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### **COAL DROPS YARD, KINGS CROSS, LONDON**

Heatherwick Studio transforms and brings together two Victorian coal warehouse roofs, for a high-end retail scheme

### **DUNDEE RAILWAY STATION**

Nicoll Russell Studios' curved new hybrid concourse and hotel







LETHARGIC SAVANNAH



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## FROM THE EDITOR



I recently attended a Westminster Social Policy Forum seminar headed up by Sir Oliver Letwin MP, who has chaired an independent review of housebuilding delivery, a particularly hot topic given the scale of the current housing crisis. His comments were surprising for a couple of reasons.

Surprising firstly because the mentions of Brexit were at a bare minimum (although it was of course the 'elephant in the room'). You do wonder whether he has been briefed to try and avoid saying anything negative about the current diplomatic crisis, especially given he was one of the leading Tory rebels attempting to 'take back control' of the process from an increasingly hopeless-looking Government.

His talk was also surprising however because the key focus was not just the commercial factors around 'build out' of large sites - the extent and speed of which residential sites are being built on by developers, in light of the dauntingly huge target to build 300,000 homes per year. Yes, he did talk about the problem of 'absorption rates,' (i.e. the rate at which homes will be sold in a new development), as being the main reason that sites are not built on quickly enough: "The reason why it takes so long is nothing to do with how fast you can do it in technical construction terms, but whether there are people, who at the prices at which they are being sold, want to buy more houses in that place at that time or not."

Letwin gave reasons why it might be a bad idea to reduce prices, in the context of the fact that the market rate is not set by the developers, but by the secondhand market. He advocated realising far greater value from sites for tenures like social housing, so that it isn't just 'lottery-winning' landowners who get all the spoils.

But he also talked very passionately about design, and what he saw as a severe lack of quality and variation, hinting that this may be another reason which homes are not fetching the prices that might make sites viable. From visiting many 'open market' UK housing developments, Letwin said he had reached the view that "almost all of the homes that the very large builders build are astonishingly, and to my mind appallingly predictable." And this isn't a maxim of housebuilding in general; he said it was "quite unlike what we saw in various other countries that we visited, where large sites are highly various in many respects."

Letwin believed that the solutions lie partly in "addressing untapped demand" for a wider variety of house design. There was a key need to "vary the product, because there are different kinds of people and different people have different desires," he said. He added that while some buyers will accept the homes that are currently on offer from major housebuilders, that's simply represents the current level of demand, which is not producing adequate build-out rates.

He said the variations in design seen in many EU housing developments, such as being shown via wide adoption of custom build, is one area where we are lagging behind the Continent. Letwin's key recommendations include that the planning system is changed so that large sites can't be built out with 'lookalike' open market housing, and local bodies are set up to oversee this – as happens in other European countries. While we stumble around trying to leave the EU, we still have much to learn from our European neighbours.

**James Parker** Editor



#### ON THE COVER

Heatherwick Studio's Coal Drops Yard forms the heart of the King's Cross regeneration project, combining old and new in a unique composition created from two reconstructed Victorian roofs.

For the full report on this project, go to page 56 Cover Image © Hufton+Crow



### AVIATION

# Fosters collaboration up for Chicago airport terminal

Designs for the new O'Hare Global Terminal and Global Concourse were presented at the Chicago Architecture Centre in January. Following an exhibition of the joint Foster + Partners, Epstein and Moreno proposal, together with the four other entries, which was on display at the Chicago Architecture Centre, the local public were invited to vote for their favourite scheme.

The new terminal will replace the existing 1960s Terminal 2, "with a cutting-edge global terminal that reflects the legacy of Chicago's innovation, architecture and diversity." The joint venture said it has created "a new vision for a gateway to Chicago that captures the city's progressive spirit and its architectural legacy, while re-thinking the airport terminal for the next generation."

In the design by Foster + Partners, Epstein and Moreno, departing passengers will first encounter the three sweeping arches of the new terminal as they approach, creating a dramatic canopy over the drop-off. The arches then merge into a single curve as they enter the building, "blurring the boundaries between inside and out and allowing the spectacle of the airfield to unfold, recapturing the romance associated with air travel," said Foster + Partners.

The column-free spacious volume is flooded with natural light. Domestic and

international arrivals and departures are intelligently planned with direct routes, and every detail is designed "with the passenger experience at its heart."

The unique roof structure is an emblematic element that binds the entire design together. Using cutting-edge technology, it is supported on its perimeter at just six points, creating a grand unified space that is designed to meet the ever-changing operational demands that are synonymous with airport terminals and new technologies.

Norman Foster, founder and executive chairman of Foster + Partners, said: "This project brings two passions together, my personal passion for flight – and my love affair with cities. I remember coming to Chicago as a graduate and being captivated by the energy, the extraordinary location, the music, the culture, and the outdoor sculpture – all of those influences blend together in our proposal."

"In 1991, we revolutionised airport design with Stansted. At O'Hare Global Terminal, we are creating another revolution – an extraordinary shell with a span of 550 feet, with views that create a direct visual relationship with the aircraft and a sense of orientation and drama, a space that truly lifts the spirits. It pushes the limits of technology to create a space that is generous, flexible, and points to the future."

### RESIDENTIAL

# Terrace gets 'two boxes' extension

The Fragmented House is one of six projects completed by Space Group Architects within the Driffield Road Conservation Area of Tower Hamlets in east London. The "convoluted" Victorian terraced house required "drastic re-shuffling of its functions in order to unlock and add additional space for family of five," said the firm.

With budget constraints in mind, Space Group Architects decided early on to keep the structural interventions to a minimum and used existing openings as setting out points for new spaces. The architects managed to add a bedroom, bathroom, laundry drying room and a new dining area, plus a new multi-functional lounge.

The two levels of 'boxes' were clad in different tones of grey fibre-cement boards, carefully stacked on the rear elevation, which are interrupted by 'ribbons' of glass. "The glazing emphasises the three-dimensionality while also allowing for a controlled flow of daylight and still maintaining privacy," commented the architects.

The ground floor also received a new wall separating the means of escape from the existing living room, "in order to address the Building Control short-comings with regards to the fire strategy," commented Space Group. However, a sense of openness had been maintained by providing large, pivoted door panels that can be folded away.



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#### **CHINA**

### Benoy regenerates historic Chinese site

Benoy has been appointed to redevelop a new mixed-use destination in one of China's oldest cities, Ningbo.

Situated on the riverfront, the historical port site will be transformed into a "unique commercial destination blending the past with present," said Benoy. The scheme, for developer Sino Ocean, aims to "evoke the memory of the area's heritage through a new mixed-use, retail and cultural experience for the community," said Benoy. Ningbo port was established in 738 AD and was one of the two biggest seaports in East Asia. Today it is the largest and busiest cargo port in the world in terms of cargo tonnage.

Retaining the original form of the historical buildings, Benoy's design inserts new blocks throughout the site, which will form spaces for pedestrian thoroughfares, retail and cultural activities. Through careful placement of new buildings, the design "preserves views of historical structures, which was crucial in the design brief," said Benoy.

With its unique riverside location and reference to the historical and cultural elements, Benoy's design is "set to create a



new revitalised district for the city," the architects commented.

Hao Li, senior associate director at Benoy said: "Ningbo is steeped in history, and we are incredibly proud to be working on this special regeneration project."

He added: "We are excited to work on something that will be part of the evolving city – creating a vibrant new destination nestled amongst a historical site."

#### BOOK

### A wayfinding guidebook

'The Spaceagency Guide to Wayfinding' is claimed by the publishers to be the first "comprehensive compendium" that answers two questions: what is wayfinding, and how is a wayfinding project executed?

Wayfinding and user experience design consultancy Spaceagency launched the publication describing it as a "visual guidebook" detailing the process for designing a wayfinding system. "Using visual information graphics, this book speaks to designers in their native language" said Spaceagency.

The authors are Sarah Manning and Peter Feldmann, directors of Spaceagency. The firm claimed wayfinding is "a little-known field of design that crosses a number of disciplines, including urban design and planning, product design, graphic design, information design and behavioural psychology." They added: "Without any higher education programmes dedicated to the field, wayfinding is often poorly understood and poorly executed."

This book is claimed to fill a gap in educational resources devoted to the field. The guide "offers an innovative methodology for developing a wayfinding project that has been successful in practice." Six international case studies from Spaceagency's own work "investigate and illustrate the practical application of wayfinding theory to real-world solutions using a step-by-step demonstration of the relevant techniques required to develop and realise a wayfinding system." The projects cover a wide range of sectors with distinctive and specific spatial, operational and cultural requirements, from the Singapore Rail Corridor and two World Expos, to the Eastland Retail Masterplan in Melbourne, the Qatar Cultural and Sports Hub, and Heathrow Terminal 2.

The book is broken down into six chapters that guide the reader through the structure and sequence of design stages in the wayfinding design process. The chapters illustrate Spaceagency's vision and approach, "providing strong insight into spatial and information strategies and how these lead to the design," said the firm.

It added: "It becomes clear thatthe term 'sign' is not meant to be a rectangular board with a few words on it. Rather the identity of a place is expressed by the graphics, media and form of the end product." The book also looks at future technologies that may provide "new ways of thinking about wayfinding."

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# **EVENTS**

#### AWARDS

National Building Awards 2019 28 March, London www.nationalbuildingawards.co.uk

### **EXHIBITIONS**

**RIBA Stirling Prize 2018 Exhibition** Ends 23 February, Liverpool www.architecture.com/whats-on

**RIBA President's Medal 2018 Exhibition** Ends 22 March, Liverpool www.architecture.com/whats-on

#### SEMINARS

Cost-Effective Sustainable Design Solutions 21 February, London www.architecture.com/whats-on

#### Inclusive Environments 27 February, Nottingham www.architecture.com/whats-on

Fire Safety for Designers Post-Grenfell 7 March, Gateshead www.architecture.com/whats-on

### **TRADE SHOWS**

Futurebuild 5 - 7 March, London www.futurebuild.co.uk

RCI Show 27 - 28 March, Coventry www.rcishow.co.uk

### WORKPLACE

### Innovative workplace for Tileyard Studios



Architects Pilbrow & Partners have submitted a detailed planning application for what the firm says is an innovative workplace building for Tileyard Studios.

The scheme, whose future is soon to be determined by The London Borough of Islington, will be part of "Europe's most significant music and entertainment cluster." From humble beginnings in largely derelict warehouses in Kings Cross in 2006, Tileyard Studios has grown to now house more than 1000 occupants, including 400 leading creative companies sharing knowledge and expertise.

Pilbrow & Partners' new building provides flexible workspaces, closely tuned to the particular demands of the sector, and "will support the development [Tileyard Studios] needs to grow its business, having reached capacity at its current campus."

Fred Pilbrow, founding partner at Pilbrow & Partners said, "The generous contemporary industrial space provides a robust framework within which recording studios, performance spaces and flexible workspace can be created." The building, which the architects designed in collaboration with Patrick Bellew of Atelier Ten, will deliver "exemplary sustainability performance with a focus on health and wellbeing."

Located 15 minutes' walk north of Kings Cross Station on York Way, the new purpose-built building aims to 'bridge the gap' in workspace provision between start-up space and the larger floorplates of office developments like Kings Cross.

# RSK Group acquires Pellings

RSK Group, one of the UK's leading integrated environmental, engineering and technical services business, has announced that it has acquired design, property and construction consultancy Pellings.

Pellings provides surveying, architecture, planning and project management and facilities management services for housing, education and healthcare projects. Recent projects include a new care home and day centre in Southend on Sea and the redevelopment of Enfield Civic Centre. The acquisition followed RSK securing new funding from Ares Capital Europe (Ares) and NatWest. RSK's founder and chief executive officer, Dr Alan Ryder commented: "This will be used to finance a strategic doubling in size over the next few years through the development of new businesses and the acquisition of bolt-on complementary businesses."

Pellings will become part of RSK's geosciences and engineering division. The company's current leadership team,

including managing director Richard Claxton, will join RSK.

Claxton commented: "The services we offer are unique within the RSK group and will release significant synergies between the two businesses. Our existing client base, particularly in education, healthcare and the public sector, will provide useful introductions for other parts of the RSK group, and RSK will be able to provide several services that we currently subcontract through its internal supply chain." He added: "With the support of RSK's national and international network, we will be able to expand our services to a wider range of sectors in a greater geographical area."

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### BRAZIL

## Rio named World Capital of Architecture

Rio de Janeiro has been chosen by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as the first World Capital of Architecture. The city, which was also the first to be admitted to UNESCO's World Heritage list in the cultural landscape category in 2012, will host the 27th World Congress of Architects in 2020.

The congress takes place every three years, and, as from the next edition, will grant the title of World Capital of Architecture to the host city. Rio was selected to apply to be the host city in 2014, and competed with Paris, in France, and Melbourne, Australia.

The event will take place between 19 and 26 July 2020, and is promoted by the International Union of Architects (UIA). Architects and city planners from around the globe will gather in Rio to discuss topics such as urban planning, culture, mobility, public works and construction of inclusive cities. Approximately 25,000



people are expected to visit the city to participate in the congress.

It will be the first time that the event will take place in Brazil, and the chairman of the Institute of Brazilian Architects, Nivaldo Andrade, emphasises that the city is renowned as the location for works of renowned names such as Oscar Niemeyer, Roberto Burle Marx and Lúcio Costa.

Nivaldo Andrade commented, "The city is also reference of contemporary challenges for architects and of positive experiences in the urbanism field, with the urbanisation of slum areas, for instance. Rio synthesises characteristics found in cities not only in Brazil, but in several countries of world."

# SAFE, HEALTHY ERVIRONMENTS

### HEALTHCARE

# Israel opens rare public hospital

Swiss practice Davide Macullo Architects have announced the opening of the Samson Assuta Ashdod University Hospital in Ashdod, Israel, the first new public hospital to be built in 45 years in the country.

This new building is "born out of the roots and the culture of Israel," said the architects. The practice added that they "regard it as a home for the inhabitants of Israel, whoever finds himself here, feels at home."

The design was "shaped through symbolic choices that serve, through every detail, to root the new hospital to the surrounding area." The project has been developed through the "careful consideration of the sensations of both people in need of care, and of those who work at the hospital." New communal



areas have been designed through the eyes of all of those who will benefit from the hospital, and "those who will experience important moments, in an atmosphere of harmony and joy." The project has seen Davide Macullo Architects recently win the WA Awards 28th Cycle 2018, and the practice were finalists at the Society of British International Design Awards 2018.

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# A floating public space for London

Construction has begun on the Royal Wharf Pier – a new riverboat terminal incorporating a large new public space on the Thames, designed by London-based architects Nex—.

The 130 metre long pier, located in Ballymore and Oxley's Royal Wharf development in London's Royal Docks, will offer a unique perspective on the river from a 162 m<sup>2</sup> viewing platform, and marks the practice's first major venture into infrastructure projects.

Commissioned following an invited competition in 2016, the architects were selected for "their innovative response to the site's unusual constraints, creating a solution that harnesses infrastructure as an integral part of valuable public realm." As a result, Royal Wharf Pier uses "strikingly contemporary design" to replace an existing derelict jetty, addressing the practical requirements of MBNA Thames Clippers' traffic while also providing a "unique and generous public space that can be enjoyed by all," commented the firm.

The fixed element of the pier acts as a linear open space, reminiscent of traditional British seaside piers. This frames straight views towards the horizon, and leads users onto a viewing platform set on the river. "Featuring integrated seating and finished with durable marine grade timber, this is a generous and peaceful space that invites people to linger, relax and admire the unique views up and down the Thames," said the architects.

The viewing platform will separate the public promenade from the floating gangway and pontoon of the MBNA Thames Clippers terminal through distinct angles in the pier's design, making this appear seemingly infinite from the river edge. The pontoon's sheltered waiting area comprises a second timber 'island' – with integrated furniture and displays, enclosed in a metal shell, providing protection from the elements.

The shelter's design showcases a "playful and contemporary response" to more traditional pier design, said the architects. The elevations are based on a regular rectangular form, cut and folded to align with the angles established by the pier's path into the river. Similarly, a skewed and cut



back roofline slopes to direct views down the river towards Canary Wharf and The O2. The layout creates increased open space around the shelter, allowing boats to dock easily and providing ample space for passengers. The large structural elements supporting the pier are concealed behind diagonal timber battens, "enhancing an impression of weightless floating," said the architects.

Royal Wharf Pier is part of the Royal Wharf development. The new neighbourhood will comprise 3,385 riverside properties housing around 10,000 residents, and stands within the £3.5bn Royal Docks regeneration area. Its townhouses, duplexes, apartments and suites are inspired by the classical heritage of London's great squares and neighbourhoods and are focused around Sovereign Place – a new market square filled with shops, restaurants, bars and cafes. 45 per cent of the 40 acre development is devoted to outside space, including a 500 metre riverfront promenade.

Alan Dempsey, director at Nex- said, "In

working with Ballymore and continuing our interest in connecting people to place, we saw an opportunity to combine new transport infrastructure with a distinctive new public space for London floating over the Thames. The pier provides both residents of Royal Wharf and visitors with new access to the city, while also offering places to gather, sit and enjoy the remarkable views of the Millennium Park, Thames Barrier and Canary Wharf."

John Mulryan, group managing director at Ballymore added, "Major new infrastructure like our Royal Wharf pier is a game-changer for east London's connectivity – for north to south of the river, and into central London. Non-road travel is an essential part of the sustainability and growth of London's commuter network, and this pier will soon be a part of that. Nex– has done an incredible job on the design and now construction is underway, the vision is one step closer to being realised." It is anticipated the Pier will open to the public in late 2019.



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### USA

# A Hillside sanctuary in the Pacific Northwest

US architects Hoedemaker Pfeiffer recently saw work completed on a "personal retreat" located on a spectacular, elevated site in Washington State.

The owners of 'Hillside house' looked to Hoedemaker Pfeiffer to create a retreat inspired by a "treasured stone and wood home lost to fire decades earlier in the hills of Appalachia."

The designers' task "was not to recreate the house but rather to give its spirit new form in the Pacific Northwest," said the firm. Taking inspiration from its remote site in the San Juan Islands, the design team conceived the project as "a series of simple stone volumes growing naturally from their rocky surroundings." From that concept emerged a main house and a guesthouse, each responding to its own unique location on the site.

Taking full advantage of views of Puget Sound, the main house is sited on a small plateau high on top of a steeply sloping hillside. The view on one side and the road on the other "suggested a stone plinth and stone wall to form the base and rear of the house," commented Hoedemaker Pfeiffer. A pair of thick stone walls with fireplaces rising together within the property interior enhance the concept, separating the main level into public and private realms and flanking a central stone staircase.

A light-filled wood structure sits on the low stone base, "creating a sense of enclosure." A simple shed roof covering the pavilion tips low in front to protect from the southern summer sun. Winter light in turn penetrates deep into the main living spaces through a wall of glass across the building's south elevation.

Behind the wood pavilion and within the stone wall to the rear are more utilitarian spaces. Protected by a smaller shed roof pitched in the opposite direction, the relative height difference between the wood pavilion and these secondary program elements allows north light to flood into the primary living spaces via a series of clerestory windows. These also allow the release of warm air high on the leeward side of the structure.

The site for the guesthouse "came with significant challenges." The concept began with a stone tower set near the centre of the small circular parcel. Rising high above steep sloping grade, it acts as "a three-dimensional datum," said the architects. "Feature elements puncture each of the tower's walls." The stair is comprised of a concrete base below large casement windows, and "emerges from the stone," incorporating a wood screen around its perimeter to balance natural light with privacy. The main entry occurs at the high side of the property, offering ease of access to the project's public spaces through a simple, full-height opening cut into the stone volume's north elevation.

A steel canopy extends from interior to exterior. Once inside the view deck opposite the entry provides "a very different experience." Cantilevering far above grade, it affords a view of Puget Sound "that is as thrilling as it is beautiful" said the architects.

The dining room, which also extends from the stone tower, was conceived as a three-sided glass object "floating in a forest of trees." Two steel beams carry its entire weight and extend deep into the interior floor system to allow the room to cantilever. Floor-to-ceiling glass wraps the exterior with minimal interruption. In order to preserve nearby trees, the design team developed custom retaining walls capable of avoiding critical root zones.

The lower level of the home contains the more private spaces. Two small bedrooms, a single shared bath, and modest utility spaces are all contained within the stone perimeter. A concrete patio below the dining room floating above provides a secondary entry as well as its own distinct view experience.

"The buildings provide two related but distinct ways of appreciating the beauty of this site," said Hoedemaker Pfeiffer.



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### NETHERLANDS

# Former Tilburg train shed is transformed into public library

A former locomotive shed has undergone an "intensive redesign" to become what the architects call the "beating heart' of Tilburg's newly modernised station district." Designed by Civic Architects, working in "close collaboration" with Braaksma & Roos Architectenbureau and Inside Outside/Petra Blaisse, the new public library was opened in January and has been transformed into a public meeting place which retains a "distinct railway theme."

The building's rugged steel structure "provides the perfect backdrop for all manner of events and exhibitions," commented Civic Architects. Much of the elegant industrial building has been conserved. With the addition of "robust" new architecture and huge textile screens, it has been transformed to showcase the new concept of public sector client Midden Brabant Libraries.

The building has a footprint of 90 x 60 metres and a height of 15 metres, and is "both imposing and inviting." It was "deliberately designed to be an extremely accessible building." The entrance hall takes the form of a covered city square with large public reading tables (doubling as podia), an exhibition area and a coffee kiosk. This square "folds up into broad steps, which can be used as event seating for over a thousand spectators," said the architects.

These lead into the main building, which has huge glass facades, allowing plentiful daylight in. On the second floor, the gallery and stairways "allow closer inspection of the historic glass walls;" on the level above is a large balcony offering panoramic views of the city.

#### A library for the 21st century

The LocHal "has redefined the function of a library in today's digital era," said the designers. Alongside traditional books in cases, the new library also "provides ample opportunity for the creation of new knowledge, in the form of lecture and events areas. "Curatorship has become just as important as the books themselves. This new role is facilitated by the architecture."

The library also has a number of 'labs'



where visitors can learn new skills. One is in the form of a glass cube, formerly part of the concert hall in Amsterdam's Beurs van Berlage building, and there's also the Food Lab, the Word Lab, the DigiLab and the Heritage Lab.

The clustering of library, various arts institutes, workspace provider Seats2Meet and journalism faculties in the nearby Mindlabs creates "a diverse group of experts," said Civic Architects. "Moreover, the form of the building ensures that the collection, the facilities and the manner in which they are used can be adapted to meet changing requirements."

The atmosphere of the building is that of a "knowledge institute." The main structure as well as various original features have been carefully preserved and the new additions make use of "honest" materials such as black steel, concrete, glass and wood, applied over large surfaces. Textile screens add accents of scale and colour.

"The main structure determines the architectural language, while the details adapt themselves to the scale of the building" said the architects. "Floors, columns and stairways reveal their characteristic textures when viewed at close hand, especially in daylight when the refined shadows created by the intricate window frames and translucent textile panels play upon them."



After dark, the building is turned 'inside out', with the interior becoming the main source of light: an inviting beacon in the city centre.

#### **Textile screens**

Textile and interior designers Inside Outside have designed six ceiling height textile screens, which define separate areas and improve acoustics. These have a total surface area of 4125 m<sup>2</sup> and can be repositioned using a computerised system. For example, be moved to separate the Seats2Meet area from the higher library floors, or across one of the staircases to create a small, semi-private auditorium.

The new architectural design is a contemporary reinterpretation of that of the original late-industrial building, dating from 1932, and "builds upon the logic of that design." The impression of spaciousness is strengthened by new sightlines across the diagonally stepped interior landscape.

