Environment Networking Hub will host free-to-attend exclusive networking events across two whole days. Build your connections, gain inspiration from industry thought-leaders and win business at the show which offers it all.

Join the rest of the construction industry in London and register today for your free tickets: www.londonbuildexpo.com/adf



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Kyle Perry from Simpson's marketing team explains: "We're seeing a growing demand for quality show-how videos, so we're building a collection of videos to share with builders and designers. We've highlighted our most popular hangers, straps and masonry connectors and addressed our most frequently asked technical queries."

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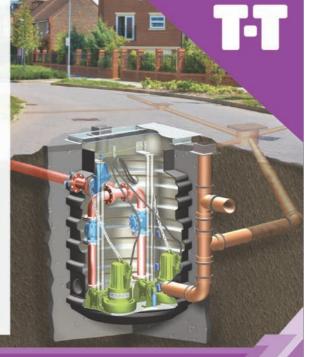
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- Can be thermally engineered to perform as an optimum combination
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- All interior finishes and treatments
- Large-span roofs with vaulted ceilings, if required
- Dramatic open-plan layouts offering lifestyle flexibility
- Extensive glazed features and uninterrupted roof-space living areas
- BBA accredited building system, including in-fill panels in other building systems

Couple this with its exceptional thermal performance and sustainability, Val-U-Therm PLUS® provides a straightforward and



cost-effective way for architects to hit energy efficiency, air permeability and other environmental targets. It offers a fit-andforget, future-proof solution, whatever level of environmental specifications are required – for example, 'A' rated Energy Performance Certificates, PassivHaus or the highest levels of energy saving and carbon neutrality.

The patented Val-U-Therm PLUS[®] is also inherently sustainable due to careful sourcing of raw materials with a minimal environmental impact. Scotframe's timber is sourced from FSC and PEFC sustainably managed forests and the insulation in Val-U-Therm PLUS[®] panels is based on renewable vegetable oil, has zero ozone depletion potential and is CFC, HFC and HCFC-free with a Global Warming Potential of less than 5. This means it has a BRE Green Guide A/A+ Rating – the same as straw bales or sheep wool yet is hydrophobic offering flood mitigation.

From the UK's first PassivHaus for rent (which won a Green Apple Award) to examples that significantly exceed the PassivHaus standard, Scotframe has been leading the way using Val-U-Therm® technology in energy efficient building for many years.

The Maryville PassivHaus delivered a total primary energy demand of 69 kWh/m²a (exceeding the PassivHaus requirement of 120 kWh/m²a). This 'Fabric First' approach is also suitable for commercial buildings – the

Rocking Horse Nursery at the University of Aberdeen, which caters for 78 pre-school children. achieved an air tightness of 0.475 ACH.

Hence Scotframe homes and buildings are warm and draught-proof in winter, cool and well ventilated in summer, healthy for all the family and enjoy remarkably low energy bills. Scotframe Val-U-Therm PLUS[®] allows the construction of typical family homes that can cost less than £95 a year to heat.

The great news is that building to these high standards is not necessarily more expensive or time consuming using Scotframe Val-U-Therm PLUS[®]. Edinburgh Napier University compared the cost per square metre of superstructure using 10 different building systems.

Scotframe Val-U-Therm[®] cost £1092 when built to PassivHaus standards, while the other nine systems ranged from £711 to £1138 when built only to existing Building Regulations. It took 65 days to build a Scotframe home to PassivHaus standards; the other 26 homes ranged from 49 to 126 days to build, again only to Building Regulations.

So, if you are looking to design a dream home or superlative building – think Scotframe Val-U-Therm PLUS[®].

Scotframe Timber Engineering and Val-U-Therm are proud to be part of the Saint Gobain Group of Companies.

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info@corian.co.uk www.corian.uk

Senior's glazing solutions are on point



Senior Architectural Systems' SF52 aluminium curtain walling has been used to create the attractive glazed facade of a landmark new data centre in the heart of London Docklands. The scheme's striking building envelope features an attractive combination of different materials,

with the sleek and slim line aluminium frame of Senior's SF52 curtain walling perfectly complementing the granite cladding. Senior's high performance aluminium SD commercial doors have also been installed to the building's main entrance to provide both a practical and aesthetically pleasing solution.

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Architectural demand for minimalistic design results in major growth for Aspex



Aspex, one of the UK's leading architectural ironmongery and doorset companies, is celebrating a rewarding return on its investment, after securing a number of major contracts to supply its Novista Riser system. Over the last six months, Aspex has had a large increase in its orders and has tripled its sales of the Novista Riser doorsets since last year. Originally developed in 2015 to meet the demands of architects looking for a minimalist aesthetic, the Novista Riser system has taken off massively in the market and has been installed in London's Facebook offices and Chelsea Barracks, a major residential scheme in London. Aspex has also recently won contracts to supply the system in Paradise Street, a student accommodation in Coventry, Nile St, an apartment scheme in London, and a prestigious office development at Station Road Station 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.

0116 278 3506 www.aspex-uk.co.uk

Helping Grenfell survivors get fighting fit



As part of the BBC *DIY SOS* build to support the Grenfell community, **Structura UK** is proud to announce it has helped to realise the ambitious project to build a new Community Centre and a replacement Dale Youth Amateur Boxing Club – located in Bay 20 of the Westway. Both projects are aimed to support the survivors of the Grenfell disaster. Over 200 square metres of Kalwall[®] translucent cladding has been used along the whole elevation of the new Boxing Club using the newly adapted THERM+ 'stick built' curtain walling system from RAICO. This is the first project realised using the new system and has worked remarkably well. The ability to conceal the fixings and screws coupled with the mill-finished aluminium framing has created a wonderfully smooth and dramatic facade. This new Kalwall+Raico system offers incredible versatility, even allowing the switching of materials – such as aluminium, steel or glued laminate timber (Glulam) – within the same facade. Kalwall is a popular choice for projects where performance, long life cycle and low maintenance are required, coupled with an aesthetic finish.

www.structura-uk.com/kalwall



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Imperial Bricks launches new Brick Tile range



Imperial Bricks has launched a range of traditional and contemporary Brick Tiles as an addition to their ever-growing range of traditional handmade, pressed, waterstruck and wirecut bricks. The Brick Tiles are suitable for DIY enthusiasts looking to create feature brick walls without the need for a bricklayer, as well as commercial installations such as retail, restaurants or hospitality interiors. The Brick Tile range is suitable for use on internal feature walls, kitchen splashbacks, decorative fireplaces or externally as cladding. The tiles are produced from full-sized bricks which are made in the traditional way, replicating the character and unique appearance of each individual brick. Brick Tiles create an authentic brick wall effect, but don't require costly labour or bricklaying skills for installation. There are seven options available: Victorian Limewashed, Victorian Farmhouse, Victorian Warehouse, Victorian London Stock, Victorian Pressed, Victorian White Crackle Glazed and the metallic blue Designer Linear. For more information or a free sample, call the Specification Team or visit the website.

01952 750816 www.imperialbricks.co.uk

Fire safety and facades CPD seminar



Rockpanel and ROCKWOOL have come together to present the latest research and thinking on how best to design out risk and ensure fire safety when it comes to specifying exterior cladding systems, with particular focus on high rise structures. Want to learn

more about Reaction to fire testing and certification, and building facade and fire compartments? Then register for free for one of the following CPD seminars organised in October: London, 4th October; Glasgow, 18th October; Birmingham 23th October.

www.rockpanel.co.uk/cpd-firesafety

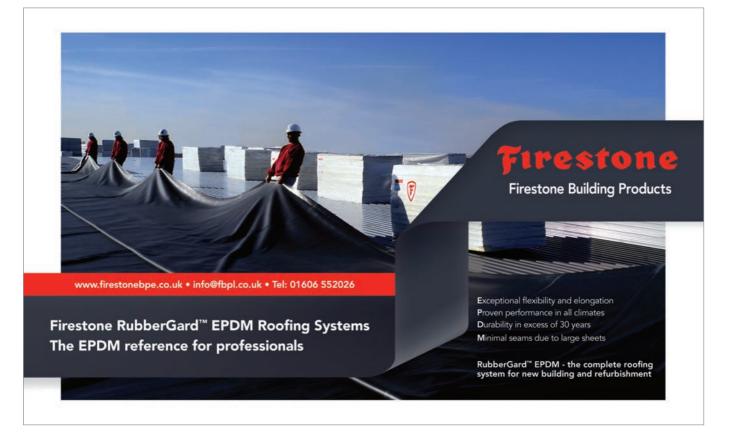
Deceuninck window for Capital House



Deceuninck's 2500 Tilt & Turn window provides a high-performance alternative to aluminium for Capital House, a bespoke student accommodation complex in Southampton. Deceuninck's 2500 Tilt & Turn window more than met the spec with outstanding performance: U-Value of 1.3 W/m²K, 0.34 G-Value, Class 4 air permeability, Class 8A water tightness, and Class A5 2000Pa exposure.

