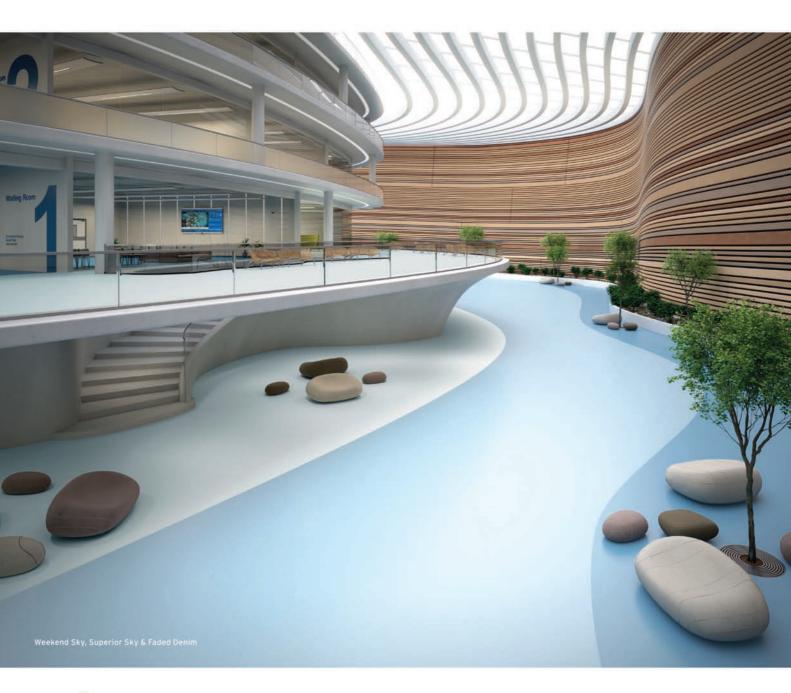


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# **CONTENTS**

# NEWS, VIEWS & INSIGHTS

- **04** Industry news & events
- 10 Ask the Architect: Rab Bennetts
- 12 Site Lines: Arup on Gasholders London
- **16** International Focus
- **18** New Arrivals
- 19 CPD Focus
- **35** Clerkenwell Design Week Show Preview
- **40** Roofing, Cladding & Insulation Showcase

# **PRODUCTS**

- **20** Appointments & news
- **47** Structural elements
- **50** External envelope
- **54** Insulation
- 55 Heating, ventilation & services
- **57** Interiors
- **68** Accessibility
- **70** Safety & security
- 71 Landscaping & external works
- **75** Classified & directory

# PROJECT REPORTS

# 24 The Age of Enlightenment

A formerly aloof monument to ancient art has been opened up in the French city of Nantes, with a precise handling of light and form as the keys to a unifying extension and refurbishment by Stanton Williams. James Parker writes

# 30 Precision-made for flexibility

With flexibility and functionality as key drivers, Bond Bryan Architects designed a state of the art autopart manufacturing facility which allowed for impromptu expansion. Sébastien Reed reports

# **FEATURES**

### **49 STRUCTURAL ELEMENTS: BRICKS & BLOCKS**

# **Delivering the vision**

Bespoke brick making is undergoing a revival, as Michael Brown of Northcot Brick explains

### 58 INTERIORS: DOORS & ARCHITECTURAL IRONMONGERY

### More than just doors

Every interior needs a statement piece to set off each element of your environment, explains Holly Graham at Premdor

### **69 ACCESSIBILITY & LIFTS**

# Handrail compliance: Overcoming physical barriers

Christian King of Kee Systems provides a run-down on the regulations around disabled access, and explores how an upgrade in handrailing systems can ensure that buildings comply

### 71 LANDSCAPING & EXTERNAL WORKS: COATINGS, PAINTS & STAINS

### Zero VOCs or not?

Matthew Pemberton at Treatex wood finishes considers whether counting VOC levels may be a misleading measure for architects when selecting products with the least environmental concerns

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# FROM THE EDITOR



aterials for Architecture took place last week at the ILEC Conference Centre in London's West Brompton, and it was a conference and exhibition which was distinguished by a tight focus on materiality, and rigour in applying materials innovatively in projects.

Among several excellent conference presentations from architects, Nick Ling from Heatherwick Studio set the event's tone of innovation in materials, with a whistlestop tour through some of the practice's inspiring projects. Particularly interesting among the firm's current schemes in terms of materials innovation was a Maggie's Centre soon to be erected in Leeds. Made from lightweight timber cassettes, the building's elements are being precisionmachined in Switzerland to provide a set of curvaceous forms with rooftop gardens. Ling said it was the project team's intention to construct the superstructure onsite in three days.

Other speakers described new ways to employ natural materials in projects large and small. David Smith of specialist flint construction firm The Flintman described how a cinema in Lewes, Sussex produced the world's first ceiling constructed from flint. At the other end of the scale, Cambridge University's Centre for Natural Material Innovation combined with architects PLP to offer a fascinating presentation (by Cambridge Uni's Michael Ramage and PLP's Kevin Flanagan) on their plans to build 'supertall' towers from engineered timber in London and the Netherlands.

Although Flanagan admitted the London scheme research proposal, which envisaged a 1000-apartment tower just under 300 metres tall at the Barbican was unlikely to be realised, he suggested the 160 metre proposal in Rotterdam was much more likely. And Ramage was vociferous on timber's potential for such schemes, he told delegates: "We don't give timber enough credit - its strength to weight performance is as good as steel and better than concrete".

Other standout sessions focused on more futuristic materials, including auxetic materials, whose composition changes, often dramatically, in use. Andrew Alderson, a professor at Sheffield Hallam University, gave a glimpse into a possible future, explaining that while their use in architecture may be some way off, auxetic materials had a strong potential to be used to control light, heat or sound.

Concrete was, perhaps predictably, a big draw at Materials for Architecture, including as the focus of several entrants to a special competition for student innovation. Held by Northumbria University's Department of Architecture and the Built Environment, the Young Researchers Forum saw judges deliberate long and hard due to the standard of entries, finally crowning postgraduate Ehab Sayed, whose intriguing research looked at the potential of incorporating still-growing natural materials into buildings of the future. Watch this space!

Last but not least, the Materials Wall gave delegates the chance to touch as well as see a wide range of interesting materials for consideration in their projects. All in all, this highly focused and still young event saw a good deal of praise from attendees purely for its level of focus and rigour, which help it stand out in a busy market.

James Parker **Editor** 

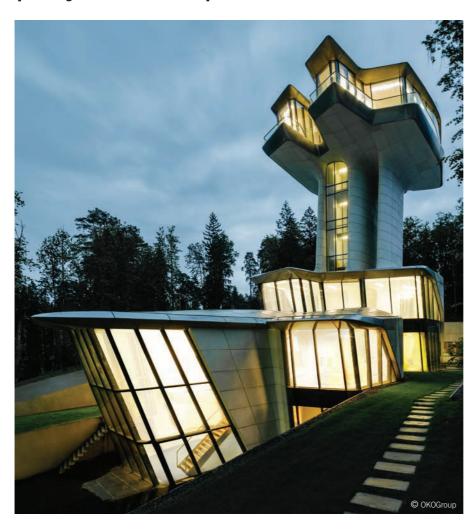


#### ON THE COVER

The Musee d'arts de Nantes was already one of France's top galleries, but it wanted to bring interiors up to 21st century standards while celebrating the past in its major refurbishment and extension. For the full report on this project, go to page 24. Cover image @ Hufton+Crow

### RESIDENTIAL

# Zaha Hadid Architects' first residential project completes in Russia





Capital Hill Residence, now completed on the outskirts of Moscow, is the late Zaha Hadid's first and only residential project.

Located on a north-facing hillside in the Barvikha Forest west of the city, the house is divided into two main components. The first merges with the sloping forested landscape, while a separate volume "floats" 22 metres above the ground to grab views of the forest over the trees. The client, Vladislav Doronin, briefed Zaha Hadid that he wanted "to wake up in the morning and just see blue sky."

The form of the residence is defined by its natural topography with "fluid

geometries emerging from the landscape and remaining partially embedded within the hillside."

The residence is organised vertically over four levels. The lower level houses leisure and recreational facilities. The ground floor includes the primary living room, dining, kitchen, entertaining spaces and indoor swimming pool. The residence's entrance foyer, library, guest room and children's rooms are on the first floor, while the master bedroom suites with exterior terraces occupy the upper level above the treetops.

The two main components of the house are connected by three concrete

columns that "establish a dialogue between these levels while also functioning as structural elements".

Vertical shafts required for circulation and services are located between two of the columns and incorporate a transparent glass lift and staircase.

The main entrance to the residence is located on the first floor where the three concrete columns intersect with the roof, defining skylights and double-height space. The view to the forest from the living room is framed by a double-curved cast concrete structure that supports the roof while also dividing the living areas.

# **EVENTS**

### **SEMINARS**

Is off-site the future of construction? 16 May, Exeter www.architecture.com/WhatsOn

Designing for flood resilience 17 May, London www.architecture.com/WhatsOn

### **FESTIVALS**

London Festival of Architecture 01-30 June, London www.londonfestivalofarchitecture.org

### **WORKSHOPS**

RIBA Future Leaders 2018: Coming to the Fore 17 May, London www.architecture.com/WhatsOn

### **EXHIBITION**

Disappear Here

2 May - 7 October, London www.architecture.com/WhatsOn

Knowledge Capital: Making places for education, innovation and health 4 May - 7 July 2018, London www.newlondonarchitecture.org/WhatsOn

### **TRADE SHOWS**

Clerkenwell Design Week 22-24 May, London www.clerkenwelldesignweek.com

#### Vision

21-22 June, London www.visionlondon.com

### 100% Design

19-22 September, London www.100percentdesign.co.uk

Healthcare Estates 09-10 October, Manchester www.healthcare-estates.com

UK Construction Week

9 - 11 October, NEC, Birmingham www.ukconstructionweek.com

### **AIRPORTS**

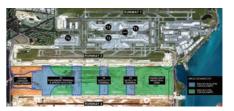
# Kohn Pedersen Fox and Heatherwick Studio to collaborate on Changi Airport

Changi Airport Group has selected Kohn Pedersen Fox (KPF) and Heatherwick Studio to lead the design of the new Terminal 5 of Singapore Changi Airport.

Terminal 5 will add capacity for up to 50 million passengers per year to what is already one of the busiest airports in the world. The magnitude of the project not only requires a "design vision on a city-like scale, but also offers the opportunity to transform conventional thinking in airport design".

The architects said the combination of KPF's experience in both large-scale infrastructure and urban neighbourhoods, paired with the innovative design expertise of Heatherwick Studio, will "create an airport that will go beyond mere transportation requirements and become a city within itself – an integral piece of Singapore".

James von Klemperer, president of KPF commented, "KPF and Heatherwick Studio, together with Architects 61, are excited to announce our collaboration for the design of the world's most significant aviation



project. As a global leader in designing buildings of major scale and significance, we welcome this opportunity to advance the airport typology. We're proud to be working with Changi Airport Group to deliver a terminal that will redefine the way we experience air travel, and provide a new, dynamic gateway to Singapore."

Thomas Heatherwick, founder of Heatherwick Studio added: "This is an extraordinary opportunity to break away from the sterility and soullessness we've come to expect from typical airport environments. We're excited to treat this next phase of Changi as a new piece of city and bring together the rigour of airport planning with an uncompromising interest in the quality of experience for passengers."

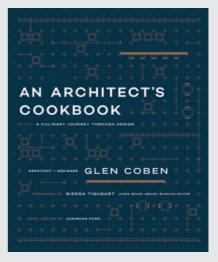
# BOOK

# An Architect's Cookbook

Billed as "half design journal and half cookbook", 'An Architect's Cookbook: A Culinary Journey Through Design' "peeks behind the curtain into the process of creating 'magical' culinary experiences both inside and outside the kitchen".

In his first book, architect and designer Glen Coben goes on a journey through his native New York City and beyond, delving into his architectural process and collaboration with some of the world's greatest chefs, including Mario Batali, Mary Dumont, Alex Stupak, Gabriel Kreuther, and more. Each chef provides a recipe to match.

Whether the reader is a design enthusiast, foodie, or a little bit of both, 'An Architect's Cookbook: A Culinary



Journey Through Design' is, say publishers Oro Editions, a "fascinating glimpse inside the mind of an architect and the journey from the conception of the design, to creating the space, and finally, to cooking and eating".



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#### **HEALTHCARE**

# Green light for BDP Taunton surgery

The Government has given the go-ahead for a new £79.5m surgical centre designed by architects BDP.

BDP was appointed by Taunton and Somerset NHS Foundation Trust to design the new Surgical and Critical Care Unit and Endoscopy Suite at Musgrove Park Hospital in Taunton.

The Department of Health has approved funding for the project, confirmed as part of a wider £760m NHS funding announcement by Secretary of State for Health and Social Care, Jeremy Hunt in March, and the planning consent has now been granted.

The new centre will include six endoscopy rooms, patient recovery and clinical support areas; eight operating theatres, including two interventional radiology theatres, recovery areas and clinical support; and 22 critical care beds.

BDP's "new thinking around wider hospital design" is illustrated at Musgrove Park, as the new unit will have dedicated wards ensuring the patients remain within the appropriate care team while in recovery, allowing staff to be able to work more efficiently with all the supporting facilities at their fingertips.

"We are designing a hospital complex of buildings that can expand and respond to future needs," commented BDP's healthcare architect director, Nick Fairham. "Musgrove Park was originally built in the 1940s with corridors so wide you could drive a jeep down them. Now we design hospitals where wards and care units are well connected so there is no need for automated transport to get from the operating theatre to the wards."

He continued: "It is excellent news that this major project has been given the green light as it is of huge significance to the local community. The Jubilee Building was very well received, and the same thinking will be applied to create a patient-centred, intelligent surgical unit for Taunton."

The new unit will be connected to the concourse building, with glazed link



Sketch of how the new surgical centre at Musgrove Park Hospital in Taunton could look © BDP

corridors to the Jubilee Building, which provides 112 new single bedrooms and support facilities. A "green corridor" will be created between the buildings for both patients and staff. The hospital's Jubilee Building and its gardens, which opened in 2014, were designed by BDP, with "the patient experience at the heart of the design approach," said the architects. Every wardroom has a view over gardens, an approach which is also being taken at the new Surgical and Critical Care Building.

# **GRENFELL REVIEW**

# RIBA expresses fears that Hackitt "will not deliver the changes needed"

RIBA has raised "serious concerns" over the direction of the Independent Review of Building Regulations and Fire Safety, which is being led by Dame Judith Hackitt, and which was commissioned in the aftermath of the Grenfell Tower fire.

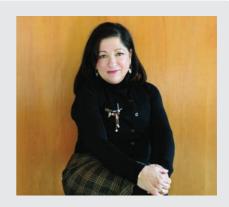
The RIBA's Expert Advisory Group on Fire Safety, set up following the tragedy, has written to then Secretary of State Sajid Javid, urging an "immediate consideration of the recommendations laid out by the RIBA before the final report is due".

In the letter, RIBA welcomed the suggestions in Hackitt's interim report that there should be clearer definition and allocation of statutory duties, increased independent oversight of construction quality and better building control enforcement. However, it

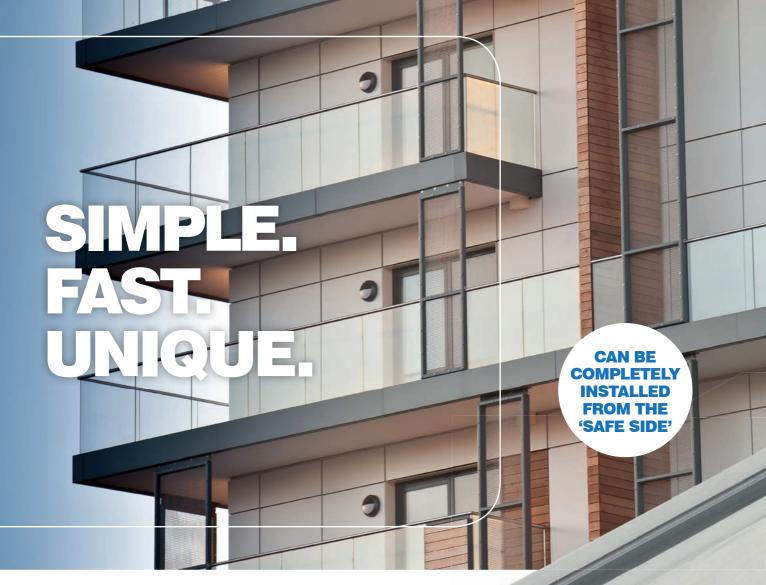
raised "significant concerns that key changes to ban

flammable cladding, require sprinklers to be fitted and ensure there is a second means of escape for high-rise residential buildings seem to have been overlooked".

Immediate past president of RIBA and Chair of the RIBA's Expert Advisory Group on Fire Safety, Jane Duncan said: "RIBA has engaged closely with Dame Judith and her review and we welcome many of the suggestions made in her interim report to strengthen the building control system. However, we fear that the current set of proposals under consideration overlook simple but critical changes that would provide clarity for professionals and most importantly, would help protect the public.



Sprinklers, a second means of escape and a ban on flammable cladding for high rise residential buildings are common-sense recommendations, and a basic requirement in many other countries. We have written to the Secretary of State making clear that there must be a thorough re-writing of the Building Regulations and guidance on all aspects of fire safety, to avoid continuation of the regulatory failings that led to the Grenfell Tower fire." The final Hackitt report is due this month.



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# ASK THE ARCHITECT

Rab C Bennetts is founding director of Bennetts Associates, an award-winning firm with a particular specialism in high-quality refurbishments in cultural, education and mixed-use projects.

### WHY DID YOU BECOME AN ARCHITECT?

It may sound unlikely, but I was fascinated by buildings and by design when I was still at primary school in Aberdeen. By my teens, by then living in Edinburgh, I was sure I wanted to be an architect.

### WHAT DO YOU LIKE ABOUT IT MOST?

The stimulus of creativity; no day is the same as another; opportunities to explore a huge range of activities that are connected in some way with architecture.

# WHAT IS THE HARDEST PART OF YOUR JOB?

The 'people issues' in our practice, especially if there is a downturn.

# WHAT IS YOUR PROUDEST ACHIEVEMENT AND WHY?

Bringing up two great kids at the same time as building the practice. They're now grown up and Denise and I [Rab's partner is architect Denise Bennetts, the practice's other founding director] see them a lot.

# WHAT'S YOUR BIGGEST CHALLENGE CURRENTLY?

As always, it's the challenge of winning new work, but right now there is a lot of uncertainty around thanks to Brexit.

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

Much wider involvement of a design adviser on the client side, when procuring an architect.

# WHAT'S YOUR CURRENT FAVOURITE MATERIAL FOR DESIGNING BUILDINGS?

Whatever the material, we like to express its natural properties; concrete, timber, steel etc. The form of construction is a big part of our architecture.

# WHAT CAN WE LEARN FROM OVERSEAS ARCHITECTS?

Confidence in modern design, particularly in historic settings.