Columns, floors, balustrades and the screens "form the 'grand gestures' of the various axes within the spatial system, a reference to the industrial processes of the past," said the architects. "The original riveted columns have been preserved and are joined by large supporting structures "in a more abstract form, which delineate the side aisles they create."

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### **MIXED USE**

### Bringing Taiwan's Times Square to life



What MVRDV describe as their "bold and ambitious" design for the Taipei Twin Towers, designed as part of a consortium led by Nan Hai Development, has been selected to "revitalise the central station area of Taiwan's capital."

The design is characterised by a "pile of blocks that create a vertical urban neighbourhood," said MVRDV, and by a number of interactive media facades. These "artistically communicate the diverse programme contained by those blocks," said the firm.

The aim of the project is to provide a "vibrant and charismatic destination that re-establishes the central station area of Taipei as the city's premier location for shopping, working, and tourism – a Times Square for Taiwan."

The site is currently occupied by the city's Main Station, which serves the city's railway, airport lines and metro networks, and a number of underused parks and plazas. The new buildings will be built over the top of the existing station, combining retail, offices, two cinemas, and two hotels; meanwhile the plazas will be unified and redeveloped.

The neighbourhood surrounding the building includes a mixture of small, human-scale buildings and larger towers. MVRDV comments on how its proposal combines different scales: "When experienced up close, the main visual impact of the buildings will be provided by the bases of the towers, comprising connected stacks of small blocks housing retail." Each are proposed to house different retail outlets and "thus contain different identities."

The towers are 337 and 280 metres, housing offices, cinemas, and two hotels: one crowning the east tower targeted at "young, trendy travellers" and the other at the top of the west tower focusing on the luxury market.

At ground level, the design proposes a sunken plaza, with a variety of interventions inspired by the history of the site. Structures marking the former locations of the original station and plaza and some old houses will turn this plaza in the centre of Taipei "into a kind of archaeological study," said the architects. These structures will include pergolas, as well as 'tribunes' to allow



for public events, and a variety of other public services.

Principal and co-founder of MVRDV, Winy Maas said, "Arriving at Taipei Central Station is currently an anti-climax. The immediate area does not reveal the metropolitan charms and exciting quality that the Taiwanese metropolis has to offer."

"The Taipei Twin Towers will turn this area into the downtown that Taipei deserves, with its vibrant mixture of activities matched only by the vibrant collection of facade treatments on the stacked neighbourhood above."

Public atria are created at the centres of the retail blocks, which allow for a natural ventilation system. Outside, escalators and walkways connect the terraces at high level, and provide alternative access to stores, making a "vertical shopping experience that rewards exploration." An elevated walkway that connects the station with the surrounding destinations will also become the project's "spine." Currently two design variations of this element are possible, said MVRDV: one running straight through the site, and another running close to the facades of the new buildings, connecting with the larger network of escalators and walkways.

Maas commented, "We broke down the required programme into pleasant small blocks that echo the surrounding urban quarters, thus fitting the density fit into its surroundings. People can climb over the blocks to the top – a true vertical village. The space in between allows for social gatherings."

This vertical village approach continues MVRDV's "investigation" into the future of high-rise buildings. The firm said: "Whereas traditional skyscraper typologies create a separation between the ground-level public realm and the elevated and isolated world of the building's interior, the Taipei Twin Towers will allow these two conditions to intertwine." By extending exterior pedestrian routes over the bottom 20 floors of the building, "the public realm of the city is expanded, while the interior life of the tower is allowed to spread out into its surroundings."

Thanks to the retail blocks' small size, each need only contain only a small number of tenants – in many cases just a single store. This "opens up the possibility that each block could communicate its unique character through an individual facade." A number of these facades are also proposed to feature interactive media displays, making the buildings "dynamic hosts" for showing major cultural spectacles, sporting events, as well as advertising.

MVRDV is working with CHY Architecture Urban Landscape as co-architect, landscape designer Topotek1, and consultants Envision Engineering, Arup, RWDI, and Mercury Fire Engineering Consulting.



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# **VIEW POINT**



Despite the opposition, BDP's Yuli Cadney-Toh argues 'the only way is up' when it comes to creating effective mixed-use development that meets the needs of Bristol's growing population as well as its economy – and that it needs to learn from other cities

Bristol residents are regularly reminded of the city's wealth of accolades, and how they make it a great place to live and work. Over the last decade we've seen Bristol flourish through a promise of work-life balance alongside the rapid development and support of the creative industry.

The success of this creative city is bringing a steady influx of people, with up to 80 individuals moving here every week from London alone. As well as bringing economic and creative opportunities, this is putting a strain on Bristol's infrastructure, forcing us all to recognise that we need a plan to ensure a sustainable future for this West Country success story.

These problems are not unique. Indeed, the issue of urbanisation is global. However, each city's answer needs to be bespoke to the social, economic and environmental factors they face, along with their ambition in national and international markets and community ecosystems. Bristol's mayor, Marvin Rees, recognises the challenges that the city's success brings, including that of equality. While many areas of Bristol are amongst the most prosperous in Europe, it contains six areas that are in the top 1 per cent of deprivation in the UK. In his drive to address these issues, Rees' office aims to deliver 2000 homes – 800 affordable each year by 2020.

Bristol has shown its creativity in its response to this challenge; the launch of the Bristol Festival of Housing explores the



**TWO TOWERS** BDP schemes in Store Street, Manchester

opportunities of modular accommodation and infill sites in the city. The city has launched its own housing company, Goram Housing, to ensure publicly-owned land is used to maximise sustainable city growth.

Policy change also supports this change in mindset through the recently adopted Urban Living SPD (Supplementary Planning Document) which sets out some of the challenges the city faces.

#### The role of tall buildings

The role of tall buildings in this new policy has divided opinion and brought protests by local campaigners, who see Bristol as a low-rise city. However, the debate is more complex than this single issue. Good urban design, achieving high density in urban settings requires collaborative thinking across a diverse range of areas, such as transport, planning policy, health and landscape.

When the alternative is 'city sprawl' through volume housebuilders, Bristol needs to join-up its thinking as quickly as possible.

Mid-rise city districts in Paris or Barcelona are often used as examples of achieving higher density living, reaching densities of over 50,000 residents per square kilometre. However, these measures do not address the current policy issues of open space, parking, space standards and amenity which drive brownfield development.

Equally we must learn from some of the mistakes of other UK regional cities where an over-provision of small units in soulless towers lead to a lack of diversity and long-term investment in the future of the city centres. The picture of a city full of young professionals enjoying the culture, bars and cafes is one-dimensional, and misses the social, economic and environmental benefits of family living and intergenerational development which requires a mix of unit sizes and tenure in the city centre.

### Age of consent

Tall building projects are already consented in Bristol city centre. These include:

- City Link's development at the Old Ambulance station offering residential accommodation over 26 storeys
- Axa and Bellhammer's Assembly Building, (workspace)
- The University of Bristol's new Temple Quarter Enterprise Campus (includes a 21 storey student accommodation building)
- Change Real Estate's proposed Redcliffe Quarter tower, (includes 22 stories of residential accommodation in the heart of the city).



**URBAN DENSITY** BDP's The Sheaf, Sheffield

With a history of invention and innovation, from Brunel to the current aerospace industry, Bristol's inventiveness is a key aspect of the city's character, and must be presented in its future plans. Early signs are good, with support for the recent Festival of Housing, which will make the city 'a laboratory for housing' for the next five years.

Tall buildings need to be considered in the city's plan, and this is recognised in the now-adopted SPD (Supplementary Planning Document). They can play an integral role in creating mixed use accommodation and inter-generational housing in the city centre, re-using brownfield land and developing new urban communities. If you live in the city, the chances are your commute will be shorter, your work/life experience will be more balanced, and you and your family will have greater access to education and health services, not to mention entertainment and leisure facilities on your doorstep.

Most of us experience the city at street level, and this is where tall buildings need most consideration. Their interface at street level needs to be generous and 'give to the city,' through public realm, footfall and access to local amenities and services. They need to convey a sense of openness, community ownership and accessibility. And, precisely because they have a hyper-dense footprint in a single city centre location, this should free up space close by for other types of housing, including family homes and accommodation for the elderly.

The scale of sites which can accommodate tall buildings in this model should make them identifiable in the medium term and allow us to plan around them. St Philips Marsh near Bristol Temple Meads station could be an exemplar city quarter – there are already plans for education, housing and employment adjacent to the main transport node of the city.

If Bristol is to deliver on its promise of housing, listening to its communities and providing an equitable and sustainable future for all, then it must grasp what tall buildings can offer as pioneers for the wellbeing and prosperity of future generations.

Yuli Cadney-Toh is architect director in BDP's Bristol studio

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### **SITE LINES**

## Designing for future workspace

Architect Nick Ridout of Scott Brownrigg says with the way we work changing fast, designers need to answer key questions such as when to retrofit, and how formal spaces need to be

The office market is shifting; users are becoming more demanding of their office spaces. Leases are becoming shorter and more flexible. The way we work has changed dramatically in the last 15 or so years. Emphasis on wellbeing and the positive effect this has on productivity and talent retention is key for businesses seeking to attract and retain the best people. These changing demands are driving a wider range of offers to the commercial office market, with an increasing requirement to provide differentiation.

Advances in IT and mobility have resulted in a significant rise in start-ups and small companies seeking more affordable office spaces; happy to compromise on perceived quality of space and set up in less fashionable areas, often former industrial spaces. This, coupled with an increasing emphasis on collaboration and exchange of ideas in lieu of more isolated tasks and cellular, hierarchical organisation of working environments, has led to the trend in less formal office design.

Standard 25 year leases on 1990s building stock are coming to an end, and this is providing redevelopment opportunities. Back then, a higher level of M&E servicing was the norm, with associated floor-to-floor heights to accommodate additional air distribution. Floor loadings were designed to accommodate significant quantities of heavy paper and servers. Such structural capacity is no longer needed to carry the modern day office and can instead be used as a way of creating additional floor space to make buildings work harder, achieve higher rental values and ultimately become more attractive to potential tenants.

### When to retrofit?

Retrofitting can mean a wide range of intrusion levels, from a 'lick of paint' to refresh a building and get it back to market, to stripping back to frame, remodelling, re-servicing and extending a building. The level of retrofit will depend on market conditions, investment models, and what product the developer wants to bring to market.

Retrofitting an existing building can have significant benefits as well as some limitations on the final product, so when to retrofit, and when to demolish and re-build? The reality, or course, is that there is no 'one size fits all' approach, but below are some of the





key issues we consider when undertaking a feasibility review, as well as a brief case study of our project for Aviva Investors at Victoria Gate in Woking (pictured).

#### What is the product?

This will vary upon location, but generally, the expectations on base build offices are shifting. Emphasis on wellbeing, the desire for natural light and greater flexibility means more is demanded of space, and the amenity built into buildings is more varied and demanding on the base build. More volume per user is desirable, so higher ceilings, or exposed services with the structural soffit being the perceived ceiling rather than a suspended ceiling has been the recent trend.

As an aside, we have recently been asked to design a scheme for a new build business park in the Thames Valley with exposed servicing and structural elements, where design precedents referenced by the Letting Agents were retrofit schemes. The qualities of space more usually found in retrofit are now making their way into new build schemes, and the line between the two are blurring.

When is the optimum time to come to market?

This is obviously very project specific, but there could be advantages to bringing an office building to market at a certain point in time. Depending on the level of retrofit and intervention, there are often significant programme advantages to reusing and adapting the existing structure, which might allow the building to be brought earlier to market, reducing costs and getting quicker returns for the developer.

### How far can the existing envelope be extended given planning restrictions?

If there is only the opportunity to add limited additional volume, it is more likely that the existing structure will be able to support this. If working on an existing building that would not be approved under planning regulations, there may be value in significant strengthening and adaptation works to retain this rather than knocking down and rebuilding a smaller volume.

#### What is the existing floor-to-floor height?

As above, natural light and an emphasis on volume means that a low floor to ceiling/soffit height is likely to have a detrimental effect on the value or even the ability to let the space. Generally, buildings built from the late 1980s onwards tend to have more contemporary floor-to-floor heights that can accommodate higher ceilings.



Retrofitting can mean a wide range of intrusion levels, from a 'lick of paint' to refresh a building and get it back to market, to stripping back to frame, remodelling, re-servicing and extending a building

Nick Ridout of Scott Brownrigg

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0800 28 99 32 enquiries@harlequinfloors.com cpd@harlequinfloors.com What is the loading capacity of the existing structure? As above, buildings have historically been designed with large floor loading capacity, usually  $4-5 + 1 \text{ kN/m}^2$ , with additional loading around cores for server space. As IT and advances in remote digital filing become the norm, we are designing to  $3-3.5 + 1 \text{ kN/m}^2$ . Floorplates can often be extended outwards as well as upwards utilising the redundant structural capacity in the frame and foundations.

#### What is the structural grid?

Are the columns at a sensible spacing that does not compromise the space, and can be efficiently used by incoming tenants?

#### Environmental factors

There is significant embodied energy within an existing building. Retaining as much as possible reduces this wastage as well as reducing the transport involved in carting away the old and bringing in the new.

#### Case Study: Victoria Gate, Woking

We originally designed and delivered the original Victoria Gate in 1986 for Norwich Union. The building's design was pioneering at its time, utilising new techniques in unitised curtain walling and slim efficient construction methods.

30 years later, Scott Brownrigg revisited the building to bring it up to 21st Century standards for the competitive commercial market. Originally appointed to undertake a simpler interior refurbishment commission, it became apparent during the feasibility stages that exploring options to re-use the existing



1980s structure could bring a more attractive longer-term solution for client Aviva Investors.

By bringing the original outboard external column structure inside to extend the floor plates beyond the original envelope, infilling the former courtyard and by adding a new fifth floor, a further 25 per cent lettable space has been delivered for the client. In addition, a strategy for a total visual rebrand for the 63,375 ft<sup>2</sup> building was undertaken to appeal to a speculative tenant. The building has now been let to McLaren Automotive.

Nick Ridout is project director at Scott Brownrigg

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## ASK THE ARCHITECT

Tiago Pereira, partner at top five Danish practice Schmidt Hammer Lassen answers *ADF*'s questions; including on making the move to Copenhagen, and balancing a host of tasks in a busy design office



Tiago Pereira, partner at Schmidt Hammer Lassen

Motivating and mentoring teams of young creatives keeps me sharp and current – their new inputs lead to discussions of architectural qualities that evolve throughout time

### WHY DID YOU BECOME AN ARCHITECT?

That's a question that I have often asked myself. When I think back I realise I have always been moved by drawings. My father was a mechanical engineer and I remember being seven or eight years old and contemplating these large A0 blueprints and technical drawings of silos and machinery. That appealed to me as something bigger than myself, and it made me realise that I could contribute to the 'creation of things.'

### WHAT MADE YOU MOVE TO COPENHAGEN AND JOIN SHL?

When I finished my studies in Portugal, I moved to Amsterdam. That was the hippest (architectural) place to be in the late 90s. After a short time, I relocated to Barcelona, as the architectural styles as well as the liveability of the city have always appealed greatly to me. There I met my wife, who is Danish, and after six years in Barcelona, we decided to move to Denmark, and try the city of Copenhagen with a fresh take on the world's architecture setting. At that time Copenhagen was still slightly hidden away from the international spotlight, and only a few studios could cope with the demands of recruiting international staff due to the language barrier.

Schmidt Hammer Lassen was one of the so-called 'big five' firms, and had a remarkable track record of designing cultural buildings and large scale mixed-use developments. That to me was quite an interesting mixture of scale and programme. As the firm slowly expanded into international markets, they wanted to diversify their staff with young, ambitious foreigners – an ideal opening for me.

### WHAT DO YOU ENJOY MOST ABOUT YOUR JOB?

As leader of the creative department in the Copenhagen studio, I work with new competitions and new assignments. The job is dynamic and ever changing, with circumstances that evolve frequently. Motivating and mentoring teams of young creatives keeps me sharp and current – their new inputs lead to discussions of architectural qualities that evolve throughout time.

### WHAT IS THE HARDEST PART OF YOUR JOB?

The diversity of daily tasks. For me these span from management to creative leadership on multiple on-going assignments. The work can be very demanding, and it is a constant challenge to maintain a balance between achieving the highest quality output while prioritising employee satisfaction.

#### WHAT IS YOUR PROUDEST ACHIEVEMENT SO FAR IN PRACTICE AND WHY?

One of my proudest achievements was being nominated for the 'Chief Happiness Officer Award' by our staff. It was a signal to me that my colleagues recognise and appreciate the daily effort of making sure that everyone feels part of something bigger.

It was also an honour to be appointed partner last year. And in terms of projects, it was a major accomplishment to win the competition to design the new headquarters for chemical company Solvay, and to complete the seven-year-long journey of our Malmö Live project in Sweden.

#### CAN YOU SUMMARISE YOUR APPROACH TO WORKING ON CONCEPTS WITH CLIENTS – ARE YOU MORE PROACTIVE THAN REACTIVE?

It is difficult to summarise, as the core point is that we are working with and for people, and people are different. So a balance has to be found, and a common ground for the design to thrive is when we listen to a client's wishes and ambitions, and we process that through our own understanding of the task ahead.

I am a very proactive person, but I don't feed my ego by pushing solo ideas forward, hoping to indoctrinate an audience. I do like to challenge clients with ideas that might sound progressive or alternative, mostly to 'take the temperature' of their real ambition behind generic high expectations for a 'great project.'

#### DO YOU PARTICULARLY ENJOY WORKING ON LARGE-SCALE, COMPLEX PROJECTS, AND WHY?

Yes and no. Large-scale, complex projects are a challenge in so many ways. The scale certainly appeals to me as it brings so many questions forward – everything from a humanistic perspective, to sheer size, to the financial feasibility of the project, the complexity of the functional program, and the technical challenges.

On the other hand, working with large-scale projects, especially in their early stages, keeps the detailing and refinement of the final product as a mirage, in the hope that it will 'all end well,' and in



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### One of the biggest challenges that today's architects face is a lack of trust from clients

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### WHAT'S YOUR BIGGEST CHALLENGE CURRENTLY AS AN ARCHITECT?

Authenticity, for sure. The banalisation of imagery and the infinite amount of digital architectural platforms has opened a creative Pandora's box, and globalisation has become the status quo. All architects look at the same references, all architects love the same solutions, and all architects are starting to think alike.

I have always been fascinated by the authenticity of the different architectural movements, and today the architectural world is spinning so fast that we don't really have time to innovate, be thought through in our own statements, question what makes a solution special, and hopefully the right one. We produce relentlessly to respond to deadlines and budget restrictions, and in very few occasions are architects actually original.

#### DO YOU THINK THAT THE URGE TO CREATE STATEMENT BUILDINGS CAN BE A DANGER?

Yes, definitely. There is an urge to create 'iconic' buildings. That is not what motivates me. I like good architecture that is moving and plays with the senses. If a building is later described as iconic, I hope it is because of its sensorial qualities and the experience it offers, and not because of its size or shape.

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

I think one of the biggest challenges that today's architects face is a lack of trust from clients. We play in an arena filled with client consultants that in most cases are not there for the project, but rather for the honorarium. The architect lost the role of being a client's best consultant, the trusted partner that will adequately manage their



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investment into a realised final product.

To that purpose, we fight everyday, through a good collaborative process, to engage clients in satisfactory partnerships, hoping that with time, our services are engaged in a broader sense.

### WHAT'S YOUR CURRENT FAVOURITE MATERIAL?

I don't have a favourite material. I like wood as much as concrete, metal as much as polycarbonate. Each material appeals to a specific tactile experience, and the use of these must be calibrated to each project, each solution. I am more interested in the refinement of its use, its patterns, reliefs, motifs, etc. Recently we have been working with triple glazed terracotta, which ages very well and reacts to sunlight in beautiful ways, but I couldn't use it in just any project. It has to make sense.

### DO YOU SEE THE ARCHITECT'S ROLE Changing in the near future?

Not so much. There is a common fear that automation and artificial intelligence will take over some of today's routine tasks, but I think the architects' role as a blend of creative, innovative, solutionoriented professional and craftsman, will be difficult to ever replace. People like authenticity and unique solutions as much as generic designs in the form of IKEA-type off-the-shelf products. But no one lives the same way, and despite cities' tendency to look alike, I think that there is still room for great design with high architectural qualities.

### WHAT IS YOUR OPINION ON BREXIT?

I think that Brexit is a result of a common European frustration towards globalisation in a broader sense, combined with the anxiety of losing identity as a nation. It is also the result of a 'neverexperienced' public consultation that spins-off a large number of political, social, and economic questions. I presume, the majority of the voters and the abstention could not totally foresee the outcome.

From a professional standpoint, and looking at it from the distance of the Danish setting, Brexit means the closing of opportunities in one specific market, while opening opportunities in other (European) markets.
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#### **PRACTICE PROFILE**

## Bilska de Beaupuy

James Parker looks at a young practice which combines architecture with nutritional expertise to produce an intense focus on holistic benefits to clients.

Bilska de Beaupuy is a coming together of two like minds, but of different yet complementary specialisms. This young practice, founded in 2015, combines the talents of two "long time friends," architect Monika Bilska (pictured above right) and Arabella de Beaupuy, a nutritionist (above left).

Monika worked for eight years at Zaha Hadid Architects as a designer and team leader on projects at a variety of scales, from private villas to large, multi-functional buildings. Arabella uses her training in complementary medicine to inform design by "integrating its holistic approach within her research of building materials and in how design affects people and the environment."

#### **Combined approach**

The two came together to create an architecture and interior design practice which would "push the boundaries of their creativity, but also have fun along the way," says de Beaupuy. The "architecture first and interior design second" firm, which has its office in London, fuses the duo's knowledge of not only design, but also material science and holistic health to create a new proposition. Taking a leap, with no projects when they founded the firm, they secured their first client within two months of setting up.

Bilska comments: "Thanks to our different backgrounds, we combine both of our technical and building site experience and evidence-based knowledge with abstract and conceptual thinking, which we find very valuable and complementary." Perhaps the most important factor in their partnership is that "they have always shared sensitivities towards life, nature and aesthetics," she adds.

The firm has an unusually esoteric approach, its stated goal – and USP – being "to design spaces which connect people to themselves and to the universe." Bilska de Beaupuy's colourful website speaks of "nourishing cultural, physiological, mental, emotional and spiritual needs." What these messages and unusual mix of specialisms mean in practice however is beginning to be shown in their work.

The duo have brought their holistic, nature-oriented design approach to mainly concept designs but also a couple of completed schemes in the high-end residential and leisure sectors, and they're also branching out into product design. Allied to a "focus on beauty," emphasis is put on good quality, natural materials, and using evidence ranging from peer reviewed scientific literature to sustainability methodologies such as 'Cradle to Cradle.'



The two came together to create an architecture and interior design practice which would "push the boundaries of their creativity, but also have fun along the way," says de Beaupuy

Bilska sums up their ethos: "It may start as quite conceptual, which allows artistic freedom, but we also provide a lot of practical and specific material to support the design." The firm is also keen to bring in cultural references, as was demonstrated in a project to create a bird observation tower at a wildlife reserve in Latvia. This being a country with "strong cultural roots within its folklore," says Bilka – the tower is inspired by folklore deity Auseklis, "a symbol of hope."

She explains how this aligned with research-based design pragmatism: "Auseklis is star-shaped, and it so happens that through our research with an ornithology professor, we discovered this shape of platform increased the viewing perimeter for birdwatching." Other projects by the firm include timber concepts for an adaptable wooden post cabin in a French forest (pictured above), and a visitor centre in Sevenoaks, plus a highly flexible "folding house" in the US.





