

# building construction design

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February/March 2019

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Cover image: RMIG  
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# Bauder to showcase its sustainability solutions at Futurebuild

Leading 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 stand 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



## Dallmer unveils new shower channels



In response to the growing demand for level-access showers, **Dallmer** has added two more new flush-in-floor 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](http://www.dallmer.com)

## 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](http://www.longfloor.co.uk)

## Sixth bathroom pod contract



**Offsite Solutions** has been awarded a £1.6m 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 £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](mailto:info@offsitesolutions.com)

## Another camera that pushes the boundaries



For building inspection and the prevention of energy loss, a thermal imaging camera is now considered an essential tool and thanks to its continuous development strategy, **FLIR Systems** provides this industry with an exceptional choice of products. Year on year FLIR Systems introduces new infrared features and capabilities that help users do their job quicker and more efficiently and 2019 is no exception. Indeed, Futurebuild 2019 has been confirmed as the UK

launch platform for a new infrared camera and the showcase for the latest technological developments in test and measurement instrumentation.

[www.flir.com](http://www.flir.com)



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## Architect@work opens doors for Latham



James Latham will be exhibiting for the first time at Architect@work UK in London. The two-day event takes place on 30<sup>th</sup> and 31<sup>st</sup> January 2019 at the Truman Brewery in Shoreditch – an area which is home to more architects per square mile than anywhere else in the world.

It will see Lathams, (who will be on stand 51/T1) showcasing a collection of performance doors demonstrating a range of technical features and benefits as well as test certification that are suitable for multiple applications in numerous sectors including healthcare, educational, commercial and residential. Steven Dennard, Group Door Manager, James Latham said: “The range of products we will be showing incorporate the most advanced and innovative door manufacturing processes available in the market. These are highly technical door solutions that have been especially developed with an Architect & Designer audience and the specification market in mind.

[marketing@lathams.co.uk](mailto:marketing@lathams.co.uk)

## 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!”

01270 753000 [www.flowcrete.co.uk](http://www.flowcrete.co.uk)

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## Large Wins for Flowcrete UK

Flowcrete UK has won the Large Industrial Project of the Year and Large Commercial Project of the Year categories at the FeRFA 2018 Best Practise Awards. The Resin Flooring Association (FeRFA) represents major businesses and organisations involved in resin flooring, screeding and surface preparation. Its annual awards event, which this year was held at St Johns Hotel, Solihull, on November 23<sup>rd</sup>, celebrates the best of the resin flooring industry’s achievements from over the past year. Flowcrete UK’s Managing Director, Kevin Potter, said: “We’re so proud and delighted to have been presented with these awards! Winning two categories is a fantastic testament to the hard work and commitment of the Flowcrete UK team as well as the quality of our flooring solutions.” At the awards ceremony Flowcrete UK was first presented with the Large Industrial Project of the Year award, thanks to its work at The Macallan’s stunning new whisky distillery. This was soon followed up by winning the Large Commercial Project of the Year category in recognition of the Menai Science Park’s (M-SParc) Flowcrete UK floor.

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# New staircase impact sound insulation system from Schöck

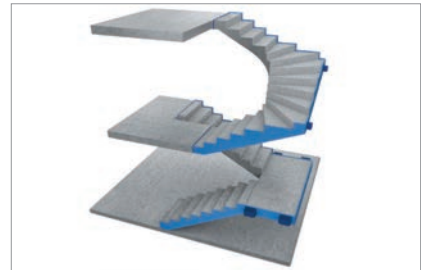
In the UK, Schöck is best known for its market leading Isokorb structural thermal break range (thermal insulation); but in Europe, insulating stairs and landings against impact sound (acoustic insulation) has also been a high priority. This is largely due to the differences in dwelling types. In the UK only 14 per cent of the population have traditionally lived in apartments, whereas the average across the Euro area is 48 per cent and sometimes higher. However things are changing in the UK. Apartment living is



dramatically on the rise, resulting in a marked increase in residential density. And in the interests of noise health protection, existing mandatory soundproofing standards are coming under ever-increasing scrutiny.