# WHAT WILL THE NEXT "BIG THING" BE IN THE INDUSTRY?

I wish it was reform of architectural and construction procurement, but I think I'll be disappointed! In design terms off-site manufacturing has huge potential, as we are demonstrating in our project for Jaguar Land Rover.

# HOW CAN YOU SEE AN ARCHITECT'S ROLE CHANGING IN THE NEAR FUTURE?

We all need to resist the trend to turn architects into stylists.

### IS IT A MISTAKE TO PUT TOO GREAT A FOCUS ON TECHNOLOGY WHEN DESIGNING?

A rigorous understanding of technology is essential, but it doesn't always have to be overtly expressed in the design. That's up to individual architects.

# DO YOU THINK THAT CLIENTS HAVE AN ACCURATE IDEA OF WHAT YOU DO?

It varies, but most clients who come to Bennetts Associates have looked at our work and understand what makes us tick.

# WHAT ARE YOUR HOPES FOR 2018 AND BEYOND IN TERMS OF YOURSELF AND YOUR PRACTICE?

We're now an Employee Ownership Trust and there is a clear plan for the practice to develop through empowerment,



# We all need to resist the trend to turn architects into stylists

Rab Bennetts of Bennetts Associates

collaboration and mutual support. Denise and I are still very much involved, but the next generation is already in the driving seat!

# WHAT IS THE BEST THING ABOUT RESTORING OR RENOVATING OLDER BUILDINGS FOR A NEW OR PERHAPS DIFFERENT USE?

To use a term we learned in our theatre projects, working with existing buildings obliges you to improvise, which often results in unconventional or unexpected solutions. Projects on a green-field site can't do this to the same extent.

# DO YOU FEEL THAT THE STANDARD OF MAJOR RENOVATION PROJECTS IS UP TO SCRATCH IN THE UK – WHAT WOULD YOU LIKE TO SEE MORE OF FROM ARCHITECTS WORKING IN THIS SPACE?

There are some great renovation projects by some very good architects in UK. As the need for sustainability increases, the re-use of existing buildings is becoming far more important.



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# **SITE LINES**

# Industrial revolution

Ed Shearer from Arup reports on how a residential project has transformed Victorian gasholders in London to provide surprising luxury while embracing heritage

he Victorian era left a long architectural legacy in London, with many examples of architecture and industrial heritage providing lasting widely-recognised symbols of the city. The boldness and ingenuity of Victorian engineers is still visible across the capital, and 21<sup>st</sup> century engineers are adopting modern analysis and digital tools – combined with ingenious structural engineering – to revive and re-imagine these historic structures. The Gasholders London project exemplifies this marriage between contemporary urbanism and Victorian industrial heritage.

In King's Cross, a group of iconic Victorian gasholder guide frames emerge from the landscape of canalside docks and warehouses. Three of these, aptly nicknamed the 'Triplet', stand boldly on the north bank of Regent's Canal. Fully restored and re-erected, these frames have been given a new lease of life by the project to create a luxury residential offering.

### Adaptive re-use of industrial structures

The Gasholders London project, which was structurally engineered by Arup and designed by architects Wilkinson Eyre, re-imagined these structures by repurposing them for an entirely different function, and thus avoided them falling into disuse.

The project is a stunning example of adaptive reuse of industrial structures, which would otherwise remain unused. In a time of

increasing urbanisation, such projects are essential to land conservation, and the reduction of urban sprawl.

Arup has played a critical role in the re-rejuvenation of the capital's Victorian landmarks, including King's Cross Station and the recently opened Exhibition Road Quarter, V&A. It has also been involved in the restoration and reuse of other listed structures as part of the King's Cross Central redevelopment vision, such as Midlands Goods Shed and Gasholder Park, a beautifully landscaped urban park nestling inside guide frames. Gasholders London brings back to life and celebrates the charming appeal of iconic industrial structures, while providing luxury residences to an existing King's Cross site.

#### Close collaboration

Arup has worked closely with developer Argent on its vision to regenerate the former industrial site north of King's Cross since the partnership took ownership of the land in 2000. From early feasibility studies informing the masterplan, through to delivery of many of the buildings, Arup has provided integrated and holistic multidisciplinary advice throughout this complex development.

Retention of the rich industrial heritage at King's Cross is central to the story of Argent's vision. And the repurposing of the gasworks





### **CONNECTING THE CIRCLES**

The project introduced a circular courtyard connecting the three ex-gasholders, ringed with steel bridge decks on a single row of diagonal props

# SURFACE







# LEVATO MONO

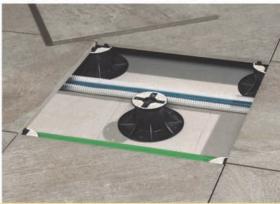
# Porcelain paver system and coordinating internal tiling

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### **GUIDE FRAMES**

The Grade II Listed guide frames, within which the three concrete-framed blocks sit, were erected in 1879  $\,$   $\,$   $\,$  Peter Landers

infrastructure, so quintessential to the area, is a thrilling starting point for much of the new public and private space.

# Working with Grade II listed frames

The project presented unique engineering challenges, both in the restoration of the Victorian gasholder guide frames, and in the design of the new residential blocks in collaboration with architect Wilkinson Eyre.

The Grade II listed guide frames were built in 1879 to house new, enlarged storage drums for gasholders 10, 11 & 12, which remained in active use until 2001 when they were dismantled to make way for the construction of the new Channel Tunnel Rail Link from St Pancras International.

The frames, comprising cast iron columns and wrought iron lattice beams, were stored temporarily at the east edge of what was once the gasworks site. A series of studies by specialists at Arup defined a strategy for restoring and repairing the guide frames, such that these could safely be reassembled and remain as a popular feature of the local landscape.

A new location on the north bank of Regent's Canal was identified for the frames and, in a competition announced by Argent, Wilkinson Eyre won the commission to design residential apartments based on its concept of three cylindrical blocks set within the guide frames. With a strategy for their reuse in place, as defined by Arup, the frames were relocated to Barnsley for refurbishment by Shepley Engineering and structural engineer, Craddy, and design of the new residential blocks began.

Arup provided consulting advice on structural, civil, geotechnical, facade and wind, and Hoare Lea led on building services.

### The structural engineering challenge

The geometry of the guide frames posed a significant constraint to the design of the new buildings, and successful delivery of high-spec residential units within required careful integration of design goals from the start. Taking design decisions early was key.

Detailed early studies of the floor plates justified ambitious minimum structural depths, set storey heights, and enabled early apprehension of an efficient yet flexible structural diagram. These allowed Wilkinson Eyre to proceed with extensive massing studies to achieve the right unit mix. The result: three lean concrete frames, optimised for maximum internal space, on a grid accommodating a large variety of non-stacking apartment layouts and basement parking, without resorting to transfer structures.

# Drawing opportunity from constraints

Non-linear analyses of the slabs justified efficient and simple reinforcement detailing for ease of construction. A unitised cladding system was proposed by Arup's facade engineers whereby cladding and balconies, assembled offsite, could be lifted into place and installed without external access, with minimal impact on the re-erection of the restored gasholder frames two metres from the building envelope.

In the centre of the three circular blocks, a fourth 'extruded' circle provides an open courtyard where the intersection of the three Victorian gasholder frames is revealed. Floating at the top of the courtyard, circular steel bridges provide graceful links between the three residential blocks.

Making use of the geometric stability of a closed ring, the bridge decks are supported from the buildings on a single row of diagonal props without the need for horizontal tie-back elements. This pared-down structural diagram not only provides a sense of lightness, it also releases restraint forces generated by thermal movements in the decks and sway in connecting buildings.

### Specialised shutters

A key feature of Gasholders London project are the motorised sliding, folding shutters over which residents have individual control, as can be seen above. At 4 metres high, the shutters are unusually tall and with four panels each operating concurrently around a faceted curve, these presented a challenge. Their reliability and operation was paramount to the facade's success. Arup's facade engineers defined a full test programme, which included life-cycling of the system, impact and simulated wind loads. This gave everyone confidence that the shutters could withstand even gale force winds in any open position.

### A fusion of historic and contemporary design

The design of Gasholders London is an exciting exchange where contemporary architecture responds to Victorian infrastructure; and state-of-the-art engineering re-unites with its industrial past. Gasholders London exudes the symbiotic relationship between the art and science of engineering.

The fusion of historic and modern design for Gasholders London now completed is a joy to behold; the slender steel bridges sharply contrast, and complement the Victorian ironwork of the guide frames, providing an eloquent counterpoint. This meeting of history and modernism is a consistent theme across the wider King's Cross Central vision. Brick, iron, concrete and steel all meld perfectly, underpinning complex design and engineering solutions.

Gasholders London was a rewarding project to be part of, born out of intense and creative collaboration between developer, architect, engineer and contractor, and the result is truly striking.

Ed Shearer is a structural engineer at Arup



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# INTERNATIONAL FOCUS

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



# TRIESTE AIRPORT, ITALY FUD & LOMBARDINI22

Trieste Airport's intermodal platform has opened to the public, 13 months after the first stone was laid. The new transport hub for the region is a combination of a redeveloped airport, railway station, bus station, and multi-storey car park. There is also an internal road network and a pedestrian link between the airport and other facilities. The steel and glass pedestrian walkway running across the "intermodal hub" from the airport was jointly developed by architects Lombardini22 and FUD. Based on a careful study of the location and its distinctive identity, the pattern of colours was "directly inspired by the surroundings," say the architects. "The rhythmic pattern of solids and spaces, sky and ground, dictates the facade's colours and materials". A striking and easily identifiable entrance was opened at the same time as the walkway. Blue has been used as "an authentic chromatic leitmotif for the airport".



# BASF TURK OFFICE, TURKEY MIMARISTUDIO

Istanbul based architecture and design studio Mimaristudio has delivered the interior concept and design work for BASF Turk Office. The new space facilitates a work environment that promotes "interaction, socialisation and working together". A brand new working and living environment was created by combining the "environmental, innovative and social face of BASF with a global design criteria which made the project a candidate for LEED certification". The design of the floors, walls and ceiling are combined with other design disciplines such as lighting, acoustics, landscape, graphic design and furniture. "Giant" installations which are a part of the lighting design over the staircase gallery form some of the project's most striking details.



# SCIENCE ISLAND, LITHUANIA SMAR ARCHITECTURE STUDIO

SMAR Architecture Studio is to design Lithuania's new National Science and Innovation Centre, known colloquially as Science Island. The new €25m science centre will be located within a 33 hectare site on Nemunas Island. Dr. Fernando Jerez, founder and creative director of SMAR Architecture Studio, commented: "Our proposal for Science Island follows the island's topography to find a deep connection with nature and with the city. On the roof, circular access points will work as public stages and natural seating areas, our aim being that the museum spills into the landscape and the park comes into the building."



# KIMMEL QUARTER, LATVIA SCHMIDT HAMMER LASSEN ARCHITECTS

Schmidt Hammer Lassen Architects won a competition to design Kimmel Quarter in Riga's Central District. Kimmel Quarter is the former home of Brewery Kimmel, and the project called for a design that realizes the "vision of a vibrant new city block with deep historic roots". Schmidt Hammer Lassen was one of 11 participants invited to the open competition. The firm's proposal aimed to revive the brewery site by transforming it into an office building and hotel with public facilities on the ground floor that will bring new life to the area. "We wanted to create a new composition of building volumes as pragmatic and straightforward as the old industrial complex with a dynamic façade that pushes back and forth and up and down," said Rasmus Kierkegaard, associate partner at Schmidt Hammer Lassen.



# VATICAN PAVILION, VENICE FOSTER + PARTNERS

The Venice Architecture Biennale 2018 will feature the first pavilions from the Vatican City. Curated by Francesco Dal Co, the Pavilions of the Holy See will take the form of 10 temporary chapels. Foster + Partners, in partnership with Tecno, will build one of the chapels located in a wooded area of the island of San Giorgio Maggiore. The starting point for the chapel's design concept was to take three symbolic crosses and a timber deck set in the landscape, draped with a tent-like membrane. "Over time, the crosses morphed into a tensegrity structure of cables and masts whilst the membrane evolved into a wooden latticework attached to the structure."



# EARLY LEARNING VILLAGE, SINGAPORE ABOGLE ARCHITECTS

The Early Learning Village represents a milestone in the delivery of international pre-school education. This "ground-breaking" school was designed by architectural studio Bogle Architects for the global schools operator Cognita. The Early Learning Village accommodates two of Cognita's schools in Singapore. The design is "radically innovative and despite the impressive scale of this institution, the 54,000 m² building is filled with visual delights creating a configuration to which both children and staff can relate" said the architects. The school is specifically designed to enhance childrens' learning experience by offering a spectrum of "lively learning environments, filled with colour and sunlight". The varied spaces range from intimate areas of sensory learning to more expansive areas of external play for social interaction, recognising that a range of spatial experiences is critical in children's development.



# SPORTCAMPUS ZUIDERPARK, NETHERLANDS FAULKNERBROWNS ARCHITECTS

Located at the heart of Zuiderpark, the €50m sports campus is an "innovative collaboration of alliances" between education, sport, sport science and the community, for both the municipality of The Hague and its private partners: the Haagse Hogeschool and ROC Mondriaan. The 33,000 m² sports campus includes a gymnastics hall, beach sports hall, spectator arena and a multi-purpose sports hall, as well as a variety of sports science and education spaces. At ground level, the curved form of the plan is expressed by a simple plinth constructed from textured precast concrete panels. The upper part of the elevation is expressed as a metallic 'ribbon' that narrows and twists to reveal glazing on the elevation. Constructed from brightly polished stainless steel, it changes colour with different lighting conditions and cloud patterns, as well as reflecting the animation of its natural setting.

# **NEW ARRIVALS**

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



# NEW DIRECTORS THE ARCHITECTS DESIGN GROUP

South West firm The Architects Design Group (ADG) has appointed three new directors. All previously Associates at ADG, Dale Beeson, Patrick Deigan and Bob McDonald, have now joined co-founders and fellow directors Phil Burgess and Marc Nash to lead the company. Dale Beeson joined ADG in 1997. He has played a key role in ADG winning new clients, including the University of Exeter and Exeter Mathematics School. As well as developing masterplans for a number of major projects. Bob McDonald joined ADG in 1999. He is the central architect in residential developments at the five-phase Mount Wise 'village by the sea' development. He was also the lead architect on the Azure development, next to the former Grand Hotel on Plymouth Hoe. Patrick Deigan joined ADG in 2005. His high profile projects include the redevelopment of the Godolphin Inn and the Royal Yachting Association training facility in Portland, which was developed for the 2012 Olympics. Patrick's expertise has helped the firm put sustainability at the heart of many of its designs, including incorporating Passivhaus principles to many of its residential projects. ADG director and co-founder Phil Burgess said: "I would like to extend a very warm welcome to Bob, Dale and Patrick as Directors at ADG. Over the last few years, they have become the main link with most of our clients, ensuring we exceed their expectations. They have also been behind many of the design awards that ADG has won."



# SENIOR PROMOTIONS PRP

PRP has announced a raft of senior promotions at board level. Manisha Patel has been promoted to senior partner and Scott Sanderson, Richard Harvey and Alistair Weir have been promoted to the board as partners. Scott will oversee technical and BIM in the practice, Richard will retain his 'design champion' focus, while Alistair will assume board responsibility for the Manchester office. Brendan Kilpatrick, Senior Partner at PRP, said: "These promotions highlight PRP's culture of encouraging and rewarding talent internally. We're confident that this next era of leadership will uphold our position as the leaders in housing design and delivery our future ambitions."



# MARTIN ROGERS MABER

Martin Rogers has joined architects maber as an associate to further drive the growth of the practice's expanding Birmingham office. With more than 20 years' experience in architecture, he has previously overseen the set up and growth of several offices for other practices. Rogers commented: "I am looking forward to helping maber to further build its reputation in the West Midlands. The practice is well established in the East Midlands, and has already made a real impact in the short time it has been established in Birmingham." Martin has previously worked for architectural practices that specialise in high-end design, commercial, education, sports and leisure.



# NEW DIRECTORS MCCULLOUGH MULVIN ARCHITECTS

McCullough Mulvin Architects are delighted to announce the appointment of Corán O'Connor and Ronan O'Connor as directors of the company, joining Valerie Mulvin, Niall McCullough and Ruth O'Herlihy. Corán and Ronan joined the practice in 2005 and are both design-focused architects and project team leaders, working across multiple sectors on many award winning projects for the practice, in Ireland and abroad, including UCC Beaufort Maritime Research Building, the Military Archives in Dublin, St Mary's Medieval Mile Museum in Kilkenny and, currently, Printing House Square student accommodation for Trinity College Dublin, and Thapar University India.

# **CPD FOCUS**

The latest CPD courses, seminars and documents for architects

SWEGON'S CPD SEMINAR, A BREATH OF FRESH AIR



Swegon's CPD seminar, A Breath of Fresh Air, outlines the importance of properly selecting an air distribution system and the impact this can have upon the comfort and well-being of end users and building occupants. The seminar explains the variety of room requirements and what product to use where, when and why. For consultants, building service engineers and architects, having a thorough understanding of air distribution systems will aid the design of a particular project. This seminar will also be broadcast as a live webinar on 30th May. 01746 761921 swegonair.co.uk/cpds

# TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



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

NEW CPD ON BRICK MATCHING FOR RENOVATION AND NEW BUILD



Imperial Bricks has introduced a new CPD to guide architects, specifiers and developers to gain a better understanding of brick matching techniques, including recognising brick types, brick blending, colour correction and the use of brick slips for interiors and external facades. The new, RIBA-approved CPD is titled: 'Innovative Brick Match Solutions: A Practical Guide to Achieving the Best Brick Match' and follows the phenomenal success of Imperial Brick's 'Revolutionising Restoration' seminar. 01952 750816 www.imperialbricks.co.uk

# AN INTRODUCTION TO AIR DISTRIBUTION



Designers, specifiers, contractors, consultants and building engineers looking to earn CPD hours, can now book their place on Waterloo Air Products PLC's 'An Introduction to Air Distribution' training. On the course, attendees will hear from one of Waterloo's air distribution experts. The session covers the basics of air distribution including typical air movement effects, cooling systems, the effect of heat gains, alternate systems and selection guidance. It also includes information about the importance of air flow in the internal environment. 01622 711500

01622 711500 www.waterloo.co.uk/technical/ cpd-and-training/ **'STEP ON IT!' SPECIFICATION OF ENTRANCE MATTING** 



Quantum 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

# AN ARCHITECTS GUIDE TO WAYFINDING AND SIGNAGE



Navigate your way around wayfinding and signage for building projects with The Comprehensive Guide to Wayfinding and Signage CPD from Modulex. Demystify the essentials of wayfinding and signage with tools and guides which enable architects and designers to efficiently guide visitors around their projects, whether for healthcare, education, workplace or leisure. Explore the key materials and typographic considerations for effective signage including when creating an inclusive wayfinding strategy. 01604 684020

www.modulex.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

# SFS PUSHES THE ENVELOPE IN NEW RIBA-APPROVED CPD



SFS has launched a new RIBA-approved CPD seminar programme for building specification professionals, providing the latest technical insights into creating high quality and safe building envelopes. Five complementary CPD seminars are now available to book at the SFS website. With seminar topics including support systems for rainscreen cladding, envelope airtightness and thermal efficiency, fixing of warm roofs, designing roof safety systems and hinge technology. 0113 208 5500

0113 208 5500 www.sfsintec.co.uk

# EverEdge edging and planters for roof gardens



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



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



galvanised finish or powder coat the steel to most colours.