#### **Nutritious architecture**

The firm brings all of its rich conceptual approach together under the umbrella term 'nutritious architecture.' While this does not mean a literal application of de Beaupuy's nutritionist expertise, it encompasses a desire to create architecture which is nourishing, because it is "full of nutrients."

Says Bilska: "We see every element of a design within a space – materials, colours, proportions, form, and clients' design intentions – as a nutrient, and will affect how people will feel in that space." She adds: "We believe that every surface has a functionality and a relationship with the inhabitant and the environment." Because of this, the firm tries to use only non-toxic and/or natural building materials, towards creating a healthy indoor climate.

They see the holistic design approach they employ as closely aligned with the body itself. "We use it to nourish and nurture various systems in the human body," says de Beaupuy. She identifies two aspects – firstly the simple fact that individuals each have a unique set of needs. Secondly, that humans are a "web of sophisticated physiological, mental, emotional, cultural and spiritual systems," and these interlinking systems all affect each other.

Bilska explains further why a careful, bespoke response is required, referring to a completed project for a private client's bathroom (pictured, above left): "For one person, a dark, warm, cave-like bathroom made of Tadelakt and climbing air filtering plants on a three-dimensional golden trellis will trigger physiological responses, hormones and neurotransmitters, and feelings and energy in a very tranquil, calm way. For another person, it will trigger responses of anxiety, stress and wanting to run away."

#### Small is beautiful

The practice admits that they "operate in an area that is quite niche." With work thus far having transpired via word of mouth and recommendations, there has been a "filter effect of clients who are interested in what we do," says Bilska. "We got to understand quite early on that our style and way of designing is not for everyone. This was extremely helpful to understand, and saved us a lot of energy and time." De Beaupuy says: "It is key for our practice and business to interact with people who are sensitive to our style and ethos, and from there, we adapt. In general, our clients tend to intuitively understand our ideas and suggestions."

The duo say clients have generally been "open and forward thinking," and it's been a case of open dialogue rather than pushing an agenda. "It all depends on how far the client wants to push the brief," says Bilska; "the final decision always sits with the client." She notes that the practice does input its knowledge on materials and their environmental impact in client discussions where possible however.

In order to move on from the first commission, Bilska de Beaupuy worked hard in competitions, design fairs, and industry and social networking across all sectors. "As a young business you can lose a lot of time trying to find a client if you don't understand first exactly who your client is," says de Beaupuy. "If you don't, you will not find them."

In terms of goals, expansion is not the overriding aim, in fact in order to retain the focus on creativity and a quality service, Bilska de Beaupuy believe that "remaining small is key." The similarly small scale of projects they have undertaken is also beneficial, "as it enables direct contact with the client and control over quality and design." Bilska adds however that they are "currently at a key stage" and are considering recruiting a new team member, "which is exciting." They say they will be looking to bring on board an architect who's "ready to embrace projects that are creative, challenging and meaningful."

Also, although they have been focused on the residential and leisure sector thus far, they "welcome all design collaborations that could take us on the journey" in future. They note that they have found it essential for the client to engage with their vision, rather than, necessarily, the contractor. In terms of working with contractors, "it is crucial to discuss and agree the requirements of the project before any work is started."

Growing organically, as befits the focus on holistic aspects, Bilska de Beaupuy is a firm with a slightly different, highly creative approach to all aspects of design. They also bring a refreshing attitude to their work day, with early starts, regular breaks from the screen, and as much model-making, drawing and illustration as possible. The presence of their two dogs in the studio also means that they are required have to be out in the nature that inspires them, perhaps more than most!

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## **NEW ARRIVALS**

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



TRACEY FRANCIS LK2

LK2 has appointed 'industry heavyweight' Tracey Francis as director. Francis, who has more than 20 years' experience in the sports world, will lead LK2's development strategy to manage an increased demand for strategic project management in sport, leisure, community and commercial projects. Tracey's role will include developing and procuring new projects, as well as working within the senior team to offer a full service to the firm's sport, leisure and education clients. Francis commented, "I am looking forward to hitting the ground running in my new role and collaborating with like-minded organisations which are passionate about the future of sport and leisure."





## TWO NEW APPOINTMENTS POD NEWCASTLE

North east architects Pod Newcastle is gearing up for continued growth with two new appointments. Launa Cowan, 26, joins the Toffee Factory-based practice as a newly qualified architect, while Matthew Turnbull, 25, comes in as a Part II architectural assistant. A graduate of Newcastle University, Launa brings creative experience in bespoke residential design and project management. She will be working closely with the firm's strategic urban design team across a diverse portfolio of regional projects and clients. Matthew re-joins after completing his Part I qualification in practice with Pod. He impressed them so much that they sponsored him through the second part of his qualification, which he completed last summer.

#### AMANDA ALLEN PURE FITOUT

Following rapid growth and success across Ireland, independent fit out specialist, Pure Fitout, has appointed Amanda Allen as UK head of business development to lead its expansion into the British market. Bringing with her nearly two decades of experience, Amanda's appointment marks a significant point in Pure Fitout's international growth. Allan said, "Pure Fitout has an edge that I've not seen before, which stems from their innovative spirit and inspired founder. My main objective when introducing Pure Fitout to the British market will be to emphasise the company's collaborative approach to projects. I'm excited to have joined the team."



#### LIZ GIBNEY LEE EVANS PARTNERSHIP

Leading south east architectural and planning practice, Lee Evans Partnership, has appointed Liz Gibney as partner. Gibney, formerly Head of Place at Home Group, one of the UK's largest housing associations, becomes the practice's first partner to be appointed from a client organisation. She has wide-ranging expertise in residential design and master planning and her appointment will help to strengthen the practice's ability to deliver large-scale housing projects. Liz said, "I am excited about being part of a practice which combines a strong design focus with an in-depth understanding of the planning environment and stakeholder consultation so seamlessly."



#### JAMES BLOOD STEPHEN GEORGE + PARTNERS

Stephen George + Partners LLP (SGP) has reinforced its commitment to BIM best practice by promoting James Blood to the post of BIM manager. James joined SGP in 2018 as BIM coordinator, bringing over 20 years of experience defining and implementing architectural service provision with openBIM standards. James said, "I am looking forward to keeping SGP on the cutting edge of BIM methodology, delivering quality assured openBIM outputs throughout the practice. SGP's ability to link 3D models with a virtual reality suite is very exciting, allowing us to show a client the design rather than having them interpret plans and diagrams."



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## LYRIC THEATRE COMPLEX, HONG KONG UNSTUDIO

UNStudio has designed a world class theatre for dance and theatrical arts in the West Kowloon Cultural District of Hong Kong. The approx. 41,000 m<sup>2</sup> Complex is a mixed-use project housing three theatres (the Lyric Theatre, the Medium Theatre and the Studio Theatre), a large rehearsal room which can also be used as an additional performing arts venue, a resident company centre and an extensive programme allocation for Retail, Dining and Entertainment. The Lyric Theatre "reflects the grandeur and distinction of baroque-era theatres" through the use of red and bronze-toned details, said the architects, while a combination of a cooler grey/brown toned wood helped add a contemporary touch. UNStudio's Ben van Berkel said: "The constraints of the site presented numerous fascinating challenges for the arrangement of the various programmes within this very compact building. However, in the end we were able to create a vibrant building that celebrates the enchanting world of dance and theatre."



#### VANKE 3D CITY, CHINA MVRDV

MVRDV have won a competition organised by Chinese real estate developer Vanke to design their new headquarters in Shenzhen. The 250 metre Vanke Headquarter Tower – unofficially named Vanke 3D City by MVRDV comprises of eight interlinked blocks of offices, housing and culture, rising from four separate bases to a single crowning tower. The eight blocks that make up Vanke 3D City are designed to "strike a balance between architectural diversity and cohesiveness," with each displaying a different facade treatment. Each block corresponds to a keyword inspired by the core values of Vanke: 'health', 'energy', 'open', 'team', 'green', 'nature', 'future', and 'creative'. Four of the blocks also have either an indent on one facade, or a hole that punctures the entire depth of the block, creating 'windows to the world' that house atriums, parks, and plazas.



#### MADRID CASTELLANA NORTE, SPAIN ROGERS STIRK HARBOUR & PARTNERS AND GRANT ASSOCIATES

A masterplan by the pairing of Rogers Stirk Harbour & Partners and landscape architect Grant Associates to create a new business and residential district in north Madrid has won outline planning. The proposal for Madrid Castellana Norte aims to transform a vast, 500-hectare tract of neglected land close to Chamartín railway station. The new green parks will serve to link the different neighbourhoods of the new district, as well as providing 15 km of cycle paths. The parks will feature a variety of tree-like, geometric canopy structures to offer shade, shelter and visual interest. The 'Fractal Trees' will complement a series of water features. The precise design detailing for each park will constitute "a distinct and recognisable space, mirroring the diverse typography of Madrid and its varied urban fabric," the team commented.



#### FORNBUPORTEN & FORNEBU SENTER STATIONS, NORWAY ZAHA HADID ARCHITECTS AND A\_LAB (NORWAY)

Zaha Hadid Architects and A\_Lab have won the architectural competition to design the Fornbuporten and Fornebu Senter stations, two of the six stations planned for the new Fornebubanen metro line in Oslo. The entrances at either end of the new Fornbuporten station define two distinct civic spaces at street level. To the south, a layered, orthogonal pavilion and public piazza "extend the Cartesian geometries of its surrounding urban fabric," said the architects. To the north, an oval canopy sits within the natural landscape of the community park in which it is located. The Fornebu Senter station (pictured) was inspired by Norway's mountainous landscapes and fjords, said the designers: "The design carves canyons and spaces for the flow of people."



#### MONROE BLOCKS, DETROIT SCHMIDT HAMMER LASSEN

Monroe Blocks in Detroit, Michigan is Schmidt Hammer Lassen's first US project. Monroe Blocks is a mix of modern office space, residential units, restaurants, retail, and outdoor public areas, located on the northeast corner of Detroit's Campus Martius Park, the 12,500 m<sup>2</sup> site has laid vacant for a generation until now. The project spans two city blocks and includes the first high-rise office tower to be built downtown in more than 25 years, as well as 4,800 m<sup>2</sup> of public outdoor space. "Monroe Blocks is the kind of special project that only comes along once or twice over the course of a career in architecture," said Kristian Ahlmark, partner and design director at Schmidt Hammer Lassen. "To be a part of a project this culturally significant that will play a part in the revitalisation of such a treasured city is an honour and a privilege."



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#### BUILDING

## RAILWAY STATION CONCOURSE & HOTEL DUNDEE

## On a learning curve

With the new V&A museum plus a regenerated waterfront, Dundee was in dire need of a new station with the right presence. James Parker describes how the architects steered an evolving project that produced an unconventional concourse building topped by a hotel.

A victim of transport planning riding roughshod over urban environmental quality in the 1960s, Dundee's waterfront is now being reinvented. Dramatically catalysed by the arrival of architect Kengo Kuma's avant-garde V&A museum which opened earlier this year, the area is unrecognisable. What was a series of roundabouts and sub-standard buildings is becoming a people-friendly new district that reunites the town with the river Tay.

The area now has an unconventionallyshaped new combined train station concourse building and 120-room 'Sleeperz' hotel, welcoming swelling visitor numbers to the city who are particularly lured by the V&A. Dundee practice Nicoll Russell Studios building is essentially a series of arches curved on plan and in section, and is something of a product of the engineering complexity that often characterises rail sector projects.

As well as the resulting building's form, this is an unusual project in that it's a rail station commissioned by the city council. Project architect for Nicoll Russell Studios, Graham Steel, explains to *ADF* how it forms part of a much wider scheme to improve the waterfront: "The council had for years recognised that it was a barrier between the town centre and the Tay." He adds: "They came up with a plan which was to create a grid of streets taking you to the river."

When the Tay road bridge was constructed in 1966, it to some degree blighted the area, with a road network leading off it constructed on reclaimed land, plus now-demolished buildings including a public swimming pool, casino and hotel. What were historic docks had become an eyesore.

Nicoll Russell Studios' involvement led from their work with engineers Jacobs throughout the UK, including a bus transport interchange for Dundee City Council. It was Jacobs' work for the council looking at how to build a road bridge over the railway line in front of the station – as part of reconfiguring the convoluted traffic system – that prompted the municipal authority to look at creating a new station concourse building, and subsequently the addition of a hotel.

Steel explains: "The existing bridges were in the wrong place and weren't strong enough. The council had always had its eye on the station as a project, so it sort of began to grow." The scope, and thus the design brief for the project evolved considerably over the years since its inception, with the architects doing a series of studies.

Steel describes the council's rationale for what would be a public-funded project: "The V&A was going to be constructed, but they had this relic of a station which was letting the whole thing down." The plan to add a hotel came later, once the architects were appointed - they were looking at putting some form of accommodation over the site, and in parallel, the council was looking at hotel capacity in Dundee. "They identified there was a need, and the two things fitted together," says Steel. The added revenue from a hotel tenant was an obvious plus, but also ties in to a clear precedent from station/hotel hybrids seen across the decades.



The station previously had a GRP-clad 1960s white concourse/entrance building, presenting a fairly nondescript face to the city, says Steel: "Something with greater presence was called for in what is a very visible position. In addition, "the new building needed to be bright, open, generous, accessible and legible, everything the original building was not," says Steel.

The original Victorian brick station which sits in a cutting below the new concourse building is retained, with its platform and metal zig-zag roof both curving to follow the railway line as it comes into the city after crossing the Tay. It then dips underneath the newly developed waterfront to remerge in the east end of Dundee, but rather than its overall physiology, the constraints the line presented for the site were the chief concern for the design team.

#### Arch rival

Following on from Jacobs' initial work to create the road which now sits in front of the station, the emerging project to replace the concourse building was initially an engineering challenge. The new structure would have to span a main railway line – which was main practical reason behind its arch-like form. Graham Steel explains: "We were spanning two abutment walls, and coming in at different angles, reconciling different things, the geometry of the railway line coming in at an odd angle relative to the street grid that had been established by the council."

There were fixed constraints – the level of the track, the roads above it, and the vertical and horizontal clearance needed for the trains. Steel says: "We were spanning across a railway cutting effectively with two bridges, one at concourse floor level, and another 'bridge' carrying the hotel floors above; it basically formed an arch."

In order to take the diagonal forces into the ground, the specially designed steel beams that make up the concourse floor tie the two ends of the bridge/arch together, dealing with the sideways 'thrust' forces. The depth of the floor was constrained by the road above and the clearance required from the trains below.

The building is highly unusual in that it is articulated on plan, following the train line – and giving each hotel room above a slightly different view – however its structure is also curved in section, with a triple height arching entrance.

Says Steel: "You wind up with an interesting concourse space which is very three-dimensional, but creates the situation where the building is wanting to lean over



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#### **REFERENCING THE PAST**

The building's form, while driven by structural necessity, also references the grand railway station arches of the past

The upper stories and end elevations are clad in a mix of curtain walling and anodised aluminium panels, which are acid etched in four different shades and randomly distributed towards the west." With the eccentric load created by the building's curve, steel sizes needed to be "pretty substantial" says the project architect. "Buried in the building are rigid frames, forming an extra cross-braced frame."

Above the ceiling of the column-free concourse are a diagonal network of steel columns and cross bracing. This structure, Steel admits, "is pretty chunky, and wasn't designed to be seen," and has been covered by four pieces of stretched white tensile fabric, which willingly accepts the building's curving geometries. "There's a lot of twist to the shape, says Steel, "to try and do it with a rigid material would have been almost impossible."

The building's form, while driven by structural necessity, also references the grand railway station arches of the past, such as St Pancras and York. Steel adds: "Very often, they are hidden behind a big facade, in this case it's not."

BIM (Revit) was essential to resolving all of the competing variables in the design, and it also helped support collaboration in the design team. Graham Steel: "The three-dimensional model was absolutely invaluable; I think we would have really struggled without it. The steel fabrication model slotted into the 3D model and we were constantly able to check the threedimensional impact as the design developed."

#### Into context

The six-storey new building (three stories of concourse/cafe plus a three-storey hotel), is the first large-scale building which visitors to the city encounter, heading in from the west. "It effectively bookends the western edge of the waterfront," says Graham Steel.

He admits it's a somewhat unusual urban site, as the building's overlooked on all sides, the street pattern meaning it cannot connect with any buildings. Due to its being articulated in a curve, its ends address both the Malmaison Hotel – housed in a historic building to the north, and the V&A and Scott's ship The Discovery to the south east; both can be viewed from the station's cafe.

In what is something of a 'classical' plan, the concourse building and hotel terminates a new west-east route, Earl Grey Place. This cuts between two new commercial buildings facing the station and a green space beyond,





which is already used for events, and runs to the waterside.

Steel comments: "In a sense, there's a certain classical element to the building," citing its exposed steel columns to front and rear. The building frames a small, roughly crescent-shaped plaza to give pedestrians some refuge from the heavy traffic nearby. Designed by the council, it features polished concrete 'pebbles' which are proving popular as seating.

Commenting on the newly created public realm, Steel says, "It was important the facade onto the plaza was of true urban scale, and avoided the 'flatness' that is a feature of many modern buildings." He adds: "The deeply inset bedroom windows, subdivided by columns, creates a kind of giant order that feels appropriate to the status of the building." These windows also give hotel guests added privacy on the inner curve of the building, preventing views in from other rooms.

The building has glazed corners, butt-jointed windows to the south allowing these hotel rooms fantastic views across the Tay, some being triple glazed to attenuate noise from trains. The north and south elevations are glazed in part – including the cafe space covering the first three levels to the south and the hotel entrance and stairwell facing the town to the north. At night, this provides "a kind of beacon," says Steel. There is a "conscious difference" between the more transparent lower floors and the more closed, intimate upper hotel floors, accentuated by the fact the building is deeper in plan on the bottom three levels due to these housing a different set of functions. However, to the front, the whole curve is clad in terracotta, bar the very bottom which is in granite to resist damage. The upper stories and end elevations are clad in a mix of curtain walling and anodised aluminium panels, which are acid etched in four different shades and randomly distributed.

Terracotta also clads the bottom three storeys to the rear of the building, surrounding a glazed arch mirroring its counterpart to the front, and welcoming passengers ascending via escalators (or accessible lift) from the platform level below. Steel comments on the choice of material: "We were conscious of a desire to pick up on some of the better stone in Dundee, some of the buff colours and lighter colours."

#### Interiors

Internally, the concourse space is typically uncluttered to allow efficient passenger movement, with the cafe accessed to the left on entering via the main sliding doors, signalled by a piano outside for public use, and a retail unit and ticket office to the right. Passengers then descend to platform level through a newly

#### TOP LEFT

Escalator down to platforms from concourse with diagrid rooflight above

#### **TOP RIGHT**

The concourse features a tensile fabric ceiling









ABOVE The Sleeperz hotel occupies upper levels refurbished circulation, also designed by Nicoll Russell Studios. As well as designing a large diagrid rooflight over the escalators and new tiled walls, they also squeezed the minimum size of escalator kit between the two retained Victorian columns which hold the existing metal roof up, as well a through-lift alongside. "We were trapped between two existing platform edges, which could not be adjusted," says Steel. "We had to go for the narrowest lift, escalators and stair that Network Rail would accept."

The cafe has a first floor balcony looking into the triple-height space but also an external south-facing one, allowing passengers to sit outside overlooking the Tay and the V&A. While it will lift them above the traffic somewhat, it also gives the "certain kind of buzz" inherent to such a busy urban location, says Steel.

#### Passive approach

With the architects aware that a large area of south west-facing glazing to a concourse could create an "unacceptable level of solar gain at certain times of the year," a passive ventilation strategy was adopted to offset this. A thermal model confirmed this supposition, and Nicoll Russell suggested that because of the arched shape of the space, this could be mitigated by venting the concourse at high level with a stack effect passive vent that ascends through the hotel levels. Running the length of the concourse ceiling is a damper consisting of a louvre grill, which opens automatically when the air temperature hits a prescribed level. "If necessary, the main sliding doors will open automatically, providing make-up air to encourage the stack effect to take place," comments Steel. In addition, the concourse's single-glazed bolted fin glazing has a dot pattern screen printed onto it, to further reduce solar gain and glare.

There are also standard 'Colt' type louvres within the terracotta cladding to front and rear, providing further natural ventilation to the concourse space. To avoid a "big box of plant sitting on the roof," the plant serving the hotel and cafe are hidden in the space between the arch and the underside of the hotel.

#### Conclusion

This is an unusual scheme in many respects, yet its form partly results from tackling a set of challenges that are common to many other rail projects. These include remedying previous and unsatisfactorily ad hoc solutions, and dealing with complex geometries. The result is what the project architect calls an "organic shape," which makes a virtue of this in addressing its city and the rescued waterfront which it helps provide a link to. It is a fitting terminus to both railway journeys to what is a revitalised Dundee, and a new and exciting urban quarter.

## **Daylighting takes off at Heathrow**

urtainwall Engineers and Kalwall distributor Structura has recently completed a challenging but fascinating 'replace and refurbishment' project at Heathrow's T4. This in conjunction with Structural Engineers Webb Yates for a scheme designed by Pascall+Watson architects. The project proved so successful that main contractor Balfour Beatty named Structura as their 'Most Promising New Supplier 2018'.

Replacing ageing glass rooflights originally installed in the 1980's, 1750 square metres of

Kalwall Skyroof cladding is being used above the Terminal's International Departure Lounge and check-in desks. Fully ASAID compliant with regards to blast performance, Kalwall improves the solar control and insulation to the space below. In this project, its inherent strength in a lightweight frame means the existing substrate could be adapted and reused - saving £7m in project costs and more than a year from the build programme. The whole retrofit was completed externally in 'engineering hours'



using a bespoke moving scaffold, meaning there was no disruption to the inside of the building.

Kalwall offers complete line-of-sight protection, maintaining privacy for the security screening area and departure lounges while bathing the interior with diffused daylighting, regardless of the weather. Apart from providing the visual protection, its inherent strength and heavy-duty impact resistance make it ideal for secure locations such as this. It offers the highest protection in terms of wind-borne debris and resistance to impact, abrasion and point loads. Not only is it also safe to walk on but Kalwall achieves S:AA (BS 476 part three) and Broof(t4) to EN 13501 part five for external fire performance.

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## Hauraton drainage channels used at Maritime Transport Headquarters

The Maritime Transport Limited new  $\pounds 5$  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<sup>®</sup> PLUS 150 channels fitted with Class C250, HEELSAFE ductile iron gratings. A further 47 metres of RECYFIX<sup>®</sup> PLUS 100 channels were also installed in other locations on site.

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#### New release of Halo 80 Plus



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Plus satisfies both these criteria, making it suitable for internal locations such as airports, shopping malls, transport hubs and arenas. The bin is functional and portable and can be supplied in any colour, stainless steel or vinyl wrap.

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#### Jack Aluminium for station revamp



A full suite of Jack Aluminium Systems' products were used in a  $\pounds 2.59m$  revamp of Strood Railway Station, part of the National Station Improvement Programme (NSIP). The 37-week refurbishment programme was part of Medway Council's plans to regenerate the area and the new station is a

bright, modern building with a new larger waiting area and booking hall. Will Woods, Managing Director at IDF Aluminium explains: "We always use Jack Aluminium doors for these kinds of projects. Contractors and customers are pleased with the result and they usually want to use the same products for other stations in the NSIP."