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Freefoam product roundup – here to help customers grow



Freefoam highlight the updates and additions to its whole product range that have taken place over the last six months. The roofline range has had a boost with the addition of Anthracite Grey to the Round Rainwater system. With the continuing growth in grey across the window, door and roofline market this new product means suppliers can now offer both the Deep and Round gutter options to customers. Perfect for new build and RMI. The phenomenal demand for cladding shows no signs of slowing. Freefoam added a beautiful subtle grey green shade to its 170mm Weatherboard range called Sage Green. Appealing to those who want to achieve a traditional 'heritage' look but with the benefits of low maintenance PVC this product adds additional colour choice, augmenting the existing cladding range, bringing the total number of colour options to an impressive eleven. Freefoam has also added to its internal panelling range, launching Acrylic Panels. High quality, high specification panels suitable for kitchens and bathrooms in a contemporary colour range. Freefoam are committed to supplying and supporting independent PVC Stockists and the Merchant sector.

01604 591110 www.freefoam.com

Safety Glass Cladding Wins Outstanding Fire-Resistance Accreditation



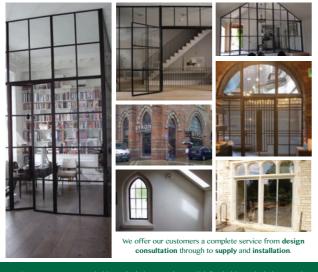
A cladding system based on a unique safety glass has achieved an oustanding A2 fire-resistance accreditation and is now available to architects and specifiers looking for product re-assurance in the post-Grenfell environment. Chromatics safety glass has undergone extensive testing by Exova Warringtonfire who awarded it an A2-s1-d0 'reaction to fire' classification. Class A2 means the product is non-combustible as no flashover occurs; s1 is the lowest level of smoke generation and d0 the lowest level for production of flaming droplets or particles. The system is also lightweight, being up to half the weight of traditional glass cladding solutions. Not a toughened glass, **Chromatics** is extraordinarily resilient as a result of bonding together, at a molecular level, glass, organic colour process and metal. This results in a laminate that is visually stunning, durable and opaque and when encapsulated between annealed glass and aluminium gives world's first optically flat, shatterproof, bomb blast resistant, thermally safe and impact resistant laminate that can be cut, edge worked and drilled after processing. A full range of RAL colours is available.

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Redland Regent crowns residential block



By employing **Redland** products, contractors and consultants have saved the residents of a block of 30 apartments from years of leaking roofs. The roofing details included replacing the mortar bedding with the Dry Vent Ridge

system together with the Redland Dry Hip system, with Kro-Clips fixing the cut tiles. At the eaves – with a traditional open loft space – they specified 10mm Redland RedVent Eaves Vent, with Extension Trays into the loft space. The Cloaked Verge System was installed where the module sizes provided a sensible fit. Ventilation tiles were installed to terminate soil pipes and bathroom extract fans.

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Expansion into offsite housing



The McAvoy Group has announced its expansion into the residential sector with the launch of a new modular solution for all housing tenures – affordable homes, market sale, build-to-rent, student accommodation, and

emergency housing. McAvoy has developed a steel-framed offsite housing solution for multi-storey apartments, detached, semi-detached and terraced family homes. An entire house can be assembled in a single day – and from foundations to occupation in just seven days. The McAvoy approach to housing will reduce programme times by at least 50 per cent compared to site-based construction.

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Schöck Isokorb for Luxembourg AAA passive house

The Grand Duchy of Luxembourg has promoted thermal insulation and energy efficiency on a timescale ahead of most European countries. With passive house construction constituting the minimum standard for domestic new builds. Every new home in Luxembourg since 2017 has to meet the requirements of energy class AA, which is virtually zero energy consumption. One recently completed residential building at Burden, in the north of the country, has gone



further and achieved an AAA Luxembourg Passive House classification. "In order to achieve these values, we conducted a thermodynamic simulation using the 3D model of the house," explains architect Serge Schmitgen. "We wanted to distribute solar gains over the course of the day in a way that meant the building could be heated and cooled using as little energy as possible".

Minimal thermal bridging was critical

The balcony on the building serves to provide shade, but at the same time exploits the maximum amount of daylight. Eliminating any risk of thermal bridging at the balcony connection was critical and the architect had no hesitation in turning to Schöck; using two types of Isokorb variants on the front and sides of the 1.60m x 4.00m concrete balcony. With pressure bearings made of microfibrereinforced high-performance fine concrete and an insulating thickness of 120mm, the certified passive house components fitted together seamlessly without expansion joints into the reinforced concrete inner slab layer. The installation involved placing the balcony cladding and floor slab into position, the load-bearing thermal insulation elements then secured to the steel reinforcements using binding wire. The floor slab and balcony were then covered with concrete, the Isokorb thermally insulating the balcony from the building.

The Schöck range of structural thermal break units allows connections to be made between concrete-to-concrete, concrete-tosteel and steel-to-steel. Product performance is totally verifiable and the range meets full compliance with the relevant UK building regulations, has NHBC approval and offers LABC Registration. There is also the security of independent BBA Certification.

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Designing out condensation

Iain Fairnington of A. Proctor Group highlights some of the factors affecting pitched roof design, and how architects can design out condensation problems from the start

B S5250 is the code of practice for condensation control, and includes the following reference in relation to design principles: Design for the control of condensation depends upon obtaining a satisfactory relationship between air conditions (internal and external air temperatures and humidity), and the properties of the external elements of construction (thermal and vapour resistance). The objectives should be as follows: prevention of harmful surface or interstitial condensation; prevention of mould growth; and economical reduction of nuisance condensation.

Condensation control should be considered as part of the design process. Successful control will depend on factors such as prevailing winds, room layout, number of storeys and type of heating system as well as the more usually accepted aspects such as construction, heating, ventilation and moisture production. All these aspects, therefore, should be considered carefully and, as they are interdependent to a greater or lesser degree, they should be considered together.

The fundamental principle in designing to minimise condensation is to maintain a balance of the three factors – thermal and vapour properties of the structure, heat input, and ventilation – in order to achieve either low vapour pressure and/or high structural temperature.

The building fabric, typical weather conditions and anticipated occupancy patterns and uses will all interact to define the moisture risks associated with the construction. These 'ground rules' form the basis of a good hygrothermal design strategy.

Once an understanding of the building, weather and occupancy are achieved, the designer can focus on ensuring the heat, air and moisture movement within the structure is properly balanced.

This critical balance of heat, air and moisture can be influenced by many factors depending on the precise nature of the project.

Refurbishment

In refurbishment projects, there may be pre-existing condensation issues to resolve, particularly relating to convection tightness and cold bridging. The building may also have been modified or upgraded over its lifespan, and interventions such as doubleglazing, blocking up chimneys and sealing draughts may have created condensation issues, which did not exist before.

Modern materials may also have very different hygrothermal properties to those they replace. This might require special treatment in order to avoid problems, and necessitate sourcing unusual materials or skills.

New build

On paper, new build presents far fewer problems, however, designers should bear the practicality of installation and site conditions in mind when detailing condensation control measures. The gap between 'as designed' and 'as built', can be significantly influenced by the level of skill and expertise of the contractors, and their awareness of the importance of vapour control.

It's also important to schedule work in order to minimise damage which following trades might cause to vapour control measures. Best practice will avoid plumbing and electrical services being run through membranes, which should provide a vapour or airtight seal. Providing service voids within the sealed envelope goes a long way to preventing these problems.

Finally, construction moisture must be considered, and wet trades like screeding and plastering will introduce additional moisture loading that may not have been accounted for.

Timber frame

Timber frame buildings are typically built under 'drier' off-site conditions, which not only reduces initial moisture loads but also means a wind and watertight envelope can be achieved in less time.

Tighter tolerances and better quality







This critical balance of heat, air and moisture can be influenced by many factors depending on the precise nature of the project







control also help reduce problems, but this might mean the building is less able to tolerate issues arising from poor installation or damage to prefabricated elements that might occur.

Traditional build, sarking & primary roof covering

Traditional masonry buildings will have higher moisture loading from wet trades and a less precise construction process that places greater emphasis on good workmanship on site. They do however have better fabric heat storage characteristics which can help stabilise temperature swings, and the inherently leakier and more permeable construction can reduce the risks associated with trapping moisture, provided this permeability is accounted for in the design process.

The use of sarking materials, such as plywood or OSB, or traditional softwood planks, will have a big impact on the way moisture flows through a loft. Some underlay membrane certification may impose additional requirements or restrictions.

It's not only traditional slating that will affect condensation in lofts. Even using a standard tiled roof, the air openness of the outer covering must be accounted for, and if the tiles are particularly airtight or if metal roof coverings are specified, additional venting of the batten cavity may be needed.

BS5250 and BS5534 – codes of practice for slating and tiling – outline when coverings can be considered 'air open', what measures must be taken if they are not, and what effect wind uplift will have both on the outer covering and the roof underlay.

Complex layouts

The physical layout of the roof has to be accounted for, and in particular, complicated roofs might pose problems when it comes to ensuring all areas are adequately ventilated and there are no 'dead spots' where moisture-laden air can accumulate.