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

01453 731717 www.everedge.co.uk

# Firestone refreshes online presence



A leading supplier of EPDM rubberbased roofing membranes and lining systems, Firestone Building Products UK and Ireland, has made accessing information about the company's products, capabilities and technical support easier than ever with the launch

of a dedicated UK and Ireland website. The new site provides clear navigation across Firestone's areas of expertise in roofing, lining, thermal insulation and facades, and features UK-based project case studies, product information and news.

01606 552026 www.firestonebpe.co.uk

# Celebrating Scottish architecture



GEZE UK will be celebrating the best in Scottish architecture when it sponsors the Royal Incorporation of Architects in Scotland (RIAS) Awards Dinner for the fourth year running. The

prestigious black-tie event will take place at The Hilton Glasgow, on Wednesday 20 June 2018 featuring a range of awards for architectural achievement. These will include the announcement of the RIBA Awards for Scotland, the Forestry Commission Scotland/Wood for Good Timber Award, Historic Environment Scotland Conservation and Climate Change Award Saint-Gobain Emerging Architect Award and RIAS/Scottish Government Scotland's Client of the Year Award.

01543 443000 www.geze.co.uk

# Apprenticeships boost from partnership



A new Modern Apprenticeship programme has been created at Norbord, Inverness, to develop skills that are focused on the technical and manufacturing aspects of the process at the mill. The new Technical Manufacturing Modern Apprenticeship

is an 18-24 month programme consisting of a combination of theoretical learning and practical hands-on experience within the production process, and results in an SVQ2 qualification. Emma Eadie, HR Assistant: "We have always supported Modern Apprenticeships and take on two apprentices every two years."

www.norbord.co.uk

# **Resiblock Celebrate Silver Jubilee**



April 28th sees **Resiblock** celebrate its 25th Anniversary! Established in 1993 by founder and Chairman Craig Amor, Resiblock has grown

from a single product company based out of a freight container in Rayleigh, Essex to one of the globally recognised leaders of the paving sealing industry. Since its creation, Resiblock has sealed and stabilised in excess of 10 million m<sup>2</sup> of paving including some of the largest and most famous sites in the world. From the product Resiblock '22', referred to as Legendary by The Paving Expert, Resiblock has now expanded its range to cover a wide range of paving.

mail@resiblock.com

# PennantPark acquires AKW Group



AKW, a UK leading manufacturers of accessible bathroom, kitchen and daily living products for the elderly, disabled people and people with reduced mobility, announced today it has been

acquired by funds managed by PennantPark Investment Advisers, LLC. Since its founding in 1982, the AKW's mission has been to support independent living with superior quality products that are practical, safe, and beautifully designed. The Company's mission will remain unchanged and its headquarters will remain in Braddan, with additional significant presence in Droitwich Spa.

01908 533253 www.akw-ltd.co.uk

# Third Queen's Award for Ancon



Ancon has won a 2018 Queen's Award for Enterprise in the Innovation category, for the successful introduction and on-going development of its advanced composite, low thermal conductivity, Teplo wall tie range. This is the third time that Ancon

has been honoured in this prestigious award scheme. Teplo wall ties are manufactured from continuous basalt fibres set in a resin matrix; a fibre-reinforced polymer that is 70 times more thermally efficient than steel. When used to join the two leaves of a cavity wall, this material virtually eliminates cold bridging across the insulated cavity.

0114 238 1219 www.ancon.co.uk

# BAL supports design and art project



BAL has teamed up with international mosaic artist Natalie Guy for art and design charity fundraising project BowWow Haus London 2018. BowWow Haus London is a fundraising and creative collaboration between pet charity Blue Cross, American not-for-profit organisation Outdoor Arts Foundation and

photographer Drew Gardener. Natalie has designed a tepee-shaped dog kennel featuring over 540 mosaic white flowers and buds, inspired by spring. The kennel has been grouted in BAL Micromax2 Gunmetal, kindly donated by the Stoke-on-Trent-based manufacturer.

01782 591100 www.bal-adhesives.com

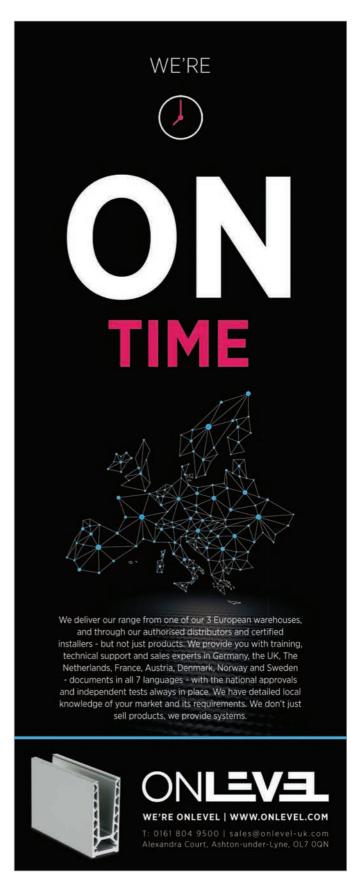
# Consort Claudgen launches Heat brochure

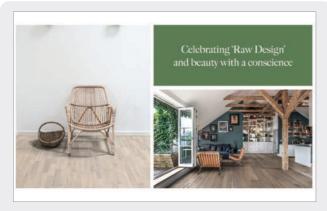


Consort Claudgen's new Heat brochure is now available in print and online. The full-colour, 48-page product directory provides information and comprehensive explanation of various heating systems including the SL and RX Wireless Control Heating System, Electronic 7-day Timer models and receiver units which can be retrofitted to existing compatible heaters, allowing the heaters to be wirelessly controlled by either an

RX or SL wireless controller. Download a copy of the new brochure from the website or request one by calling.

01646 692172 www.consortepl.com





# Kährs invite you to 'Raw Design' at CDW

Join Kährs during Clerkenwell Design Week, for a 'Raw Design' workshop, a discussion on the powerful influence of nature within design, particularly within interior design and architecture. Kährs will also demonstrate their new ultra matt wood flooring designs, which have been inspired by nature and designed by Emanuel Lidberg, the head of design at Kährs. There will also be the chance to win £2000 worth of one of the new floor designs, Oak Rime, for your own home! Following the 'Raw Design' workshop, you are invited to Kährs' roof top terrace, overlooking the glorious St. John's Priory, for refreshments and networking. To find out more and to confirm your attendance at one of the 'Raw Design' workshops, please use the contact details below. Spaces are limited!

023 92 453045 katherine.mathews@kahrs.com

VISIT AT CLENKENWELL DESIGN WEEK

# **Remmers Exhibits at Hayward Gallery**



Remmers restoration products were selected to complete extensive concrete repair and renovation works to the internal architectural concrete elements of the Hayward Gallery contemporary art gallery. Remmers 'Arte Mundit' was applied to remove the decades

of superficial dirt that had built up on the concrete walls and ceilings. Arte Mundit is a self-vulcanising cleaning paste that dries into a peelable natural latex. It provides thorough water-free removal of residues to varied substrates and there is no development of dust making it the ideal product for specialised restoration projects.

01293 594010 www.remmers.co.uk

# Welsh Slate has a new MD



The UK's largest manufacturer of natural slate, Welsh Slate, has appointed a new managing director. Mark Hodgkinson takes over the reins of the North Wales-based company after 11 years as production director, prior to which he was Welsh Slate's business development manager. However, Mark's expertise with slate goes back further than that, to when, as an independent consultant, he worked extensively with the

company in redefining manufacturing processes, material planning and improving productivity.

01248 600656 www.welshslate.com

# **Aesthetic automatic access for Cathedral**



A magnificent Grade 1 listed building, Birmingham Cathedral (St Philips) is a rare and fine example of English Baroque architecture. As part of a significant refurbishment of the interior, TORMAX was contracted to supply and automate two sets of traditional, wood-framed glass swing doors, providing DDA compliant access to the main lobby area. Helping maintain the architectural integrity of the building, the doors are powered by unobtrusive TORMAX 1201 operators, delivering smooth and reliable opening with whisper-quiet precision. Birmingham Cathedral was awarded a £500,000 grant to undertake essential internal renovation work. This included a complete re-wire of the building, cleaning of notable structures including the numerous stained-glass windows, as well improving accessibility throughout the building. Contracted by Midland Conservation Ltd, the automatic swing doors, installed by TORMAX, feature glass panels etched with an ecclesiastical design to blend seamlessly with this historic interior. Anna Pitt, chief executive at the Cathedral said: "As a place of worship, we want to ensure our facilities are welcoming to all who visit Birmingham Cathedral."

sales@tormax.co.uk



WWW.ARCHITECTSDATAFILE.CO.UK ADF MAY 2018

# G-Smatt completes one of the world's largest architectural glass LED media facades

G-Smatt Europe's parent company, G-Smatt, has successfully completed the installation of what is believed to be one of the world's largest installations of an architectural LED media glass facade. The innovative glass has been installed on the Coex Convention & Exhibition Centre, in Samseong-dong of Gangnam-gu district in Seoul, South Korea.

The project took three months to install and was completed in December last year. There were a number of challenges facing the team as the building remained open throughout the construction process. So, whilst the G-Smatt media glass could be installed during the day, all the associated welding and painting had to be carried out overnight.

On the technical side the main challenge came in the form of the three different zones, which were of varying dimension. This required some complex engineering to ensure a constant pitch of the LEDs across the glass to ensure the highest quality for the media display. A total of 1,200 sq metres of the media glass has been installed which contains over 400,000 LEDs.

Coex is owned by the Korea International Trade Association, one of the biggest private economic organisation in Korea. Technically it's a private company, but it takes on the



character of a public institution. Therefore, before the glass could be installed the company was required to obtain the same level of approvals as required by government buildings; no easy feat and one which required a great deal of effort from the G-Smatt team. There is also a requirement for 30 per cent of the display time be allocated to public service announcements including PR for the Gangnam-Gu municipal government.

The remaining 70 per cent of the time is dedicated to high-end brand advertisement eg AUDI, Blizzard, Calvin Klein, Cartier and Tiffany.

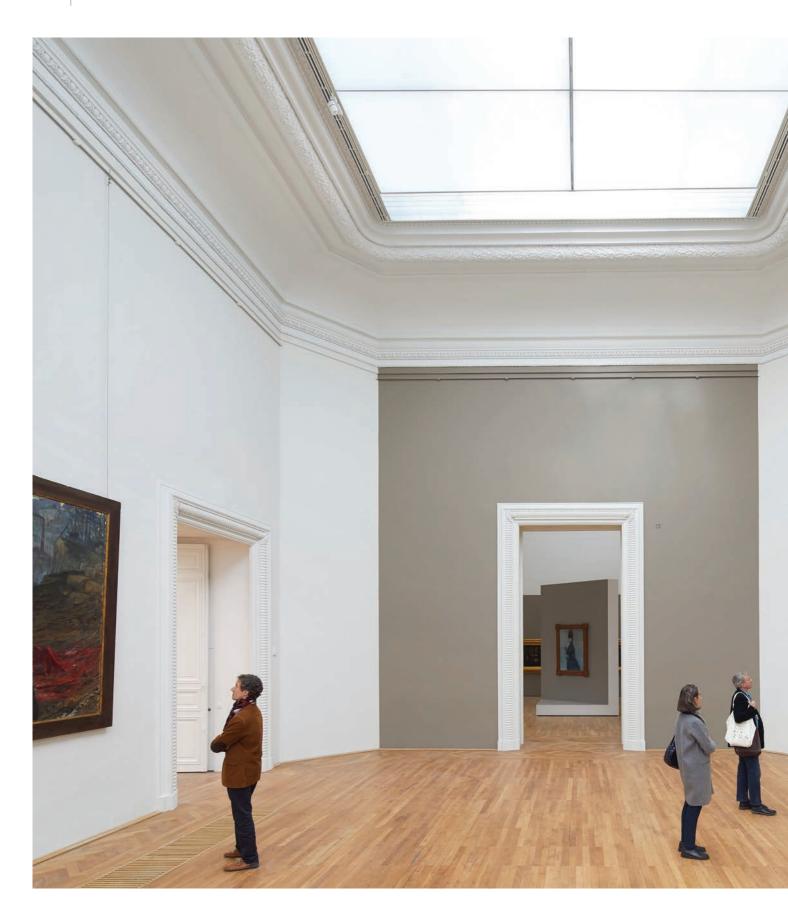
### Company Profile

G-SMATT is a Korean company that produces an innovative digital smart glass product. Launched in 2013 the company now has offices in five countries. The company believes in the transformation of the digital city scape with compelling architectural media and interactivity. Its innovative, building grade, laminated media glass provides full transparency and rich media capability. This allows developers and architects to provide a new way for people to experience and enjoy their buildings and the surrounding urban spaces without compromising on the aesthetic beauty of their original design. In the new world of the Internet of Things it also allows for unparalleled connectivity and integration, a key in the development of the smart city. G-SMATT produces both architectural and exhibition products and received the LCA 2017 Award for Technological Innovation of the Year.

01865 688221 www.g-smatteurope.com



ADF MAY 2018 WWW.ARCHITECTSDATAFILE.CO.UK





BUILDING

# MUSÉE D'ARTS DE NANTES FRANCE

# The Age of Enlightenment

A formerly aloof monument to ancient art has been opened up in the French city of Nantes, with a precise handling of light and form as the keys to a unifying extension and refurbishment by Stanton Williams. James Parker reports

The Musée d'arts de Nantes ranks as one of France's major fine art repositories, and one of the six largest in the country outside Paris. It has a large collection of works spanning the 13th century to the present, including substantial installations the museum commissions from current artists. Already mixing modern works with old masters, the museum wanted to enhance its focus on the present while celebrating the past in its recent major refurbishment and extension, which opened to the public in 2017.

This much-respected institution faced a dual problem, in that it presented a somewhat unwelcoming face to its city, and its internal environment was not up to 21st century exhibition standards. So a design competition was held in 2009 to find an architectural firm to design a refurbishment and extension that would bring a sense of coherence to the group of buildings on the site, as well as a greater openness to its surroundings. They would also need to bring the museums' environments up to scratch; a key part of the brief was to upgrade the existing building to a standard that would enable the museum to borrow prized collections from leading international galleries.

The winning firm was UK practice Stanton Williams, which has considerable pedigree in cultural projects nationwide, including several projects at the V&A, plus recent commissions for the Royal Opera House, and the new Museum of London in Smithfield. However it had never before worked in France, and winning the Nantes project against a shortlist which included well-regarded French architects was something of a coup.

The project was also unusual in that Stanton Williams would not be working with a local architect, but would oversee every aspect of the scheme, except for the final installation of artworks. As Stanton Williams associate and project architect Anne Fehrenbach explained to *ADF*, this enabled them to demonstrate the meticulous approach which characterises the practice's work: "We wanted to do it ourselves because we pay a lot of attention to the details – we wanted it to be really thorough".

This meant that in close collaboration with the museum, Stanton Williams would have a guiding hand in everything from designing mountings for paintings and sculpture, to the signage that was built into the structure itself, designed in collaboration with Cartlidge Levene. Fehrenbach says that the competition "was very different to the way it's done in the UK," explaining: "We had a very detailed brief for the competition, so our entry was very detailed." Following close engagement with the client to entirely understand their requirements, the architects "slightly tweaked" the designs.

### Openness & coherence

The main building of the group of structures on the site in the centre of Nantes



The whole south elevation of the CUBE is clad in a lamination of thin 7 mm Portuguese marble

is the 'Palais de Beaux-Arts.' Purpose-built in 1900 to house the museum's collections, it is a grand neo-classical stone and alabaster edifice, square in form with toplit galleries around a covered courtyard. Despite the benefits of this substantial two-storey structure, Fehrenbach says that the building, stuck behind iron gates, was "very closed on itself," as well as inaccessible for wheelchair users. She says that in light of this, "the idea was to open the museum to the outside," including installing lifts, but also a more fundamental reorganisation of the front elevation.

Included in the other extant buildings on the urban block, there is a 17th century chapel which holds temporary exhibitions, a couple of private residential buildings from the 19th century, and a small garden separating the Palais from the chapel. The comprehensive project included a full refurbishment of the main Palais, a new extension for contemporary art with a linking walkway, and a sculpture garden. In addition there's a new back of house building housing a graphic art archive and a library, created as infill between two residential dwellings along the south flank of the site, where the entrance to the Palais is also found.

### Palais renovation

The two-floor Palais contains the main historic collections – the ancient art collection is on the ground floor, and the toplit 'monumental' stone stair which greets visitors once through the main entrance takes them to the 19th century and modern art collections. Resolving the building's daylighting issues in order to both create the ideal viewing experience and one which was precisely controlled was a central focus of the designers, and this started with the central courtyard, also known as the 'patio'.

Its glazed pyramidal rooflight had suffered similar deterioration to the other roofs on the building, and as Fehrenbach explains, while the steelwork was retained, "virtually everything else was replaced as the structure was leaking". This was also the case in the Palais' toplit first floor galleries, the glass also having been painted in the past to avoid direct light damaging paintings, which meant the spaces were too dark by modern standards and required supplementary artificial lighting. As well as replacing the glass in the roof and skylights, the architects added adjustable blinds, plus a translucent heat-stretched material to diffuse the light to the 200 lux accepted level required for exhibitions.

The milky-coloured Newmat product used was the ideal balance between transparency and opaqueness, says Fehrenbach, as "you can see through it a tiny bit, not too far, but you get a sense of depth". The light changes subtly as clouds pass over the sun, but is moderated by the blinds and the stretched material, creating a soft glow to the spaces below, further assisted by the white walls.

The controlled natural light is working so well that the sensor-controlled LED ceiling spotlights installed are not used during the day, says Fehrenbach. Linked to the building's BMS, they gradually increase in intensity as the light deteriorates, so spaces remain functional all day.

As part of the refurbishment of the Palais, the architects opened up several of the

windows which had been previously closed up to display more paintings, with special glazing to moderate light levels. They also sanded down existing timber floors and refurbished walls to a pristine white, as well as painting some walls a particular colour.

Working together with engineers Max Fordham, fresh air extract ducting plus humidity and temperature control were installed, however this together with the necessary ceiling CCTV, alarms and speakers created a challenge in maintaining a monolithic, clean look. Anne laughs: "There are a massive amount of technical services; we spent a lot of time hiding everything, and working on duct co-ordination!"