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#### Advanced selected to protect premier shopping destination in Mumbai



Inorbit has emerged as one of Mumbai's popular shopping destinations with its diverse and exceptional offerings in food, fashion and entertainment. Over the last 15 years of being in business, the mall has gained a huge fan following because of the unique shopping experience one can enjoy here. The Axis EN system, which has recently received globally recognised FM APPROVED accreditation, was installed by **Advanced** Partners, Abhay Fire and Security Engineers, who were tasked with replacing the entire system including full re-configuration, programming and commissioning. Available for European, Middle East and South East Asian markets, Axis EN is Advanced's highest performance analogue panel range, combining 1-8 loop, fire panels configurable up to 200 panel networks with a complete range of systems, holds global approvals, including EN54, UL864 and AS1670. It is designed to go anywhere where high quality, reliable and easy to use fire detection and control is required.

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BUILDING COAL DROPS YARD LONDON

## Where past and future meet

Combining old and new in a unique composition created from two dramatically reimagined Victorian roofs, Heatherwick Studio's Coal Drops Yard retail scheme forms the heart of the King's Cross regeneration. Roseanne Field reports



Formerly a gritty part of London, King's Cross has undergone a total transformation over the last 20 years. One of the key final parts of the overall regeneration has recently completed – a striking high-end retail development nestled down next to Regent's Canal.

The project takes its name from the two Victorian 'coal drops' (essentially covered rail viaducts) which were built in 1851 in 1860, which had a colourful history but had fallen into disrepair in recent years. They were the city's entry point for coal for heating (and lighting, in the form of coal gas) arriving by train from northern mines. These would enter the buildings at the upper level and drop coals into hoppers on the middle level, this was then shovelled into sacks and loaded onto horses and carts at a lower level.

It was only 27 years however before electrification took place and the coal drops were suddenly no longer required. The buildings were then used for warehousing and industrial use for around a century, before London's club/rave scene – which rapidly colonised disused warehouses across the city in the late 1980s and 90s – made its way into part of the eastern of the two coal drops, in the form of the infamous Bagley's nightclub.

The parts of the buildings not repurposed to serve the nightlife trade were abandoned, and fell into disrepair. In the 2000s the site



The new elevated roof "ribbons" are made of 20 steel sections bolted onto trusses at either end and tied back to the columns



was eventually earmarked to form part of the mammoth King's Cross redevelopment, and Bagley's, as well as two further clubs opened in the eastern building, were closed.

The still-ongoing regeneration is being led by the King's Cross Central Limited Partnership, formed of property developer Argent and investor AustralianSuper. The project includes a total of 36 architecture practices, each working on a different element.

The 67 acres was previously "underused industrial wasteland." Once completed, the site will hold 50 new buildings, 2,000 new homes, 20 new streets, 10 new public squares, 3.4 million ft<sup>2</sup> of workspace, 500,000 ft<sup>2</sup> of retail space and 26 acres of public space.

Coal Drops Yard sits at the centre of this development, adjacent to another reinvention of Victorian structures, Wilkinson Eyre's residential Gasholders scheme.

This eye-catching new retail project has been designed by Heatherwick Studio; the practice also responsible (with BIG) for Google's new HQ, under construction on the other side the canal within the King's Cross scheme. The newly-conjoined former industrial buildings now housing high-end retail are a key part of the new district.

The project is significant for both Heatherwick Studio and Argent, but especially so for the architects. The studio's office is just down the road, which made it special to them. "It will become part of our neighbourhood," says project leader Tamsin Green.

#### Creating a heart

The original brief provided by Argent was to somehow link the long, two-storey and arch-filled brick buildings. They sit at a slight angle to each other, the western one being shorter due to the canal bending northwards alongside it. Green explains the designers' thought processes in addressing the brief: "The original scheme that we designed effectively had two bridges connecting the buildings." However, the more the studio examined the two buildings, the more they realised that this project required a more transformative response. Thomas Heatherwick, founder of the studio, commented: "The challenge to us was to create a heart that would hold and glue everything together."

Adding a third level seemed a natural way to unite the two buildings. However, the studio were keen not to just "drop a box on top." It was thanks to the fact the roofs needed rebuilding – their state of disrepair combined with a large section of the eastern coal drop's roof having been burned out made this a given – that the designers' ideas started to evolve and they examined the possibility of "stitching" the roofs together instead.

When the proposals were first put forward to Camden's planners, there was, says Green, "an element of surprise. We were very much deviating from what we had outline planning for." However, this was contrasted by the project team's excitement at the prospect of doing something more and "being bold," Green explains.

As well as the planners, meetings were also attended by Historic England, who officiated on heritage matters. Workshop upon workshop took place with ideas discussed and sketched out, the studio "very much making them a part of the process of coming up with the idea," Green explains. Although these discussions were characterised by lots of questioning from the two groups, ultimately, according to Thomas Heatherwick, it "made the project better." In particular, he said he found it "thrilling" how ambitious Historic England were. "Britain has so many historic buildings and we can't just have single formulas for how we handle them," he added.

Heatherwick Studio group leader Lisa Finlay credits the planners' cooperation to the dilapidated state of the buildings. "They were in really bad repair, so anybody who's prepared to invest in them, obviously the planners want to work with them," she says.





The first designs had just one of the roofs "peeling" out to meet the other, which left a hole in the middle. But this idea was challenged, on the basis that while the aim was to connect them, the buildings also needed to retain their own identity. The next iteration, therefore, was to bring both roofs out and up so that the buildings met in the middle, simultaneously creating a third level. This also raised the height of the building, which sits in a lowlying part of the King's Cross site and, as Finlay says, "announced it" to the public. "It was totally off people's radar, because it's sunken."

#### Victorian industrial to 21st century retail

One of the biggest challenges presented by the coal drops was making them suitable for high-end retail, says Green: "They were never envisaged to be that, so there's a lot that goes into how to get those kind of buildings to work." For example, the architects were very conscious that the width across a typical shopping environment would usually be 10 to 13 metres - a distance based on how people will interact with the environment and at what distance they're likely to be drawn into shops. The distance between the coal drops ranges from 26 metres at the northern end to 39 metres at the southern end.

This was a contributing factor to the studio's notion that the development needed a heart, and that making bridges between the two wasn't going to cut it. The brief's aim to create a 'destination', was key to their thinking. "We thought if you just refurbish these buildings and put bridges in, you're not going to get what you want," explains Finlay. Naturally with a part-heritage project such as this, the studio were conscious to do as little alternation as possible to these historic structures – especially given the eastern one is Grade II listed. For the most part, the original brickwork remains intact, complete with soot stains and old paintwork. "We've tried to keep the slight moodiness," Finlay summarises. However, various uses and alterations over time meant floor levels were all over the place, and so adjusting those became the biggest change at lower levels. "We had to be able to get the inside level to meet with the outside," Green explains.

As well as the floor level, in some places the sills had to be dropped. Every bay was closely examined by the heritage consultants, not only to assess the structural integrity, but also to see where it would or wouldn't be appropriate to alter it. "There was a lot of going back and forward," Finlay says. At the end of each building is a large "anchor" unit, where much of the original structure could be left intact, the retail tenants installing stairs and lifts where necessary.

#### Meeting the challenge

With various teams and consultants working on the project, 3D BIM modelling formed a key part of the design process. The basis for these models was formed from a point cloud scan of the building, which was conducted early on. However, with a conscious desire "not to stay in the digital environment", the studio also produced many physical models to "check scale and materiality".

Adding an additional level to the buildings presented myriad challenges. Green says that a key aim was the "illusion of the roof being peeled out, and that there

#### TRANSFORMATIVE

Replacing the roofs with twisting, curving but still slate-covered structures also created striking interior spaces for retail tenants







#### MEETING IN THE MIDDLE

The 'concertina' glazing evolved as a budget-conscious alternative to curved glass, but the designers also felt it echoed how the buildings were broken up by arches All photos © Hufton+Crow

wouldn't be any columns underneath." She adds however: "The structural gymnastics of achieving that were incredibly complicated." The coal drops themselves couldn't support the new level, so they had to find a way to "stitch it through the existing structure onto new foundations."

In total, 52 pairs of steel columns – which sit on either side of the walls separating each bay – have been "threaded" through the existing buildings. This in itself presented a headache for the studio, as Finlay explains. They couldn't get a standard piling rig in the space so they used mini piles for each pair of columns. "You just couldn't do things in a conventional way."

The new roof "ribbons" themselves are made up of 20 steel sections bolted onto trusses at either end and tied back to the columns. The structure is also shored up by concrete walls and cores, and the new floor is hung via a series of high tension cables tucked in the corners created by the concertina-style glass. Although this steel and glass contrasts with the historic buildings below, it was part of Argent's brief that the additional level should be "as transparent as possible," says Finlay. "There was this feeling that you could look through, up into it and out of it, and it all felt connected together," adds Green.

Specifying the glass wasn't a simple task. There was a fixed budget that didn't allow for curved glass, which is how the concertina shape evolved. The designers see this design as a contemporary way of echoing how the buildings below are broken up into sections by the arches.

As well as the overall design, the thermal properties, and ensuring the views in and out worked for retail clients, also had to be considered. "There was a lot of testing on samples of glass to make sure it would work," Finlay says.

Originally, a third viaduct ran through the middle of the coal drops, and the design of the cobbles follow its footprint, by way of recognition of this vanished edifice. Despite the removal of this substantial structure, the site was still incredibly tight. "When the four sections of steel came, they were lying in the yard taking up all of the operational space," explains Finlay. Many of the utilities for the surrounding area also run through the site: "Underneath the yard every inch is taken up," she says. "We were coordinating facilities at the same time as coming up with our very early concept design," adds Green.



With this being one of the final projects to complete in this smartly regenerated area, a certain amount of inspiration was drawn from new buildings emerging in the development. "Our job was stitching all this together," says Green. "We took some details from the wider scheme but also needed to make it a distinct place." Timber infills have been used throughout to bring warmth - and can also be seen on the restored granary building next door, now the new home of Central Saint Martins. "Things like that were inspired by the tones and colours the original railway company used," explains Finlay. The reuse of existing cobbles can also be seen elsewhere across King's Cross.

Some of the original roof trusses have also been retained where possible. In the sections that were burnt out, trusses were relocated from the middle of the building where the new structure sits. The new roof has been clad in over 80,000 slates – some individually hand-cut to fit the curve – and they come from the same Welsh quarry as the originals. This traditional craftsmanship paired with the use of 3D modelling embodies how the project brings together two worlds, says Finlay, "pulling out this modern space from within these existing buildings."

#### The finished product

The retail units are now home to a mix of established higher-end brands as well as new entrants, some of whom have opened their first shop here. Samsung has taken the entire unusually-shaped space which occupies the new third level created under the 'kissing' roof. The dramatically glazed and timber finished interior is sure to prov a dramatic location for its promised "digital playground."

The central cobbled space is to host events, enabled by the copious amount of space between the buildings. The area has also allowed for seating which will not impede passers by. "It's a place where people will gather and spend time," Green explains. Despite some initial concerns over this larger-than-usual gap between buildings, in the end, says Finlay, it "works really well."

Having handed the majority of the King's Cross redevelopment over to various tenants and agencies, Argent will be retaining and managing Coal Drops Yard themselves. As this massive overall transformation of an area approaches the end of its 20 year tenure, this particular project is a very important architectural centrepiece – "it's a bit like its gem," says Heatherwick's Finlay.

#### "There was this feeling that you could look through, up into it and out of it, and it all felt connected together"

Tamsin Green, project leader at Heatherwick Studio

#### **PROJECT FACTFILE**

Client: Argent Developer: KCCLP / Argent Lead architect: Heatherwick Studio Heritage consultant: Giles Quarme & Associates Structural/facade engineer: Arup

M+E/sustainability: Hoare Lea Lighting designers: Speirs and Major Cost consultant: Gardiner and Theobald

Delivery architect: BAM Design Slate supplier: Welsh Slate

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This CPD from Velux Commercial looks at the specification and installation of modular skylights to engineer and control daylight in buildings. It will help you to understand the following topics: Why daylight and ventilation is important to the human condition and the negative impact that a lack of daylight can cause; The history of how skylights have helped to deliver light within buildings; How to specify and install modular skylights to deliver light in an efficient and sustainable way; How to engineer daylight for use in educational and other spaces; How we measure daylight and how this is changing. 01592 778916

www.veluxcommercial.co.uk

#### SPECIFYING POCKET DOORS



Eclisse's RIBA accredited CPD seminar Pocket Doors: The Future of Doors outlines the different construction and type of pocket doors that are on the market. It shows the different variations and styles of pocket door including those that require finishing with architrave and styles that are flush without architrave. Single, double, telescopic and curved pocket door systems with timber door leaves are depicted. A variety of frameless glass door finishes are shown. FD30 options are discussed along with testing and certification. 01476 542 809 www.eclisse.co.uk

#### 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

#### WETROOM DESIGN & SPECIFICATION CPD



The Wetroom Design & Specification CPD from CCL Wetrooms, guides Architects through the process of designing and specifying a watertight wetroom. Run free of charge at a time to suit your practice, the 45 minute technical presentation comprehensively covers all aspects of wetroom design and specification. This includes wetroom design & layout, waterproofing, drainage, floor build up and installation. An informative section on how wetrooms can help meet the Lifetime Homes Standard is also covered. 0844 327 6002 www.ccl-wetrooms.co.uk

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#### SPECIFYING HARDWOOD TIMBER EXTERNAL DOORSETS



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

#### SIMONSWERK SPECIFICATION OF HINGES CPD



SIMONSWERK RIBA approved CPD on the Specification of Hinges will provide Architects with the technical knowledge for specifying the correct hinge for the right application. The presentation offers guidance on Door Specification, Legislation, Building Regulations, Fire & Safety in use, CE marking -MANDEC and the Equality Act. SIMONSWERK have over 35 years' experience in the manufacture of high quality brass, aluminium and stainless steel hinges for doors, windows & conservatories. 0121 522 2848 www.simonswerk.co.uk

#### Altro ensemble hits perfect note



Altro Ensemble luxury vinyl tiles have been used in Fidelity Acker & Buck's flagship Hamburg store. Fidelity took several months to design and implement the studios, which included testing Altro Ensemble at the studio. This showed its 15dB sound reduction meets the requirement for a noise-reducing environment. The high-quality flooring was also

selected as it is extremely hard-wearing and durable, while being easy to clean. Altro Ensemble modular flooring system is the next generation of luxury vinyl tiles that combines design possibilities for creating stunning effects, superior function and durability, and ease of installation.

01462 489 516 www.altro.co.uk

#### **Finance specialist joins Cistermiser**



Giles Townsend has joined Cistermiser and Keraflo, the washroom and water efficiency specialists, in the Board-level operational role of Finance Director. A Business Studies graduate and Chartered Management Accountant, Giles has specialised in financial management throughout

his successful career to date which has included 29 years of fastmoving commercial experience at leading retailer Toys 'R' Us, where he was formerly Financial Controller. At Cistermiser and Keraflo, Giles will hold management responsibility for all aspects of finance, as well as HR and business administration for both companies.

0118 969 1611 www.cistermiser.co.uk

#### Advanced Panels recognised with FM Approvals Diamond Mark



Axis EN and MxPro 5 fire panels from Advanced have been certified by FM Approvals to the EN 54 standard. The FM APPROVED diamond is one of the most prestigious certification marks in the world. It is issued by FM Approvals, a member of the FM Global Group, for products that adhere to the highest property conservation standards in quality, technical integrity and performance. The MxPro 5 multi-protocol panel and Axis EN systems panel are certified to EN54 Parts two, four & 13 and come in one-to-eight-loop variants as standard, with further custom build options available. Both product ranges are easily configured into high speed, 200-panel networks, covering huge areas with tens of thousands of field devices. They include high performance features such as Advanced's complete false alarm reduction software, AlarmCalm, and TouchControl, Advanced's control and touchscreen repeaters that feature Active Maps and zone plans. Advanced are specified from the smallest to the largest buildings globally including in some of the most prestigious developments such as The Shard in London, Abu Dhabi's International Airport and Istanbul's Hagia Sophia.

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Approved National and International Best Practice Build Details are contained in a new 190 page publication from **Cavity Trays** of Yeovil, that contains the most extensive range of construction product solutions. Building envelope protection at all levels from below ground to roof top. Considered essential reading for all disciplines this free informative publication has been released by the only UK specialist in its field awarded European Technical Approval. It contains new construction solutions previously not released. Cavity Trays of Yeovil is the longest-established cavity tray company and the only UK tray manufacturer awarded European Technical Approval. Its products are accompanied with a performance warranty for the benefit of architect, builder and client. The latest 190 page technical manual addresses more construction solutions + insight into ways to remedy existing deficiencies. A free scheduling, appraisal and guidance service operates. Build details include concave and convex cavity walls, fire-rated closing requirements and dentil impingements.

01935 474769 www.cavitytrays.com

#### T. Gunning completes major renovation project at Fairfield hall



**T. Gunning Ltd**, the Chartered Building Company specialising in interior/exterior refurbishment, has completed a major project to refurbish and renovate Fairfield Hall, a magnificent, historic building in Bedfordshire. McCoy Pearce was appointed on behalf of the management company to deliver the planned maintenance programme and to invite tenders from a selection of suitably qualified Contractors. T. Gunning was subsequently appointed to carry out works to the Grade II Listed former hospital on the maiden major works contract known as Phase 1. T. Gunning has helped to transform the building, cleaning and repairing masonry and undertaking an extensive series of repairs to the building's timber-framed windows. It has also conducted repairs to the roof, replaced guttering, and redecorated throughout – all of which has been done using materials appropriate to the building's historic status. T. Gunning established a methodical system of working from initial site set-up and scaffold erection, through to repair surveys and final completion. A dedicated site management team meant that any issues that were identified could be swiftly dealt with.

020 8593 8916 www.tgunning.co.uk

#### New National Sales Manager at Firestone



Firestone Building Products has appointed former lining sales manager, Andrew Cooper, in a newly created role as national sales manager. Andrew's new role sees him taking on sales and business development responsibility across commercial roofing, modular roofing and lining sectors, building

on his previous remit of lining sales for decorative ponds, landscaping features and irrigation reservoirs for the agricultural sector. Andrew comments: "Firestone Building Products takes a personal approach to looking after every customer, including both specifiers and contractors, and ensuring every project is the best it can be."

01606 552026 www.firestonebpe.co.uk

#### The essential architect's guide



The 2019 edition of **Kick-Start's** *The Specifier's Guide* to *Ceramic Tile & Calibrated Natural Stone*, which explores all the latest ceramic tile design trends and advanced installation techniques, is now available in print and online at www.specifiersguide.co.uk. The guide will be officially unveiled at The Surface Design Show (5<sup>th</sup> to 7<sup>th</sup> February). Now in its fifth edition, this annual industry bible is an essential specification

tool for architects and designers. Content includes informed analysis of global tile trends, along with reports on the latest technology, and sustainability; as well as some truly inspirational case studies.

01892 752 400 www.specifiersguide.co.uk

#### Enhancing production capabilities



Hadley Group is delighted to announce that it has further enhanced its UK production capabilities with the addition of a new heavy-duty flying cut-off press at its Downing Street headquarters in Smethwick. The new addition means Hadley Group can process a wider range of metal products than ever before. The capacity to work with larger, heavier-duty

products of greater sectional complexity and gauge thickness is enabling Hadley Group to take on jobs that they haven't been able to quote for previously meaning the company can deliver even more innovative solutions to customers across a diverse range of industries.

0121 555 1300 www.hadleygroup.com

#### Rhodes & Partners report a record year



A leading structural and civil engineering consultancy has reported that 2018 was a record year for the company, in which it surpassed all previous records for the volume of work which it had handled. **Rhodes & Partners**,

which has a number of business award wins to its credit, offers a wide range of professional services for both small domestic and large commercial projects. "Over the past 26 years we have worked on well over 22,500 jobs," says Managing Director Nick Ribbeck. "In the process, we've developed a very wide range of specialist skills. That enables us to handle a very wide variety of different project types."

0161 427 8388 www.rhodesandpartners.co.uk

#### The Tiling Show – It's where the tiling industry does business!



The Tiling Show, organised by **The Tile Association**, takes place ahead of the TTA Awards at The Hilton Birmingham Metropole, from 10am on Friday 12 April. Inteeram are the main sponsor. The Show is open for all to visit and visitors will have the opportunity to see leading brands from the tiling industry. It promises once again to be a unique event, hosted by the tiling industry for the tiling industry. The exhibitors so far confirmed include Aquacut, ARDEX, BAL, Banks & Lloyd, Jackon, Lithofin, Mapei, Norcros Adhesives, Palace Chemicals/Laticrete, Parkside, Saint-Gobain Weber, Scarfato Ceramiche, Shackerley, STS Ltd, Trimline Group, TTA, UltraTileFix. Last year over 30 companies exhibited and it is expected that the number of exhibitors will be in excess of that this year. In addition to guaranteed networking opportunities and the chance to see the latest products, the Show will provide the opportunity to clinch some good business deals, since all exhibitors, as last year, are requested to have a special Show offer running on the day. With its central location, the Tiling Show is simple to visit, whether travelling by road, train or air.

0300 365 8453 www.thetilingshow.org.uk

#### **BAL** invests in Specification Support Team



BAL has expanded its Specification Team support with the appointment of Keith Pearce as Specification Manager for London and the South East. Keith has nearly 30 years' experience in the construction industry, including 26 years at CEMEX – one of the UK's leading suppliers of cement, ready mix concrete, screeds and aggregates. He held numerous roles including technical manager, training advisor and operations supervisor. Latterly involved in working with architects closely on specifications Keith brings a wealth of technical experience to the role. In addition, BAL have promoted Stuart Ross (pictured) to Head of Specifications. Stuart previously worked as BAL's Technical Services Advisory Supervisor working closely with the Specification team over the years on some key projects, with previous experience as Business Development Manager for CPDs and Specifications. Commenting on his and Keith's appointment, he said: "We are extremely pleased to welcome Keith to the team. Bringing with him a wealth of technical and architectural, solution-based knowledge and experience, Keith is a superb addition to our growing team of experts".

01782 591100 www.bal-adhesives.com

#### Schueco UK Excellence Awards 2019



Schueco UK are calling on architects, main contractors and specialist contractors to submit entries to the 2019 Schueco Excellence Awards for Design and Innovation. This highly regarded annual competition continues to attract large numbers of submissions from all over the UK and Ireland, with Schueco confident that entries

for the 2019 competition will top last year's record total. The only criteria for an eligible entry are that the project submitted should have been completed before the end of March 2019 and should have utilised at least one Schueco system in either aluminium or steel, with the involvement of a Schueco UK network partner fabricator.

mkinfobox@schueco.com www.schueco.co.uk

#### Three join sales team at Vortice



The Vortice sales team has welcomed three new recruits; Colin McNally, formerly involved in passive fire protection and underfloor heating, Darren Clare who has a background in ventilation and Gary Williams who previously worked in the

wholesale sector. Offering a complete project management approach, the Vortice sales team works closely with all its customers to offer technical help and advice and the internal sales team then ensures that the products are delivered at the right stage of the project. The new team enhances the ongoing advice and support by the head office technical team which can produce a fully compliant design and quotation service.

01283 492949 www.vortice.ltd.uk

#### Vent-Axia welcomes Clean Air Strategy



Ventilation manufacturer Vent-Axia has welcomed the Government's Clean Air Strategy, launched on 14th January 2019, which highlights the importance of clean air in the home. The strategy sets out how the Government aims to tackle all sources of air pollution with indoor air quality (IAQ) a key part of this. As such,

the document proposes a number of simple measures to reduce air pollutants in the home, including regularly ventilating dwellings. Jenny Smith, Marketing Manager at Vent-Axia (pictured) said: "We constantly strive to provide ever more effective and efficient ventilation products to improve IAQ and so improve the nation's health."