Subdivisions of roof areas for example for fire compartmentalisation can further exacerbate this issue, as can specific architectural detailing or the overall aesthetic, which may preclude adding additional ventilation.

BS5250 details the requirements for ventilating roofs and controlling condensation.

Iain Fairnington is technical director of the A. Proctor Group



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SpecMaster solves thorny problem



Gorse Hill School, in Swindon, has been restored to its Victorian splendour thanks to contractor, Davis Roofing, who used **Redland** tiles and Dry-Fix systems specified under the Redland SpecMaster service. SpecMaster is a three-stage

free-of-charge service. At the first stage, Redland provides a comprehensive bespoke specification for any pitched roofing project. Once the project is under way, on-site support is available for public sector clients from Redland's Specification Managers to ensure each element is installed correctly and to specification. On completion, the roof is covered by the 15-year guarantee.

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Firestone's Rubbergard[™] EPDM



Firestone Building Products' RubberGard[™] EPDM roofing membrane has helped ensure a new wedding venue was ready in time for couples waiting to tie the knot this summer at Sandy Cove Hotel on the Devon coast. John McMullan from Firestone Building Products adds: "Our EPDM roofing membranes are ideal for a fast track project like this, as the system is supplied on wide

rolls, enabling faster installation with fewer seams. Our RubberGard™ EPDM membrane's elasticity and flexibility make it a robust choice both during installation and throughout its service life."

01606 552026 www.firestonebpe.co.uk

Cembrit plank brings life to a bungalow



Water leaks are a distant memory for the owners of a bungalow in the Isle of Wight after **Cembrit** Plank was installed on the property to provide a new watertight cladding system. Roofing contractor, L J Teal Roofing Service was approached by the homeowners

who were looking for a solution to fix a water ingress issue. The concrete blocks and render finish had become porous and water was penetrating through. Having heard about the recently launched Cembrit Plank, the contractor was confident that this weatherboard could provide a good cladding solution for the customer.

sales@cembrit.co.uk



Natural slate, natural beauty

Allan Liddell of Cupa Pizarras explores the inherent beauty, as well as the environmental credentials, of natural slate

Iate is formed through the regional metamorphosis of mudstone or shale under low-grade conditions. This happens when shale or mudstone is exposed to heavy pressure and heat from tectonic plate activity, which metamorphoses its clay mineral components into 'mica minerals'. These are the main components of slate, and determine the colour, depending on the minerals and the amount of them within any given location. These mineral components vary greatly from location to location which is why different quarries will produce different coloured slate, offering architects a palette of beautiful, natural tones.

As a 100 per cent natural material, slate is a sustainable choice. Independent studies, such as one carried out by the Inventory of Carbon and Energy (ICE, University of Bath), have confirmed that it is the material with the least negative effects on the environment. Unlike other materials and roofing adhesives that leave volatile organic compounds (VOC) in the air around the building for years after being installed, natural slate uses only water in the production process. We have taken this one step further as recycled water from a closed circuit is used, to prevent water wastage and further minimise the environmental impact.

Furthermore, the extraction of slate, if done correctly, can have a minimal effect on its surrounding environment. For instance, most manufacturers, as part of the production process, will conduct geological, mineral and geotechnical surveys and sample testing. This is to determine the quality of the slate and the potential reserves of the deposit, so only high quality slate is extracted. Once the reserves of slate have been exhausted, the quarries can also be restored by hydro-seeding native plants, which will ensure the natural recovery of the local flora and fauna.

Slate's unquestionable beauty, structural quality and environmental credentials mean it is often the preferred choice from a design



stance. For instance, a private residential, new-build in Cambridgeshire recently required a circular roof to accommodate the property's shape. 12.5 metres in diameter – with a circular, 30° pitch meant the project required a durable product that could easily be cut. Starting with 24 inch x 18 inch slates at the eaves, working up the roof with 20 SPLIT Split House in Sussex, featuring Cupa Pizzaras' Cupaclad slate cladding



CIRCULAR

A new-build home in Cambridge with a circular roof made of Cupa R12 Excellence natural slate in a variety of sizes

inch x 15 inch and then 24 inch x 12 inch, the project was finished using 20 inch x 10 inch, which were cut down in width at the top to create a distinctive yet beautiful design.

Although slate is often associated with heritage projects, its versatility is increasingly seeing it contribute to more contemporary aesthetics more and more. The product can also be used as a rainscreen cladding system, to great effect, due to its naturally waterproof properties, lightweight design and aesthetic appeal. For example Split House, a private new build residence on the Sussex coastline boasts a beautiful facade on its second storey to resemble something similar to a sundial. Due to the angles of the build and the slates' almost reflective surface, the sun could be expressed across the building with the cladding catching the light at certain angles, which created astonishing results in relation to colour movement throughout the day.

Although slate has a long and established history as a building material, its design possibilities and environmental credentials enable it to be a modern choice for a wide range of projects. Extremely versatile, the use of slate is already evolving to meet changing design requirements and with research continuing to uncover new ays for this material to be used its place across the architectural spectrum seems to remain cemented.

Allan Liddell is specification sales manager at Cupa Pizarras

New Stuart Turner range of pressurisation units coming soon



Pump manufacturer **Stuart Turner** are introducing a new range of next generation digital pressurisation units to their portfolio, seeing them move into the heating market too! The Stuart Digital Pressurisation Units, which will be available later this year, offer all the reliability and engineering excellence associated with established Stuart Turner shower boosting pumps, with interest already growing from key focus groups. The next generation units offer an automatic filling and pressure maintenance solutions for sealed heating and chiller systems. They are capable of filling a system from empty and then maintaining the fill pressure in sealed systems. They are available in a range of sizes and with one (duty) or two (duty standby) premium quality Stuart Turner continuously rated brass pumps and utilise advanced digital controls with a unique microprocessor and pressure transducer designed to provide self-diagnostics and an intuitive easy to use menu. Stuart Digital Pressurisation Units are compact in size and exceptionally easy to install and commission, with left or right hand side inlet and outlet connections and the option to be either floor or wall mounted.

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Still at its best, Johnson & Starley Warm Air Heating



Johnson & Starley's WarmCair condensing warm air heating range is suitable for a wide range of applications including private residential and social housing as well as smaller commercial applications such as schools, sports facilities, nursing homes and community centres. With rapid warm up times and low noise levels, models are suitable for new builds and the direct replacement of existing warm air systems. Designed for simple and quick installation, the WarmCair warm air heating system offers many space saving and room layout advantages over wet heating systems. There is a choice of upflow or downflow models available with or without hot water and incorporating a stainless steel heat exchanger and other first class component to ensure long life and low maintenance costs. Compliant with Building Regulations Part L, WarmCair heaters produce up to 36kW heat output and are up to 98 per cent thermally efficient. Savings in gas consumption can be as much as 28 per cent. An optional 'Cleanflow' electronic air filtration system provides the added benefit of filtered air with the ability to filter 95 per cent of airborne pollutants as small as one micron including pollen, dust and cigarette smoke.

01604 762881 www.johnsonandstarley.co.uk

Kingspan provides full system solution



IKO Polymeric have expanded their existing Chesterfield headquarters with an energy-efficient warehouse, featuring a top class building envelope and daylight solution from both **Kingspan Insulated Panels** and Kingspan Light + Air. The building envelope was completed with a Topdek flat roof system, with a durable and UV-resistant

IKO Armourplan membrane. Meanwhile, Kingspan Light + Air worked with the project team to create a lighting specification, which maximised the natural daylight within the warehouse. To achieve this, Kingspan Day-Lite Vault rooflights were installed.

www.kingspanpanels.co.uk www.kingspanlightandair.com

Providing a slimmer insulated fall



Kingspan Insulation has introduced Kingspan Thermataper TT44-K and Thermataper TT47-K, its first tapered roofing systems to incorporate Kingspan Kooltherm insulation, delivering excellent drainage and thermal performance with slim, lightweight

constructions. Kingspan Thermataper TT44-K and Thermataper TT47-K are designed for use on new and existing roofs with concrete or timber decks. Kingspan Thermataper TT44-K and Thermataper TT47-K can provide an effective flat roof drainage solution without the need for a structural fall.

01544 387 384 www.kingspaninsulation.co.uk

Yonos PICO the small pump to specify



A range of new features has been added to the Wilo Yonos PICO circulator – specified primarily for residential homes and properties, for heating systems and air conditioning equipment. Together with the new functions, the compactness of Wilo Yonos PICO has been dramatically improved to make it easy to install. Front access to motor screws and the Wilo

connector position, contribute to the adaptability of the pump in any installation. Importantly, new ease of use functions make maintenance far easier for the installer. Manual restart is a response to a specific request from the market, as is the new constant speed mode.

01283 523000 www.wilo.co.uk

Lowboard provides ideal UFH solution



A complex and time constrained redevelopment contract in central London is making extensive use of 'LowBoard22' underfloor heating panels, as well as other products from the OMNIE range, to offer optimum comfort and flexibility of living space for its future residents. The

LowBoard22 panels are a widely specified and very popular product within OMNIE's UltraLow offering with an overall panel depth of 22mm, accommodating 12mm diameter pipe runs. This offers low water volume while the relatively small diameter pipe is also easy to push into the precisely routed board profiles.