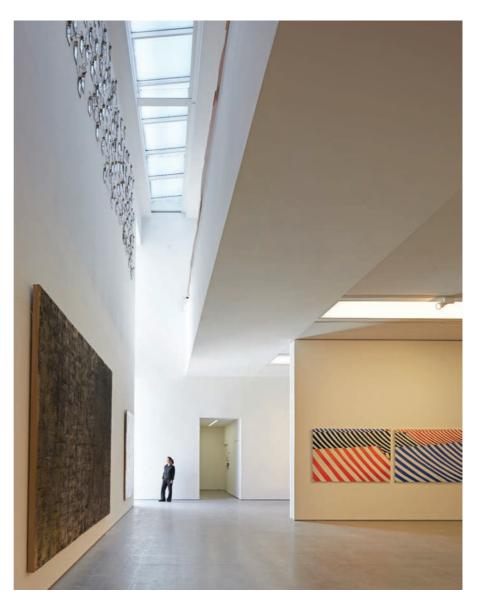
### A glowing cube

The key new addition to the museum is a four-level contemporary gallery called the CUBE, connected to the Palais via a link bridge, and "sitting very much on its own, although part of a route," says Fehrenbach. Visitors can now get to the chapel (refurbished by a different architect, and containing its own artworks) from the Palais via the CUBE, from where they take a lift from a new glass pavilion up to the chapel's entrance.

One way of helping to unite the campus – a guiding principle for the designers – was creating a couple of windows in the CUBE which offer views of the chapel without breaking the route around the galleries. In addition the route to the CUBE was not to be a transparent glazed link, but one which would continue the appearance of the Palais' solidity, albeit in a different material. The link would also contain exhibits, to "continue the chronological route" of the collections from classical to modern.

The CUBE is a simple form, its materiality echoing the stone of the Palais. The architects, says Fehrenbach, "were inspired by the Palais. We wanted the CUBE to be seen as very sober and monolithic. It plays with a similar palette of materials, which helps to unify the buildings." Including a large window at ground floor, it works as an intriguing 'shop window,' showing off exhibits to passing pedestrians on the north side of the site – enticing them to walk around to the south flank to enter.

The connecting staircase which runs along the CUBE's south elevation not only "mimics the monumental stair," but is also housed in the project's most dynamic architectural feature. The whole south elevation of the CUBE is clad in a lamination of thin 7 mm Portuguese



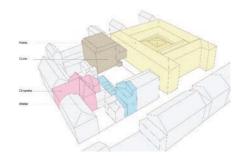
marble (from Estremoz) with glass on either side, a void and a further glass panel to provide thermal insulation.

"From the outside it looks like normal marble," says Anne, however once inside the light illuminating the material brings the cladding to life: "It's really colourful, with its orange and grey coming out, and random patterns – it's beautiful." When the LEDs are on at night, the CUBE has a gentle glow. With this material being highly innovative used in a suspended facade in this way, it had to go through six months of testing.

The marble used for the CUBE is only fully translucent on the southern elevation – it is more opaque on the others, and the connecting link bridge. It has also been used to clad the infill building housing the

### UNITY

The project was carefully masterplanned to bring a sense of unity to the 'campus'







### **PROJECT FACTFILE**

Client: Musée d'Arts de Nantes Architect: Stanton Williams Design team M&E engineer: Max

Fordham & GEFI

Acoustic & lighting engineer: Max

Fordham

Structural & envelope engineer:  $\ensuremath{\mathsf{RFR}}$ 

Artelia & Sepia

**Quantity surveyor:** Artelia

**Wayfinding and identity:** Cartlidge Levene (with Stanton Williams)

Main contractor: Bouygues Bâtiment Grand Ouest archive and library on the south perimeter of the site. The resulting abstract and minimalist form enhances the stone residential buildings it sits between by virtue of its facade's sheer plainness, and provides a hint of what the CUBE offers within.

A similarly meticulous approach to testing was also evident in lighting the contemporary galleries, where several LED spotlights were tested by the designers with a real painting to "make sure the colour rendering could get as close as possible to natural light." Ceiling lighting boxes feature in the contemporary galleries with a similar diffused design to the Palais, although in this case using artificial lighting.

### Basement, display & parvis

The loop created from the Palais through the CUBE to the chapel continues down to a new basement which connects all of the buildings, and where visitors are surprised to find a full set of ancillary spaces. Anne explains that due to planning restrictions, they had to "go down" to deliver what the brief required: "The client wanted new auditorium, learning workshops, storage facilities, so we had to excavate fairly drastically, between three and six metres below the foundation slab."

A "completely different palette of

materials" was used here, celebrating the physical nature of the below ground structures, using exposed concrete for all openings and timber door furniture designed by the architects. "We wanted to expose the bones of the building, so you see how it's formed. The existing stone walls start by being quite regular, then quite rough, and then you see when the underpinning starts. You see the concrete foundation."

She adds: "Everyone is amazed by the space – that it exists, because they don't expect it. All of these spaces were back of house before and we've completely transformed them; it's completely different to everywhere else in the building".

Stanton Williams' all-encompassing coverage of this project extended as far as creating "very sculptural" MDF and timber display furniture for artworks in both the CUBE and the Palais. These colourful forms provided a way to display smaller artworks, as per the client's wishes to increase its offering – would be lost on the 10 metre walls – and they also serve to break up the galleries' length.

Lastly, the architects' chief intervention to the front of the museum was to open up the parvis and provide a new paved public space, replacing the railings. Fehrenbach comments: "The museum was rather introverted before, and the grand staircase could be read as imposing and/or intimidating."

The design seeks to make the museum more inviting and democratic. As well as having a glass enclosure for sculpture on the front steps which performs a similar function to the fourth plinth in Trafalgar Square, the building holds a lot of special events including night-time and childrens' events. These are helping it to embed the museum into its community to a much greater extent.

#### Conclusion

The project is exemplary in showing the benefits of enabling an expert architect to deploy an exacting focus on environmental quality, via being centrally involved throughout. The belt-and-braces nature of the commission is notable partly due to its rarity. Fehrenbach gives a telling example of the practical difference that the result – an extremely elegant project – delivers for the client: "It was part of our brief that the building would enable the museum to borrow pieces from the Louvre. We've brought the building into the 21st century, and now they can."

# CLERKENWELL DESIGN WEEK

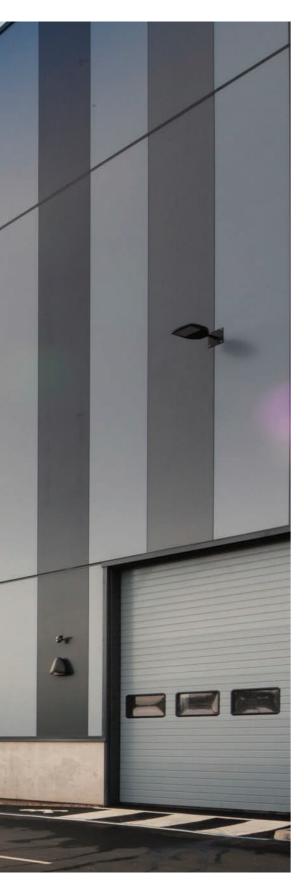
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BUILDING

# MAGNA INTERNATIONAL TELFORD

# Precision-made for flexibility

With flexibility and functionality as key drivers, Bond Bryan Architects designed a state of the art autopart manufacturing facility which allowed for future expansion on demand. Sébastien Reed reports

agna International is a leading automotive supplier with 327 manufacturing operations and 100 centres spanning product development, engineering and sales across 29 countries employing 161,000 people globally. As part of an ongoing strategic expansion, its new Telford manufacturing facility was created to supply the nearby Land Rover Jaguar factory with advanced lightweight aluminium castings – a key building block in next generation all-metal and multi-material vehicle architectures.

Appointed to design the facility were Sheffield-based Bond Bryan Architects, selected on the basis of their extensive experience delivering schemes for the advanced manufacturing sector and their wealth of connections to other relevant design and engineering expertise.

The client based its brief around the design of an existing factory in Soest, Germany, but the architects identified significant areas where it could be improved upon – particularly in that the manufacturing process that would be housed in the new facility had developed considerably in the time since the factory's construction. This, along with a brief mandating a flexible and functional building, provided a window of opportunity for the architects to develop a robust typology, and demonstrate creative architectural solutions.

# Provision & plan

Duncan Hogg, associate at Bond Bryan Architects and project lead on the plant's design and delivery. "It was unusual for Magna to undertake such a project on a greenfield site," he says, citing regular conference calls with Magna representatives in the UK, Canada and Germany. "So, everybody from the board to senior management was interested in how the project and design would emerge."

The client and architects formed a consensus on what was physically required from the project. This comprised a triple-height foundry area playing host to a significant portion of the production flow, a shipping point, flexible office area, social facilities, stores, welfare accommodation, and finally car parking for staff and visitors, bicycle parking, and smoking shelters.

Informed by a series of detailed studies and mock-ups, the proposed scheme placed the entrance to the facility at the previously agricultural site's northern elevation, close to an existing roundabout that would provide access to shipping vehicles. On the colossal 17,000 m² foundry's northern side, the two-storey office area and entrance to the facility are delineated by a canopy overhang spanning the building's width, and which also protrudes over the edge of the staff car park offering some protection from the elements.





It's a huge site, and there was a balance that needed to be struck between positioning the building, and avoiding having to excavate too much material and dispose of it offsite

Duncan Hogg, Bond Bryan Architects

"The layout of the building was centred around the production hall and its ability to be extended to the south of the site," explains Hogg: "The shipping area has been kept to the west of the production hall with the offices taking prime position to take advantage of the views over the surrounding areas to the north."

Beyond capitalising on the green vistas, justification for the resulting layout is supported further by the entrance's – as well as the car park's – proximity to the roundabout plus the placement of a shipping road into the site, facilitating the transportation of goods in and out.

"The location of the building also worked with the existing topography to ensure the most economical cut and fill exercise was achieved," Hogg explains. "It's a huge site, and there was a balance that needed to be struck between positioning the building, and avoiding having to excavate too much material and dispose of it offsite."

### A working environment

"The manufacturing process basically comprises of melting ingots of pure aluminium, and feeding them into to a casting machine within an enclosed conveyor," says Hogg. Commercial sensitivity was an obstacle to the design process, with the client being necessarily opaque on the details of the die casting process – it being key to their commercial edge over their competition.

While teasing out the requirements of the working environment, Hogg picks up that "it was more of a high-level brief in terms of the spatial requirement for operation, maintenance and installation of the

machines that would inhabit it." He adds: "It's quite difficult designing and coordinating a building around a process and product that is commercially sensitive."

With the building designed to house some of the largest die casting machines in Europe, structural measures had to be taken to ensure that the foundations could support the equipment's significant weight. The shipping doors also had to be large enough to accommodate the transportation of the machines into and out of the building.

One of the key challenges to deal with was the presence of the foundry's three 63-tonne cranes within the foundry. Hogg explains that their movements had to be carefully factored into the design of structural, mechanical and electrical services in order to ensure no clashes occurred during their operation.

The requirement for the facility to offer flexibility as its output grows in future – a recurring theme in Bond Bryan's design – translates into a hall big enough for five more machines on top of the three already featuring in the building handed over to the client. In addition, the structural, mechanical and electrical systems are designed to facilitate extension of both the foundry and the office space.

However in terms of the immediate constraints, Hogg asserts: "Containing molten aluminium is paramount," and with good reason – if molten aluminium comes into contact with anything with any moisture content, it explodes. While the latest tech in aluminium die casting removes much of the risk from the process itself, using physical barriers, sounding beacons

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and coloured wayfinding on the floor to demarcate forklift and pedestrian routes help to safely regulate flow of personnel around the facility.

Among the many challenges facing the architects, the most prominent for Hogg was ensuring that the emerging design and specification choices would meet the requirements of Magna International's commercial property insurer FM Global. It was essential that the building meet restrictions in terms of weathertightness, non-combustibility, and other factors.

An example of how the architects met the stringent insurance requirements and achieved the insurer's approval was in their specification of a siphonic rainwater drainage system over the traditional gravity-fed solution. Using a siphonic system, fewer downpipes are necessary and can be placed at more flexible intervals throughout the facility. With forklifts and cranes operating inside, less downpipes means less chance of interference and, in turn, reduced potential of water leakage and the potentially damaging consequences.

The office area is situated at the front of the building over two floors. In line with the project brief which emphasised the importance of natural light, the office and plant areas benefit from full height glazing, concurrently cementing visual connections with the outdoors. The canteen area nestled within the building's front section is also illuminated naturally in the day through expansive glass curtain walling.

Combining under one roof two environments with somewhat conflicting characters – a noisy, industrial foundry area, with a relatively quieter officer area – presents inevitable design challenges to solve. A non-combustible and acoustically absorbent wall construction was specified to separate the foundry and office accommodation, with secure visibility in to the production area maintained by fitting steel roller shutters to any glazed screens which automatically roll down in the event of a fire. Hogg says: "This was a cheaper solution than using fire-resistant glass, and thus allowed us to maximise areas of glazing to maintain visual connection between operations within the offices and the foundry".

# Breaking down the scale

With its colossal size (the section housing the foundry alone is over 200 metres long and 16 metres floor to parapet), a concerted effort was made by the architects to shrink the building's apparent size and reduce the visual impact of its immense scale within its rural context. The introduction of the twostorey office jutting from the main hall – as opposed to integrating it into the production hall itself or using a mixture of more intricate protrusions to accommodate the office function – represents a happy medium. According to the architects, this configuration "allows the building to nestle into the undulating landscape and harmonize against the skyline" negating the need for small additions to the building which might cause visual confusion. Ridding the design of any complex massing hierarchy also helped to serve the client's future flexibility mandate.

Rooted into a concrete plinth running around the perimeter walls, the building's external envelope is a patchwork of vertical

#### ΠΔΥΙ ΙΤ

In line with a project brief that emphasised the importance of natural light, the office and plant areas have full height glazing











The canteen area nestled within the building's front section is also illuminated naturally in the day through expansive glass curtain walling

cladding panels with apparent horizontal breaks which "allow the elevation to be broken down into smaller zones", scaling it down and providing a natural break in the roof's parapet line.

A mixed palette of greys form contrasting stripes up and down the facade, which firstly, "reduce the overall mass and potential monotony of the building's appearance" and, secondly, provide a better platform for a seamless transition between original building and any future extension. With the client focused on the functional adaptability of the building to the production process, Hogg and his team found themselves frequently exploring opportunities which appeared, at first glance, somewhat removed from a sole focus on production efficiencies.

Hogg notes in the light of this how Bond Bryan helped to develop the client's preconceptions of the project towards a more fruitful outcome. In the project's incipient phases, the client provided a basic model of the building, taking the form of a more traditional portal frame with horizontal bands of glazing around the production hall. The architects created a more contemporary form and rotated these glazed ribbons upwards to better harmonise with the vertical direction of cladding. Not only did this fit aesthetically. but, as Hogg explains: "It'll help natural daylight permeate further into the deep plan building, and provide views of the external environment for the workforce - something you don't see very often with a factory building."

The facility presents a sleek face: vibrant red cladding on the underside of the canopy contrasts with more sober greys elsewhere and ties in with the client's branding. This together with the logo mounted on the wall conjures a sense of arrival for both staff and visitors, developed further with carefully selected greenery and landscaping. Various sustainable drainage systems were also integrated into the scheme, such as retention ponds and swales, delivering the project's large hardstanding, and its required surface water runoff rate.

While certifications for energy efficiency were not pursued for the building – its function being energy intensive by nature – there was a keenness to enhance the sustainability of the project where possible. The building was opened to natural light as much as reasonably possible to offset artificial lighting, bearing in mind the need to maintain security and confidentiality of the die casting process.

The project was strictly value engineered and completed under budget, meriting a letter of praise from Magna International's vice president written to the architects. Precision-designed but inherently allowing for expansion, the facility demonstrates the company's confidence in the economic sustainability of its business in this location. With reports showing UK manufacturing at a 30-year high, Bond Bryan's assured design should be an instructive example for architects required to offer forms which adhere firmly to present function, while future-proofing upwardly-mobile clients in this sector at least.

### **PROJECT FACTFILE**

Client: Magna International Architect: Bond Bryan Architects Contractor: McLaren Construction Project manager: Turner & Townsend Civil/structure/landscape: WSP Gross external floor area: 24,163 m<sup>2</sup> Construction cost: £25m (excluding

equipment fit out)

**Factory employees:** 295 (when operating at full capacity)

# "CDW Presents"

This month, east London's design hub will reveal a new series of collaborations for the ninth edition of Clerkenwell Design Week (CDW)



DW Presents will bring specially commissioned public installations, offering a fresh insight into design and materials. Integral to the festival's unique structure, the CDW Presents programme offers an insight into temporary architecture, materials and use of public spaces.

CDW are proud to present an installation created by Kinetech Design in collaboration with Amari Interiors for one of Clerkenwell's most renowned sites; the Arch of St John. St John's Gate saw the first performances of some of Shakespeare's most famous works, including Romeo and Juliet, Hamlet and Macbeth. Kinetech Design have drawn on the history of the arch and showcase their strong kiri-origami structure evoking an Elizabethan ruff.

A number of leading practices such as TDO Architecture have been commissioned to create wayfinding sculptures in polystyrene that will be situated around Clerkenwell during the week. Bakers Patterns, who specialise in polystyrene model making and manufacturing, will produce the sculptures. Creative Director of CDW Max Fraser says, "Polystyrene is considered one of the 'bad' materials of our time as it can't be recycled through regular municipal recycling schemes. However, if the material is sent back to the manufacturer, it is 100 per cent recyclable (98 per cent of it is air). So we are commissioning these 'beacons' at CDW with their end-of life destination fully diverted from landfill."

Studio DA, a new practice formed by Russian For Fish and Pierre d'Avoine Architects to work on special projects will also be involved in the project and their sculpture will be based upon Clerkenwell's famous ghost story. In 1762 a landlord claimed his house and his daughter was haunted by a ghost and regular séances were held in the crypt of St John's to determine whether this was true (it wasn't).

Hakwood, a global leader in the design and manufacture of quality wood flooring and wall tiles returns to CDW in collaboration with Shape London to reveal the interactive installation 'Behind Closed Doors' located at the entrance to Spa Fields. Shape London will design a 3.2 metre high pop up street scene of Dutch town houses decorated with Hakwood Wall Tiles. Each house will have a small door revealing a series of miniature interiors designed by various architects from Shape's Dragon Fly Place. The hidden rooms will be placed at various heights to invite visitors to interact with the installation and 'discover' all the rooms, which contain Hakwood flooring.

For the third consecutive year, Scale Rule will present the 'Next Generation Design Pavilion' in the Garden of St James. The pavilion aims to inspire a younger generation interested in the construction-related professions and is a result of a series of educational workshops, bringing GCSE students together from across London. The winning concept for 2018 responded to the theme of sustainability by proposing a metaphor: layers representing past, present and future through a kaleidoscopic oculus, inviting visitors to take a moment to direct their eyes up and become more aware of key natural elements around them.

Elements at CDW, brings together a leading selection of ironmongery, hardware, switch plates and architectural accessories. New for 2018, the exhibition will take place within a street-market style pavilion on St John's Square, becoming a go-to destination for designers looking for the perfect finish.