0844 856 0590 www.vent-axia.com

#### Pland Stainless celebrates centenary



2019 will be a year of celebration for **Pland Stainless** as they mark 100 years in British manufacturing. Established in 1919 on the same site, based on the Lower Wortley Ring Road in Leeds, the company has some exciting plans to reveal during the year that will suitably mark the occasion. Pland products today are largely designed for the healthcare,

sanitaryware, washrooms, laboratory, education, catering, janitorial and the secure accommodation market places. But a significant proportion of their business is made up of bespoke products, using their in-house CAD/CAM and 3D modeling technology.

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#### **Case study: CitySuites**

CP Electronics sets the scene for high flyers in Manchester's CitySuites

CitySuites is now one of the most desirable places to stay and live in the city. The building is nestled between Manchester's famous shopping boutiques and the major business centres.

CP Electronics supplied its room lighting control system to the communal areas of the building, including the reception, gym and pool. Corridors that link the high-end apartments have been installed with CP's high performance microwave presence detectors, that can sense movement up to 25-30 metres away.

"The service from CP was excellent, while their attention to detail during the design of the apartments was faultless." Matthew Liffen, Commercial Manager for AMEON



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MWS3A Adjustable head, IP40, long range, flush mounted, microwave presence detectors

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## Mapei to exhibit at Futurebuild 2019

apei UK is pleased to announce it will be an exhibitor at Futurebuild 2019, located at ExCeL London, 5-7<sup>th</sup> March. As a company renowned for its long-standing environmental commitment in the manufacture of construction products, Mapei will be embracing the event's exciting new rebrand with an eco-conscious theme at stand D90.

Featuring alongside the event's central conference is six Futurebuild Hubs focusing on niche industry sectors. As the world-leading manufacturer of adhesives and chemical building products for the construction industry, Mapei will be part of this year's Buildings Hub which will cover all aspects of building across domestic and commercial projects.

This will be Mapei's ninth consecutive year as an exhibitor under Ecobuild, and now Futurebuild, events. Taking on feedback from last year's event, and with the environment being at the forefront of Mapei's core values, the stand will include interactive screens for visitors to access an extensive range of product information. Experts will also be



available to discuss relevant products and projects with stand visitors.

The 2018 event attracted over 26,000 visitors, seeing a 5 per cent rise in attendees compared to its previous year, and this year's event is expected to achieve similar results. An ever-growing platform for the industry, Futurebuild 2019 will welcome the freshest thinking opinion-shapers, decision-makers and product innovators under one roof, and

will explore the latest technologies and approaches, while looking into the biggest issues facing the built environment.

Visit Mapei in the Buildings Hub at stand D90 for product displays, expert advice on how to specify for new build and refurbishment projects, and for information on innovative and sustainable products.

0121 508 6970 www.mapei.co.uk

#### FUTUREBUILD STAND NO D90

#### Ancon to exhibit at Futurebuild 2019



ANCON will be showcasing its latest fixing innovations at Futurebuild (formerly Ecobuild),  $5^{th} - 7^{th}$  March, London ExCeL, stand number C82. Awarded with the Queen's Award for Innovation in 2018, this is the third time that Ancon has been honoured in this prestigious award scheme. Alongside a

string of innovation and product development accolades, Ancon will continue to enhance its product range further in 2019. For more information, call Ancon or visit their website.

0114 275 5224 www.ancon.co.uk

FUTUREBUILD STAND NO C82

#### Selectaglaze at FutureBuild 2019



Futurebuild draws together over 25,000 visiting industry experts from all areas of the built environment supply chain. This event affords visitors the opportunity to learn about the latest products, discover cutting edge technology as well as connect and build relationships for the future. **Selectaglaze** will be showcasing a variety of secondary glazing products at Futurebuild from the 5th – 7th March, ExCel London at

Stand D21. Selectaglaze's Technical Advisors will be available to answer any secondary glazing questions.

enquiries@selectaglaze.co.uk

FUTUREBUILD STAND NO D21

#### Flowcrete UK Achieves ISO 9001:2015 Certification



The resin flooring manufacturer **Flowcrete UK** has successfully achieved ISO 9001:2015 certification for the quality of its products, services and management. ISO 9001:2015 is the latest BSI standard for evaluating an organisation's quality management system. Attaining this certification proves that the Sandbach, Cheshire based flooring specialists are constantly operating to the highest possible standard and adhering to industry best practise throughout a wide variety of business-critical activities. Product control and assurance as well as customer satisfaction are central services that this standard evaluates to ensure that they are in line with all applicable statutory and regulatory requirements. Flowcrete UK's Managing Director, Kevin Potter, said: "Flowcrete UK works hard to be at the forefront of manufacturing excellence and this certification is a great testament to the hours, expertise and commitment that goes into our products and services. Being ISO 9001:2015 certified means that our clients can rest assured that not only are they being provided with products that are of the highest possible quality – but also that their customer experience will be second to none!"

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## futurebuild

05-07 March 2019 / ExCeL, London



# Futurebuild 2019: addressing architects' challenges

Futurebuild, the new name for Ecobuild, remains the leading event for architects and specifiers to meet and learn, be inspired, and do business, adding new features for 2019

Ruturebuild 2019 (formerly Ecobuild) will focus on exploring and tackling the biggest challenges impacting the industry, and will be a unique destination for visitors to gain unrivalled insight and hands-on experience around the latest innovations, products and materials in order to address these challenges.

Developed in conjunction with industryleading partners, Futurebuild will provide over 500 hours of structured learning across an inspiring conference programme and 11 seminar streams – all completely free and CPD accredited.

#### Meeting challenges & making commitments

Central to Futurebuild is the conference stream which retains the 'Ecobuild' name, which will inspire visitors to take action on the most pressing challenges through insights from leading experts and knowledge sharing. With an overarching theme of 'Time For Action,' the conference sessions will be "collaborative forums" where visitors will develop plans for implementing change and proposing action for a more sustainable future.

A total of 13 key challenges will be tackled through this programme, including how to put health and wellbeing at the heart of design, how to achieve a truly circular economy, and how the industry can overcome the housing crisis.

#### Future trends, future products & future materials

More than 500 market-leading brands and organisations from across the globe – a snapshot includes RIBA, Bauder, Glavloc,

More than 500 marketleading brands and organisations from across the globe will be showcasing the latest innovations and contributing to the extensive knowledge programme



#### UNIQUE FEATURES

Each of six curated Hubs at Futurebuild 2019 will include unique features and also host new and expanded pavilions and attractions

Internorm, Nudura and Smart Systems – will be showcasing their latest innovations and contributing to the extensive knowledge programme. To ensure visitors gain a truly immersive and in-depth experience across all areas of the industry, these exhibitors will be hosted across six curated Hubs: Buildings, Urban Infrastructure, Materials, Interiors, Energy and Offsite.

Each Hub will include unique features and concentrated education programmes hosted by a relevant sector-specific authority, and will also host a variety of new and expanded pavilions and attractions, including: The City Walk, Made In Britain, the Association of Decentralised Energy (ADE) pavilion, the Home of the Future by Tufeco, the RIBA stand designed by Gundry + Ducker, and many more.

#### New & exclusive features

Futurebuild will be bolstered by a range of new and exclusive partnerships and features. As an official UK Government Innovation Partner, Futurebuild will be hosting the Innovation Zone with the Department for Business, Energy & Industrial Strategy (BEIS) and Innovate UK. At the Zone, BEIS will be showcasing the work of the Energy Innovation Programme and demonstrating how it is delivering the Clean Growth Strategy. Focusing on "true innovation," it will provide a platform for investment and knowledge exchange across three areas: a dedicated three-day seminar series; an exhibition featuring innovative companies BEIS and Innovative UK has provided funding for; and a 'Business Bar' in collaboration with the Knowledge Transfer Network – providing one to one advice and support on accessing funding.

New for 2019 is the Knowledge Forum – a dedicated area where industry-leading partners, academia and professional bodies will offer a comprehensive look at the biggest issues facing the built environment. Hosting CPD workshops, the Knowledge Forum will provide useful solutions and guidance for visitors to take back to the office.

The Waste Zone will return with new and expanded features. Curated by architect, academic and author Duncan Baker-Brown, the area will showcase how waste can be a valuable resource for industry. Central to the experience will be the new Circular Economy Hub, which will take a unique 'beach hut' format and feature a collection of hand-picked brands at the forefront of making the circular economy a reality.

Futurebuild is also partnering with the architect-oriented exhibition and conference Vision, to provide a Londonfocused seminar programme alongside an unrivalled networking opportunity for architects. The programme will be curated by Vision and hosted in the Vision Seminar theatre, surrounded by an exhibition of brands looking to improve the built environment and public spaces through new technologies, products and services.

#### To register visit www.futurebuild.co.uk/register




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TRADA



# Bauder to showcase its sustainability solutions at Futurebuild

eading flat roof manufacturer, Bauder, will once again be exhibiting at Futurebuild at the ExCeL in March. After the success of last years' show, Bauder is thrilled to be returning to one of the industry's most prominent exhibitions with an exciting new flat roofing system.

Futurebuild, which is the evolution of Ecobuild, has been running since 2005 and will host its 14th event this year. Futurebuild 2019 will bring together opinion shapers, decision makers and product innovators for one common purpose; to explore the latest technologies and approaches and debate the biggest issues facing the construction industry both now and in the future. Dedicating individual zones for specific sectors of the industry will see the show split into 7 areas: the Offsite hub, the Urban Infrastructure hub, the Materials hub, the Energy hub, the Buildings hub, the Interiors hub and the Waste zone. Bauder will be situated in the Buildings hub on stand D100 this year.

Bauder provides a range of flat roof waterproofing solutions to make buildings watertight, insulation for thermal efficiency, solar PV arrays for renewable energy generation and green roofs to support the environment and create better living and working spaces for people. At last year's show Bauder launched its most recent addition to its solution offerings in BauderBLUE. This blue roof system has been developed to alleviate flooding in flood sensitive areas in accordance with SuDS legislation. Nigel Blacklock, Bauder's technical director, spoke at the launch.

"With the introduction of the SuDS legislation and the subsequent requirements for developments in built up and flood sensitive areas, the evolution of our ever-popular green roof system was a natural process. Using rooftop and podium solutions will address the excess water issue at source by providing the necessary drainage to ensure structural integrity along with regulation compliance and optimal waterproofing "

This year at Futurebuild, the Bauder st and will be split into 3 main areas to display the complete portfolio of Bauder's insulation options including its new Tapered insulation scheme as well as showcasing its full range of waterproofing solutions and their multiple variations. At the forefront



of the stand a bespoke pod will display Bauder's most innovative roofing solution to date.

The showstopping feature on the stand for 2019 combines a total of 4 flat roof systems to create one multifunctional solution. The revolutionary solar PV mounting system for biodiverse or extensive green roofs, BioSOLAR, also incorporate BauderBLUE, essentially bringing 3 sustainable solutions together in one system. A key element of the BioSOLAR system is that the front edge of the PV panel is set at around 300mm above the level of the substrate, which allows liberal growing room for the extensive vegetation without blocking light to the polycrystalline solar cells that would otherwise reduce the efficiency of the panels. This height setting also enables light and moisture to reach beneath the panel to support the plants below. The BauderBLUE element is a sustainable drainage method designed to attenuate and manage stormwater on a flat roof over a 24-hour period via a restrictive flow outlet. Tom Raftery, Bauder's SOLAR manager discusses the combinations of systems:

"One of the most common questions I am currently asked is whether we can combine a blue roof with solar. BioSOLAR systems can be very easily combined with a Blue Roof as long as an extensive or biodiverse green roof is also included. More than any other type of flat roof it is important to avoid penetrations through a blue roof. As the BioSOLAR system sits above the void former there are no risks to the waterproofing and the 3 different elements work seamlessly together."

For the duration of the show Bauder's product managers and technical experts will be on the stand to answer all of your questions and discuss any of your upcoming projects. New for 2019, we have incorporated a lounge area where you can share any project details you wish to bring along in a comfortable and relaxed setting. To discover all of our products be sure to visit stand D100 at the ExCeL from the 5th to the 7th of March at Futurebuild.

Can't make Futurebuild? Contact Alex to book a meeting with your dedicated area technical manager.

01473 261258 a.body@bauder.co.uk

FUTUREBUILD STAND NO D100

# Launchpad of an exciting new venture



Closer collaboration between **RCM**, SPSenvirowall and SPS Facades will see the sister companies jointly exhibiting at Futurebuild 2019 at London's ExCel on 5<sup>th</sup>-7<sup>th</sup> March on stand D72. Futurebuild 2019

was chosen as the ideal venue to announce the greater integration between RCM, SPSenvirowall and SPS Facades. By working closer together the three companies will open up a joint portfolio of high-quality innovative products and services meeting the needs of different sectors across the construction industry. Customers will be able to choose from a vast array of products for the building envelope.

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FUTUREBUILD STAND NO D72

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FUTUREBUILD STAND NO C45



# A celebration of sustainability excellence

Previewing the annual BREEAM Awards, an international celebration of excellence in sustainable buildings, which will take place on 4 March in London

The project teams, clients and buildings shortlisted for the annual BREEAM Awards represent significant achievement in sustainable building design, development and management. Over 2.2 million buildings are registered under BREEAM and there are more than half a million projects with BREEAM certificates globally. The initial shortlists are created by taking the highest scoring projects certified under BREEAM each year.



Universal Music's new London HQ

#### **Commercial Projects – Design**

- New Logic III The Tube, Tilburg This distribution centre is developer Dokvast's fifth BREEAM Outstanding building.
- New Logic V, Tilburg This design by DENC includes airtight construction, triple glazing, an 8,250 square metre photovoltaic installation, and rainwater recycling for toilet flushing.
- Unilever Global Foods Innovation Centre The centre's design focuses on the themes of health, flexibility, energy usage, and material efficiency and "circularity."
- Universal Music Group HQ, London Universal Studios wanted to equal the standard of its nearby HQ building.
- Van Gelder Groente & Fruit facility Fruit and vegetable company Van Gelder is developing a state-of-the-art complex in Ridderkerk, Netherlands.

• Van Oers United BV facility Sustainable features include re-use of cold and heat from the cooling system for climate control in offices, and rainwater recycling.

# Commercial Projects – Post-Construction

- 1-9 Seymour Street, London The Portman Estate maintained high sustainability standards throughout.
- Bloomberg London The building in the City of London is already a multi-award winner.
- Building R7, London
   A project in London's King's Cross that continues leading developer Argent's commitment to achieving the highest levels of environmental certification.
- Deloitte's 1 New Street Square Environmental and wellbeing were key priorities for the fit-out of Deloitte's new office in London.
- EUIPO Edificio AA3 The latest addition to the European Union Intellectual Property Office (EUIPO) campus in Alicante.
- Scherpenhuizen The fruit and vegetable supplier targeted BREEAM Very Good for this distribution centre in Eindhoven, evolved to Excellent, and by the building's concept phase was targeting Outstanding.

#### **Commercial Projects – In-Use**

- BINARIUM Business Center The regeneration of this old industrial building in Romania has taken a circular approach, with the existing structure combined with Cradle-to-Cradle certified products, FSC certified wood, and durable materials.
- Edificio Beatriz One of Madrid's most significant late 20th century buildings – now a multi-tenanted office block.



CollectieCentrum will house some of the leading art collections in the Netherlands

• Forum Mersin

BREEAM New Construction and BREEAM In-Use have helped Forum Mersin in Turkey to improve its processes, and manage cooperation between landlord, tenants and staff.

## Public Projects – Design

• Barry Building

Part of the Royal College of Surgeons' (RCS) historic campus in central London, this project retains and enhances its Grade II listed element while replacing a 1950s section.

- CollectieCentrum Nederland Art and heritage collections of the Rijksmuseum, the Holland Open Air Museum, Paleis Het Loo and the Cultural Heritage Agency of the Netherlands are being brought together in this shared sustainable storage centre.
- Ny Horten VGS This secondary school is the first public building in Norway to achieve BREEAM Outstanding design-stage certification.
- The Marshall Building Exemplary standards of sustainable design are incorporated into the design of the London School of Economics and Political Science's (LSE) Marshall Building.



Rhyl New School is sustainable and energy-efficient

# • University College London Hospital Phase 4

A state-of-the-art cancer and surgical care facility is being constructed in central London, much of it underground.

• Urbanest Vine Street The mixed-use scheme, combines student accommodation with workspace and exhibition space, has achieved high levels in all categories of the BREEAM assessment.

#### **Public Projects – Post-Construction**

- Howardian Primary School/Ysgol Gynradd Howardian Sustainability and good value can go hand in hand, as this new primary school in central Cardiff demonstrates.
- National College for High Speed Rail This college on the outskirts of Doncaster provides learning spaces in a highly efficient and comfortable building, designed to stand the test of a changing climate while providing a local economic boost.
- Rhyl New School Students are benefitting from this new sustainable, energy efficient and modern school.
- Ysgol Bro Gwaun

Rural areas can present challenges in creating all-round sustainable development, but this new teaching block for a Pembrokeshire school has achieved BREEAM Excellent through its robust and elegant design.

• Ysgol Glan Morfa Sustainable design is helping to limit the running costs of this new 420-pupil primary school in Cardiff.

## Public Projects – In-Use

- Björsjö 42:3
- Health and wellbeing of building occupants is a priority for this retirement home in Gävle, Sweden.
- Dolomiten 1 An optimal indoor climate was high on the agenda for this retirement home in Norrtälje, Sweden.
- Landvetter Airport Terminal, Gothenburg Terminal owner Swedavia is constantly working to improve its buildings as part of its broader economic, social and ecological aims.
- Ratten 4

A retirement facility in Örebro, Sweden, is applying BREEAM In-Use to identify and measure the scope for environmental improvements.

• Tabellen 3

Reviewing the heating and cooling system at the District Court building in Atunda, Sweden, offered the potential to deliver significant benefits.

• Tabellen 4

Since BREEAM In-Use was applied, a programme of sustainability works for this Swedish facility has been targeted, including a shift to LED lighting.

# Homes Projects – Design

- 1 Queen Anne's Gate This development in Westminster has included demolition of dilapidated buildings, new build and the retention of a Grade II listed facade.
- Falconhoven L-blok Apartments Developer CIP sought to create homes in Antwerp that would offer residents a valuable and sustainable investment for lifetime living.
- Morley House The Crown Estate's scheme is being redeveloped behind retained Portland stone facades to provide 44 apartments.
- Nomadic House Developer FRT Developments had never targeted BREEAM until it came to work on its Nomadic House scheme in west London.

#### Homes – Post-Construction

• 122-126 Chancery Lane A 35-home development in central London, which combines a grade II listed Victorian facade with contemporary living space.

• 16 Winchester Walk Retaining as much of the external building fabric as possible was a key driver in the conversion and extension of



COFCO Landmark is a flagship development in Beijing

this nineteenth century former hop warehouse.

• 33 Bury Street

This grade II listed building in St James's, central London, has been returned to predominantly residential use.

- North Stoneham Park, Phase 1 BREEAM Communities has been an integral design tool and framework from the outset to create a sustainable community.
- Hoover Building

The iconic Hoover Building in west London, has been converted to residential use after laying dormant for more than a decade.

# Rewarding regions, real estate, and professions

There are also Regional Awards for the Americas, Asia, Central and Eastern Europe, and Western Europe. For the latter region, the projects shortlisted are Bloomberg London, New Logic III (Tilburg), Deloitte's 1 New Street Square (London) EUIPO Edificio AA3 (Alicante), Unilever Global Foods Innovation Centre (Wageningen, Netherlands, Van Oers United BV facility (Dinteloord, Netherlands).

Awards will also be made for the best performing BREEAM assessors, as well as categories for architects and M&E consultants who have scored consistently highly in BREEAM projects. For the third year in succession, real estate assessment body GRESB and BREEAM are working together to recognise the achievement of "responsible real estate investors."

The 2019 awards ceremony takes place at the Hilton Bankside on the evening of Monday 4 March – the eve of Futurebuild at London ExCel (the event is one of the awards' partners). More details on the awards can be found at the website: www.breeam.com/awards

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# Why concrete remains a rock-solid design choice

Dr Bill Price of Tarmac Cement discusses why concrete is increasingly popular with architects for its aesthetic as well as practical characteristics



As the creative possibilities of concrete expand, from rough to smooth and solid to fluid, designers are trying new techniques to achieve fresh visual elements A n ever-popular material for construction, concrete is seeing a new wave of usage and innovation, thanks to both its aesthetic values and its inherent qualities of strength, durability and affordability. In fact, a 2018 repor by WGSN highlighted that concrete is trending across the latest trade shows and particularly with emerging designers.

Innovations in moulding and setting techniques have boosted its versatility, with many using the material in unexpected and unusual ways. From sophisticated board-marked and polished concrete, to furniture and feature walls – the material can make contributions to projects in ways glass and steel can't.

#### Concrete as a design element

Commonplace in the 1960s as a key element of the now notorious Brutalist architecture movement, modern developments often focus on concrete's hard and industrial surface used as a contemporary design element, often contrasted with soft furnishes and tactile textures. Exposed concrete has moved on from being just an architectural industrial material to a source of inspiration for interior finishes, entering homes via the walls, furniture, floors and home accessories.

Hard-wearing, and with the option of a rough-hewn texture or even a refined look, concrete is becoming a cornerstone of minimal design. In particular, high strength concrete (40N) is being used increasingly for a range of applications, such as statement kitchen worktops, modern board-formed concrete walls, curved open gutters, and luxury stone terrazzo floors.

#### **Concrete countertops**

Installing concrete countertops is a sure way to infuse a stylish aesthetic into your client's home or commercial application. The countertop doesn't need to appear cold or industrial; concrete can complement almost any style of room. The key is to add other warmer, natural textures like fabric or wood to keep it from feeling too austere.

Adding inserts or inlays is a great way to personalise a concrete countertop in a kitchen, bathroom, or even outside. Whether it's small stones, pieces of glass or other materials that are mixed throughout the concrete, these can all contribute to a stylish countertop.

However, as concrete countertops are generally long, slender, thin beams, it's critical to use a concrete from a reputable manufacturer with adequate strength and quality to prevent cracking, chipping and shrinkage. Countertops are often the centrepiece of the room, and also need to take a lot of wear. This, plus concrete's natural capacity for cooling and absorbing heat, makes it the perfect material in this setting.

#### **Board-marked concrete**

There are a wide range of exterior building materials used to protect homes from the elements. Using poured high strength concrete for exterior walls can be one of the most enduring, fire-resistant, thermally retentive and maintenance-free solutions. A concrete wall can last without decay for many years.

Concrete takes on the shape and texture of the forms into which it is poured, making it possible to enrich the surface character by using textured forms. Often, timber is used in combination with concrete walls to add warmth to the overall composition. For example, if the concrete has been formed with horizontal, rough-board shuttering, the concrete's surface is imprinted with the wood's texture and the two materials work together to produce the aesthetic.

At some point in a cold winter or a hot summer, the concrete wall will need thermal resistance augmentation, thus

# Concrete takes on the shape and texture of the forms into which it is poured, making it possible to enrich the surface character

insulation. A solution is to pour a four-inch exterior concrete wall, installing rigid insulation on the inner face and then pouring the interior four-inch wall to take advantage of the thermal mass of the concrete on the interior of the building. This way, the building will attain the required thermal resistance from the insulation while still gaining the durability of concrete on the exterior surface.

#### Which product to use?

A concrete with excellent workability and flexural strength such as bagged Blue Circle High Strength (40N) is a prerequisite for many small-size design applications in modern architecture. The concrete can be moulded into a number of different shapes and sizes – perfect for avant-garde style projects, as well as more traditional builds.

Also, using a readily available concrete mix brings greater convenience to projects. Its availability throughout the UK means busy contractors can access the product without travelling too far afield, while also taking advantage of the timesaving and consistency advantages of using a pre-bagged concrete mix.