01392 363605 www.omnie.co.uk

Kingspan embraces the past



A £12.4 million extension to the 19th century Dunfermline Carnegie Library in Scotland is helping raise the town's cultural profile. The new building is designed and built to comply with Scottish Building Regulations, with the help of **Kingspan**. Kingspan Kooltherm K15 Rainscreen Board and Kingspan Kooltherm

K10 Soffit Board feature a fibre-free core manufactured with a blowing agent which has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP). The product has been assigned a highest possible BREEAM Green Guide summary of A+.

01544 387 384 www.kingspaninsulation.co.uk

Sto provides robust wall insulation



Insulation products from **Sto Ltd** have been used to provide a robust external wall insulation system for a new rugby club building in Scotland. The StoTherm Classic K system provides outstanding thermal

insulation and a market-leading impact resistance of 60 joules. This is up to 10 times greater than similar cementitious systems and so was the ideal choice for the rugby club environment where it might be subject to impact. The thoroughly proven system was fixed to the pavilion walls using StoLevell Uni mineralic reinforcing mortar, which allowed for fast, easy and secure installation.

01418 928000 www.sto.co.uk

Welcoming BB101 2018



Breathing Buildings has welcomed the 2018 edition of *BB101: Guidelines* on ventilation, thermal comfort and indoor air quality in schools. Focusing on the vital balance of indoor air

quality, thermal comfort and efficiency BB101 2018 sets more stringent air quality targets, is tougher on summertime overheating, and recommends a pre-mixing of air to eliminate cold draughts. Hybrid ventilation systems are also introduced in BB101 2018 alongside traditional natural and mechanical ventilation, offering specifiers an alternative ventilation design strategy for schools.

01223 450060 www.breathingbuildings.com

Tenant fit-out for SVC



AET Flexible Space engineers have just completed a Cat-B fit-out of underfloor air conditioning equipment on the fifth floor of 180 Great Portland Street for new incoming tenant, strategic communications specialist, Sard Verbinnen & Co. The system installed

throughout the six floors at 180 Great Portland Street is a CAM-C chilled water system with underfloor supply air and underfloor return air. The CAM-C downflow unit supplies conditioned air into the plenum beneath the raised access floor, which serves as the ventilation zone as well as space for power and IT distribution.

01342 310400 www.flexiblespace.com



In-print magazine • Digital magazine Newsletter • Daily digests

www.architectsdatafile.co.uk

The Vision Trimline Collection



The Vision Trimline Collection from Vision Fires launched in 2014 is a luxury range of balanced and conventional flue gas fires which give customers the choice of truly trimless options. This season sees the latest addition to range with the introduction of the TL83 its

timeless design will match all interior styles. The TL83 incorporates the latest burning log technology, this innovative feature is so realistic it cannot be distinguished from a natural living fire. The Trimline brand is renowned for its pioneering elegant heating products offering design solutions for virtually every situation.

www.visionfires.co.uk

Clean air strategy is a breath of fresh air



Vortice Limited has always been committed to educating its customers about the importance of ventilation and is now thrilled to get behind DEFRA's new clean air strategy consultation. This new draft outlines very simply that 'Air pollution is the top environmental risk to human health in the UK, and the fourth greatest

threat to public health after cancer'. The draft clearly shows the connection between suitable, correct ventilation and good indoor air quality which maintains the health and wellbeing of the occupants.

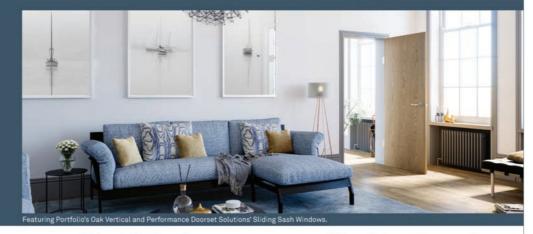
01283 492949 www.vortice.ltd.uk

Let More Originality In.



Classic

Simple. Timeless. Balanced.



Portfolio doors are more than just 'doors'.

CCL Wetroom's ideal drainage solution



The demand for effective shallow drainage systems in today's modern residential builds has never been greater. As floor depths are being squeezed to below 100mm, it is becoming more important than ever to find

certified shallow drainage solutions that can meet strict building regulations while achieving the correct waste tolerances on-site. Designed to be installed in the shallowest of floor depths, the BBA approved Linear Screed Drain from CCL Wetrooms with 55mm Lo-Seal Trap technology can deliver on both. The unique waterless trap allows the drain to be easily installed in any situation.

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

Versatile. Reliable. Fundo.



The main characteristics of the **wedi** Fundo series are quality, reliability and functionality with straightforward, safe and quick installation. 10 designs, 3 different drain locations and numerous sizes to meet the demand of planners, contractors and

installers. More than just a level-access shower – whether it's a comfortable bench for relaxation in the shower, a practical niche as a hygienic storage space, a stable partition wall with cleverly integrated shelving or a tailor-made wash stand – the modular wedi system opens up endless possibilities in expanding the shower area.

0161 864 2336 www.wedi.co.uk

Planning for the future



Planning for the future involves more than ensuring finances are organised. What about a client's home? Is that "future-proofed"? As we get older, one of the main 'activities' people struggle with is using the bathroom, particularly the toilet. The new Asana from **Closomat** overcomes the struggle. While it can be used as a conventional WC, with its fully-automatic integrated douching and

drying, your client just 'goes' ,then push a button for the ultimate in hygienic cleaning, without having to wipe.

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

Kaldewei offers the perfect answer



Kaldewei's Cayonoplan offers the perfect answer when it comes to designing a nearly flat shower solution. The enamelled Cayonoplan shower surface adapts to different structural requirements. For instance, if adequate height is available it can be installed at floor level. Where the bathroom does not allow for this, the shower surface can be

quickly and easily installed directly on top of the floor tiles. All Kaldewei bathroom solutions are 100 per cent recyclable and are supplied with a 30 year guarantee. Kaldewei will exhibit at Sleep + Eat 2018 at Olympia, London from 20th-21st November – stand B40.

01480 498053 www.kaldewei.co.uk

For Stockists:T: 0808 129 2224 | E: sales@carron.uk.net | W: www.carron.uk.net Victorian 6 Column 920mm, Satin Black THE ART arro **OF HEATING**

Borders to provide fresh appeal



When Viavi Romania designed their new Bucharest Headquarters they wanted a fresh and modern approach to their space planning design. Turning large expanses into demarcated colour areas was essential, without the need to physically block the space using walls or walkway interruptions. **Paragon Carpets** used BREEAM A+ rated Strobe to team solid colour with gradients of colour using vertical borders as demarcation lines with offices

given highlight colours to allow the floorspace to become an engaging place to occupy.

01709 763 800 www.paragon-carpets.co.uk

BLANCO ARCHPRO for the expert look



The **BLANCO** ARCHPRO series of taps demonstrates the expert design from BLANCO UK. The semi-professional mixer tap has a twin lever to regulate the temperature of the water flow to suit the user's requirements. The flexible spout is coiled to protect the hose and can easily be removed from the holder. The ARCHPRO range

includes the BLANCO ARCHPRO-B, available in Black/Chrome, the BLANCO ARCHPRO-C, available in chrome and the BLANCO ARCHPRO-S which is also available in chrome.

www.blanco.co.uk

Altro takes a fresh look



Commercial interior surfaces specialist Altro has introduced stunning new high-design ranges to its floors, doors and walls package. Delivering premium aesthetics with outstanding durability, all backed by Altro's sector-leading support and expertise, Altro

Ensemble[™] modular flooring system and Altro Whiterock[™] wall designs wall sheet are ideal for office, retail and hospitality environments. New Altro Ensemble modular flooring system is the next generation of luxury vinyl tiles. From colour blocking to geometric patterns, with a range of plank and tile sizes and textures.

01462 489 516 www.altro.co.uk

Refurbishment has just got a lot easier



The success of Interior Film from David Clouting now extends across a wide range of refurbishment solutions from; office doors and desks, shop walls, specialist hospital wards, hotels, restaurants and even luxury yachts. This innovative self-adhesive, decorative film manufactured by LG

Hausys is quick and easy to install. It's so versatile it can be applied to almost any interior surface. Easy to clean and maintain, Interior Film is hardwearing and remains stable if exposed to heat, humidity or low temperatures.

www.davidclouting.co.uk





Schlüter®-SCHIENE L-shaped floor profile

> Schlüter®-DILEX movement joint

Rece

INST NEC 3-103

Schlüter®-RONDEC

wall corners and edges profiles

Schlüter - TREP stair nosing with Schlüter - LIPROTEC lighting profile technology.

Schlüter®-PROFILES to complement tile and stone

Schlüter®-DITRA 25 uncoupling and CE marked waterproofing

> Schlüter - BEKOTEC-THERM hydronic underfloor heating and modular screed system

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Schlüter[®]-PROFILES

When specifying tile and stone, you need a partner you can trust.

From functional to decorative, our product range includes profiles for finishing wall and floor coverings, stair nosings, expansion, perimeter, edge, and transition joints.