For CDW, British light switch company, Forbes & Lomax will be introducing the Aged Brass light switch to the existing Invisible range. The new collection with an antique aesthetic has been left unlacquered which patinates even more over time. The House of Eroju is an Ironmongery design company launching a range of new door handles and introducing their latest Marble and Bronze range. Other exhibitors include Tirar, Carsson International, Harbrine and The Chelsea Hardware Company.



Register today for your free tickets to Clerkenwell Design Week at: www.clerkenwelldesignweek.com





# Mapei are sustainability – Clerkenwell Design Week 2018



apei Are Sustainability – A global corporate focus to protect the earth, use energy and resources sustainably, minimise waste and develop and supply products with end user safety in mind. As a leading company in the global construction market the Mapei Group are taking further steps towards social responsibility – ethical behaviour, the quest for excellence and transparent communications are our corporate values and this year, will be showcasing their sustainability commitments through daily events at Clerkenwell Design Week 2018.

Guest speakers will be presenting daily 'Lunch & Learn' sessions from 11:30-12:30 at the Mapei Specification Centre during Clerkenwell Design Week, with a buffet lunch and refreshments provided for delegates\*. Presentation topics include 'External wall insulation (EWI) and Sustainable protective and decoration coatings' on the 22nd May, 'Sustainable roofing solutions in collaboration with Polyglass' on the 23rd May and 'Specifying sustainable flooring' on the 24th May. On Wednesday 23rd May, renowned

sustainable architect, Charlie Luxton, will be presenting from 7-8pm at an Italian evening event (6-10pm) where Italian food and drink, plus music will be provided, please email ukmarketing@mapei.co.uk to register your interest.

East London based florist, Grace & Thorn, will be holding daily Terrarium planting workshops, 1-5pm, with the aim to help people in the city live a greener life. The workshops operate on a first come, first served basis and are subject to availability.

For a 2nd year, Mapei UK are working closely with established architecture practice, Harper Downie, to present an installation as part of the official installation series. Mapei's installation will host 'Conversations at Clerkenwell in partnership with Mapei', an arena for world class talks and programmes, located in the Design Fields. The installations embrace the special character of the area by using public spaces to present a wide-ranging mixture of solo shows and street installations. Collaboration and working together is a principle inherent to Mapei's ethos with this project reflecting Mapei's strong relationship with architect practices and the

wider specification supply chain.

The Mapei Group invest 5 per cent of annual turnover into Research and Development activities with a total of 70 per cent of this sum channelled into the development of environmentally friendly products. Mapei also produce Environmental Product Declarations (EPDs) to help architects, design engineers and other buyers have a better understanding of a product's sustainability characteristics and its impact on the environment. Certification bodies and protocols for buildings, such as LEED and BREEAM, have implemented criteria for sustainability and imposed specific requirements for construction based on the Life Cycle Assessment (LCA) method.

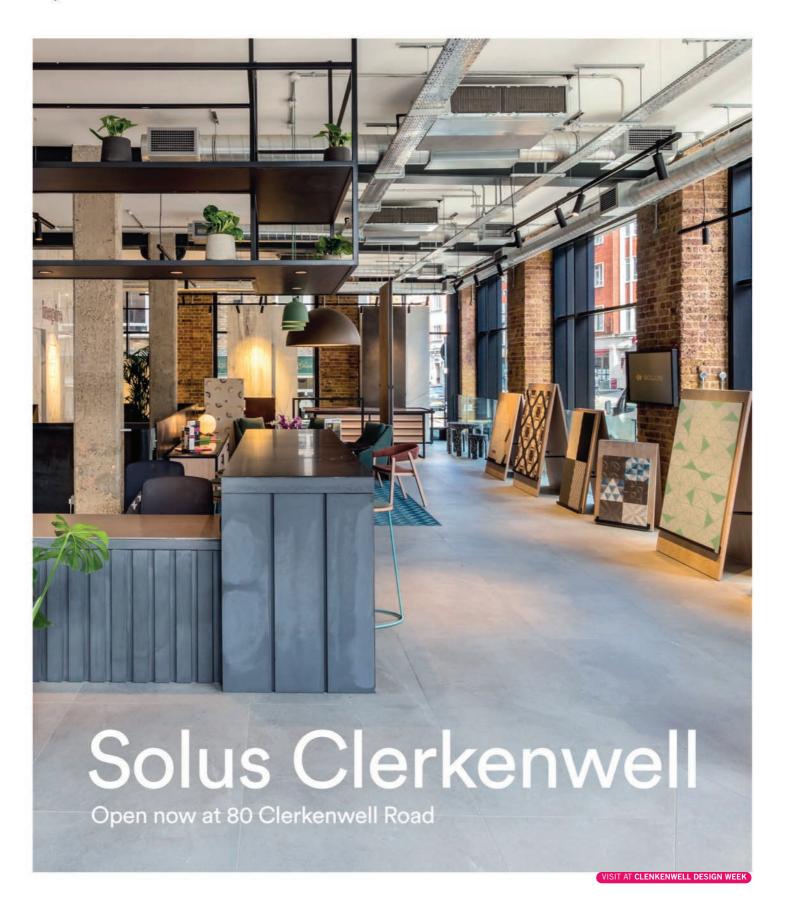
Email info@mapei.co.uk or phone for more information on how Mapei products can be used in your project or visit the website to view the full product range.

Booking is essential for these events as places are subject to availability – please visit www.eventbrite.co.uk to reserve your place.

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VISIT AT CLENKENWELL DESIGN WEEK













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# Renovate, don't replace!

s a showroom partner, wood floor specialist, Bona, will introduce the Clerkenwell community to its new 'Inspiration' wood floor styles, designed to transform the look of tired, existing wood floors or to embellish unfinished new ones. Created by Bona in collaboration with internationally recognised trend analyst, Cay Bond, each of the 17 new looks can be achieved using a combination of Bona's sanding and brushing methods to enhance the grain, followed by treatments with the company's waterborne lacquers, oils and colours. The styles, Nordic Shimmer, Garden Atmosphere, Malibu Dreams, Touch of Grace and New Modern, include everything from dark, rustic floors to floors with a pale, lacquered finish.

Floor owners are often simply not aware of how an existing wood floor can be transformed, giving a room or space a completely new look and feel. From a sustainability perspective it makes sense too – the old floor has already been manufactured and transported.



A campaign starts on June 1st using social media, print and online advertising to target and inspire floor owners. Contractors will be able to use the professional pages at bona.com to see how the individual looks can be achieved, and samples and beautiful inspirational brochures will also be available for designers, architects and flooring contractors to leave with their clients.

Bona's technical manager, and renowned wood floor expert, Alec Stacey, will be giving twice daily showroom talks at Clerkenwell entitled 'Inspiration through renovation – how to achieve contemporary trends on existing wood floors'. Alec will explain how to achieve the perfect balance between aesthetics and surface performance, on domestic or commercial wood floor surfaces, through the correct specification of finish (oils, wax, lacquers and colours) – and considering the available opportunities for maintenance. Register for the talks at Bona's Showroom page via clerkenwelldesignweek.com.

01908 525 150 www.bona.com

VISIT AT CLENKENWELL DESIGN WEEK

# British Ceramic Tile set to celebrate at Clerkenwell Design Week



British Ceramic Tile will be opening its showroom doors from 22-24 May inviting visitors to join the team during CDW, as the company dedicates its celebrations to honoring the best of Great British design and manufacture. One of the UK's few remaining tile manufacturers to design and produce products here in Britain, the company is incredibly proud of its longstanding heritage and its in house design credentials, and will be marking the occasion through a range of activities that reflect the best of British. British Ceramic Tile will also be using CDW as an opportunity to showcase some of the latest products to arrive in the specification market. These include Rock, a porcelain tile influenced by natural stone, available in a polished, hammered or matt finish and Seagrass, a ceramic tile created using a combination of the latest technologies in inkjet and rotocolour printing. Liam Poole, head of specification marketing at British Ceramic Tile comments: "For us, CDW is the perfect opportunity to celebrate our obsession with British design and manufacture. We want to communicate to the A&D community that our products are designed and made here in the UK."

0207 490 0338 www.britishceramictile.com

VISIT AT CLENKENWELL DESIGN WEEK

# Gerflor set to make an 'impression'



The Clerkenwell Design Week (CDW) in North London takes place on 22-24th May. International flooring specialists Gerflor are set to thrill the visitors with some stunning examples of how their innovative flooring ranges are making their mark in a host of commercial applications...and in the

home too. It's a brave new world out there as Gerflor prepare to parade some of their exhilarating flooring designs. Come and meet the Gerflor team on stand PB11.

01926 622 600 www.gerflor.co.uk

VISIT AT CLENKENWELL DESIGN WEEK

# New personal workspace solutions



At this year's festival, **Boss Design** will be unveiling a series of personal workspace solutions and opening the doors of its highly anticipated newly refurbished London showroom; Mango (pictured), a new personal workspace solution that has been created with headspace in mind; ATOM consists of modularised seating, tables and desks that will help to create dynamic workplaces enabling

everyone to work in their own way; TP4, an innovative telephone booth, facilitates private telephone or conference calls, as well as providing an alternative space for more concentrated work.

www.bossdesign.com

VISIT AT CLENKENWELL DESIGN WEEK

# **Blue Roof Launch**

Bauder Ltd has launched their roofing solution for construction within flood sensitive, urban areas. The flat roofing specialists used ecobuild 2018, the event for sustainability and innovation in the built environment, to exclusively launch BauderBLUE to industry experts and professionals.

As climate change causes more extreme weather patterns, the construction industry faces new challenges with an increase in excessive rainfall resulting in flash flooding and standing water. Continued



development in built up areas where existing drainage systems can be depleted, and natural infiltration is limited has prompted the introduction of Sustainable Urban Drainage System (SuDS) legislations by local authorities.

To combat these issues, Bauder has originated a Blue Roof System which will simultaneously attenuate heavy rainfall and manage its discharge over a 12-24 hour period. This limits water egress to 5-10 litres per second per hectare, the same flow rates for regional greenfield sites. Each BauderBLUE roofing solution is unique, as calculations for the flow restrictor are specific to each project to ensure that the water run off during storm conditions meets drainage requirements of local planning authorities whilst controlling the time it takes to disperse the water.

The new system was publicly revealed on the Bauder stand on Tuesday 6th March. An introduction to SuDS was given by Malcolm Wearing of CRM Rainwater Drainage before Nigel Blacklock, technical director for Bauder and Peter Rowlinson, product manager for



Bauder, delivered a technical overview and interactive demonstration of the BauderBLUE system. Gary Warpole of NFRC was also on hand to discuss the latest NFRC guidelines on blue roofs.

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allows frogs to "breathe" through

# Sweeping curves at the Old Dairy

The Old Dairy regeneration project is a mixed used development of the former Arla Dairy site in South Ruislip. The scheme includes 162 residential properties, a Cineworld cinema, an Asda food store and family-themed restaurants.

The main challenge was to rejuvenate a brownfield derelict site by creating a high quality, attractive and distinctive development with aesthetics that provides a number of enhancements to the area. It was also important that new public spaces were created and that the new leisure facilities complemented the existing amenities of the local centre. The design ethos was to master plan a new destination within the South Ruislip district centre. This knitted together the commercial development with a new residential development via a tree lined avenue headed by a new public square offering access to each of the units.

Minimising external noise break-in was therefore of crucial importance in the specification of the cinema external envelope. The black ALUCOBOND® facade successfully merges disparate design requirements of sweeping curves providing an inviting urban environment, contrasting with more dynamic angular elements including main entrance interventions. The facade is accentuated by the irregular provision of illuminated light boxes giving the impression of falling shards.

Paul Herbert, Specification Manager 07584 680263 Richard Geater, Sales Manager 07584 680262 Richard Clough, Business Development Manager 07760884369

www.alucobond.com

# PROJECT DATA:

Project: The Old Arla Dairy /

Cineworld Ruislip

Location: South Ruislip, UK Facade material: ALUCOBOND® PLUS spectra & sparkling Black

Metallic & Desert Gold Construction system: Tray panels screwed Architects: DLA Wakefield

Fabricator / Installer: Booth Muirie

Ltd / Coverstructure
Year of construction: 2017
Copyright pictures: Paul Scott



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# SFS listens to rainscreen customers



Responding to market feedback, SFS has invested in a new assembly facility in Leeds to provide high quality, colour-matched AP rivets for rainscreen cladding. The full range of AP rivets are now available in three days' lead time in more than 100 standard colours. The grade five

aluminium body delivers ease of installation, durability and long term assurance. Three flange sizes – 11mm, 14mm and 16mm – and a range of rivet lengths provide a solution for securing the most widely specified rainscreen panels to a support frame.

0113 2085 500 www.sfsintec.co.uk

# Dry verges to meet and beat BS 8612



Redland, the company that invented dry-fixed roofing systems, has launched two new dry verge products to coincide with the publication of BS 8612: Dry-fixed ridge, hip and verge systems for slating and tiling - the new British Standard which aims to ensure that dry fixed

products are adequately designed and installed to be fit for purpose. Redland's new dry verges - the DryVerge and Rapid DryVerge - are specifically designed to not only meet the requirements of BS 8612, but also to be best in class. Moreover, the dry verges have been designed to be even easier and faster to fix than their predecessors.

01293 666700 www.redland.co.uk/dryverge

# Off site success



The 2018 Ideal Home exhibition showcases Freefoam X-Wood Cladding as the ideal solution for off-site construction. This year's 'Innovation Home' features Freefoam X-Wood Urban Cladding, prior to its release later in the year, to create a stunning exterior finish. The whole house was built prior to the exhibition by Off Site Factory Homes in four separate 'modules', which were then transported to the show and constructed to form one house. Tony Fox, Director Off Site Factory Homes, explained how the process worked: "To create a durable and stable modular construction we need materials to be light, easy to handle and to withstand the rigors of transportation. We used Freefoam cladding last year and found it met all of our criteria and made perfect sense to use the new X-Wood Urban product for this year's house. We found it really easy to work with and were very pleased with the finished results." With the construction industry facing challenges to reduce its environmental impact and meet the demands of the housing crisis, modular construction has become increasingly popular in recent years as a way to address and solve some of these issues.

01604 591110 www.freefoam.com







Icynene - the spray-foam thermal blanket

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Icynene. It's the modern way to insulate buildings, old and new.

For for more information on the benefits of Icynene visit icynene.co.uk













# SFS provides a single secret fix solution



Installing Cembrit fibre cement rainscreen panels as thin as 8mm using mechanical secret fixings just became quicker, easier and safer thanks to the innovative new range of TUF-S rivets by one of the world's leading fastening systems manufacturer SFS. Extensive testing by SFS demonstrated how

TUF-S challenges the convention that installers need to use different fasteners for different panel materials and thicknesses. Until now, no other rivet of this kind has provided a reliable secret fix for panels manufactured in both HPL and fibre cement.

0113 2085 500 www.sfsintec.co.uk

# **Exposed estate weathers storms**



One of the highest housing estates in the UK has survived 100mph+ winds without any damage to the roofing after employing SpecMaster, the free-of-charge roof specification service offered by Redland – one the UK's leading manufacturers and suppliers of pitched roof systems. Developed

for architects and professional specifiers, the SpecMaster specification covers every detail of the complete roof – including slates, tiles, fittings, accessories, fixings, ventilation, underlay and battens.

01293 666700 www.redland.co.uk

# Cladding firm hired for new-build project



Specialist Cladding Systems (SCS), CA Group Limited's specialist cladding division, has bolstered its portfolio by successfully securing the design, supply and installation of the facade for a high-end residential development in Salford,

Manchester. SCS has been awarded the contract to design and install a full cladding system for Downtown Manchester, a 368-apartment scheme along the River Irwell. The specifications for the project comprise of the design, supply and installation of CA Building Products' Prime RFX PPC aluminium rainscreen cladding system.

01388 834242 www.cagroupltd.co.uk

# VMZINC roof and facades



A pre-weathered, VMZINC QUARTZ-ZINC PLUS standing seam roof with flat lock facades has been used in RHP's carbon neutral design of the Sophi Taylor Building at the National Institute of Agricultural Botany. VMZINC PLUS has a protective underside coating while the

flat lock panels interlock on all four sides using concealed fasteners. The single storey pavilion was designed to Passivhaus principles using low embodied energy materials and achieved a 'BREEAM Outstanding' rating.

01992 822288 www.vmzinc.co.uk

# Cupa Pizarras chosen for heritage site



Dalkeith Country Park is a £7 million development where the building products specified needed to reflect the rich historic surroundings. Recently, the development has also been awarded two prestigious accolades for conservation at this year's Edinburgh Architectural Association Awards.

Consequently, this led to CUPA PIZARRAS' high quality Heavy 3 slate being chosen for the recently refurbished stable yard. Heavy 3 slate is particularly popular in Scotland to due to its close resemblance to the traditional Ballachulish natural slate that is no longer produced.

01312 253 111 www.cupapizarras.com/uk

# Preschool's sustainable design



During the construction of Lillmunkens Förskola preschool in Munkfors, great importance was given to the build's environmental and sustainability credentials. VIVIX® by Formica Group was specified by KLARA Architects as part of the facade to complement the wood

panelling. The panels were also used in the areas subject to high wear and tear such as the entrances, stairs and storage spaces. The durability of the panels being ideal for environments subject to high traffic footfall. Used in the design of the ventilated facade, VIVIX® panels help optimise the school's heat and energy efficiency.

0191 259 3512 www.formica.com

# Roofglaze Group restructure



Roofglaze Ltd is pleased to announce that it will officially become a group comprising three limited companies, with Roofglaze Holdings steering the aspirations of the group and its two customer-facing subsidiaries; Roofglaze Rooflights and Roofglaze Limited. Roofglaze Ltd has consulted both clients and staff to establish how the business can best service its customers, which has led to the business taking the strategic step to restructure. The group is pleased to announce the appointments of Chris Morgan as Managing Director of Roofglaze Rooflights, and Robert Culley as Managing Director of Roofglaze Limited. By having two specialised and efficient sub-divisions, Roofglaze will be able to further expand on its product and service offering in an increasingly competitive marketplace. Roofglaze Rooflights will offer customers a wide range of stock and bespoke Flatglass Rooflights, Roof Lanterns and Domes. Roofglaze Limited will continue to provide its unique range of bespoke large area skylights through its key partnerships with established glazing system manufacturers, as well as offering its own contemporary Flatglass rooflights and Solis skylight systems.

01480 474 797 www.roofglaze.co.uk

# BBA certification for Ubiflex Extreme premium non-lead flashing

biflex Extreme, the premium non-lead flashing introduced by Ubbink in 2017, has gained BBA certification, to match the Ubiflex B3 range.

With the popularity of Ubiflex B3 already well established in the UK market, this latest move further reinforces Ubbink's position as the market leader in non-lead flashings.

Ubiflex Extreme can be used in most applications where lead is traditionally used to provide a weatherproof junction at features such as changes of direction and materials. It has been developed to withstand extremely harsh weather conditions, with an extended working temperature range: –30°C to +180°C. It has all the features of the current Ubiflex B3 range, being significantly lighter and easier to handle than lead, with no scrap value.