Sometimes, especially on smaller projects, products can remain outdoors and on site for several months. Something as simple as waterproof packaging can protect water vulnerable products and eliminate wastage through rainwater contamination and damage. It's also worth considering specifying concrete mixes that are available in weatherproof, tear-resistant bags.

Overall, as the creative possibilities of concrete expand, from rough to smooth and solid to fluid, designers are trying new techniques to achieve fresh visual elements. This, coupled with its inherent practical properties of durability, heat absorption and cooling, makes the material a versatile choice for the modern designer.

Dr Bill Price is national commercial technical manager at Tarmac Cement





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Firestone Building Products' RubberGard<sup>™</sup> EPDM roofing membrane has been used to help create a woodland haven for holiday makers, foodies and golfing enthusiasts at the prestigious 'The Lodges at Feldon Valley' Hotel. Firestone Authorised Contractor,

Weatherfix FRS, was appointed to carry out installation of the RubberGard EPDM roofing membrane on each of the four satellite lodges. The RubberGard EPDM membrane was installed onto the roof of all four small lodges within just four days, enabling the main contractor to begin work on the interiors.

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

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# Rapid rise for external cladding supplier



A supplier of external cladding systems in North Somerset is on target to hit £8million this year after a hugely successful 2018. Aquarian Cladding Systems have been supplying brick and terracotta cladding systems to the UK construction industry since launching just 11 years ago, making the projected turnover, which was helped by monthly sales topping £1million for the first time in February, even more impressive. For Managing Director Paul Richards, the rapid rise has been down to a combination of four things – quality products, first-class technical support, a customer-focused approach and strong supply chain relationships. "We are known as a reputable supplier acknowledged for the testing and quality of our products," said Paul, "But, as well as that, our team have a wealth of knowledge and experience and understand the issues that drive our clients' decisions. This company culture has helped us to stand out in what is a crowded market." Working with architects, contractors, developers and installation specialists, the company's cladding systems have been used on buildings across a wide range of sectors, from residential to commercial, in both the public and private sector.

0808 223 9080 www.aquariancladding.co.uk



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For rear-ventilated façades, we recommend ALUCOBOND<sup>®</sup> PLUS (EN classes B-s1, d0) or ALUCOBOND<sup>®</sup> A2 (EN classes A2-s1, d0) in combination with non-combustible mineral insulation. This combination shows no flame propagation or critical temperature rise, and even exceeds the requirements of BR135.



Sales Team Leader UK / IE Monika Lutz +49 7731 941 3843 monika.lutz@3AComposites.com www.alucobond.com Specification Manager UK / IE Paul Herbert +44 75 84 68 02 62 paul.herbert@3AComposites.com Business Development Manager UK / IE Richard Clough +44 77 60 88 43 69 richard.clough@3AComposites.com

## New SoundSecure Internal Doorset



**Premdor's** SoundSecure Internal Doorset boasts Secured by Design approval and offers up to 40 different designs. SoundSecure apartment entrance doorsets comply with all performance and legislative requirements where security, fire and noise reduction performance are of

paramount importance. From glazed to non-glazed, Moulded Panel to Portfolio veneers, all doors are supplied with an FD30 fire rated core as standard; with the option to advance to FD60. SoundSecure doorsets offer practical reassurance while delivering a stylish aesthetic. Watch the installation video at youtu.be/TUTh3CUzNfs

0844 209 008 www.premdor.co.uk/internal-doorsets

# Profile 22 delivers glazing solution



**Profile 22** Flush Tilt and Turn windows have been used in the construction of flats for University of Derby students. The vibrant, modern flats accommodate between four and six students and house 244 students in total. Given the nature of student accommodation, and the shape of the building's aesthetics, the Flush Tilt and Turn Window from Profile 22 was the best choice

for optimum ventilation and maximisation of space. It has a sash that is neatly positioned inside the frame of the window to create an elegant and sleek 'flush' appearance that delivers the appearance of aluminium. The window is Secured by Design accredited.

www.profile22.co.uk

# **TREMCO** systems a hit for car park



The redevelopment of a famous record factory to the west of London has included the construction of a visually striking multi-storey car park, where two waterproofing and wearing course systems produced by **tremco illbruck** 

have been used to complete a rapid build methodology. The history of the Old Vinyl Factory at Hayes, Middlesex, is vividly portrayed in the punched metal screens that clad the seven storey car park structure portraying screaming teenage fans at a Beatles concert in the sixties. TREMCO CP polyurethane system were specified to waterproof the roof deck, as well as TREMCO MMA for the internal floors.

www.tremco-illbruck.com

# Sto provide integrated product package



A carefully integrated package of building facade products provided by **Sto** has been used to create attractive new elevations for a building which has undergone extensive refurbishment. StoTherm Classic external wall insulation and a brick slip facade finish combination has been applied to the CityBlock

site in Reading, which provides premium student accommodation. StoTherm Classic external wall insulation was fixed to the walls with adhesive for fast and easy installation. The BBA-certified StoTherm Classic provides outstanding impact resistance of 60 joules, which is up to 10 times greater than similar cementitious systems.

01418 928000 www.sto.co.uk



# Perfectly Integrated: Collective Garage Door ET 500

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Garador's GaraRoll roller doors come in sizes up to 5000mm wide. All doors are purpose made to specification, to ensure they fit the opening precisely.

The spring assisted design, combined with pressure sensitivity built into the operator which recognises when there is an obstruction in the doors path, means this door is one of the most advanced and reliable available on the UK market. Plus, they are electrically operated as standard, so homeowners have the convenience of opening their garage door with a hand transmitter.

These are the ideal solution for garages which want to retain access to a loft or ceiling space, as the door rolls up into a box at the head of the garage door opening. Available in a choice of 13 colours and timber effect finishes, you are sure to find a colour to perfectly suit your build project.

01935 443709 www.garador.co.uk

# **VEKA Group onsite at the Offsite Show**



VEKA Group was happy to meet attendees and discuss new opportunities at the 2018 Offsite Construction Show. VEKA's Head of Sales for the South Matthew Adaway said: "As the fenestration industry's leading supplier of PVC-U systems, our stand attracted a large number of visitors who were interested in VEKA Group products and there were a host of different sectors represented. We were able to talk 'all things VEKA Group' to architects, housing associations, main contractors, housebuilders and offsite companies, to name just a few. "Off-site construction has been bubbling away – as an idea – for 20 years or more, and this event illustrated to me that real, tangible things are definitely happening in this area now. Building in this way makes the process more precise and promises to eliminate a host of variables that can potentially cause delays on traditional site-based building projects, such as problematic weather conditions. "VEKA Group is a global brand with a reputation for quality and reliability, and the versatility of our systems means that we are well suited to meet a huge spectrum of requirements, whatever the style of property."

salesenquiry@veka.com



We at **BalconyLife** are specialists in the design and manufacture of balconies & canopies, structural thermally broken building connection systems, structural thermal breaks, electrical insulating plates, steel staircases and steel welding and fabrication for buildings.

The **BalconyLife** balcony range includes the **Vista View** with its contemporary glass balustrade appearance and the **Panorama** with its elegant and traditional appearance of metal-railing balustrade. These ranges come both in cantilever and Juliet styles and a variety of sizes including the Junior balcony which provides the benefits of a walk-on cantilever balcony at a budget price.

BalconyLife offer the complete thermal and structural solution for designers when fixing structural and architectural elements to a building outside of the insulated building envelope. Our building connections can be installed within timber joist floors and to concrete floors or steel structural frames. The BalconyLife Concrete Strap and Timber Tee building connection systems and Insula structural thermal breaks have been successfully installed on construction projects throughout the UK in order to comply with the requirements of the Building Regulations Part L to improve the thermal and energy efficiency of buildings.



The Insula structural thermal break products are available in a standard range. We also offer a bespoke design service so the Insula thermal breaks can be manufactured to achieve project specific



requirements including steel to steel, concrete to steel and concrete to concrete thermally broken connections.

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experienced design team who are available to discuss your requirements from initial enquiry through to installation of our products. Balcony & Structural Thermally Broken Building Connection Specialists

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find out more at idsystems.co.uk/vistaline t 01603 408804 e info@idsystems.co.uk Capable of creating a complete opening like bifold doors yet with slimmer frames like sliding doors, vistaline is a contemporary glazing solution that consists of non-connected panels that stack to one end. The doors provide an industry leading combination of precision Swiss engineering, outstanding thermal performance and ultra-slim 45mm sightlines.



# New FlameOut Building Membranes for FR Safety

FlameOut building membranes are a new range of materials developed by Industrial Textiles & Plastics (ITP), manufacturers with more than two decades of experience in flame retardant technology.

The highest specification product in the range is FlameOut Breathe Class A, the UK's first Euroclass A2 flame retardant breathable membrane for roof and wall installations. Powerlon FlameOut Breathe Class A is a woven material, engineered with the highest level of flame retardant properties. Independently tested to EN 13501-1, FlameOut Breathe Class A is rated A2-s1,d0. Prior to the launch of this innovative multipurpose breather membrane, the highest level of flame retardant breather materials offered in the UK were Class 0 (BS 476 Parts 6 & 7) or Euroclass B. With changes to UK building regulations, banning the use of combustible materials on the external walls of many new buildings over 18 metres, industry demand for the highest quality FR



New Powerlon FlameOut Breathe Class A breather membrane is rated Euroclass A2-s1,d0, the highest level of fire protection for wall and roof installations

products will continue to expand.

CE Certified FlameOut Breathe Class A is heavyweight with very high tensile strength, good water vapour transmission and is rated W1 for water tightness. Proprietary FR tapes and glues are offered with the membrane for effective installation.

Other flame retardant breather membranes in the range include FlameOut Breathe, rated Class B-s1,d0 (EN 13501-1) and FlameOut Block, flame retardant vapour control layers. FlameOut Breathe FR house wrap is lightweight but strong and combines high water vapour permeability with excellent water tightness. FlameOut Block VCLs are FR rated Class B-s1,d0; with mono-filament reinforcement for high tensile strength, they have outstanding water vapour resistance and low water vapour transmission. FlameOut VCLs come in two grades: FlameOut Block (140gsm weight) and FlameOut Block Plus (210gsm weight).

Used together, FlameOut Breathe membranes and FlameOut Block VCLs offer an effective package of superior flame retardant protection in new construction.

01347 825200 www.itpltd.com

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# SPSenvirowall's Journey to BOPAS Accreditation



Servirowall, a UK leading supplier of external wall insulation, render and facades, has secured BOPAS (Buildoffsite Property Assurance Scheme) accreditation for its innovative, rain screen cladding, RendaClad for the new build and offsite construction industry.

RendaClad was developed for applying a non-structural and seamless rendered rain screen system to a timber-framed substrate. It replaces the need to build a structural masonry outer leaf that is finished with low-performance cementitious renders.

RendaClad is a full facade system made up of many carefully selected components which have been rigorously tested and as an entire system makes up one of a very few BBA approved systems of its type which provides the reassurance that it will perform over the long term.

The system ensures a fully ventilated and drained cavity is maintained within the wall structure, meeting the requirements of the NHBC and TRADA. The system can be



applied to any wall structure, lightweight steel

frame or masonry construction. SPSenvirowall is delighted that RendaClad is the first and currently only proprietary solution which has undergone the rigorous

BOPAS accreditation process designed to give lenders and surveyors the assurance of the building materials utilised within a development. This has provided confidence to the market that the innovative concept has a minimum life expectancy of 60-years.

This accreditation will allow SPSenvirowall to deliver its RendaClad system to offsite and modular developments, enabling the supply of a greater range of projects while providing the assurance required to satisfy mortgage lenders and their surveyors, meaning that the RendaClad system will last for a minimum of two mortgage cycles

With the challenges brought by the government to build 250,000 homes per year, the demand for innovative or non-traditional methods of construction to replace poor quality and conventionally constructed homes has never been greater.

BOPAS accreditation assures lenders, funders, valuers and purchasers that homes built from non-traditional means will be durable and deliver the quality required by the industry.

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# Cladding creates a calming appearance

The new state-of-the-art 65 bed Cygnet Hospital mental health facility in Maidstone has been clad in Abet Laminati's MEG exterior grade laminate.

Purpose-built to meet the latest national specifications for improving mental health within a therapeutic environment, the hospital will provide an important and muchneeded service for local patients.

800 square metres of exterior grade MEG cladding in a 754 Padouk Soft finish were installed by Rhino Exteriors across various elevations. MEG was chosen as it carries a BBA Agrément Certificate and, most importantly, F1 panels from 6mm and thicker are rated Class B-s1, d0. This makes them fully compliant for all non-residential applications and up to 18m high for residential schemes.

This scheme is a perfect example of high performance MEG in action where the need for high performance and durability is married up with low life-cycle costs and aesthetic design.

The range comprises 58 colours and 31 woodgrains together with 5 concrete and metal effect finishes. MEG is also able to



incorporate Abet's digital printing technology. This means that almost any design, photograph or pattern can be reproduced in stunning detail to give architects and designers unparalleled freedom to create unusual and dramatic building facades.

MEG is a self-supporting high pressure laminate (HPL) for cladding the exterior of buildings, balconies and other applications. It features high resistance to temperature, climate shock, weathering, UV light and impact. Furthermore, its chemical resistant nature and closed structure do not allow paint in spray cans, various inks, emulsion paints, lipstick or pastel paints to penetrate into the decorative layer. This negates the need for any anti-graffiti treatment and makes the surface easy to clean. Samples and technical literature are available from Abet sample line.

020 7473 6915 uk.abetlaminati.com





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Building Products



# Six stars with Nordic Brass

ently curving, perforated Nordic Brass solar screens help to define the character of a key community building in Melbourne, Australia. They also enhance its sustainability, recognised by the highest, 6-Star 'Greenstar' rating.

Designed by architects GroupGSA, the North Fitzroy Library and Community Hub is a three-storey building incorporating a library, Maternal Child Health Facility and various community spaces. The tapered site presents long facades to the east and west. The eastern facade allows glimpses into the building, particularly at night, with views out to the public urban space.

Much of the glazing is shielded by the curved, vertical screens of perforated Nordic Brass, each one offset against the next. The pattern formed by the perforations in the brass is derived from the dappled light patterns from the trees in the adjacent Edinburgh Gardens. This theme continues internally with perforated Nordic Brass applied to internal features such as the reception desk.



Nordic Brass – which can also be supplied pre-weathered – is an alloy of copper and zinc with a distinctive golden yellow colour. When exposed to the atmosphere, the surface begins to darken within weeks and can change to a dark brown in around a year. Other Nordic Copper alloys include Nordic Bronze, an alloy of copper and tin, initially with a similar colour to Nordic Standard copper, which gradually changes to a stable, dark chocolate brown. The innovative Nordic Royal, an alloy of copper with aluminium and zinc, enjoys a rich golden through-colour which remains very stable.

In addition, other Nordic Copper ranges from Aurubis include Nordic Standard 'mill finish' and Nordic Brown pre-oxidised copper, offering lighter or darker shades of brown determined by the thickness of the oxide layer.

The extensive Nordic Blue, Nordic Green and Nordic Turquoise ranges have been developed with properties and colours based on the same brochantite mineralogy found in natural patinas all over the world. Solid patina colours and various 'Living' surfaces are available for each range. A wide choice of Nordic Decor mechanically applied surface treatments can also be supplied.

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www.architectsdatafile.co.uk/adf-ereader-survey

# Excellence in unity with Kingspan



Kingspan Kooltherm K103 Floorboard has been installed as part of a new block at The Heath School. 1,720m<sup>2</sup> of Kingspan Kooltherm K103 Floorboard was specified for the ground floor with a further 605m<sup>2</sup> of Kingspan Thermapitch TP10 installed within the roof construction to help the

school towards its target of a BREEAM rating 'Very Good'. Kingspan Kooltherm K103 Floorboard has a thermal conductivity of just 0.018 W/m·K across all thicknesses, making it the most thermally efficient insulation products commonly used.

01544 387 384 www.kingspaninsulation.co.uk

# **OPTIM-R** makes room for refurbishment



The Kingspan OPTIM-R Flooring System and Kingspan Thermaroof TR27 LPC/FM have been installed in floor and roof constructions as part of The Piece Hall in Halifax. The system comprises OPTIM-R vacuum insulation panels,

with an exceptionally low thermal conductivity of just 0.007 W/m.K, and OPTIM-R flex infill strips of the same thickness, which can be cut to fill any gaps within the insulation layer. The low thermal conductivity of the OPTIM-R VIPs allowed the desired thermal performance to be met with a system thickness of just 43 mm.

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

# Adding excitement to school dinners



Pupils at Filton Avenue Primary School are enjoying the benefits of offsite construction in their warm, vibrant new dining hall, erected in a matter of weeks using the **Kingspan TEK Building System**. Kingspan TEK panels comprise a high-performance insulation core sandwiched

between two layers of OSB/3. They were designed and factory cut to the project's unique specifications. This offsite production process minimised site waste and allowed the panels to be quickly erected. The Kingspan TEK Building System supported a fabric first construction approach, limiting the heating demand of the building.

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# Turning the sound down

As higher density living becomes more common, nuisance noise and its possible impact on health is becoming an all-important topic. With one of the most invasive irritations being impact sound, Chris Willett of Schöck describes an innovative solution for staircases



FOOTSTEPS Impact sound is a particularly invasive irritation It will come as little surprise that social surveys across several European countries indicate that noise from neighbours in residential complexes causes annoyance to varying degrees. The type of noise can take various forms of course, but a particularly invasive irritation is impact sound. Footsteps on common stairs and stairwells is a typical example, transmitting sound through solid structures and cavities in the building.

This can become more than just an annovance however, and a number of health studies have looked into the different effects of 'community noise' on individuals. The findings are wide-ranging, but suggest that regular noise interference can result in symptoms such as sleep loss, headaches, anxiety and loss of concentration, and in some cases raised blood pressure and even an increase in the potential for aggressive behaviour. So with the inevitable move towards higher density living in many European towns and cities, appropriate acoustic performance standards are becoming more important than ever for residents.

#### Urban living on the rise

There is, however, considerable disparity between UK mandatory acoustic standards and those in many parts of Europe. This is possibly a result of the historical differences in dwelling types. In the UK only 14 per cent of the population have traditionally lived in apartments, one of the lowest European percentages, whereas the average for apartment living across Europe is 48 per cent and in many cases higher. In Germany, for example, it's over 60 per cent.

However things are changing in the UK, where urban and therefore primarily apartment living, is dramatically on the rise. According to the Office of National Statistics, between 2002 and 2015 Liverpool was the fastest growing city centre, with a population increasing by 181 per cent. Other cities are close behind, examples being Birmingham, with a city centre growing by 163 per cent, as well as Leeds – by 150 per cent, Manchester – 149 per cent and Leicester – 145 per cent. In terms of sheer numbers, the fastest growing city centre was London, but due to overall population density this amounted to a relatively low 22 per cent increase.

# Soundproofing standards under scrutiny

This level of urban migration is resulting in a marked increase in the density of residential living and, in the interests of noise health protection, existing manadatory soundproofing standards (of which common stairs and impact sound is an important feature) are coming under ever-increasing scrutiny. Currently, Part E of the Building Regulations recommend performance standards for "separating walls, separating floors and stairs that have a separate function" as being less than or equivalent to 62 dB. The European average for staircases is around 53 dB, in some individual cases even stricter. This is significant when you consider that for human hearing, a 10 dB difference is equivalent to twice the amount of noise disturbance. The first ever standard in Europe to specify a test procedure for impact sound insulation elements was published in Germany in 2016. (DIN 7396). This was a standardised laboratory test procedure for acoustically measuring isolation systems for solid staircases.

# A basis for verifying acoustic insulation

DIN 7396 specifies a test with realistic configurations and typical building loads on staircases. The weighted normalised impact sound pressure level (L'n,w) as defined in DIN 7396 can be used as a basis for verifying acoustic insulation in buildings. This is fine in principle, but in reality, during the construction process soundproofing solutions are often used that do not comply with longer term requirements. Individual elastomer supports



# Acoustic bridges will occur, and sound reduction become ineffective, if the joints between the wall and staircase allow any dirt and material ingress

for example may not protect the joint areas completely, with the result that dirt and plaster can find their way into the gaps, causing acoustic bridges. Other materials may result in lower sound insulation performance, moreover there is often no acoustic validation for on-site solutions.

Soft materials have a high risk of creating sound bridges, as stones or construction debris may have been transferred into the gaps. Also, if harder materials are used, such as polystyrene or foam, there is a transmission through the material itself and compliance with even with the minimum requirements is jeopardised. To achieve these with construction site materials, the whole staircase must be free of sound bridges.

# Creating an impact sound solution for staircases

An integrated impact sound insulation solution has been developed for all structural subsections on both straight and winding staircases. Known as Tronsole, this system has been designed to facilitate straightforward installation. Pascal Maier, international product manager for Tronsole at Schöck comments: "Good soundproofing is becoming increasingly important in quality construction. Staircases in particular and the elimination of impact sound and acoustic bridges is essential. The system provides standard-compliant soundproofing in apartment blocks and multi-use buildings." Maier continues: "An individual elastomer support under the stairs is not

fixed, and can slip. This can result in more than just the concrete edge breaking due to incorrect support; it also harbours the risk of dirt and gravel getting into the gap between staircase and floor slab or landing. It takes only one piece of gravel to reduce acoustic insulation performance by around 10 dB. By contrast, a system that envelopes the entire staircase minimises the risk of acoustic bridges."

Seven main product types are mixed and matched to form a fully integrated impact soundproof system, At the system's heart is an elastomer support, formulated and designed to ensure optimum acoustic insulation and low deflection. Compared with conventional strip supports, it assures an impact sound level difference of approximately 32 dB, which constitutes an improvement of around 10 dB.

Acoustic bridges will occur, and the sound reduction become ineffective, if the joints between the staircase wall and the staircase (soffit and landing) allow any dirt and material ingress. A key component of the system is designed to ensure complete soundproofing by totally sealing the joint. The system is suitable for on or offsite construction, and for emergency exits; it also complies with the requirements for fire resistance class R90 (subject to appropriate on-site additional reinforcement of the landing).

Chris Willett is UK managing director at Schöck





#### **STAIRWAY TO SILENCE**

An integrated impact sound insulation solution has been developed for straight and winding staircases

# Let's get Creative – Soundtect Acoustics set you Free

W k based acoustic solutions manufacturer and supplier Soundtect, recently announced the launch of their freestyle product range, a lightweight, semi rigid sound absorbing panel that can used in a variety of design and interior solutions.

What makes Freestyle so innovative is its incredible versatility – providing the perfect noise absorption solution in any domestic or



commercial interior design spec. The sheets are available in 23 colours and a soon to be launched new line of finishes including wood and stone and can be integrated as stylish wall and ceiling panels or as suspended structures to create a standalone feature. The product capabilities are extensive panels can be bold and vibrant and arranged to create an interesting pattern, or neutral to blend in and be discreet - that's the beauty of Freestyle. Made from 100 per cent polyester, 70 per cent of which is post-consumer recycled PET material, Freestyle is completely safe, environmentally friendly, non-toxic, non-allergenic and incredibly easy to maintain.

Soundtect, now in its 9<sup>th</sup> year, is internationally recognised for their products that not only address the issue of reverberation but also add a positive design feature to rooms or areas in commercial, educational, hospitality and residential applications.



As a recycled product, Soundtect is an ideal choice for greener projects and with performance levels of up to 1.0 NRC the panels are acoustic to the core.

By creating highly design led panels, Soundtect has camouflaged acoustic function with imagination and produced beautiful patterns that are technically admirable due to their finely tuned balance of reverberation control and sound absorption.

Add this to fine design; a wow factor has entered the room.