With a wide range of finishes, colours, materials, textures and capabilities there's an option for every application, all suitable for use in commercial and residential installations with tile and stone coverings.

Backed up by expert technical support, whenever, wherever you need it.

Making the decision to choose Schlüter-Systems even easier.

To find out more call 01530 813396 or visit www.schluterspecifier.co.uk







From product to system – The ultimate solution for any requirement

The core of the wedi system is its base material the wedi building board. Thanks to its unique properties, it is one of the most versatile interior building boards in the construction industry today. Its main characteristics – 100 per cent watertightness, thermal insulation, mould and fungus protection and lightweight construction – are paired with straightforward, secure installation and reduced overall processing time. It is suitable for tiling or plastering and can be applied to practically any substrate.

On the current market, wedi building boards are not only available in the most extensive board formats and the widest range of board thicknesses but offer the strongest vertical weight loading capacity of 120kgs/m² and are also much sought-after as added insulation beneath underfloor heating systems.

wedi tile backer boards are named 'building boards' for their versatility in being commonly used for the construction of tailor-made solutions – whether a washstand, partition wall, shelving or a complete bathroom, almost any idea can be brought to life with the standard or flexible structural panels from wedi.

Special shower partition walls can be implemented quickly and easily with the use of wedi building boards. This robust system solution is an ideal alternative to cumbersome wall structures.





wedi building boards with a thickness of 50mm or more are approved for use as shower partition walls – wedi's standard product range offers eight different solutions in four thicknesses and five formats including wall elements with integrated, customisable niches.

These boards can be used to build partitions in limitless lengths when the building boards are attached to the wall, floor and a solid cementous ceiling structure and are strong enough to support shower doors, radiators, shelves or tray elements in conjunction with the wedi fixings set/reinforcement plates.

Furthermore, the calculation of the exact wall height before installation is not necessary as the final height of the partitions can be shortened during tiling.

wedi partition solutions offer fewer work steps (construct & seal in one step) and less material to carry (from only 14kg) resulting in significantly shorter processing time (from only 30mins) and reduced labour thus safer installation that is ready to tile in just 24 hours!

wedi is always at the cutting edge of innovation and also offers a special, creative wall solution for those design led areas where every detail counts – from a classic partition wall to a unique shower, the only limit is your imagination.

Due to its modular design and selection of various components (round, angled and curved pieces) nearly every customised wall combination can be created using the modular interlocking components of the wedi Moltoromo system. The robust construction of elements with installation void not only offers space for water pipes and connections, but also acts as a stable support for the installation of shower fittings and lines. Decoration with tile or plaster has barely any limitations allowing extensive freedom of design.

Think quality... Think reassurance... Think versatility... Think wedi

0161 864 2336 www.wedi.co.uk



New additions to Kährs wood flooring samples



A number of wood flooring samples have joined the selection at the **Kährs** Design Studio in London. Additions to the sampling include Kährs' new scandi inspired whitewashed oak designs, Nouveau Lace and Harmony Shell, which join the Kährs range this year as Scandinavian influenced flooring, decor and soft furnishings continue in popularity. Also joining the sampling is a new timeless French Pattern design, recently shortlisted in the 'International Design & Architecture Awards' for Best Hard Flooring. The new design benefits from a 'ready-to-install' format and is available in two colours, a golden natural brown 'Castello Rovere' and a rich, smokey tone 'Castello Fumo'. The Kährs Design Studio is in the heart of London's architectural and interior design community, Clerkenwell. Located at 5 Albemarle Way, with a roof terrace overlooking St John's Priory, the studio showcases over 200 large Kährs engineered wood flooring samples - ranging from clean boards to expressive, rustic designs. Specification appointments and CPD's can be booked between 9am and 5pm at the Kährs Design Studio by calling the Kährs office.

023 9245 3045 www.kahrsflooring.com

Welcome to the Dream Team Latexplan NA!



Mapei introduces Latexplan NA, a two-part, fast setting, smoothing and levelling compound to the ever popular 'Dream Team' range of levelling compounds. Latexplan NA is a two-part, fast-setting, moisture tolerant, cement based levelling compound, suitable for levelling differences in thickness between 3mm to 10mm in one application on new and existing substrates. The versatility of Latexplan NA means it can be applied over numerous substrates, including over most existing adhesive residues including bitumen, is suitable for use onto plywood substrates and Mapeproof ESM and Mapeproof One Coat surface DPM's usually without priming. Once applied, Latexplan NA can receive light foot traffic after approximately 60 minutes and is ready to receive floor coverings after four hours, depending on the ambient temperature. Latexplan NA can also be used in conjunction with underfloor heating and can be applied below surface applied damp proof membranes. Latexplan NA joins Latexplan Trade and Latexplan Trade Fast in the ultimate 'dream team' of levelling compounds, offering complete peace of mind for your flooring project.

0121 508 6970 www.mapei.co.uk

Stertil scissor lift ensures safety in confined space



Stertil Dock Products has designed, manufactured and installed a scissor lift to ensure safe handling operations for one of the UK's leading retailers at its store in Brixton. The 1500kg capacity electro-hydraulic scissor lift is used to transport a variety of roll cages, garment rails and plastic dollies between a goods receiving area and the shop floor. One of the biggest challenges to be overcome was the extremely confined space within which the lift was installed. As a result, the lift was delivered to the store as a set of components, which were then assembled on site by Stertil's installation engineers.

Although the distance between the two levels is less than a metre, Stertil Dock Products was commissioned to ensure that the lift's design and operation complied with stringent Health & Safety regulations. The adjacent control panel incorporates up/down push buttons plus a hi-vis emergency stop button which is replicated by another installed on the lift. In addition, the lift's doors and sides are fully enclosed to prevent hands and feet becoming trapped.

0870 770 0471 www.stertil-dockproducts.co.uk

Delivering safe hot water



Horne Engineering Ltd, designers and manufacturers of specialist thermostatic mixing valves, showers and taps for healthcare, secure, sport & leisure, education and accommodation markets, are delighted to unveil a brand new Show Van, which aims to showcase their clever and versatile product range to end-user clients, architects, consulting engineers, and FM providers. Glasgow-based specialist camper-van conversions firm, Caledonian Campers, have created an outstanding bespoke conversion, paying the very closest attention to every detail of the fit-out and product installations – from the flooring, to the wall and ceiling panelling, to the lighting and the central heating system! Long wheel-based and high-roofed, the van has standing head-room and is fitted out with a very comprehensive sample of the current product range of showers, medical tap, mixing valves and the patented ILTDU, In-line Thermal Disinfection Unit. The on-board computer also allows for slide shows of installations and media presentations to further illustrate a point or concept. Centrally heated, and with hot and cold liquid refreshments available, the Horne Show Van will tour year-round and operate, initially, across Scotland.

01505 321 455 goo.gl/rda7W2

Zip launches widest range of designs and finishes for workplace HydroTap

In response to specifiers' ever growing need for products that deliver high performance functionality matched with stunning design, Zip Water – creators of the world's most advanced drinking water systems – has launched a wide range of new designs and finishes within its popular workplace HydroTap range.

Previously only available for residential projects, the new collection includes the HydroTap Design range, with three new tap styles; the elegant swan-necked Arc, the contemporary Cube and minimalist Elite. Alongside these designs are eight new trend-led Platinum finishes – rose gold, brushed rose gold, gold, brushed gold, platinum, gunmetal, nickel and brushed nickel.

The new tap designs and finishes are an extension of the Zip HydroTap range for the workplace, which includes the flagship HydroTap Classic design. All tap styles can be paired with commercial-grade under

counter units to deliver up to 240 cups of instant filtered boiling water an hour and 175 glasses of instant filtered chilled or sparkling water an hour. Zip's Celsius and All-in-One models offer the option of pairing this functionality with an integrated mixer tap.

"The workplace kitchen is no longer an afterthought," explains Russell Owens, marketing director at Zip Water UK. "In fact, we've seen a huge shift in these spaces becoming the beating heart of modern offices, and with this comes the same expectations in terms of design."

"Architects are demanding a wider choice of styles and finishes that equal those found in residential kitchens and we're delighted to be able to fulfil this need. Staff can now benefit from a strikingly beautiful, highly functional drinking water system, which will ultimately improve hydration, wellbeing and productivity in the workplace."

The new range of taps look the part in any design-led office, while also delivering the

performance and reliability specifiers expect from Zip. The HydroTap's market-leading and cost-efficient filtration system offers 25 times better filtration than a standard water filter jug, producing water that's crisp, clear and refreshing.

From a sustainability perspective, the HydroTap enables staff to use refillable water bottles, eliminating the need for single-use plastic bottles, and the system's advanced energy efficient technology is good for the planet while reducing running costs.

03456 005 005 specify.zipwater.co.uk

New collection of Interwoven Vinyl Tiles



The idea behind **Polyflor's** new Wovon range was to provide an opportunity to explore new textures and patterns while still offering great functionality. The Wovon collection of interwoven vinyl tiles provides a unique and diverse selection of

weave designs that come with extraordinary depth and sophisticated aesthetics to cater for projects that require contemporary styling. Available in a range of 18 unique design options in 500mm x 500mm tile format, the Wovon collection is a sustainable product choice which is 100 per cent recyclable, Phthalate free and low VOC.