Ubiflex Extreme comprises of a reinforced aluminium mesh with a textured silicone coating to both sides – one Grey and the other Black – so it can be installed with

either side visible, depending on the specific requirements of the application. This simplifies ordering and reduces the need to stock different colours. The Grey side provides a very close match of traditional lead flashing, making it particularly suitable for installations where aesthetics are important.

Ubiflex Extreme is fully malleable and is not susceptible to thermal movement. This means that aprons up to 5m long can be formed without seams or expansion joints, minimising wastage. It's easy to cut with a sharp knife or snips and can be easily worked by hand in all directions, exactly the same way as lead flashing, but without the need for protective measures: an important Health & Safety consideration for installers.

In addition to BBA Certification, it has been tested at the BRE where it received a Class A fire rating pass and was wind tunnel tested to 100mph.

Ubiflex Extreme is compatible with most common building materials and components,



such as thermal panels, extract flues, ventilators, rooflights and flat roofing membranes including PVC single ply. It's stable and will not cause any unsightly staining.

To complement Ubiflex Extreme, Ubbink has developed 'Extreme Fix', an advanced adhesive that allows installation in damp conditions, reducing the potential for delays on site.

Ubiflex Extreme and Extreme Fix are available from Roofing and Builders' Merchants nationwide.

01604 433000 www.ubbink.co.uk



# Metal Technology adds 'silver screen' to Belfast film studio

Belfast Harbour Studios, the latest asset to Northern Ireland's burgeoning film industry infrastructure, features curtain walling, window and door systems from leading aluminium systems manufacturer, Metal Technology.

The project includes more than 120,000sqft of studio space, workshops and production offices, and covers 8.4 acres of the overall 340-acre Giant's Park, a former landfill which has been transformed into the largest development site in Belfast city. Warner Horizon became the studio's first tenant for the making of the Superman prequel KRYPTON, further cementing Northern Ireland's position as a favoured location for major film and television productions.

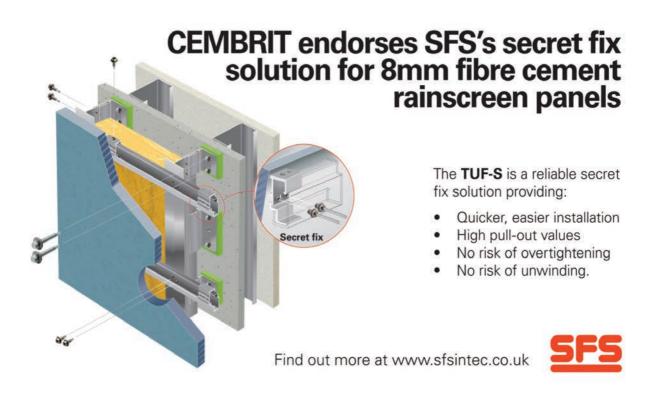
Metal Technology's System 17 capped curtain walling was used to create the glazed façade office space, with System 5-20D doors and 4-35Hi+ casement windows used throughout the building. All Metal



Technology systems are designed to perform seamlessly together while delivering the desired look and performance standards. Used individually or together, they offer complete design flexibility for creative

aesthetics with the assurance of value engineered structural, weather and security performance.

028 9448 7777 www.metaltechnology.com





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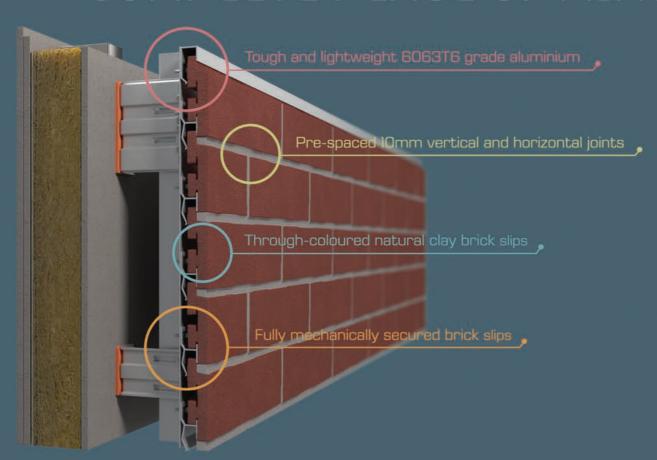


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0121 525 1444 www.ashandlacy.com/naturalx





# **Delivering the vision**

Bespoke brick making is undergoing a revival, as Michael Brown of Northcot Brick explains

The architecture of many of our towns and cities still reveals diverse regional characteristics dating back to the days when clay was quarried locally and towns had their own brick kiln.

Bricks were, by virtue of the plentiful local clay sources and variety of kilns used, bespoke and individual to any given location or even individual building project.

In modern times, ever increasing market demand has meant that many manufacturers have sought economies of scale through mechanisation and standardisation. This has resulted in high quality, consistent products at ever more competitive prices, but with arguably less 'character,' thereby undervaluing this immensely versatile medium.

However, some small independent manufacturers, which have not had access to the same levels of mass production and investment, have deliberately moved in the opposite direction by offering architects more tailored solutions.

Architects are increasingly looking for customised blends, sometimes driven by the need to meet planning constraints and respect regional identities by matching a specific brick type. However sometimes – as in the case of Manchester's award-winning Whitworth Art Gallery – they are used to lift or brighten a traditional colour, while referencing its historical context.

To help offer the visual range of old brickwork, age-old techniques such as hand throwing or traditional coal firing to create naturally rich tones remain important. Although bespoke brickmaking can mean as little as a few minor tweaks to an existing blend, more often than not it requires a complicated mix of finishes, textures, and new moulds made for non-standard sizes. In our experience delivering an architect's vision can involve creating a blend of as many as seven different handmade bricks, mixed together in a precise and agreed ratio.

Specific colours and degrees of weathering are often required, and can

generally be achieved through sophisticated antiquing processes and the adjustment of firing and setting patterns in the kiln. There has also been a noticeable trend towards designing with textured brickwork and the use of ornamentation through bespoke special shapes.

As architects continue to push for unique solutions, it is not surprising that bespoke brick making is undergoing a revival, having played a significant part in internationally recognised architectural projects like the Newport Street Gallery, winner of the 2016 RIBA Stirling Prize.

# **Newport Street Gallery**

Designed by Caruso St John Architects, the Newport Street Gallery in Vauxhall occupies a terrace of new-build and refurbished buildings that line Newport Street's eastern side. The central architectural inspiration was the original Victorian brick buildings, with the brickwork used to bind the old and the new elements together. The precise quality of the finish and the intricate brick detailing was an immense work of craftsmanship from manufacture through to the specialist brick laying skill required.

Two distinct bespoke blends were created to match to the fletton-style brick of the listed buildings, one requiring the removal of a specific colour and the other needing a crisper edge than standard. They were then fired the traditional way in order to give a natural variation and tonal richness.

Most brickwork was in Newport Light (181,000 bricks in total), a hard pale semi-glazed machine-made brick, laid mainly in a Flemish bond. The lower courses were constructed with a total of 17,000 Newport Dark bricks, laid in a header bond on a dark mortar.

A total of 6,000 bespoke handmade and standard machine-made special shapes were created to match both blend types, and a unique mould had to be made for each.

Michael Brown is the managing director of Northcot Brick



### WHITWORTH ART GALLERY

The requirement for customised blends has been driven by the need to meet planning constraints and respect regional identities by matching a specific brick type, lift or brighten a traditional colour, while referencing its historical context © Alan Williams





# **Introducing Simpson Strong-Tie's latest**

Introducing the latest product offering by Simpson Strong-Tie, a leading construction connector manufacturer; masonry reinforcement and render mesh solutions for timber and masonry construction: Bricktor® for crack control reinforcement, Brickforc® for structural reinforced masonry applications, Bricktie® - developed to overcome the problems associated with lifting heavy blocks in the construction of 215 mm and greater thickness walls, STUCANET HGBM and EBM - purpose designed steel welded wire mesh plaster and render carriers. Sales Director Jon Head comments "The introduction of a complete suite of masonry reinforcement products means that, along with our wall ties, frame ties and joist hangers, we can now offer the widest range of masonry connectors to the UK construction sector."

01827 255600 www.strongtie.co.uk

# **Development balances airtightness**



A brand new housing development in County Cork, Ireland is to maximise airtightness and energy efficiency of the homes while ensuring the protection of the building fabric with the introduction of a high performance variable-permeability vapour control layer from the A.

**Proctor Group** Cygnum Timber Frame required a high quality membrane. Procheck Adapt has been specifically designed to protect the building fabric from the potential risks of condensation, whilst serving as a highly effective airtight barrier. Karl Maloney from Cygnums said: "Procheck Adapt is the ideal choice."

01250 872261 www.proctorgroup.com

# Architects Datafile website



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

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www.architectsdatafile.co.uk





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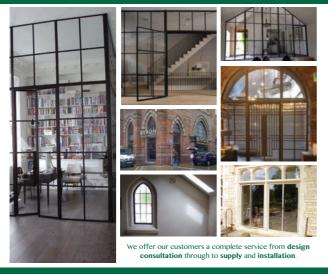
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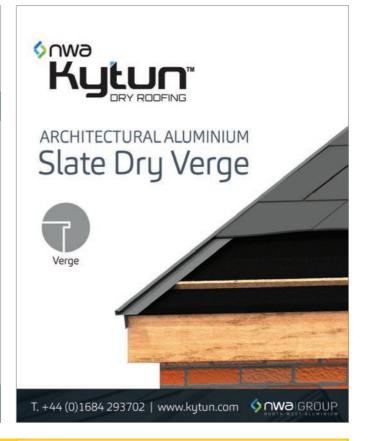


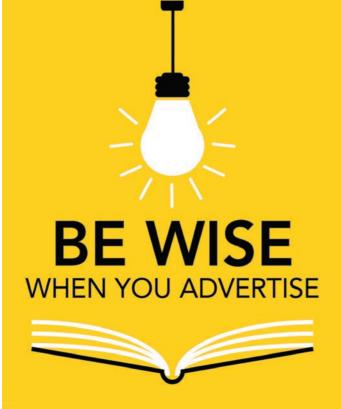
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# London Bridge gets a new lease of life from OAG

ne of the capital's oldest and best-known railway stations, handling over 50 million customers a year, London Bridge has been extensively renovated as part of a multimillion-pound collaboration between Costain, Network Rail, and architectural glazing experts OAG.

Planned in three phases over four years, OAG helped revolutionise the station as part of a broader refurbishment project totalling £1bn.

The esteemed High Wycombe firm installed a 275m bespoke glass façade along the station's Tooley Street entrance, with a stylish curved upper tier, and a lower tier consisting of double-height bomb blast



glazing. Each pane of 5.6m glass installed in the lower tier weighed in at 350kg.

Heading inside, OAG were tasked with installing all 26 glass archway shopfronts as part of the station's Western Arcade, bringing a sleek, modern touch to the building's barrel-vaulted Victorian architecture.

OAG Director Gary Evans commented: "We were delighted to work on such a demanding and prestigious project. There's no doubt it was challenging at times - London Bridge is one of the most vital components of London's overland and underground rail

infrastructure, and was kept in full use throughout the refurbishment. It's extremely rewarding to see the work completed.

"Grimshaw architects had a bold vision of how to revitalise London Bridge for the twenty-first century, while retaining its existing Victorian charm. It's been incredibly exciting to see that vision brought to life.

"I want to take the opportunity to thank Costain, Grimshaw and Network Rail for their co-operation, and we look forward to working with them in the future."

01494 492 700 www.oag.uk.com





# FlexiEdge doors improve conditions

Two satisfied users of **Stertil** fast-action doors have specified additional models to improve hygiene and working conditions within their production facilities.

One of Europe's leading specialist pharmaceutical companies relies on a pair of Stertil FlexiEdge Cleanroom doors to support its manufacturing operations in Wales. The two FlexiEdge doors replaced existing doors that were not designed for cleanroom operations.

In Gloucestershire, a global supplier of speciality paper and engineered products specified additional doors following the successful use of FlexiEdge models for over ten years. The five latest FlexiEdge doors range in size up to 4200mm wide x 5100mm high.

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

# **REHAU** chosen for school development



REHAU's TOTAL70 window profiles, installed by Manchester's Excell Trade Frames, have been chosen for a brand new free school in Manchester, which will provide education for up to 100 young people in the area with special learning

needs. TOTAL70 is one of REHAU's most popular systems, offering a solution for both commercial and domestic projects. Suitable for new builds or refurbishment installations, the 70mm profile is available in chamfered and sculptured options, and the windows have single leg beads to provide easy but secure on-site glazing.

01989 762600 www.rehau.uk/windows

# New Reliance multi-point lock range



Quest, a Buckinghamshire based hardware and ironmongery supplier has launched a new in-depth brochure to promote their new Reliance multipoint lock range. Reliance is a family of tried and tested multipoint locks and accessories with an easy to use 'kit code' ordering method, making it simple to

choose the right lock for your door requirement i.e. a single door, stable door or a double door. Each ordering code has the necessary keeps to complete the installation.

www.questhardware.co.uk



# **An Air of Academic Excellence**

EZE UK has provided a breath of fresh air to an extraordinary facility which boasts academic excellence and innovation. The refurbishment of West Court – part of Jesus College, Cambridge – incorporates GEZE's natural ventilation system to create the ideal learning environment.

It is integrated into four areas of the development, including a conference room with the iconic Lantern Tower, lobby and reception area, and uses GEZE's award-winning Slimchain automatic window drive and is managed by the WS 1000 indoor climate building control.

This is connected to a weather station and together they balance internal conditions such as air quality, temperature and humidity with external elements such as rain and wind speeds to achieve desired requirements.

Experts believe that improving indoor air quality by utilising natural air flow significantly improves cognitive performance – ideal for a building which houses the College's new Intellectual Forum, a spearheading research organisation that

applies critical-thinking to global problems.

GEZE UK provided a full suite of natural ventilation products which include Slimchain window actuators for outward opening vents, DMS 5 open/close controllers, temperature sensors, weather station and WS 1000 touch screen controller.

The Slimchain actuator range is extremely versatile and an ideal choice in creating a climate control package. It has a broad range of applications and meets diverse requirements for varying loads, upstroke lengths, opening widths and the widest range of installation types. With a maximum upstroke of 800 millimetres, it achieves a large aerodynamic opening width, meaning that it can also be used in natural smoke and heat extraction devices (SHEVs) in line with EN 12101-2.

Its discreet design proved to be the perfect accompaniment to architect Niall McLaughlin's design which combined organic aesthetics with the exacting demands of functionality to create a multi-purpose development within an historic setting.

West Court was a three-phase development



which involved the renovation of existing buildings and incorporated part of the historic Wesley House. This was a red-brick training college for Methodist ministers designed by Maurice Everett Webb but in the 1970's, a section spanning the city's medieval King's Ditch, was filled with a contemporary building.

01543 443000 www.geze.co.uk

# **Building bright futures with Kingspan**



Kingspan Light + Air has helped to create a bright and welcoming new home for a popular community primary school in the heart of Salford, Manchester. Its bespoke daylighting solution, comprising high performance Kingspan Kapture Prismatic Skylights with climate control glazing, offering savings of up to 80 per cent on artificial lighting energy consumption. The technical team at Kingspan

Light + Air used climate-based daylight modelling of the proposed building to design a skylight system, comprising Kingspan Kapture Nano-Prismatic Skylights with climate control glazing.

01352 716100 www.kingspanlightandair.co.uk

# Sapa windows used again



A total of 770 windows from one of the largest suppliers of aluminium building systems in Europe, Sapa Building System, feature on Newcastle's latest student accommodation addition, Verde. This is the fourth and final phase of the £250 million Downing Plaza development – the largest planning application to be granted in Newcastle for a generation. The same Sapa systems were used on the first phase of

the development. Dane Architectural Systems Ltd installed 770 Sapa Building System window units, constructed primarily from Dualframe 75 Si TBT (Tilt/Turn) as well as fixed light Dualframe 75 Si Casement.

01684 853500 www.sapabuildingsystems.co.uk

# Kingspan TEK insulates 'quads'



The Kingspan TEK Building System of Structural Insulated Panels (SIPs) has been installed as part of the modular construction of Virido, a new, highly energy efficient housing development in Cambridge. Each property was designed with a high

performance fabric specification, made possible with the Kingspan TEK Building System. The Kingspan TEK Building System comprises a high-performance insulation core sandwiched between two layers of OSB/3. The Kingspan TEK Building System also contributed towards the excellent fabric performance of the properties.

01544 387 384 www.kingspantek.co.uk

# Success at new golf clubhouse



Golfers at Centurion Club in Hemel Hempstead have found their performance matched back at the clubhouse, following the installation of the Kingspan OPTIM-R Balcony & Terrace System. To ensure a level threshold for a smooth transition from inside to outside, whilst also keeping

the area well insulated, the Kingspan OPTIM-R Balcony & Terrace System was specified. As with every installation of a Kingspan OPTIM-R System, Kingspan's specialist technical team provided detailed layouts and instructions for the project.

01544 387 384 www.kingspaninsulation.co.uk/optim-r

# STO helps brings vibrant artwork to life



What is believed to be the UK's tallest piece of street art has been created on a Leeds office development, with help from an external wall insulation system supplied by **Sto Ltd.** The 137ft high mural is entitled 'Athena Rising' and has been created on the side of the Platform building in Leeds,

which has been clad with StoTherm Vario external wall insulation and finished with StoColor X-black facade paint. The ambitious and bold artwork depicts an owl in flight alongside a moon and a crown, and has been created by artists Cbloxx and AYLO.

01418 928000 www.sto.co.uk

# TROX units chosen for Oastler building



TROX X-CUBE air handling units have been chosen to deliver outstanding environmental performance in an awardwinning new building belonging to the University of Huddersfield. The outstanding energy efficiency of the TROX X-CUBE air handling unit was a key factor in its selection for this project. The X-CUBE's

integral variable flow control technology facilitates room-by-room air management, adjusting automatically to requirements. The X-CUBE is Designed to connect seamlessly to a centralised BMS.

01842 754545 www.troxuk.co.uk





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and is easily programmed to only heat rooms in use.

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Underfloor heating can add value to the property as it is considered a luxurious form of heat and therefore a home improvement. Our stylish wall mounted or portable, JG Aura heating controls, have a contemporary design, adding a touch of elegance to the way underfloor heating is controlled.

# All-round heating control

Alongside controlling underfloor heating, JG



Aura can be combined with existing or new radiators. A single solution capable of controlling underfloor heating and radiators, also allowing occupants to manage heating for different rooms.

# Smart heating controls

Using the free JG Aura App homeowners need not worry about returning to a cold house or forgetting to turn off their heating when leaving. It gives them the freedom to manage heating from anywhere, at anytime using a smart device.