0845 548 0518 www.soundtect.com



## New membrane addresses airtightness



The **A. Proctor Group** has launched a new wall membrane composite, which will improve airtightness levels whilst at the same time addresses the need to reduce thermal bridging. Wraptherm is a high-performance self-adhesive membrane composite specifically developed to be applied

during the refurbishment of existing buildings, and specifically where there is a requirement to enhance the thermal and airtightness performance of the building. Wraptherm consists of a 10mm Spacetherm insulation blanket bonded to the face of Wraptite, the industry recognised vapour permeable, self-adhesive airtight membrane.

01250 872261 www.proctorgroup.com

# Specification easier with new guide



Knauf Insulation has launched its new Solutions Guide to make specifying the right insulation for every application quicker and easier than ever before. The guide features the company's extensive range of non-combustible, high-performance insulation ordered by application. This means customers, including architects and specifiers, can

identify which products are best suited for roofs, walls, floors and fire protection. Product data detailing features and benefits are then listed in full at the back of the Solutions Guide. The guide also includes information about the company's extensive sustainability credentials.

01744 766 666 www.knaufinsulation.co.uk/solutions-guide

# LONGFLOOR liquid cement screed



Longcliffe Quarries are now supplying LONGFLOOR, a groundbreaking dry powder bulk binder for the manufacture of liquid cement screeds. LONGFLOOR has major advantages over both traditional

screeds and anhydrite/gypsum flowing screeds. It can be laid at ten times the speed of traditional screeds, manual handling is avoided and a denser, more even surface and creamy smooth finish achieved. LONGFLOOR dries faster than anhydrite/gypsum based flowing screeds. Contamination and blistering issues with wet concrete or cement based floor adhesives are totally avoided.

01629 540284 www.longfloor.co.uk

# 42 Berners Street transforms Fitzrovia



A leading provider of underfloor air conditioning systems, **AET Flexible Space** has completed the supply and commissioning of underfloor air conditioning equipment at 42 Berners Street, Fitzrovia. The 27,300 sq. ft. building is a high quality new build

development created through the demolition of two town houses, offering 22,000 sq. ft. office accommodation. The system specified at 42 Berners Street is a CAM-C direct expansion system, installed throughout the seven office floors with each floor divided into two separate zones, each served by a CAM-C25 downflow unit.

01342 310400 www.flexiblespace.com





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Their stone and marble mantels are made in England from the best quality material and they can therefore offer bespoke sizes if required.

Marble Hill also offer a good range of solid fuel burners and stoves with the all important Defra approval for use in smokeless zones.

They are the agents for Planika fires who offer a range of Bio Ethanol line

fires (which require no chimney at all and give 100% efficiency) and are the main agents for the Dutch company Bell Fires, who have a superb range of balanced flue gas fires which do not require a traditional chimney.

Bellfires are at the top of the range for quality, design and the majority of their fires are up to 85% efficient and can give between 2kw-10kw of heat, creating stunning warmth and making any room cosy and inviting.

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# A triumph of innovation: The Central Bank of Ireland, renovated with MEDITE



The renovation of the Central Bank of Ireland, on the banks of the River Liffey, is Ireland's first ever BREEAM "Outstanding" rated building. Architects Henry J Lyons achieved this by designing the large sweeping interiors to be as user friendly as possible for the bank's staff by specifying acoustic wood panels from Woodfit Acoustics, made from MEDITE PREMIER FR. This specialist MDF panel from MEDITE SMARTPLY is fire rated for safe use in public buildings, exceeds the stringent CARB2 emissions measure, and is produced using FSC certified timber, from sustainably managed forests in Ireland. Colin Wheatley, Product Manager at MEDITE SMARTPLY explained: "With responsible management, timber is a 100 per cent renewable natural resource. BREEAM encourages us to use timber responsibly, and to create environments that are safe and healthy for occupants, in a way that will contribute to the maintenance of the natural world. The Central Bank of Ireland's renovation is a stunning example of this. In its safety-conscious specification of MEDITE PREMIER FR, the building has a fire rated panel that also happens to be aesthetically beautiful."

mdfosb.com/en/medite/products/medite-premier-fr

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

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# The latest addition to the Vision brand!



Percy Doughty is excited to announce the latest addition to the Vision brand, the E-Line range of contemporary luxury electric fires. These stunning appliances are the ultimate home investment and are available in wall mounted or floor standing options. All the appliances will

come as panoramic as standard but can be transformed to front facing or corner right and left with the use of a conversion kit which is included in the fire at no extra cost making it one of the most versatile on the market. The new collection has a range of exquisitely designed suites available in a variety of materials designed to suit every interior.

info@visionfires.co.uk



# Evaporating energy costs in the washroom

It's been designed with sustainability in It's been designed with sustainability in mind every step of the way, from the cladding materials on the wall panels to its energy-efficient lighting system. However, the washroom also provides opportunities to support the architect's green objective, facilitate long-term savings through sustainable operation and uphold the original aesthetic vision.

In recent years, evolving consumer preferences have driven demand for hand dryers with faster dry times. Thus, high-speed dryers (or jet dryers) that hasten traffic flow have increased in popularity, especially in high-traffic washrooms. However, facilities that employ jet dryers should take special care when it comes to product selection. Specifically, many jet dryers are primary culprits of high energy usage and long-term increased operating costs in the washroom. Further, costly operation often prompts facility managers to replace products such as hand dryers early in the washroom's lifetime - compromising the designer's functional intention.

For exceptional energy savings and enduring design, Bobrick has introduced the industry's lowest wattage jet dryer for sustainability and economy. The new B-7125 InstaDry™ surface-mounted high-speed hand dryer supports the high-speed hand-drying experience that today's patrons expect, without the high operating costs typically associated with competitive units.

Functioning at only 200 watts, InstaDry is ideal for high-traffic facilities such as airports and other transportation hubs, stadiums, restaurants and retail spaces. Even in the busiest environments, InstaDry has a life expectancy of approximately 7,500 hours, which can equate to nearly ten years in some facilities. Its annual operating costs can be up to 80 per cent less than other leading dryer brands and its low power consumption allows multiple units to be installed on one circuit breaker.

In the 1940s and 1950s, hand dryers took between 30 and 40 seconds to dry hands thoroughly and operated at about 2300 watts—roughly equivalent to the energy requirements of two dishwashers in 2018.



Today, InstaDry makes it easier for facility operators and managers to achieve their goals and operate washrooms with high economic and environmental value. For architects, that sustainable operation enables design decisions that endure and products that aren't replaced by less aesthetic accessories early in the washroom's lifetime.

020 8366 1771 www.bobrick.co.uk



# Dallmer unveils new shower channels



In response to the growing demand for level-access showers, **Dallmer** has added two more new flush-infloor shower channels to its DallFlex system, bringing the number of Dallmer shower channels that can be combined with a single drain body to an impressive nine! CeraFloor Individual is the elegant shower

channel that boasts outstanding design. The shower channel comes in a length of 1500 mm and can be shortened to suit the specific shower area. CeraFrame Individual is a compact, short shower channel. The only thing you can see is a discreet 300 x 50 mm rectangle. The short shower channel is the perfect frame for a minimalist cover plate.

01787 248244 www.dallmer.com

# Hilclare's new compact ceiling light fitting



Hilclare – the exclusive distributor of Sammode lighting in the UK – has unveiled a new compact ceiling light fitting for diffuse lighting; Sammode Stifter. Commonly specified

throughout industries such as food processing, Stifter boasts an IP69K rating – the highest protection available – and provides protection against ingress of dust, high temperature and high pressure water. It is ideal for use in conditions where equipment must be carefully sanitised. Easy and quick to install with low maintenance, Stifter is available in three colour options – 2700K, 3000K, and 4000K – with each one offering two lengths to suit multiple installations.

sales@hilclare.com

# Benif Interior Film on display at NEC



Benif Interior Film from David Clouting was specified to refurbish one of the washroom facilities at the NEC. Specialist contractor T6 transformed the washroom in under seven days covering the walls, cubicle doors and paneling with a selection of designs from the Benif Interior Film range.

Manufactured by LG Hausys, Benif is a self-adhesive, architectural film which can be applied to most interior surfaces. With over 400 designs and finishes to choose from, walls, doors, paneling, desks etc. can be easily refurbished to provide a stunning, cost effective finish.

www.davidclouting.co.uk

# Maxwood completes No.90 Fetter Lane



Pendant bulb lighting overhanging concreteeffect vanity tops, against Italian-made metal splashbacks provided plenty of wow factor on No.90 Fetter Lane.This project, completed with JRA Architects for CORE & Evans Randall Investors, shows what is achievable through close collaboration with

all design teams, site-trades and suppliers, even when using overseas manufacturers. As always, we are grateful for the praise of Knight Harwood, who thanked **Maxwood** for "Being positive with resolving any items and ensuring the management was always in place."

020 3657 7615 www.maxwoodwashrooms.com

# Splash up colour schemes



Lustrolite's acrylic panels are one of the most suitable materials for bathroom and kitchen splashbacks. Not only do they have a sleek, modern look and finish; they are incredibly easy to clean and maintain. The panels are highly-resistant to harsh chemicals and

can be cleaned with just warm water and a soft microfibre cloth. The non-stick surface prevents the growth of mould and bacteria as well as soap or calcium build-up; perfect for the home. Lustrolite panels are ideal for any interior scheme.

www.lustrolite.co.uk

# Sixth bathroom pod contract



Offsite Solutions has been awarded a  $\pm 1.6$ m contract for Crown Student Living. Crown Place in Swansea will be Offsite Solutions' sixth and largest student accommodation scheme for the developer and brings the total value of its projects for Crown Student Living to  $\pm 6.8$  million. Offsite Solutions offers the

UK's largest range of bathroom pods to suit different building types and applications. Alan Pulver, Director of Crown Student Living, said: "We like dealing with Offsite Solutions and would never consider traditional bathroom construction for any of our schemes."

info@offsitesolutions.com

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ALGUI Dual finish stainless steel washbasin







# Meet the brand face to face



# Let us introduce you to the latest wedi innovation:

the wedi Top series

wedi's core values have risen to the surface in perfect unison: functionality, practicality and longevity with a simple yet timeless elegance do more than justice to the brand's reputation.

As a custom fit high-quality mineral surface for wedi Fundo shower elements in both point and linear design, the wedi Fundo Top can not only be installed quickly and easily, but thanks to its thickness of only 6mm, it's also easy to incorporate into a spacious flush-to-floor area or a stylish step-up shower design with the aid of the matching cladding/skirting strips.

The large format, decorative wedi Top Wall surfaces - thanks to their versatility in being suitable to use on all common surfaces from tiles through plaster to plasterboard - provide a stylish, colour-coordinated cladding across the whole bathroom. What's more, they can be easily cut into desired shapes and various colours can also be arranged to achieve characteristic patterns in a blink of an eye.

The aesthetic stone look of the grey and anthracite colours are created with the use of natural components - this is what gives their unique, distinctive character and natural look putting them amongst the latest trends. Furthermore each and every one of these seamless surfaces are warm to the touch, non-slip (R11) and have an antibacterial surface that promotes hygiene around the whole bathroom.



# The offsite route to accessibility

Chris Sutton from On the Level discusses the challenge of delivering accessible living for an ageing population, and the benefits of offsite bathroom construction

ne of our greatest societal challenges is how we meet the needs of an ageing population. We all welcome the opportunity to live longer, yet with improved longevity comes the pressure to provide appropriate and accessible living space for older people. From care home beds to specialist social housing, adapting existing homes to building granny flats, we are struggling to deliver enough bespoke accommodation to meet the requirements of the older generation. How might offsite construction and modular pods help speed up delivery, while offering better quality and more accessible spaces for our ageing demographic?

Our population is definitely ageing. According to the Office for National Statistics, by 2066 there will be an additional 8.6 million people aged 65 years and over – a population roughly the size of London. In 2016, people over 85 accounted for just 2 per cent of the population, but fast forward 50 years and that is forecast to rocket to 7 per cent.

As we live longer, our health needs become more complex and the places we live must adapt to our changing demands. In the UK we are already struggling to provide appropriate accommodation for our existing population. As it continues to grow as well as age, how do we respond to the challenges that presents?

Many argue that Britain faces a social care crisis. Research published by Newcastle University in the Lancet medical journal last year found there will be an additional 353,000 older people with complex needs by 2025, requiring 71,000 extra care home beds.

Yet this need to ramp up delivery of care home provision comes at a time when the construction industry is already under enormous pressure. A research paper by Heriot-Watt University on behalf of the National Housing Federation indicates that England faces a shortfall of four million homes and needs to build an additional 340,000 a year until 2031.



The construction sector will struggle to meet the challenge given the skills shortages and low productivity. To provide an adequate supply of care home places in the midst of a housing crisis, it will require some radical changes.

One solution is to exploit offsite construction. The manufacture and pre-assembly of construction components within a controlled factory setting can revolutionise the provision of accessible accommodation for our ageing population. It speeds up delivery, reduces costs, minimises waste and ensures greater quality control. The Government has recognised the value of this new approach, whilst a Construction Industry Training Board (CITB) white paper revealed that 42 per cent of construction firms employing over 100 staff believe they will be using offsite methods in five years' time.

When providing accessible residential care for older people, features such as modular pod wet rooms can bring

A Construction Industry Board white paper revealed that 42 per cent of construction firms employing over 100 staff believe they will be using offsite methods in five years' time



When providing accessible residential care for older people, features such as modular pod wet rooms can bring significant benefits significant benefits. They can form a bespoke part of a larger offsite construction project or be slotted into an existing building as part of a wider refurbishment.

Bathrooms are one of the greatest potential hazards for older people and a great deal of thought needs to go into their design. Wet room floor solutions from On The Level for instance, provide made-tomeasure environments, which prioritise accessibility. They are far quicker to install than those constructed on-site, incorporate an innovative waterproofing system, and allow the security of level access showers.

What's more, these modular solutions could easily be installed into people's houses. Many older people wish to delay going into residential care for as long as possible and would prefer to stay in their own home. Adaptations such as installing a wet room pod, tailored to meet their specific needs, would mean they could live independently for longer. A customised bolt-on bathroom annex is a quick and easy way to make a home user-friendly.

Providing homes that are fit for purpose is critical when confronting the challenges of an ageing population. This is also true in relation to social housing. The UK is in dire need of more affordable quality homes, which can stand the test of time. As the Government grapples with the need to boost social housing provision, features such as pod wet rooms can help future proof a home and ensure it meets the needs of occupiers with limited mobility.

We need more strategies to ensure that as people grow older, everyone in the UK will be able to live somewhere which meets their needs. That will not only involve delivering more new-build homes but adapting existing properties.

Those in the offsite construction sector must rise to the challenge and play a pivotal role in the provision of appropriate living spaces. Offsite and modular construction businesses must take the opportunity and be ready to work with Government and the wider construction industry to increase offsite capacity, investing further in manufacturing capability and developing modular construction techniques that can address the needs people at every stage of life.

Chris Sutton is business development director at On the Level







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# Schlüter-Systems introduces statement designer shelving

Released at Cersaie 2018 and offering new possibilities for the creation of stylish features on tiled walls, Schlüter®-SHELF is a welcome introduction to Schlüter-Systems' range of solutions for tile and stone.

SHELF avoids the need to drill through finished coverings (and the waterproofing beneath) in pursuit of a shelving solution. Instead, products in the range are designed to coincide with grout lines, creating a more aesthetically pleasing and harmonious feel across an installation as well as preventing damage to its layers.

Three variants are available:

- Corner (SHELF-E) range includes options for standard or retrofit installation
- Niche insert (SHELF-N) sized to slot into the grout joints within a Schlüter niche
- Conventional (SHELF-W) with anchoring legs for embedding into adhesive

The shelves feature the distinctive FLORAL and CURVE designs of the



Schlüter®-KERDI-LINE-STYLE/-DRAIN-STYLE grates released at Cersaie 2017, allowing for co-ordination across the drainage and storage elements of a room design. They are available not only in a smart brushed stainless steel, but also in three of the most popular Schlüter®-TRENDLINE finishes – Ivory, Stone Grey and Dark Anthracite.

01530 813396 www.schluterspecifier.co.uk

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Magrini **baby changing units** provide a hygienic and safe place for changing your smallest customers. The contemporary style incorporates extra-deep sides providing an intrinsic safety barrier and the units have a unique hinge system preventing small fingers from being trapped.

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t: 01543 375311 • e: sales@magrini.co.uk • w: www.magrini.co.uk

# Inspirational acoustics for motivational office design

A leading global manufacturer of innovative audio technology has opened a new UK HQ in Edinburgh. The company is recognised for its award-winning corporate culture and its new office interior reflects this ethos with facilities designed to generate a collaborative and vibrant workplace. Heradesign ceiling rafts and baffles from Knauf AMF make a positive contribution to this vision by creating a healthy acoustic environment.

Michael Laird Architects designed the four-storey office which has a variety of highly functional, flexible, inspirational spaces and workplace settings to support creative thinking. Heradesign with its organic wood-wool woven surface fits seamlessly into this contemporary interior, helping to create a motivational place to work. In the large open-plan office spaces, Heradesign ceiling rafts are fixed directly to the soffit, sitting above the exposed services. The light grey colour of Heradesign matches the chrome of



the ducts and pipes, creating an eye-catching ceiling design.

Open plan areas can generate intrusive noise. Research shows poor acoustics can harm productivity and staff morale. The Class A sound absorption of Heradesign helps improve staff wellbeing by effectively reducing all unwanted background noise ensuring staff can concentrate, and that meetings in the pods surrounding the open office spaces remain private. Heradesign ceiling baffles, fitted in three colours and sizes, create a striking design feature in the stairwells, circulation areas, games room and break-out spaces. Sound control is key to making these places work. Optimum acoustic performance is achieved by varying the distances between the rows of baffles. The baffles ensure any noise from people travelling up and down the stairs or along the corridors does not disturb those using the adjoining open areas for meetings.

Heradesign is a versatile product, its surface can be matched to any colour, enabling it to enhance any design aesthetic. It is available in a wide selection of shapes, face patterns, edge details and sizes, and can be fixed to walls or suspended as ceilings, baffles and rafts. Manufactured from robust sustainable materials, Heradesign offers high impact resistance and superior fire resistance, which is paramount for any building.

info@knaufamf.co.uk www.knaufamf.co.uk

#### Changing places for invisible disability



Have you ever needed to 'go' when away from home, and not been able to easily find a toilet? Add to that feeling the fact that you need more space, or special equipment, or that you've had an accident because of continence problems. Building designers and operators are being urged to "hold that thought" when creating interior spaces. Up to 6 million people in the UK are affected by continence issues, according to latest figures from the NHS. For many, conventional 'away from home' toilets are still not suitable: they need more space, and/or equipment – a Changing Places toilet. Under current Building Regulations and British Standards, a Changing Places should be provided in any facilities to which numbers of the public have access, and/or spend a length of time. It should be in addition to any wheelchair-accessible toilets, and, as a minimum, be 12m<sup>2</sup>, with a ceiling track hoist, peninsular toilet and adult-sized height adjustable changing bed. The Toilets-Provision & Accessibility Bill currently going through Parliament will, if enacted, upgrade that to a compulsory requirement. Visit the **Closomat** website for more information.

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

#### Ceiling looks good and sounds great



Employees at the Foyer Assurance offices in Leudelange Luxemborg are delighted with their recently refurbished staff cafeteria. The new ceiling features two natural material finishes in veneered wood and **Hunter Douglas Architectural's** exciting new HeartFelt<sup>®</sup> modular felt

ceiling system. The veneered wood grill panels in oak, offer a directional flow away from the serving and preparation areas and act as a distinguishing feature against the HeartFelt<sup>®</sup> panels in black that were installed over the seated areas.

01604 648229 www.hunterdouglas.co.uk

#### (Con)figure your options



A new option in bathroom specification, believed to be unique in the shower/wash dry toilet sector, has been launched by **Closomat**. Closomat has introduced a "configurator" on its website to give designers and potential purchasers the ability to personalise their new Asana shower (wash/dry) toilet, and see it in preview, before buying. Just by clicking on the various options, potential

customers can create their ideal style combination. Options encompass concealed cistern, surface-mounting, back panel finish and colour, and a range of flush mechanisms.

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



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# Kährs Group introduce new designs at BAU show

E urope wood flooring manufacturer Kährs Group have introduced a range of new flooring designs during Munich's BAU show in January. Innovative wood designs for 2019 were presented, including reclaimed-themed designs, ultra matt wood floors and a brand new 'Boardwalk' collection of modern rustic wood floors. However, stealing the show was the Group's exciting launch of an entirely new product category – Kährs Luxury Tiles.

Over 250,000 visitors enjoyed BAU 2019, the 'World's Leading Trade Fair for Architecture, Materials and Systems' held in Munich, Germany this January. With an impressive exhibition stand spanning over 200 sqm - including an integrated bar area – Kährs proudly showcased their new 2019 wood flooring designs with large, striking wall samples and within an example 'shop-inshop' point of sale concept. These included an entire new modern rustic collection 'Boardwalk' comprising of four single strip,



handscraped designs. Following the success of ultra matt wood collections 'Lux' and 'Lumen' last year, new grey and white toned ultra matt lacquered designs in Kährs 'Capital' and 'Lumen' collections were also introduced, alongside three reclaimed-themed designs with a unique, worn appearance. XL board formats and rustic herringbone designs with saw marks were also displayed, and will be available in the UK later in the year.

Shown for the first time at BAU, 'Kährs Luxury Tiles' is a comprehensive offering of modern, waterproof and phthalate-free luxury tile designs in Dry Back, Click and Loose Lay. The LT product range includes over 170 wood and stone designs that utilise high-resolution technology with no repetition and a highly durable ceramic coating – the most abrasion resistant and robust coating on the market. The range also introduces a selection of PVC-free designs with especially low VOC values – Dry Back Enomer<sup>®</sup>, and a Marine range available for marine ship projects.

Please contact Kährs for more information and availability for the new wood and LT product ranges – all suitable for domestic and commercial projects.

023 9245 3045 www.kahrsflooring.com

#### Age-friendly housing – adaptable and 'care ready'



Guidance billed as 'a new bar for the design of future housing for an ageing population' is reiterating the need for homes to be adaptable and 'care ready'. One of the simplest means of ensuring that is met is by specifying a toilet that can evolve with people's changing needs, says **Closomat**. Closomat's range of shower toilets reflect contemporary design, with floor-standing and wall-mounted options that can be configured to individual choice – even in terms of concealed cistern, back panels, flush mechanisms. Uniquely, they can be personalised to individual user needs initially and retrospectively, so can evolve as the user ages to accommodate changing circumstances, mobility and dexterity. The company's website is the 'go to' resource for specifiers involved in designing for ageing and/or disabled people, with a raft of white papers, NBS specifications, CAD blocks to simplify the process and deliver an appropriate, compliant solution. The expertise within the company represents the combined wealth of knowledge amassed from almost 60 years of helping disabled people optimise their dignity and independence in the bathroom, at home and away.

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

#### Osmo excels at Oxford



When Brasenose College extended its student library into the old cloisters and required a hardwearing wood finish for the tops of the new desks, they turned to **Osmo UK** to provide a product that would protect and preserve

the wooden surfaces. The college contracted professional cabinet maker, David Haddock to create the extended library and stipulated that the new desk tops be protected with Osmo UK Polyx®-Oil, a premium wood finish that is guaranteed to keep wooden surfaces in top condition. Polyx®-Oil is a high quality, water-repellent and tread-resistant wood finish based on natural ingredients.

www.osmouk.com

#### Inspirational architectural ironmongery



Project Specification Group, a unit of ASSA ABLOY Opening Solutions UK & Ireland understands the importance of quality and attention to detail and has therefore launched new ranges of design-led ironmongery to complement any project. The new ranges of architectural ironmongery incorporate a wide variety of materials such as bronze, wood and

chrome and have been fashioned to make an impact, with designs featuring in prestigious projects across the world. The new Elmes, Fusital and Valli&Valli ranges combine aesthetics with function, ergonomics, safety, longevity and environmental responsibility.

ukspecification@assaabloy.com

### A sound specification for Bona Craft Oil 2K

Bonna Craft Oil 2K has been specified for the restoration of the Beech floor in the world's largest purpose-built recording studio. The work was undertaken by Bona Certified Contractors, CMT Wood Flooring of Birmingham, contracted to commercial fit out specialists, Prestige Interiors.