0161 767 1111 www.polyflor.com

Flooring solution for new maternity unit



Polyflor was selected for installation at North Middlesex Hospital's new £17.9 million maternity unit. Forest fx PUR sheet vinyl flooring in American Oak has been extensively used throughout the wards, corridors and reception areas. The Forest fx range is available in a practical and resilient

2.0mm gauge vinyl sheet format with a 0.7mm wear layer, making it ideal for high traffic, heavy commercial environments in the healthcare sector. Forest fx contains recycled material and is 100 per cent recyclable via the Recofloor scheme.

0161 767 1111 www.polyflor.com

Launch of Verona Pure Colours collection



Polyflor is delighted to announce the launch of the Polysafe Verona Pure Colours collection. The Pure Colours collection features a new and contemporary decoration in a selection of 18 tonal hues, perfectly suited for installation within a

wide range of commercial and residential environments to ensure the underfoot safety of occupants. The collection also features a specially engineered emboss and unique matt finish, using complementary coloured quartz in the vinyl to harmonise with the base shade and generate enhanced sustainable slip resistance of 45+.

0161 767 1111 www.polyflor.com

BAL's Microban range



Microban technology helps keep bathrooms, showers and all tiled environments cleaner and fresher. Only **BAL's** range of grouts and sealants developed exclusively with global leader Microban technology will provide protection against black mould AND potentially harmful

microbes and bacteria. Because the Microban technology is in-built within the BAL formulation's, Microban protection provides continuous antibacterial and antifungal protection that lasts the lifetime of the products, helping to create a cleaner, fresher and more efficient building application.

01782 591100 www.bal-adhesives.com

Polysafe Verona PUR

Berry Red 5232, Vanilla 5221, Lemon Drizzle 5241 & Neptune 523

New PURE COLOURS Collection

Polysafe Verona PUR, now with all new Pure Colours Collections, featuring a choice of light and stronger colours with optimised decoration to stimulate learning, productivity and motivation in classrooms. Ideal for high traffic areas such as corridors and classrooms where there is risk of spillages, Verona PURE provides an aesthetically appealing safety floor that looks like a smooth vinyl with virtually 'invisible' slip resistance.



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Real projects. Real energy savings.

Case Study: Ark Byron Academy School

CP Electronics halves project time of Ark Byron Primary Academy's new school

The construction timeline of a North London School has been reduced from 6 months to 3 months due to a successful partnership work by CP Electronics, Rawfield M & E, Ridings Consulting Engineers and Eco Modular Buildings.

This project required extensive application of the Vitesse Plus and Vitesse Modular product ranges which provide quick and easy installation that can be done off-site. The Ark Byron collaborative project shows how the education sector can cut costs during refurbishments and new builds with limited impact on pupils' education.

"Labour cost savings as well as installation simplicity has meant that we delivered a project 3 months earlier than originally planned – fantastic news!" Martyn Frear, SBDM at CP Electronics



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

A brand of **[] legrand**

Fusing design with technology

As more everyday devices become connected to the internet, so the desire for integrating technology into the home increases. Here, Matt Nimmons of CEDIA EMEA explains how architects can tap into this ongoing trend

The integration of smart home technology is fast becoming the norm for households up and down the country. As such, architects are increasingly quizzed on their smart home knowledge, making it now more important than ever to understand this technology to be able to provide the service that is now fully expected by the client.

What was once considered an optional add-on is now expected as standard. With consumers wanting the technology to be integrated and concealed within the design, they often turn to the architect for advice and guidance, so professionals need to be able to discuss the benefits, the functions, and the aesthetics of home technology with their clients.

One way for architects to ensure that their knowledge is at the required level, is to attend various CPD seminars, such as CEDIA's RIBA, BIID and RIAI accredited "Designing Integrated Future-Ready Homes" CPD. This course explains how to talk intelligently with clients and other members of the design team when discussing home technology. Attendees gain an understanding on how to achieve the successful integration of smart home technologies and systems by sharing some alternatives and explaining how to incorporate the various systems without detracting from the design within 21st century homes.

Delivering a smart home to a client requires collaboration between the architects and the technology integrator. CEDIA members are integrators who specialise in the planning, design, supply, installation, and concealment of technology systems for the modern, intelligent home. They partner directly with design professionals to maximise the lifestyle, function, aesthetic, and efficiency benefits of the connected home for their clients.

Technology can be a standout feature in a space, or blend transparently into the environment so that it doesn't detract from the flow of the design. Either way, a CEDIA



member will ensure that the integrity of the project is never compromised, and the technology is seamlessly integrated. Members can install anything from multi-room audio and home cinema systems to complete home networks and sub-systems, which intelligently control lighting, security, and HVAC.

CEDIA offers a Finder Service on its website, which allows design and build professionals to locate their nearest technology integrator. Users can search CEDIA member companies by postcode, services, and certification.

Matt Nimmons is managing director of CEDIA EMEA

TAKE PART IN CEDIA'S BENCHMARKING STUDY

The home technology industry is interested in finding out about your awareness, usage, and attitudes towards smart home technology. We invite you to take part in this benchmarking survey, which will; put you in the running to win a 55" UHD LG TV. To take part, visit www.surveymonkey.co.uk/r/DZ6BPCZ

Create Transform Innovate

esigning doors is an art form which comes naturally at Vicaima. Blending on-trend colour tones and surface materials such as veneer, laminate and foil with lacquers and stains to elevate the simply to surprising. Capturing truly fresh ideas that have the ability to harmonize with an existing theme or completely transform their surroundings.

Among the many recent creations to make the leap from drawing board to reality are two new additions to Vicaima's Exclusive range. The Ex20 collection blends the purity of white, acting like a canvas to off-set striking and modern grain patterns, forming a door which is almost abstract art. This collection presents no less than five models and offers a choice of grained tones, including Dark Ebony, Bleached Oak and Zebrano in both Golden and Rouge. For designers and specifiers looking for a more geometric style, the Ex70 collection displays multiple grain directions intersected by a commanding jet black and curved groove. These real Ash veneered doors come in four models and are stained in a choice of contemporary tones, Image: Vicaima EX71 model in Dark Taupe.



which include Warm Umber, Dark Taupe and Charcoal Brown; making them perfect for modern environments.

Of course innovation is not only confined to the appearance of a Vicaima door. The beauty of these products go far more than skin deep. With manufacturing expertise that has been honed for almost 60 years, Vicaima performance solutions in acoustics, security and of course fire doors, are widely recognised in the industry as a benchmark to which many aspire. This and Vicaima's suitability for multiple locations makes them an ideal choice for luxury living, hotels and commercial applications.

If you would also like to know more about Vicaima's latest collections or indeed any of the design and performance solutions provided, visit the website.

01793 532333 www.vicaima.com



WWW.ARCHITECTSDATAFILE.CO.UK

Wood Ceilings add extra warmth



The Hunter Douglas Architectural range of interior wood ceilings provide an unrivalled selection of finishes and applications, that have been developed to create a warmth and subtleness to almost any

interior roof space. This extensive selection includes linear wood, grill, tile and panel variations, which are available in solid wood, veneered wood and metal woodprint finishes. Hunter Douglas have also ensured that key requirements such as acoustics, integrated lighting and fire protection have not been ignored.

01604 648229 www.hunterdouglas.co.uk

Smartpanel by Electrorad



The latest addition to the smart heating ranges at **Electrorad** is the New Smartpanel. With energy saving features such as weekly programming (nine pre-programs and four custom), Adaptive Start Function (learns the heat up characteristics of the property and reacts accordingly), Open Window sensing,

in-built energy monitor, comfort, economy and frost protection modes. Add to that the fact that it's Eco Design Lot 20 compliant and available in five heat outputs from 600w to an impressive 2kw then you have one of the smartest panel heaters in the marketplace.

0113 2746799 www.electrorad.co.uk

Aico's first combined Heat & CO alarm



Aico has launched its first combined Heat & Carbon Monoxide (CO) Alarm.The new Ei3028 from Aico, a UK market leader in domestic mains powered Fire and Carbon Monoxide detection, is the company's first ever mains powered Multi-Sensor Heat & CO Alarm. Unique to the new 3000 Series, it is a convenient, cost-effective, efficient solution to protecting

residents from both Fire and CO in the kitchen and garage. The Ei3028 Multi-Sensor Heat & CO Alarm is designed to work as part of a Fire Alarm system that also includes Smoke Alarms.

www.aico.co.uk/3000series

Top category protection with Aico



Watford Community Housing has completed the installation of Grade D, LD1 fire detection systems in two 16 storey tower blocks using Aico Multi-Sensor Fire Alarms and accessories, wirelessly interconnected with Aico's award winning RadioLINK+ RF technology. Aico's

Multi-Sensor Fire Alarm uses two sensor types, optical and heat, to constantly monitor smoke and heat levels which are processed through intelligent detection software to provide the best response to all fire types, as well as reducing potential false alarms.

enquiries@aico.co.uk

Multi-occupancy buildings made simple



'Best practice' guidelines for accessibility provision within multi occupancy buildings have been updated, and extended in their remit. To help specifiers and developers get it right, a new white paper has been published. Provision of Assisted Accessible Toilet Facilities/Changing Places in Multi-

Occupancy Buildings, has been produced by **Closomat**. The paper simplifies the new guidance BS8300:2018 design of an accessible an inclusive built environment alongside the existing Building Regulations, and the Equality Act 2010 (which replaced the DDA).