01895 425333 www.jgspeedfit.co.uk

# The Future of Heating and Cooling



Panasonic hosted a buzzing stand at Mostra Convegno Expocomfort show in Milan to showcase new solutions for the residential and commercial markets. Visitors to Panasonic's stand had a preview of some of the new innovations and developments for

2018. With an aim of providing a wider range of efficient and more environmental solutions, Panasonic announced a full switch to R32 and a new range of  $\mathrm{CO}_2$  trans-critical condensing units. With 60 years of heating and cooling expertise, Panasonic is set to make big strides in the European HVAC market in the coming years.

www.aircon.panasonic.eu

# Gilberts exposes design potential



There is a patented solution to delivering the fine detail in the trend towards exposed ceilings in commercial environments – Gilberts' swirl diffusers. The company's range of GSF fixed and GSJ adjustable diffusers have been purpose-designed to bring a modern yet discreet element to exposed ceiling

building systems. Gilberts' GSF and GSJ swirl diffusers are just part of the company's range of grilles, louvres and diffusers for natural and mechanical ventilation.

01253 766911 info@gilbertsblackpool.com

# A heater for almost every application



Installers or homeowners looking to replace old warm air heating systems with the latest highly energy efficient technology should consider the advantages of the Johnson & Starley's Aquair Heat interface unit. An Aquair can replace any warm air heater in a home, fully utilise the existing warm air ducting and be integrated in to almost any centralised heating source. It can be run in conjunction with an existing wet

system and also has the option of supplying unheated air for cooling purposes during the warmer months.

01604 762881 www.johnsonandstarley.co.uk

# Ventilation creates perfect environment



Breathing Buildings, a leading provider of controlled hybrid ventilation systems in UK, has supplied a first-class natural ventilation system for the construction of YMCA East Anton Nursery and Community Centre. Breathing Buildings' F1000 units were installed in the classrooms to provide fresh air and to create a healthy indoor environment. This slimline unit is neatly tucked up

against the ceiling and provides a throw of up to 10m into the space.

01223 450060 www.breathingbuildings.com



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# More than just doors

Holly Graham at Premdor explains why doors can be the key design feature which will define a space, while reflecting an interior design vision







reat interiors rely on balance and getting the essentials of the room right, and it's a fact that every room feels incomplete without a door. Doors have the ability to both start and finish off the look of a room, so making a door a design feature allows you to define a space and reflect an on-trend vision before even stepping over the threshold.

### **Trends**

Trends are often perceived to have a short life span, yet trends in interior design are surprisingly long lasting and do not change sporadically, but evolve gradually.

Grey has had a dominating effect on the interior design world for the past couple of years, and is still a key colour for 2018/19. What we are now seeing is the introduction of a larger variety of greys and neutral tones to complement and blend with up and coming trends. Graphite and charcoal greys work well in urban inspired environments where lighter, softer greys are popular within contemporary or Nordic-influenced interiors.

A top tip for discovering potential new trends enticing the market is to look towards the kitchen and flooring industries. Implementing the use of natural, distressed woods and textured grains into the general decor is emerging as a popular feature on the design agenda for this year. This is great in terms of determining the style of your doors, as natural, veneered timber doors are both aesthetically pleasing and won't blow the budget.

If you are interested in using natural materials but require something more detailed and style driven, natural engineered veneers are an increasingly popular option. Perfect for transforming your interior doors into prominent pieces of furniture, this innovative method allows for aesthetic versatility in terms of desired patterns and colour availability.

Responsible sourcing of materials is a consideration that is influencing interiors. With the rise in eco-conscious building projects and an enhanced number of regulations and criteria to meet where

traceability and sustainability are concerned, it's important to factor in an ethical approach to your decor. When enquiring about timber doors, be sure to look for certifications that outline their commitment to comply with specific standards such as the Forest Stewardship Council (FSC) and the Programme for the Endorsements of Forest Certification (PEFC).

# Transforming ideas into reality

A development just outside the market town of Hexham combines both an environmental commitment and an on-trend approach. Homes by Esh have developed sixteen brand new executive homes to create a sophisticated housing complex encompassing the notion of luxurious yet affordable living.

Style, sustainability and modern living have been the main aspirations at the forefront of Hexham Gate and the execution of each element has been successfully projected throughout each individual home, right down to the selection of interior doors. The Scandinavian Two Stile door from Portfolio's Natural Range complements interiors inspired by Swedish sophistication. Framed by vertical stiles, the striking cross grain effect accentuates the fresh and light feel of the Scandi origins of the house, whilst maintaining the sense of refined environmental awareness through the door's quality, British manufacturing and commitment to the principles promoted by the PEFC. Each statement door is created from originally designed Italian veneers.

Colin Willetts, deputy managing director of Homes by Esh comments: "Hexham Gate is a unique development and as such, the interiors needed to complement the high specification design and construction of every property. The internal doors offered the right balance of quality aesthetic and functionality and have become very much a standout feature of the properties."

Holly Graham is senior product and marketing manager at Premdor





# Opening the door to contemporary colour

new approach to creating beautiful designer doors with an original colour aesthetic is now possible thanks to the new W-Tec 3D+ hinge by SFS.

This ground-breaking hinge allows designers to rethink the visual impact of the hinge within the doorset, providing the option to colour contrast for bold aesthetics, or harmonise the hinge's colour to complement the door and frame.

European designed and built, W-Tec 3D+ is a highly engineered premium quality hinge which offers unparalleled levels of stability and three-dimensional mechanical adjustability to enable precise installation and long-term reliability. It can also be used for fire doors with a rating of up to 60 minutes, subject to appropriate doorset testing.

It is the perfect solution for aestheticallyled heavyweight timber doors up to 200kg in weight which are fitted into timber or steel frames and are typically suited to high-end commercial, hospitality and residential applications. The scope of applications for doorsets built with W-Tec 3D+ hinges is expanding all the time, with luxury hotels in Mallorca and Turkey just two of the projects which are already benefiting.

SFS manufactures W-Tec 3D+ hinges in any RAL colour to deliver a visually stunning result in contrast or for colour match. Two versions are available for standard and slim doors, both providing reliable stability and durability through SFS's unique patented 7-axis kinematic mechanism. This utilises three levers to handle the weight of the door in an innovative way which keeps the door straight and prevents elliptical movement when opening and closing. The result is minimum wear and tear, even when door closers are fitted, over a long service life.

0113 2085 500 www.sfsintec.co.uk



# Selecting the correct doorset



When selecting the correct doorset, cost usually comes fairly close to the top of priorities. However, the way this cost is calculated is more complex than meets the eye.

- How well will the doorset stand up against everyday knocks and bangs?
- How easy is the door and frame to clean so the building retains the 'just opened look'?
- How often and how soon we need a carpenter to carry out repair work?
- How often and how soon will the decorator need to return to refinish the door frames?
- What will the Fire Door Inspection reveal in 2, 3, 5 or perhaps 10 years time?

Best Of Steel – BOS GmbH is the one of the largest producers of steel door frames for commercial projects in Europe and it believes the door frame is an essential element in a 'durable' and stylish doorset. Please contact to discuss how Best Of Steel address the above issues. The company's offsite manufacturing and finishing greatly reduces the 'onsite' cost so its solutions are surprisingly cost effective.

0758 465 5828 www.bestofsteel.co.uk

# Vicaima reaches new heights



Getting to the top is not easy. But with the rising demand for grey and on-trend tonal colours epitomised by the new Visual Sensations' Mountain from Vicaima, specifiers can take their vision to new heights with doors that reflect the latest fashions within interior design. Vicaima has launched four new and stunning Visual Sensation finishes into its ever popular Dekordor SD range. Mountain, being one its latest grey creations, has given designers some new creative inspiration. Stimulated by dramatic landscapes, Mountain allows specifiers to incorporate the peaceful essence of nature within their chosen interior space. Since its introduction, the Visual Sensations (VS) collection has heralded a new era for foil faced doors, with bespoke models being created and manufactured by Vicaima that offer unique design solutions which are in-step with the latest design trends. Visual Sensations Mountain is just one in a selection of eight new finish options in the 2018 VS collection, which also includes Tundra, Alpine and Desert, all of which available in both vertical grain and cross directional woodgrain designs.

01793 532333 www.vicaima.com

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Tel 0121 766 4200 info@samuel-heath.com



# Sound Investment

s the exclusive UK distributor of Moralt high performance door blanks, James Latham is delighted to announce that the Moralt FireSound 59mm has been successfully acoustically tested as operational interconnecting doors to an acoustic value of dB68.

Interconnecting doors are now extremely popular within the specification market for all kinds of applications. For example; between hotel bedrooms, in night clubs or music studios where sound needs to be blocked out or in commercial offices and administration buildings which have meeting rooms where greater confidentiality is required.

Steven Dennard, Group Door Manager for James Latham commented, "This high-acoustic performance from a timber-based door product highlights the superior quality of the Moralt FireSound 59mm door blank, UK stocked up to sizes 3050 x 1220mm which also boasts a fire rating of up to FD90 under BS476 Pt.22."

Mr Dennard added, "The technical features and benefits of the Moralt FireSound



59mm, coupled with its environmental credentials – the door blank is FSC accredited – make it a really attractive option for specifiers and it is generating plenty of interest in the market."

A single leaf Moralt FireSound 59mm door on a pivot hinge with a floor spring and available exclusively through James Latham

in the UK, has also been successfully tested to dB42. Again, these doors which work in both swing directions, allowing it to revolve up to 180° are proving to be extremely popular among architects and designers as they can create a true design statement.

0116 257 3415 www.lathamtimber.co.uk



# **DELABIE** launches new threaded shower head filter



DELABIE has extended its range of BIOFIL terminal filters with a new single use anti-bacterial shower head which attaches directly to the shower hose. As with all the BIOFIL filters, this shower head secures the water quality at the point-of-use, protecting the user against waterborne infection. This new shower head has a threaded tail which screws directly into any flexible hose, without the need for a push-fit connector. Available in both sterile and non-sterile versions, it complements the existing range of BIOFIL antibacterial shower heads, cartridges and spout filters (the only ones available on the market). The spouts are also available in sterile and non-sterile versions and can be fitted to all DELABIE's mixers with removable BIOCLIP spouts. All DELABIE's filters have a maximum lifespan of 62 days. Fully WRAS approved, DELABIE's new anti-bacterial BIOFIL shower head filters provide peace of mind if bacterial analysis identifies an outbreak. Featuring innovative, hollow-fibre membrane technology to micro-filter the water, the BIOFIL filters accommodate increased volumes of water. Although compact, they have a large filtration surface with better resistance to clogging.

01491 824449 www.delabie.co.uk

# New coating "will take market by storm"



Bradite is set to take the specialist paint market by storm with the launch of a new multi-purpose product that is suitable for use on all surfaces. Bradite One Can, an all-purpose water-based primer and finish in one can, will be available at merchants from this Spring. The unique product is an interior and exterior, anti-corrosive, quick drying, low odour, low VOC, primer, undercoat

and finish. The high-performance coating will give protection to many substrates including: cladding, UPVC, powder coated metal, steel, and timber including fencing, garden furniture and sheds.

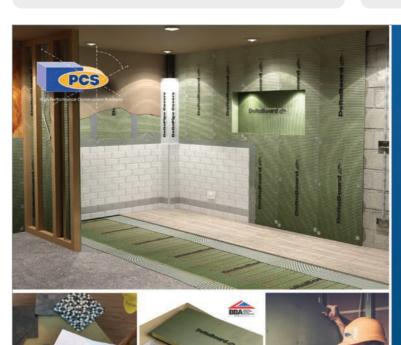
01248 600315 www.bradite.com

# Offsite solutions launches new solution



Offsite Solutions has launched a new premium bathroom pod which incorporates a concrete base - and becomes the only UK pod manufacturer to offer this type of factory-built wet room. This latest innovation from Offsite Solutions provides a fully waterproofed pod solution for high specification wet rooms and bathrooms. It features cold rolled steel-framed walls with a cast concrete base which removes the need for visible shower trays to create a clean, contemporary appearance.

info@offsitesolutions.com



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# The future of lighting control



Luceco has collaborated with LiteIP to provide a flexible, intelligent wireless lighting system requiring no complicated installation and no limit to the number of luminaires that can be controlled. Throughout the new Luceco Lighting Catalogue, compatible products carry the LiteIP logo for ease of specification. LiteIP requires no special lighting controls design work. Each wireless luminaire is programmed to operate using drag and drop menus within LiteIP software. Changes to individual luminaire operation, to improve light usage, can be made without the need to alter any wiring. Furthermore, emergency lighting tests can be run automatically, with monitoring email alerts and reports generated avoiding the need for manual recording of results. The lighting installation is also simple and can be completed as if no lighting controls are required, each luminaire needs only Live, Earth and Neutral, no expensive control cables are needed. Lighting controls are now affordable and no longer complicated, just specify Luceco LiteIP luminaires for a full lighting control system!

01952 238100 www.luceco.com/uk

# Modern farmhouse-style sink



The latest addition to BLANCO UK's STEELART collection, BLANCO CRONOS, combines contemporary designs with traditional farmhouse-style. The Stainless Steel sink comes with a matt finish which imitates the trims of electric kitchen appliances creating a modern look. The sink's eye-catching

apron front can be customised to the user's kitchen whereby the height of the sink can be levelled with the worktops and kitchen cupboards, ensuring a seamless and smooth design. BLANCO's CRONOS is available in two versions: the IF version and the U version.

www.blanco.co.uk

# SFS hinge technology raises the bar



Leading door hinge manufacturer SFS has reported a successful four days at the Fensterbau 2018 exhibition, with the show providing the ideal platform for door manufacturers to explore why its latest range offers unparalleled adjustability, aesthetics and performance across every type of doorset. Star of the show was the W-TEC 3D hinge range

which SFS offers in any RAL colour to deliver a visually stunning result in contrast or to colour match.

0113 2085 500 www.sfsintec.co.uk

# Silentflor acoustic flooring



Silentflor vinyl sheet flooring from Polyflor's collection of acoustic floor coverings was chosen for the interior design scheme of a brand new burger restaurant, The Counter Custom Burgers at The Quay in Glasgow. Approximately 220m² of heavy commercial Silentflor

flooring in Light Industrial Concrete was fitted in the front of house areas of the restaurant which can seat up to 100 covers. Another 100m<sup>2</sup> of Polysafe Standard safety flooring with sustainable slip resistance was also used for the back of house kitchen and staff zones.

0161 767 1111 www.polyflor.com

# Expona Flow helps complete centre



Expona Flow sheet vinyl flooring from Polyflor, one of the UK's commercial vinyl flooring specialists, was recently installed at the new NGS Macmillan Unit at Chesterfield Royal Hospital. Expona Flow PUR vinyl flooring in the Light Grey Concrete and Cool

Concrete shades was installed throughout The NGS Macmillan Unit by Active Flooring in the reception area, circulation areas, corridors, staircases and wards. 2000 PUR homogeneous sheet vinyl flooring in Stream was also used for the staff kitchenette area. Expona Flow product samples can be ordered free of charge on the Polyflor website.

0161 767 1111 www.polyflor.com

# Marble provides exquisite entrance for award winning five star hotel



The magnificent marble entrance hall at the award winning Gainsborough Bath Spa Hotel has been created by National Federation of Terrazzo, Marble and Mosaic Specialists (NFTMMS) member Zanetti & Company Ltd. Zanetti was commissioned to install 220m² of Calacatta Oro, Grigio Carnico and Nublado natural marble to the entrance hall and corridors areas of this five-star hotel. The Gainsborough Bath Spa is housed in an historic Grade Two Listed Building in the centre of Bath, a world heritage site. The hotel is centred around Spa Village Bath and has privileged access to the natural thermal, mineral-rich waters. "In addition to the entrance hall, we supplied and installed bespoke cut, natural marble benches, plus a stunning mosaic feature in the sauna and steam room areas, said Mr Zanetti. The NFTMMS represents companies which wish to maintain and improve the standards of craftsmanship and technical control on which the industry depends. It includes organisations involved in terrazzo, mosaic, marble, granite, limestone and quartz and NFTMMS members freely offer technical advice and assistance with specifications. Visit the website for more details.

www.nftmms.co.uk

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# It's a Lift Slide Life for Us

ow it's your turn to lift and slide your product range with Comar 7Pi LS+. Innovative lift and slide gearing provides smooth operation for door configurations up to 12 metres wide and 3 metres high, creating true glazed sliding walls. From one system Comar 7P.i LS+ provides delivered solutions, for the summer months maximise the opening space with the three-track slider which creates two thirds clear opening, whilst in the winter the lowest U-values keep out the cold.

Innovation comes from Comar 7P.i LS+ offering unique solutions from one system, which means that with the same profiles you can provide lift slide or straight rolling gear, standard or slim interlock, enhanced performance with the inclusion of thermal foam and double or triple track configurations.

Optional slim interlocks maximise the homeowners view out when the doors are in the closed position keeping the slim sightlines of Comar 7Pi LS+ doors with the reassurance of the lowest U-values, so even in the coldest winter months daylighting is maximised and

warmth assured. For a standard CEN size set of doors U-values are down to 1.4 with a 1.0 centre pane and using glass technology and Comar's Enhanced Thermal Foam U-values of 0.74 are achievable.

The real advantage of this system is it's smooth and easy lift operation, it's ease of operation for sliding doors means that there is no alternative; it really is a lift slide life for all members of the family. Another advantage is the ability to lock the door in an open position anywhere along the track which means that the homeowner can open the door for ventilation without the risk of small children and toddlers exiting the doors.

For our fabricator and trade partners, Comar Systems utilises multi-function profiles which means that from a minimum stock all configurations of this feature laden system can be fabricated. Installers with the unique Comar Easyfit components minimise time on site and disruption to the home owner whilst maximising returns.

The Comar 7P.i Lift and Slide was developed to ensure a highly engineered solution that offers market leading



performance. Feedback from the UKAS Accredited Test House was "it is the best they'd ever seen", as it passed BS6375 Parts 1, 2 and 3 with no water leakage at 1050Pa. The hardware, has been tested to over 50,000 open and closing cycles.

As Secured by Design is now being incorporated into some region's Planning conditions and BREEAM Assessments, Comar 7P.i LS+ passed the new stringent PAS24:2016 and holds a Kite-mark for Enhanced Security to enable sub-contractors to provide an SBD Licensed product to discerning customers.

Comar 7P.i LS+ now provides a future proof solution with a glazing pocket of up to 57mm.

projects@parksidegroup.co.uk 020 8685 2318 www.comar-alu.co.uk

# Grade II becomes Grade A with Neaco



Neaco have supplied an extensive balustrade specification to help transform a Grade II Listed former Post Office and Telephone Exchange into Grade A contemporary offices in Sheffield city centre. SDA Architects designed the comprehensive internal revamp of the property, built in the 1920s, to create

Steel City House comprising 60,000 square feet of prime commercial space across five storeys. Neaco's structural glass balustrade forms part of the £10m project's signature feature: a new central atrium which brings natural light into the heart of the building.

www.neaco.co.uk

# Ceiling enhances RIBA North building



Hunter Douglas Architectural has created a stunning ceiling for the new RIBA North building. The national architecture centre on Liverpool's waterfront is a 1,350m<sup>2</sup> complex located within the Royal

Institute of British Architects' (RIBA) award-winning Mann Island and the ultra-modern design of the gallery space lent itself to a Hunter Douglas solid wood grill ceiling. Hunter Douglas Architectural's solid wood ceilings are the ideal option for all-natural and sustainable projects and they come with FSC/PEFC certification.