The London based studio is in constant use by orchestras and choruses. It was therefore essential that a highly durable finish was applied, that would not only protect the surface from the high levels of traffic but would also dry quickly to minimise downtime in this very busy space. CMT flooring initially recommended the use of Bona Traffic HD, the toughest waterborne lacquer manufactured by Bona, and which dries so quickly that the floor can be put back into full use in just 12 hours.

However, the studio team were concerned that using a lacquer finish on the floor, which had been previously oiled, might change its acoustic properties. Consequently, the specification was changed to highly durable Bona Craft Oil 2K, a penetrating, two component oil with an equally impressive drying time of just eight hours for the 'Neutral', uncoloured version – meaning the studio could be put back into full use the day after treatment.

To retain a sense of history in the space, it was also decided not to use a darker oil on the lighter coloured blocks (that were laid after a stage was removed from one end of the studio) so they matched the original darker coloured floor. However, had the studio team wanted to create a uniformly coloured floor, this could have easily been achieved by treating the lighter blocks with one of the darker coloured versions of Craft Oil 2K.

Before applying the oil, the CMT team repaired several loose and damaged blocks and then sanded the floor and filled all gaps with filler mixed with dust from the final sanding pass. One coat of Bona Craft Oil 2K



was then applied with a Bona FlexiSand buffing machine – using a red pad – an efficient way of applying oil to a floor this size and which ensured the surface layer of timber was uniformly saturated.

Bona Craft Oil 2K is a unique formula based on modified plant-based oil and has a very low VOC content of less than 4 per cent. It's the perfect treatment for a wide variety of wood species including tricky ones such as cherry and walnut, and it produces a strong water and stain resistant surface that is ready for use in 8 or 12 hours (depending if neutral or coloured versions are used). In situations where supreme surface durability is required, Bona Craft Oil 2K can be overcoated with any version of Bona Traffic lacquer.

01908 525 150 www.bona.com

#### Howe Green provides innovative access solution for NHS's newest hospital



Howe Green Ltd has supplied nearly 70 covers to the newest and most digitally advanced hospital in the NHS estate. The £200 million redeveloped Chase Farm Hospital, in Enfield, became fully operational last autumn. Howe Green's Visedge Series Flexible Floor Access Covers and 7500 Series Medium-Duty Aluminium Floor Access Covers were installed throughout the 20,000 square metres of internal flooring. The Visedge covers were infilled with vinyl flooring. The floor finish for the 7500 Series varied depending upon the location of the cover. The Howe Green access covers enable safe and easy access to building services concealed under the flooring of the hospital. The Visedge Series provide a durable, lightweight, non-rusting access solution for flexible sheet flooring systems in environments with pedestrian footfall, wheeled trolleys and sack trucks. Double sealed, the Visedge covers are ideal for a busy hospital where the highest standards of hygiene and security are required. 7500 Series Medium-Duty Floor Access Covers are used for all types of hard floor finish, including ceramic tiles, terrazzo and wood. They offer a five tonne pneumatic tyre wheel load suitable for cars and light delivery vehicles.

01920 463230 www.bilcouk.co.uk

#### Flotex offers Ashley Hicks design freedom



Interior designer, Ashley Hicks, has had his unique design 'Specimen Marble' digitally printed onto Forbo Flooring Systems' Flotex flocked floor covering, for his new studio in Oxfordshire. Ashley Hicks is known for his intricate patterns and eclectic designs. He therefore required his studio to have a neutral aesthetic to act as a suitable background for his projects; and wanted a

flooring that his own design could be printed on. Forbo's Flotex is a completely unique product, which offers the hard-wearing durability of a resilient floor covering, while delivering the comfort of a textile finish – all the while boasting exceptional printing abilities.

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

#### Beaulieu Fibres launches UltraBond



Beaulieu Fibres International unveils a unique opportunity for carpet manufacturers to create fully recyclable needlepunch carpets, and benefit from production and resource savings, without influencing performance. UltraBond is a patented polyolefin bonding

staple fibre that eliminates the need for latex or other chemical binders to bind nonwovens. It opens up a new path for creating 100 per cent polypropylene needlepunch carpets which meet the same performance requirements as traditional latex-bonded carpets while reducing the end-of-life environmental impact.

+32 56 66 81 91 www.beaulieufibres.com

#### Polyflor launches new flooring collection



**Polyflor** is delighted to announce the launch of the new Polysafe QuickLay PUR Collection. Polysafe QuickLay is a loose lay safety flooring designed for adhesive-free installation and is the perfect solution for busy commercial environments in need of a quick

turnaround and where sustainable slip resistance is a priority. Polysafe QuickLay is a temporary or permanent floor covering which achieves the same performance and durability as other Polysafe flooring collections but with the added benefits of adhesive-free installation.

0161 767 1111 www.polyflor.com

#### Polyflor in first energy positive building



Designed by SPECIFIC, a UK innovation and knowledge centre led by Swansea University, the Active Office will be the UK's first energy positive building, generating more energy than it uses over the course of a year. The office features integrated solar cells in the curved roof, lithium

ion batteries to store electricity and a 2,000 litre water tank to store solar heat. **Polyflor** products chosen for the build included Polysafe Hydro Evolve, Expona Flow PUR and Polysafe Arena. All the Expona Flow PUR, Polysafe Arena PUR and Polysafe Hydro Evolve fitted on site is 100 per cent recyclable and achieves a A+ BRE rating.

0161 767 1111 www.polyflor.com





#### Polyflor Sport 67 scores at new centre



**Polyflor's** Sport 67 in Maple was the flooring of choice for GT3 Architects when completing the new £7m Brinnington Park Leisure Complex in Stockport. Facilities in the new centre include a gym, aerobics studio, community room, boxing gym and four court sports hall where a number of Polyflor products were fitted including

Polysafe Hydro, Polysafe Standard PUR, Polysafe Wood FX Acoustic in Silver Oak and 690m<sup>2</sup> of Sports 67 in Maple. Sports 67 in Maple is perfect for the classic gymnasium style and is designed to perform safely and effectively in 'multi-purpose' indoor sports venues.

0161 767 1111 www.polyflor.com

#### **Recommended supplier for Procure22**



Altro has been appointed as a recommended supplier of Wall & Door Protection by the PSCPs on the Department of Health & Social Care's ProCure22 Framework for NHS and social care construction schemes in England. Altro wall and door systems, including Altro Whiterock and Altro Fortis systems,

are recommended for use throughout healthcare environments. The ProCure22 (P22) process is designed to achieve improved value for money and reduce exposure to risk through a simplified capital procurement procedure. Altro is the only walls manufacturer on the P22 supplier list to have been awarded DSDC accreditation.

01462 489 516 www.altro.co.uk

#### Forbo's Marmoleum Marbled collection



Inspired by the breath-taking colours and textures found within natural landscapes, Forbo Flooring Systems has re-launched its Marmoleum Marbled collection. With an independent Environmental Product Declaration confirming carbon neutral status in the production phase, Marmoleum (2.5mm) helps to minimise the embodied carbon

of a building – with this latest collection designed to help users feel at one with nature. Marmoleum is manufactured from 94-98 per cent natural raw materials, making it one of the most sustainable floor coverings available on the market.

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

#### **CTD Architectural Tiles for development**



CTD Architectural Tiles is delighted to have been selected to supply over 1,000m<sup>2</sup> of product to the new Fletton Quays development on the south bank of the River Nene, Peterborough. Contractors Bowmer and Kirkland and tiling contractor P.Plunkett Tiling, CTD Architectural

Tiles Senior Sales Manager Sean Lane supplied 900 x 600mm of Cliffstone Grey tiles in a matt finish for the floors, ideal for the heavy traffic areas throughout the development. CTD Architectural Tiles specialises in the supply of high quality ceramic tile finishes and tiling solutions across all sectors in the UK commercial specification market.

0800 021 4835 www.ctdarchitecturaltiles.co.uk

EPTION



### Polysafe QuickLay PUR

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OGY



#### Renderplas PVC shadow gap beads

Sleek minimalist shadow gaps create statement internal design elements, producing clean lines unimpeded by the traditional use of skirting boards, architraves and cornices. The features can be installed between walls, floors, skirting boards, windows, door frames and staircases throughout a building, or in specific areas such as hallways and kitchens to create maximum impact. Specified by architects and used by house builders, **Renderplas** PVC shadow gaps are less wasteful, safer and quicker to install than metal equivalents. The PVC is UV stable ensuring that large amounts of light from modern glass facades will not lead to discolouration. The profiles are durable and impact resistant; important when featured at skirting level where floor cleaning equipment might be in contact with the profiles. Renderplas supply two shadow gap profiles both of which are fully recyclable, a key feature for any low energy building solution.

#### 01299 888333 www.renderplas.co.uk

#### Colour your space



Boss Design has launched a striking colour palette of painted frame options for its extensive range of commercial furniture. Offering endless design permutations, a choice of eight colours may be applied to the under frames, tables, legs, and arms of most of Boss Design's upholstered seating

and table collections. The eight RAL colours include orange, black, white, purple, grey, green, blue and yellow. Designed to complement chrome and natural wood frames, the new options follow meticulous market research that has recently been conducted by the company.

www.bossdesign.com

#### Let sleeping dogs lie with Norbord



Norbord's CaberFloor P5 – one of the UK's most specified chipboard flooring products, has been upgraded to produce a high performance floor with reduced impact and airborne noise transmission. Called CaberAcoustic, the new product comprises 18mm or 22mm CaberFloor P5 chipboard with a 10mm acoustic felt

layer permanently bonded to the underside. CaberAcoustic is installed with the tongue-and-groove joints glued with CaberFix D3 adhesive and all perimeters of the panel sealed with acoustic flanking strips.

www.norbord.co.uk





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### A world of possibilities with Vicaima doors

The eagerly anticipated 2019 edition of the Vicaima Interior Door Selector (IDS) has now arrived, with an array of products designed to inspire creative interiors for modern living. Whether for homes, commercial environments, health or educational establishments, Vicaima offers original style coupled with outstanding performance.

The 2019 IDS provides specifiers and distributors with an easy to navigate, priced guide through a myriad of styles and finishes that demonstrate the sheer breadth of possibilities available with Vicaima interior doors and doorsets. All doors are available in a variety of constructional cores, extensive choice of dimensions and of course a colour palette that allows real creative flair for new build and refurbishment projects. Whether the vision calls for wood veneers displaying their natural specie or stained in a contemporary tone, originally designed laminates and innovative foils or even a spectrum of paint lacquers; Vicaima has one of the most comprehensive selections available.



enough, the Vicaima 2019 Interior Door Selector goes one step further, offering a wide assortment of additional modifications. Vicaima customisation provides the opportunity to select a door of choice from any of their Essential ex-stock solid core designs and to transform them with grooves, inlays and glazing plus many other factory servicing options. Effectively this creates thousands of additional doors patterns, all available with shorter lead times than conventional bespoke doors.

Call or download a copy of the 2019 Interior Door Selector today by visiting the Vicaima website.

01793 532333 www.vicaima.com

As if 80 pages of door models were not

#### Bowater by Birtley launches fire door



Bowater by **Birtley** has introduced an exclusive new FireShield FD30S fire door after successfully securing BS EN 1634 certification. The door is manufactured using a sustainable agrifiber core, a material recognised as a green product that can contribute to Leadership in Energy and Environmental Design (LEED) credits. A

solid timber frame and durable GRP facing completes the construction of the door, making it one of only a handful on the market to offer a FD30S certified door to this standard. The Bowater FireShield FD30S has been proven to maintain its integrity beyond the required minimum 30 minutes, preventing the passage of flames and hot gases.

0845 121 8977 www.bowaterbybirtley.co.uk

#### Securiscape helps New Street station



Three planters designed to protect the public using Birmingham's busy New Street station have been installed outside the entrance after a leading supplier of security street furniture answered a call for help. **Securiscape** was able to supply and fit nine 1.42m<sup>2</sup> high-tech when of stopping and displayed or 7.5 topping

planter frames, each capable of stopping and disabling a 7.5 tonne truck travelling at 40mph. The company got involved after a previous sub-contractor was unable to fulfil a brief to provide planters certified to the exacting standards of PAS 68-2010, the latest publicly available specification for vehicle security barriers.

info@securiscape.co.uk

#### New additions to the Vecta Range



Vecta from Monitor Audio is an architectural weather resistant range of speakers that offers incredible versatility and simple installation in places where other speaker choices would prove impractical. The new V240-LV speaker adds further versatility in commercial

applications with 70/100V line level. An integrated transformer allows the system designer to consider multiple speakers in a system without worrying about impedance matching or losses where long cable runs are required. This particularly benefits larger commercial applications, but can also be beneficial in larger, more complex domestic designs.

info@monitoraudio.com

#### Axim PR-7200 Series



Emergency and Panic Exit Devices must provide an easy method of escape for building occupants in the event of a fire or other emergencies, as well as provide security against intrusion and

burglary. The Axim PR 7200 Series provides solutions ensuring that, whatever the project type, specifiers can rely on Axim PR 7200 Series to supply the solution. The Axim PR-7200 is a concealed, vertical rod panic exit device which secures the top and bottom of the door, except during the operating cycle when the rods are retracted with cylinder key or when the touch bar is locked down with an Allen key (dogged). The Axim PR-7200 Full Width Series is compliant to BS EN 1125.

0208 685 9685 www.axim.co.uk









#### Ultra-discreet loudspeakers for any location

British loudspeaker designer, Monitor Audio, has a range of Custom Install speakers for every situation. Their ultra-discreet in-wall and in-ceiling speakers deliver a stunning audio performance whilst protecting the room's décor. For more extreme environments, such as outdoor terraces or pool rooms, they offer a choice of speaker ranges, all of which deliver Monitor Audio's award-winning sound.







monitoraudio.com





# Smart homes means secure homes

Mark Carey of Salto Systems discusses how technology is now laying the foundation for the creation of truly smart homes when it comes to security



#### With smart security, the technology is already here to deliver tomorrow's smart home today



S till thinking in terms of keys and locks when it comes to security for your residential clients' designs? Well, just like the commercial sector where smartcard technology is widely used and mobile is now gaining traction, the home market too is now changing.

Everything from serviced apartments to individual homes is now starting to adopt the convenience of using smart phones to control access. This is a quick update to equip architects with the knowledge they need for incorporating mobile security into their projects.

Already there are smart meters to track energy usage, smart thermostats to control heating systems, smart doorbells, and cameras for home security as well as smart home assistance devices such as Amazon's Alexa and Google's Home Mini. Today, the 'smart, connected home' is the exception. In a decade or less it will be the norm.

Residential smart lock technology allows the user to go above and beyond what a standard door lock can offer. The smart lock provides multiple features accessed through an app on a smart phone, giving a greater picture of home security. Undoubtedly a driver for this is that more people now want everything to be accessed through their personal device.

With a smart home lock there is no need to carry keys, which eliminates the chance of them being lost or stolen, and it also allows users to cancel keys on the go if they need to restrict access. And because such technology works with most existing euro cylinders or multipoint locks (depending on different manufacturers' models), it still complies with current home insurance standards.

Such locks are battery operated and wire free, wireless, cloud or mobile based – so no need for the expense and inconvenience of hard wiring – and are already in widespread use in commercial markets such as hotels, universities, airports, serviced offices, etc.

#### Technology over traditional

For residential projects of a more commercial nature such as serviced apartments and the like, more powerful cloud-based solutions are a common choice. Cloud access control provides a simple and secure solution to manage keys, users and doors across multiple locations – typically using a combination of smart phone app and smart RFID tag.

No software installation is required; all that's needed is an online device with an Internet connection. An online account is created and this is used to create access groups, manage users and view entries to the property from a smart phone, tablet or other device.

A hub unit fitted inside the building uses 2G, 3G or 4Gcellular connectivity to communicate with the wireless lock equipped doors. Users simply present their RFID tag to the lock, which instantly engages so residents, visitors etc can enter easily and according to their access rights.

#### The individual home

For the domestic home there are a number of options on the market, and most make use of the smart phone to take the place of the key.

Some take the form of a traditional handle set and have a prominent reader unit at the top. Users can configure, control and unlock their smart door lock from their smart phone via a secure Bluetooth app. They can give family and friends access by sending a virtual key to their smart phone and keep track of who comes and goes via the app. Another variation is to have a smart motorised lock. The advantage of this is that the door looks just like a normal door with a standard-looking handle and keyhole; there is no impression from the outside that the door is 'smart.' The electronic unit is housed on the inside of the door and again works with a smart phone app. But the beauty of this product is that it also has an auto unlock feature.

With auto unlock activated, coming home is as easy as it gets. Automatic GEO location detection determines your position when you enter the auto unlock zone, approx 500-1000 m from the door, and when you get in Bluetooth range approx 0-5 m, it unlocks your door for you. Not only that, but with automatic timed locking it can do exactly the same thing in reverse and automatically lock the door when you leave the house.

As with most things the key to success lies in selecting the right product for the project. But with smart security, the technology is already here to deliver tomorrow's smart home today.

*Keith Carey is marketing manager at Salto Systems* 





#### Von Duprin show the way

Relcross have employed their problem solving experience by supplying Von Duprin 99QEL exit devices to Advanced Diesel Engineering (ADE) of Yorkshire. ADE are experts in acoustic containers for generators and their products can be found in a number of data centres throughout Europe. Normal entry and exit is controlled by a swipe card system that disengages the door alarms while recording the details of who has entered or exited the container. A key operated lock can then be used to open the door by releasing the latch on the Von Duprin device installed on the inner surface of the door. The Von Duprin 99 QEL features motorised latches rather than magnetic solenoids which, together with the famous Von Duprin fluid dampener that decelerates the touch bar on its return stroke, eliminates most of the noise associated with exit device operations. In the event of an emergency the touch bar can be used independently and without any delay. The touch bar is covered with a luminous material to provide guidance to people trying to escape.

01380 729600 www.relcross.co.uk



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

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#### Maximising Land Value through SuDS



GreenBlue Urban are extremely conscious of the tight constraints that house builders work under and have designed a modular storm water management system that is installed below mandatory hard surfaces. GreenBlue Urban Arborflow systems are

uniquely placed to enable all of these criteria to be met without encroaching on valuable land, maintaining the amenity values, holding up property values and creating a pleasant place to live work and play. By specifying GreenBlue Urban ArborFlow systems, a long-term solution is available to make every development sustainable for the long term resident, and profitable for the developer.

enquires@greenblueurban.com

#### Safe and Sound with Resiblock



Part of Network Rails £6bn Thameslink Programme, the redevelopment of London Bridge Station started in 2013. With new paving installed it was anticipated that cleaning regimes would serve to remove the jointing sand leading to de-stabilisation of the paving and causing

hazards such as tripping accidents. The success of **Resiblock** Resiecco at The O2 Arena, where similar problems occured, played a key role in the selection process. Resiblock Technicians attended and advised on application and spread rate of Resiblock Resiecco and the one coat application allowed the station to remain open during installation.

mail@resiblock.com

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NEW ROOM

### Expand your mind

Adrian Walker of Sundolitt discusses why specifiers should consider expanded polystyrene as a versatile as well as sustainable material for landscaping applications

eighing only 1 per cent of the weight of traditional fill, expanded polystyrene (EPS) is continuing to prove itself as a modern and innovative civil engineering and construction material for landscaping projects as well as road construction, embankments, 'noise bund' and retaining wall applications. This versatile material's popularity has grown due to the increased drive to find more sustainable fill options for landscaping while also taking into consideration the varied and unstable ground common throughout the UK.

EPS is 98 per cent air, accounting for its light weight, but is also extremely strong under compression, with the manufacturing process having a significant impact on its inherent characteristics. Raw beads are firstly heated with steam causing them to expand. Following storage for maturation, the beads are then fed into a block mould with more steam, causing the bead to expand further and fuse together, forming the rigid block.

EPS does not add any significant weight to the existing ground, even if there is extra load from any structure above. One hundred times less dense than traditional materials, due to its closed cell formation, EPS reduces settlement caused by soil compaction, also meaning that it can be used on weaker sub-soil structures than traditional material. This high strength-toweight ratio of EPS and its lightweight nature makes it ideal for both hard and soft landscaping, ensuring that pressures are reduced on underlying structures and services.

Manufactured in a wide range of densities from 15 kg/m<sup>3</sup> up to 43 kg/m<sup>3</sup> and a range of compressive strengths from 70 kPa to 350 kPa, the versatility of EPS ensures the material's suitability for a wide range of landscaping specifications and applications, according to client requirements.

A great example of soft landscaping was at the prestigious Quarter Mile development in central Edinburgh, where EPS was used to avoid the transfer of load onto an



underground carpark. The landscaping requirements for this project were quite exact and stringent in that the architects required creating a contoured area of grass and trees for an area between the new-build section and the existing Infirmary buildings. This area was on top of the underground car park and traditional fill would have been too heavy to create the mounds and amount of contouring required.

EPS can be used in urban environments where hard landscaping may be required over structures or service tunnels. Different grades can be combined to create the most economic design for the individual specification, with the knowledge that minimal load will be transferred to the structure below, yet with the assurance of a firm foundation that will accept any hard landscaping finish.

EPS can also be used in conjunction with green roof applications, where the EPS is not providing the thermal insulation but is allowing for landscaping on the roof structure, without severe loading



The ability of EPS to create stable ground conditions over an extensive timeframe will decrease the need for potentially costly remedial works caused by settlement implications of traditional fill materials. This could be ideal for a structure where the roof needs to blend in with the surrounding countryside.

Due to the lightweight nature of EPS, significantly more blocks can be transported compared to traditional fill material, ensuring lower carbon emissions and less pollution due to the reduced number of loads. Approximately 80 m<sup>3</sup> of EPS blocks can be loaded onto one single vehicle compared to only 16 m<sup>3</sup> of traditional landfill, reducing the need for excessive transportation. EPS does not require heaving lifting equipment on site and is easy to handle and cut; safety measures such as protective clothing, masks or goggles are not required.

EPS will maintain its performance characteristics over its expected life cycle, with this longevity increased due to its durable nature and immunity to insect, bacterial and fungal attack. It is rot proof making it ideal for direct contact with earth and it does not require indoor storage, nor will it become friable (crumblable) or saturated.

Manufactured in a range of compressive strengths and sizes designed specifically for

individual applications, EPS has proven its use as an innovative and ideal landscaping material for several years. Manufacturers work with architects and landscape designers to ensure the correct grade of EPS is used with layer by layer drawings provided to detail contouring and build-up.

The material's versatility is undeniable, and the environmental qualities of EPS make it a sustainable choice. The ability of EPS to create stable ground conditions over an extensive timeframe will decrease the need for potentially costly remedial works caused by settlement, resulting in a more stable fill material, but with none of the associated issues experienced with alternatives.

Extruded polystyrene (XPS) can also be used as a fill material, and has recently been used at the major redevelopment of Battersea Power Station. Installed to provide temporary parking for delivery trucks supplying this huge scheme, XPS was specified for the project due its load-bearing characteristics yet lightweight nature ensuring undue stress would not be transferred to the existing slab.

Adrian Walker is sales manager at Sundolitt





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