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successfully proven to resist attack to LPS1175. The Platinum range joins our large portfolio of high security products, further bridging the gap between Frontier Pitts Security Range and our High Security Anti-Terra IWA14/PAS68 impact tested products, enhancing our accreditations further. We can offer the complete solution for all Mob Attack scenarios and Crowded Place, Public Realm venues.

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Door closer enhances fire safety



British designed and manufactured, Powermatic controlled, concealed door closers tick all the right boxes when it comes to fire safety and are particularly suitable for social housing applications.

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Powermatic's appeal to the social housing sector is further enhanced by its ability to enable doors to meet accessibility requirements.

For further information, please visit the Samuel Heath website or you can contact by phone.

0121 766 4200 www.concealeddoorclosers.com

The Life Safety Functions of an AOV



AOV lobby to shaft vent products used for natural and mechanical smoke ventilation systems have two life safety

functions. They are required to open, to allow the evacuation of smoke and toxic fumes as part of a smoke ventilation system; and when closed, they must maintain the Fire compartment of the shaft. AOV lobby vents opening into a shaft or duct as a function of a smoke control system should have an EI and S classification and comply with BS EN 1366-10, BS EN 13501-4 as well as BS EN 12101-8, these being the testing, classification and product standard for this type of product. For more information, please visit **Smoke Control Dampers** website.

www.smokecontroldampers.co.uk

Specialising in innovative ventilation



Smoke Vent Systems Ltd has a proven track record designing and installing life safety smoke control systems. It specialises in delivering cost effective and innovative ventilation solutions into new build and challenging refurbishment projects. SVS Ltd believe it is best practice to arrange a

consultation between your team, SVS Ltd and Fire Design Engineers during the early stages of the design process. The company ensures that regulations are adhered to and proposed systems are compliant. This reduces avoidable problems during the build and saves your client money. Please contact SVS today to discuss your project.

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- Directly replaces existing hob isolator switch

HobWatcher from Hoyles prevents hob fires by ensuring hobs cannot be left on unattended, mains power to the hob is turned off if no one is present.

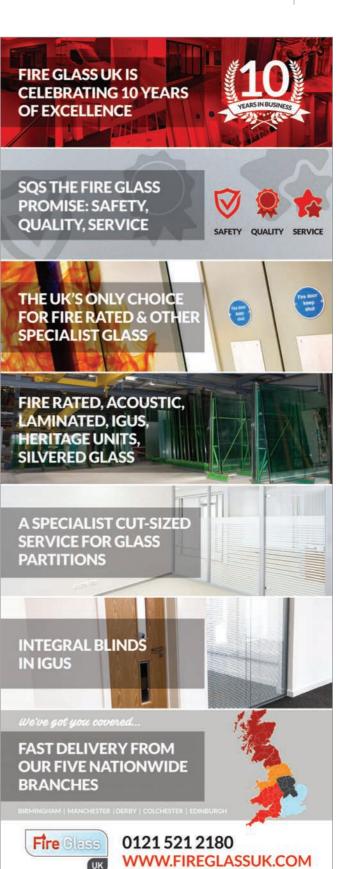
DorWatcher

- Keep student kitchen fire doors closed
- Prevent the spread of smoke
- Contain kitchen fires
- · Reduce fire alarm activations
- No user training
- · Robust and tamper resistant
- · Easy to install and maintain
- Battery or mains powered

DorWatcher from Hoyles helps ensure kitchen fire doors are kept closed to prevent the spread of cooking smoke, and in the worst-case scenario, contain a fire.



DerWatcher Alarm



ADF OCTOBER 2018

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Decoding fire regs

Rob Gunningham of SE Controls discusses regulations, compliance and best practice for fire safety

Fire safety is more than ever a prominent issue within the construction industry, as a result of the high-profile failures associated with Grenfell Tower. While certain remedial measures are being addressed, there is a lack of clear guidance when it comes to regulations and compliance for smoke control systems, from specification and design through to installation and post-occupancy maintenance regimes.

Regulatory network

Smoke control systems are among the most highly regulated aspects of a building's design. From our experience of running regular CPD events for architects and specifiers, it is often apparent that regulations need interpreting and 'decoding' to help best practice emerge through a greater level of understanding.

Under the UK Construction Product Regulations, products that have a harmonised European standard (hEN), must be CE certified against that standard.

The following EN 12101 series of harmonised standards apply to smoke ventilation products:

- EN12101 Part 1 Specification for smoke barriers
- EN12101 Part 2 Natural smoke and heat exhaust ventilators
- EN12101 Part 3 Specification for powered smoke and heat exhaust ventilators
- EN12101 Part 8 Smoke control dampers
- EN12101 Part 10 Power supplies.

Windows automated for smoke ventilation fall into the smoke and heat exhaust ventilator (SHEV) standard EN12101-2.

EN 12101-2 dictates that actuators and vent profiles must be tested together as a single system, at an accredited facility, to all annexes of the prescriptive standard. There are also strict audited procedures to fabricate and install the components, to ensure they are manufactured as tested. Failure to follow this procedure means that the required Declaration of Performance (DoP) certificate cannot be issued, therefore the solution is not compliant.

Compliance & diligence in design

In addition to component regulations, the most important design and specification reference is Building Regulations Approved Document B (ADB). This not only provides all the necessary guidance on escape travel distances and smoke control options, but also gives details on the location of vents, free area calculations and other key considerations, yet it must be remembered that ADB is a guidance document and shows minimum compliance standards for fire safety in occupied buildings.

However, unless the specifier is fully conversant with every aspect of ADB, there is potential for the specifications to be misinterpreted. For example, Section 2.26 requires smoke vents to be located either on an external wall or discharge into a vertical smoke shaft, yet each option also has additional specification criteria which have an impact on the building design.

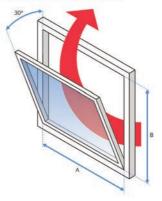
When located on an external wall the smoke vent's minimum free area to enable smoke to escape is 1.5 m^2 . However, as the free area is dependent on the window size and the amount it opens, this has a direct influence on window sizing. Also, the free area requirement calculations must be undertaken in accordance with ADB Appendix C – 'Methods of measurement', or alternatively the aerodynamic free area can be declared, which satisfies BS EN12101-2:2003 for natural ventilators.

ADB also demands that a worke shaft opening at roof level must be at least 0.5 m above any surrounding structures within a horizontal distance of 2.0 m and extend at least 2.5 m above the ceiling of the highest storey served by the shaft. This has clear implications for the building design, such lift shaft over-runs and parapet walls, which affects the location of smoke shafts and the location of roof mounted plant.

The key point for specifiers to take from these examples is that there are



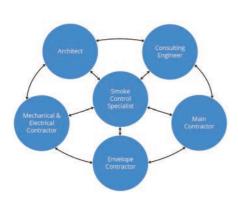
Free Area Calculation



APPROVED DOCUMENT B CALCULATION

Example free area calculation:

- Where A = 1.0 m and B = 1.0 m, the maximum free area = 1.0 m^2 .
- If the vent opens to 30° (0.5 m) then free area = A x 0.5 = 0.5 m².
- When the vent opens to 60° then the free area = the area of rectangle A x B = 1 m x 1 m = maximum free area = 1.0 m²



WORKING TOGETHER A team approach to design

several areas where the regulations may be open to misinterpretation and the design could be compromised, as an unintentional consequence.

Beyond design

With the release of BS7346 Part 8 'Code of practice for planning, design, installation, commissioning and maintenance' in 2014, navigating the compliance issues surrounding all aspects of smoke control systems was made simpler and more integrated.

This standard goes beyond the design stage to incorporate guidance and best practice on installation and commissioning as well as planned ongoing maintenance. Maintenance is a key feature of life safety systems, such as smoke control, as even the best designed solutions can be compromised or even fail, if they are not maintained in accordance with the regimes specified by the manufacturers.

It also adds further elements that need to be considered by architects and other disciplines involved in the design process. The standard deals with 'cause and effect' – key principles of effective smoke control system design, operation and safety. Consulting engineers, architects, design teams and installers will already be familiar with the principles of cause and effect, but BS7346-8 makes it a discrete but inherent part of the overall system process to ensure failsafe operation and system integrity.

Integrated solutions

As smoke control systems are essential for the protection of life, it's arguable that smoke control specialists should be included in the building design at a very early stage.

This can help smooth the overall design process and help avoid issues later in the construction process where some aspect of the complex regulation matrix might have been overlooked, such as the example of roof mounted plant and walls.