01604 648229 www.hunterdouglas.co.uk

# Megaman® launches INGENIUM® ZB



Megaman, has introduced its latest product innovation to the UK, INGENIUM® ZB. The new smart system works with ZigBee® technology to create a scalable solution, allowing users to gain wireless control over all INGENIUM® ZB products. Ideal for new and retrofit applications, INGENIUM®

ZB is a smart lighting solution for residential, commercial, retail and industrial spaces. The new INGENIUM® ZB smart lighting solution is compatible with a range of smart systems on the market – including voice control. For more information follow @MegamanUKLtd

01707 386000 www.megamanuk.com

# All in one shading solution by Sunbell



Sunbell, a leading Italian designer and manufacturer of interstitial blinds for glazing, has launched an innovative new solution for residential and commercial windows and doors. Powered by a 24v low-voltage motor the system features a slim

control switch positioned on the glass that allows for individual movement or alternatively for group activation up to 12 blinds, using a hand held remote device. The 'All in one' system is hard-wired to a central power source with each blind linked together using a simple 'sprung' electrical connector positioned in the frame.

01245 422489 info@sunbell.co.uk

# New Heavy Duty Accessories for Yeoman Shield Protection Rails

ith over 50 years of experience in the wall & door protection industry, Yeoman Shield continually asses and develop their products based on not only their own knowledge, but also feedback received from customers.

Always keen to problem solve Yeoman Shield responded to customers who wished to use 200mm, 125mm Protection Rail, or the Guardian Twin Handrail in areas of heavy traffic, where vulnerable corners and wall surfaces were being hit by very heavily laden or motorised vehicles and equipment.

"Whilst our standard PVCu injection moulded accessories are more than capable of warding off general, everyday blows, in certain circumstances where the traffic is exceptionally heavy and continuous an alternative, more durable option is required"

"This led us to designing and manufacturing alternative 200 mm and 125 mm rubber accessories to solve this problem, all of which are compatible with the profiles



mentioned above" commented Yeoman Shield's Sales Director, Stuart Russell.

Manufactured solely from EPDM rubber, which is a dense and abrasion resistant compound, results in the new accessories being capable of absorbing heavy blows – perfect for use in areas such as service corridors, warehouse, manufacturing facilities, etc. – in fact anywhere that has the traffic of heavily laden trucks and trolleys passing through on a daily basis.



To receive product information, costings or if you would like to request a site survey from an Area Sales Managers, then please contact sallyann@yeomanshield.com

All products are showcased on Yeoman Shield's newly launched website where you can also sign up to a mailing list to keep up to date with all product development and news.

0113 279 5854 www.yeomanshield.com



# Bathroom and Wetroom Solutions from Schlüter-Systems

A significant amount of time and thought is invested into the design of bathrooms for architectural projects. One design aspect that is important to consider is how our needs may change over time and the accessibility of a bathroom, en-suite or wetroom.

This is where barrier-free bathrooms or wetrooms with floor-level showers, easy-access sanitary ware and the provision of seating areas can offer a practical, future-proof solution. The huge range of ceramic and natural stone tiles available today means that creating luxurious, beautiful, yet safe slip-resistant surfaces is easily achievable.

Schlüter-Systems can help protect these stunning installations whilst providing a complete solution for a CE Marked waterproof floor-level shower area. The Schlüter®-KERDI range includes a wide range of waterproof membranes, backerboards and prefabricated components



to create reliable underlays. The uncoupling membrane, Schlüter®-DITRA 25, which has been tried, tested and trusted for over 25 years, serves as a waterproofing membrane and a vapour pressure equalisation layer, protecting tile or natural stone coverings

from cracking or debonding. The same features can also be found in the underfloor heating system Schlüter®-DITRA-HEAT-E, making it ideal for heated floors and walls in wetrooms with tile and stone coverings.

The tile and stone covering in the shower area must be sufficiently sloped to allow for appropriate drainage. This is easily achieved with Schlüter's prefabricated levelling and shower tray components, which are available with a point drainage system or a component linear drainage system.

Schlüter-Systems has a long history of providing solutions for the application of tile and stone and has project case studies detailing where their systems and solutions have been used. The company has NBS Clauses and BIM Objects available on NBS Plus, National BIM Library and on the website below.

01530 813396 www.schluter.co.uk

# Architectural Hardware Tel: 03300 373 334 sales@barrier-components.co.uk www.barrier-components.co.uk





# Handrail compliance: Overcoming physical barriers

Disabled people continue to be affected by the lack of access into public and commercial buildings. Christian King of Kee Systems discusses the regulations around disabled access and explores how an upgrade in handrailing systems can ensure buildings are compliant

here are an estimated 13.3 million disabled people in Great Britain, making up almost one in five of the overall population. With such a significant number of people requiring assisted access to commercial and public buildings, it is essential to have the correct facilities in place.

Laws tackling the discrimination and inequality against disabled people in the UK have existed for many years. These regulations state that "reasonable steps" need to be taken to ensure disabled people are not at a disadvantage when accessing public buildings. However, it seems that building owners are still not upgrading or refurbishing their properties to meet the required standards.

# There are many solutions on the market which are ideal for heavy traffic environments

In an attempt to enforce this issue, the Disability Discrimination Act (DDA) was superseded by the Equality Act 2010, to simplify the law, remove inconsistencies and make it easier to understand and comply with. This Act supports the existing Building Regulations.

Under the terms of the Act, building owners are legally required to provide non-discriminatory balustrading and handrailing systems on stairways and ramps, as without suitable handrails, ramps and lifts, access can be extremely limited. Previously, adjustments to premises had to be made only where it would otherwise be 'impossible or unreasonably difficult' for a disabled person to access the property. Under the DDA, it was possible to legally



justify failing to provide a reasonable adjustment in certain circumstances. Now, the only question is whether the adjustment is a reasonable one to make.

A common solution can involve taking out physical structures like steps and replacing them with ramps, or simply providing handrails to aid wheelchair or other disabled users. In these cases, the obligations set out in Building Regulation Approved Document M specify that handrail heights on all building stairways and ramps do not discriminate against any disability group.

For a wide flight of steps, handrails should be used to divide the flight into channels. On flights of steps wider than 1800 mm, it is recommended that handrails are used to divide the flight into channels between 1000 and 1800 mm. If the flight of steps involves two or more risers, then a continuous handrail should be provided on either side. Where the stairway consists of two or more flights

### **CONTINUOUS HANDRAILS**

If a flight of steps involves two or more risers, then a continuous handrail should be provided on either side

Companies should aim to create a safe handrail system which children, the elderly, the disabled and even able-bodied adults can benefit from

separated by landings, where possible handrails should be continued throughout the series of the flight.

On access ramp gradients, varying from two through to five degrees, handrails need to be positioned on both sides, or centrally for a wide path of 1 metre, to allow a choice of which arm to use for support. They should be installed on both sides of the ramps that are longer than two metres and should, where possible, extend 300 mm beyond the top and bottom of the ramp or staircase. The Building Regulations stipulate an outside diameter tube size for such installations of between 40 to 50 mm, and must be offset in the case of a mid-height handrail.

Architects must satisfy these regulatory requirements, yet also be able to meet customer demands on building aesthetics and cost-effective options.

One option is to adapt the existing handrails to meet the requirements of Part M and the Equality Act. There are many solutions on the market which are ideal for heavy traffic environments and allow both speedy and seamless retrofitting as well as hassle-free and simple installation in a new build. This is hugely

important to those businesses where there is no option of down time.

There are fittings available which provide versatility depending on the installation. These ensure that handrails can be assembled at any required angle, or to offer a midpoint connection to dual handrails, when required. One piece 90° corner elbow and adjustable elbow fittings, meanwhile, ensure that any new handrailing structure created can cope easily with different angles and changes in direction. Product ranges which include 'add-on' offset fittings remain popular; they lend themselves well to retrofit projects, where the new handrail can simply be added onto an existing structure of the appropriate size.

Given the requirements of the Equality Act and Building Regulations, and the number of people who require access to commercial and public buildings, companies should aim to create a safe handrail system which children, the elderly, the disabled and even able-bodied adults can benefit from.

Christian King is the general manager at Kee Systems

# New standard for accessibility



The British Standard for accessibility in the built environment have been updated, and now extend the useability of the ultimate in accessible toileting. The Standard now notes that replacement of a conventional WC within the facility with a wash & dry (automatic shower) toilet, can enable

greater independence and dignity for users. A wash & dry toilet, such as a Closomat, looks like – and can be used as – a conventional WC; integrated douching and drying facilities mean it cleans the user after toileting without the need for manual wiping with toilet tissue.

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

# Changing places at shopping centre



Silverburn in Glasgow, a leading shopping and leisure destination, is ensuring it can be enjoyed by even more people, with the unveiling of new accessible facilities. The one million ft<sup>2</sup> venue is the latest to open a Changing Places. Executed by Closomat, one of Britain's leading providers

of such accessible toilets, the new room means anyone who needs the help of a carer for their intimate hygiene now has appropriate facilities whilst at the centre. Disabled visitors and their carers can therefore relax and enjoy as much time there as they want, without having to curtail their trip because of lack of suitable toilets.

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

# **FDS wins Paddington Gardens contract**



Fire Design Solutions (FDS) has secured its latest contract to supply smoke ventilation and corridor environmental systems to the new Paddington Gardens residential development. The award-winning fire safety systems contractor will provide full consultation, design and installation

services. The Paddington Gardens project is the latest in a series of collaborations between FDS and Ark M&E over the last five or more years. FDS was engaged early on, and has been providing consultancy on the design for the development's fire safety features.

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# Leading the way in fire protection



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# Zero VOCs or not?

Matthew Pemberton at Treatex wood finishes considers the key questions for architects around VOCs, including whether they can be a misleading factor when selecting products for the least environmental impact

ow can architects select an internal or external wood finish that will throughout its entire lifespan (i.e. up to the point where the finish has to be reapplied), have the minimal possible impact on health and the environment? Is there a requirement to choose zero VOC finishes, or are zero VOC finishes more complex to understand than first assumed?

# **VOCs**

VOCs are organic chemicals that have a high vapour pressure at ordinary, room-temperature conditions. Their high vapour pressure results from a low boiling point, which causes large numbers of molecules to evaporate or sublimate from the liquid or solid form of the compound, and enter the surrounding air.

However the difficulty in reducing VOCs lies directly in that they are a key part of paints and decorative finishes' mechanical characteristics, as they determine the viscosity, flow, surface dexterity and drying time.

# **VOC** legislation – leading the way

Across the UK and Europe the decorative industry has been required to meet legislative guidelines applied to all paint types, with the aim being to reduce the environmental impact of the industry as a whole. A by-product of these reducing VOC levels is accelerated development of new materials, permitting lower VOC content without the loss of these key mechanical characteristics.

This legislation also allows companies who are clearly displaying the VOC contents of products on labels to demonstrate to today's environmentally conscious society that they are at the forefront of contribution to the development of more ecological products.

# Zero VOCs

Paints are made up of a large number of components. These can either be of natural origin or synthetically manufactured, that



during processing require refinement to be readied as raw ingredients with which to make the final products.

The substances used to achieve the necessary levels of refinement are themselves classified as VOCs. A great deal of work is undertaken to remove these VOCs, but there are always trace amounts to be found in the processed raw materials. So it can be said that as the raw materials contain these trace VOC amounts, that the final product is not 100 per cent VOC-free aka Zero VOC, by definition determined across Europe by the CEPE and in the UK by the British Coatings Federation.

# Are zero VOCs eco efficient?

This is a question best suited to specific projects and clients' expectations, but Overall Environmental Footprinting (OEF) uses the comprehensive approach that durability should always be brought into consideration e.g. to the point where the finish has to be reapplied.

Clay paint products are based on natural clays and are not as durable as VOC-emitting bases and require recoating more often

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**ENVIRONMENTAL** 

New products can offer excellent performance while meeting environmental legislation

For example to achieve low-VOC credentials clay paints products are based on natural clays. These are not as durable as VOC-bases and require recoating more often. Achieving an OEF score (dependant on project and expectations) that is lower than its VOC counterpart.

# **Ecologically efficient solutions**

It is a requirement of any company to trive to stand out in a market place, for a wood finishes company the usual first requirement would be to enhance the natural beauty of surfaces. But they need to be able to do so with products that involve openness with regards to the information they make available about products in line with legislation.

# Is there a requirement to choose zero-VOC finishes?

VOC legislation has been consecutively tightened over the last 14 years since the European Paints Directive 2004/42/EC and should a company aim to meet criteria ahead of schedule, by default it shows both effort to satisfy environmentally orientated clients concerns and actual contribution

towards creating a healthier environment.

Thanks to efforts and technological achievements in line with legislation towards healthier interior environments made e.g. by Germany. There are new products now able to offer excellent performance characteristics whilst meeting environmental legislation.

# Are zero-VOC finishes complex to understand?

When deciding between zero VOC products or not, be aware of terms often used to disguise the nature of what you are investing in. There are zero or 'low VOC' coatings which are beautiful, however they do tend to need ongoing upkeep or maintenance, which can often negate a product's ecological efficiency over the full lifespan.

More and more end users are becoming aware of alternatives to what is usually available, these alternatives are often worth investigating for your client and the environment, and it is a matter of making an informed choice.

Matthew Pemberton is general manager at Treatex





# Hauraton drainage channels used at Maritime Transport Headquarters

The Maritime Transport Limited new £5 million headquarters in Felixstowe has received the accolade of "Winner-Design (Non residential)" at the Suffolk Coastal Quality of Place awards held in October 2015. Designed by Architects, Wincer Kievenaar, the Maritime Headquarters office provides an impressive gateway to Felixstowe Port.

The Headquarters extensive car park, set with composite grey blocks is drained by 98 metres of Hauraton RECYFIX® PLUS 150 channels fitted with Class C250, HEELSAFE ductile iron gratings. A further 47 metres of RECYFIX® PLUS 100 channels were also installed in other locations on site.

The RECYFIX® PLUS channel unit is made of tough, virtually unbreakable recycled polypropylene (PP) formulated to be very resistant to daily temperature fluctuations from frost conditions to strong sunlight, including the Ultra Violet (UV) spectrum. The channel unit also features galvanised steel top



edges which house the ductile iron gratings. Complying with the requirements of EN 1433, the PP is given its UV resistance by adding just sufficient carbon black as a stabiliser so that the structural strength of the

material is unaffected and a consistent appearance is maintained. The PP is also naturally resistant to de-icing salt.

01582 501380 www.hauraton.co.uk.



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# Denso selected for RHS Garden Wisley



As part of refurbishment works at the RHS Garden at Wisley in Surrey, Winn & Coales (Denso) Ltd has supplied Densoseal 16A<sup>TM</sup> for the prevention of water ingress via cable entry ducts in the switch room and power stations on site. Densoseal 16A<sup>TM</sup> (pictured) was

developed for the sealing of cable ducts, conduits and service entry pipes or sleeves from the ingress of water and gas. The firm, fibrous mastic creates a flexible seal around electrical supply cables and is particularly suitable for ducts that are wet or liable to water entry.

0208 6707511 www.denso.net

# Harvey Street flats get a face lift



CLC Contractors Limited, in conjunction with Cornwall Housing, joined forces to appoint the **Dulux Trade Commercial** Colour Services team to give the Harvey Street Flats a new lease on life with an updated colour scheme fitting of the buildings' design. The core product of

choice was Dulux Trade Weathershield Exterior High Gloss, which is the last product used in a three-part weather resistant and flexible paint system. Visit www.contractpartnership.co.uk to find your nearest Dulux Trade approved contractor.

0333 222 70 70 duluxtrade.advice@akzonobel.com

# Mighton adds Kremlin spray range



Mighton has added a further bonus to users of its Mighton Ankerstuy specialist paints with the addition of the acclaimed Kremlin spray equipment range, including full installation, technical support and demo facility. The Kremlin range is extensive but the most popular items are expected to be the 20:25 Large Kremlin

Pump, the smaller Kremlin EOS 15:C30 Pump and the Kremlin M 22 G HPA GSP Gravity air-fed Gun. To learn more about Mighton Products or to order a new catalogue, please call or visit the website.

01223 497097 www.mightonproducts.com

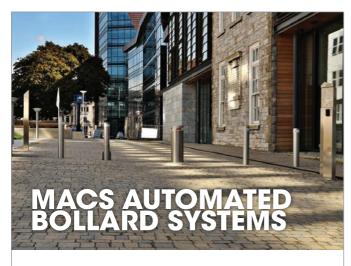
# Megaman® unveils new NERO range



As leading experts in sustainable lighting solutions, Megaman has launched its new integrated LED Batten Range – NERO. The high performance design delivers a slim, lightweight and waterproof batten, ideal for outdoor use in car parks, warehouses, workshops and underground areas. The new

integrated waterproof LED batten range offers a cost-effective, energy efficient and long-lasting alternative to conventional T5 and T8 outdoor battens. For more information follow @MegamanUKLtd

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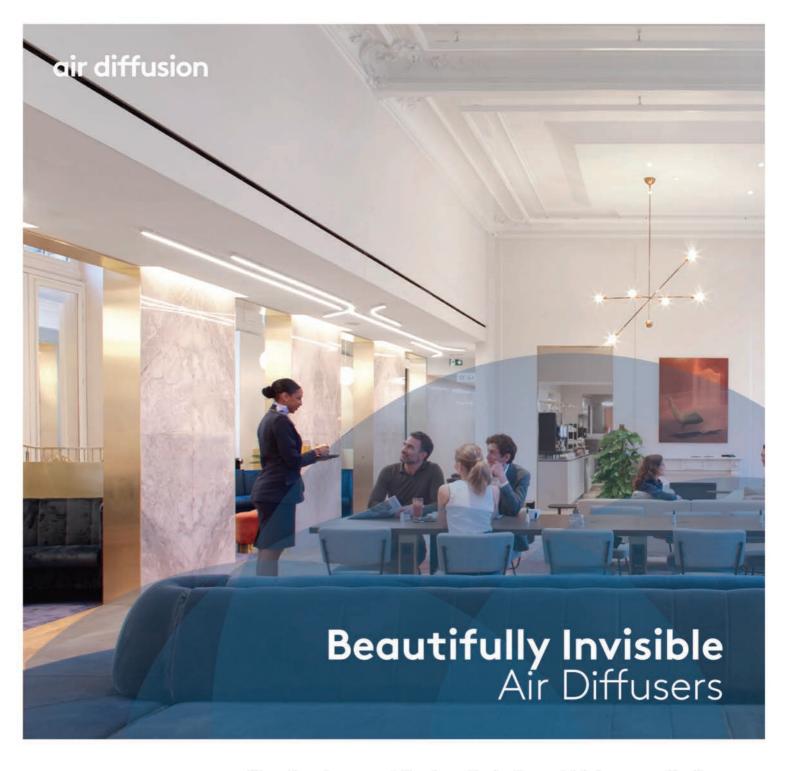
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