While the regulatory framework is complex, demanding and in some cases confusing, they exist to protect building occupants, and there is an obligation to ensure the building design and life safety systems integrate as a complete solution, built on compliance and best practice.

Rob Gunningham is director of SE Controls

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Fire Doors Protected by Yeoman Shield



A fter carrying out a fire door survey, Warwick Hospital undertook measures to protect and refurbish the fire doors throughout their sterilisation unit with Yeoman Shield door protection products.

Catering for the sterilisation requirements for all wards and departments within South Warwickshire NHS Foundation Trust as well as GP surgeries and clinics, the department is a hub of activity. The movement of heavily laden trolleys and equipment around the unit had caused impact damage to the department's doors around door edges, glazing beads and the door fronts. Damage to these particular parts of a fire door can render it unfit for purpose.

In this instance Yeoman Shield fired rated



door protection products were used to refurbish and then protect from further impact damage. Door edge protectors were fitted to the leading and meeting edges of the doors with door protection panels installed to a height that would shield the most vulnerable areas.

For additional protection, particularly to ward off blows to the glazing bead section of the doors, Yeoman Shield's rub rail was fitted to the face of the door just below the vision panels. Colours of Blue and Red were chosen to distinguish between the contaminated and sterile areas within the unit.

Yeoman Shield door protection products come with current and relevant fire certificates and do not affect the integrity of a fire door when installed but will continue to protect from detrimental impact damage for many years to come.

Malcolm Bloxham Reactive Supervisor commented "We have used Yeoman Shield for many years and find their door protection products perfect for maintaining our fire doors in good working condition, helping to reduce our door maintenance costs by minimising repair and replacement requirements."

0113 279 5854 www.yeomanshield.com

Jeckells sets pupils in the shade



Jeckells' the Sailmakers has installed three tensioned canopies over outside learning areas at Icknield School in Letchworth. Working closely with architects, Wilby & Burnett, Jeckells fabricated the canopies, sourced the stainless steel posts with red post bumpers and

organised full installation to fit in with the school's demanding schedule. Ferrari Soltis 86 premium mesh material was used due it its strength and durability. In recent years Jeckells has built up a reputation for the design and manufacture of quality shade sails with an almost unlimited degree of versatility in design, colour and materials.

www.jeckells.co.uk

U can have secure parking at UCLan



Cycle-Works have helped to encourage cycling to The University of Central Lancashire (UCLan) which had an issue with bike theft and security for staff and students. This was discouraging regular commuters using their bikes. To help

solve this, UCLan bought 48 Cycle-Works Velo-Safe lockers, that have been designed for campus's and similar sites. The university found the unique wedge shape to be attractive, flexible and space saving. The lockers support the university's Travel Plan and are helping to solve the problem of bike theft whilst promoting cycling.

www.cycle-works.com

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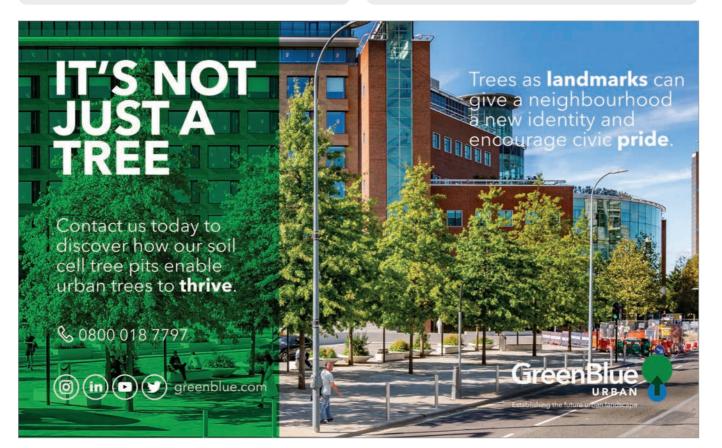
Resiblock made to order



Resiblock, and their commercial product Resiblock '22' A.F, has been specified and now utilised at the Maidstone Public Realm project. Resiblock '22' A.F was specified due

its protection against food and drink stains, and darkened appearance. The success of Resiblock '22' A.F at Bedford Square in Tavistock, and at Guildhall Shopping Centre in Exeter played a key part in Resiblock's recommendation of Resiblock '22' A.F, as both sites experienced similar level of footfall traffic that is expected in the Maidstone project.

mail@resiblock.com



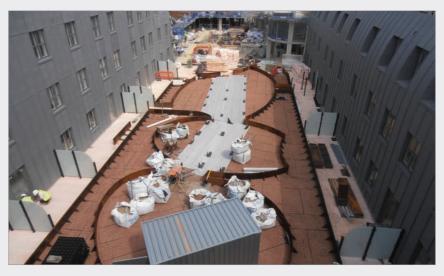
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'The Edging Company'

For 25 years, EverEdge have been known as 'The Edging Company'. We have been manufacturing edging for gardens, parks and public buildings and this edging range has been installed across the world. In more recent years, there has been a boom in demand for podium landscaping products and EverEdge have been supplying custom made steel planter walls for projects across the UK. EverEdge have a busy custom made department able to advice and quote on projects of all sizes.

The attached project, an installation on a new building in Islington, required a range of edging products from as little as 100mm to 600mm high and a mixture of curves, straight lines and corners. This Islington Square development is offering 250 residential units as well as leisure and retail facilities. EverEdge are providing steel edging and planters for private roof terraces as well as communal gardens and spaces.

Green roofs and podium gardens have become a must on new city developments. They are an excellent way to improve green



spaces in built up areas whilst providing the much needed new homes. Creating podium gardens creates a number of challenges. With our years of experience in manufacturing steel edging products, EverEdge are perfectly placed to advise on the best way to handle these challenges.

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A new anti-ram standard – which could save businesses millions

Roger Knight of Marshalls explains the benefits of the new PAS 170 standard and how it could provide architects with an assured security product to protect against vehicle attacks on commercial property

riminal ram raids are a costly threat to businesses. In the UK retail sector alone, the Association of Convenience Stores found that companies faced over £8m in damages from ATM ram raids last year with a further £38m for robberies and burglaries, the vast majority of which involved a vehicle impact. According to the most recent European ATM Crime Report, criminal attacks on cash machines across the continent increased by 230 per cent year-on-year in 2017.

Businesses are taking action to protect themselves and a number of retailers have announced plans to install measures outside their stores as a result of a series of incidents where vehicles have been driven through shop fronts. But up until very recently, the range of accredited and tested protective measures that companies can use has been limited to those specifically designed for mitigating high-speed, terrorist vehicle attacks, such as the incident in Westminster in August. Criminal ram raids happen at lower speeds, which means architects and developers have had to resort to specifying untested 'anti-ram' products.

The government has introduced Publicly Available Specification (PAS) 170 to address this challenge. This is a new set of accredited standards that can provide specifiers with access to assured security products designed to stop a vehicle of up to 2.5 tonnes travelling between 10 and 20 mph, as opposed to the greater weights and speeds tested to mitigate against terror attacks.

The new standard offers greater

flexibility and this provides architects and specifiers with a number of benefits. Together with helping them to protect commercial property and cut insurance premiums for businesses, it provides the proof of performance that the anti-ram solutions previously specified were unable to deliver.

It also provides a quick and proportionate way of evaluating protective products, which means that manufacturers will be able to conduct a greater number of tests with a wider range of bollards. This makes them more cost-effective and provides greater choice when it comes to picking the right type of security product for a particular space.

Following the latest round of testing at the Horiba MIRA crash test centre, Marshalls now has four bollard cores, which have been tested to the PAS 170 standard. All of these were put through their paces using a 2,500 kg trolley, with one replicating the impact of a vehicle travelling at 20 mph and the others at 10 mph. Each achieved a penetration distance of under 2 m – the limit for securing the certification.

Once incorporated into pre-existing landscape furniture, the new standard will give architects and specifiers access to a more cost-effective and wider choice of products to protect properties. Going forward, it's vital that solutions are available that are proportionate to the level of threat posed.

Roger Knight is head of new product development and engineering for landscape protection at Marshalls



This is a new set of accredited standards that can provide specifiers with access to assured security products designed to stop a vehicle of up to 2.5 tonnes travelling between 10 and 20 mph



New Paving Resource Launched

The trade association Interpave has just launched its new hard landscape, commercial paving and SuDS resource website www.paving.org.uk for architects, urban designers, engineers and other specifiers, at all stages of the design process.

Concrete block paving, flags, kerbs and related products play a key role in urban design, public realm and the spaces around and between buildings. In particular, concrete block permeable paving is the most versatile, multifunctional solution to meet Sustainable Drainage System (SuDS) requirements.

The new website provides an essential resource covering all aspects of design with precast concrete products, including an inspirational project gallery and case studies, supported by background information for early design stages, as well as CPD. A comprehensive series of technical documents covering all types of precast concrete paving products provide the definitive source of guidance for specifiers and contractors – including detailing, construction and maintenance.

Over the coming weeks, several new or



updated Interpave technical and educational documents will be launched and specifiers can register on the website to be kept up-todate with the latest publications and projects.

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WINDOW CONTROLS



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