As a result, Schöck has developed an integrated impact sound insulation solution for all structural subsections on both straight and winding staircases. Known as Tronsole, it is a system that combines dependable sound insulation with straightforward installation. Providing optimum standard-compliant soundproofing in apartment blocks and multi-use buildings. With conventional solutions, such as an unsecured individual elastomer support under the stairs, any displacement can result in a broken concrete edge due to incorrect support.

This means the risk of dirt and gravel getting into gaps between staircase and floor slab, which can easily reduce acoustic insulation performance by around 10 dB. Schöck Tronsole, by contrast, is a



system that envelopes the entire staircase, totally minimising the risk of acoustic bridges. It consists of seven main product types that can be mixed and matched to form a fully integrated impact soundproof system either on-site, or in the prefabricating plant. It is suitable for emergency exits and complies with the requirements for fire resistance class R90 (subject to appropriate on-site additional reinforcement of the landing).

01865 290 890 [www.schoeck.co.uk](http://www.schoeck.co.uk)

## McAvoy unveils prototype built entirely offsite



The McAvoy Group, one of the UK's leading offsite construction specialists, has unveiled a prototype house at its factory in Lisburn to demonstrate the potential of its new modular housing solution and latest innovations for the residential sector. Designed and

engineered by McAvoy in collaboration with Queen's University Belfast and Todd Architects, the prototype house has been manufactured and fitted out entirely offsite to showcase a number of new innovations in offsite housing. It is now available for viewing by developers and housing providers at the Group's Lisburn site.

028 8774 0372 [www.mcavoygroup.com/housing](http://www.mcavoygroup.com/housing)

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# SE Controls helps protect passengers at the world's longest sea bridge terminal

The passenger clearance building (PCB) at the world's longest combined sea bridge and tunnel is using smoke vents and failsafe linear actuators from SE Controls Asia to help protect passengers and officials by ensuring escape routes are kept clear of smoke should a fire occur in the 90,000 sq.mtr structure.

Designed by Aedas (Hong Kong) in collaboration with Rogers Stirk Harbour & Partners (RSHP) and opened in late 2018, the Hong Kong-Zhuhai-Macao Bridge (HZMB) is 34 miles (55 km) long and spans two channels of the Pearl River Delta to join Macao and Hong Kong with mainland China at Zhuhai in its southern Guangdong province.

In addition to the three cable stayed bridges, the nine year long building project also included the construction of a 4 mile (7 km) sub-sea tunnel and four artificial islands, as well as the two-storey PCB, which houses retail units, food and beverage outlets visitor centre, as well as the ground floor arrival hall and the first floor departure hall.

The PCB is part of the port area, which is constructed on an artificial island of around 150 hectares that has been reclaimed from open waters while the terminal's undulating modular roof design and glazed curtain walled structure allows plenty of natural light and fresh air to enter the building.



Image by permission of HZMB

As part of the wide range of sustainable construction methods and energy efficient technologies used in the building, it is also capable of generating much of its own energy and water.

The smoke control system is equally advanced and incorporates almost 2,000 smoke vents into the design. These are located in three individual zones to give greater control over the ventilations system, which enables escape routes to be kept free of smoke

if a fire should occur.

Every smoke vent in the PCB is operated by two SE Controls SEPO pneumatic gas / spring failsafe actuators, which are equipped with a locking catch. In the event of a fire the system automatically opens the vents to release smoke and heat from the building, but is also designed to operate even if a failure should occur in either the mains power or pneumatic system.

If either were to fail, the actuators automatically default to the open position and lock the smoke vent fully open until the situation has been remedied, which complies with the requirements of the Hong Kong Fire Service Department.

Alex Luk, SE Controls Asia Pacific Director, has been involved in a wide range successful and high profile projects throughout Hong Kong and China. He explained: "The sheer scale of the HZMB project is astonishing and required new technological solutions to be found in many areas during its planning design and construction."

He added: "The unique design, layout and structure of the Passenger Clearing Building enabled us to engineer the complete system and by using different smoke control technologies, the system is fully integrated life safety solution dedicated to this particular build."

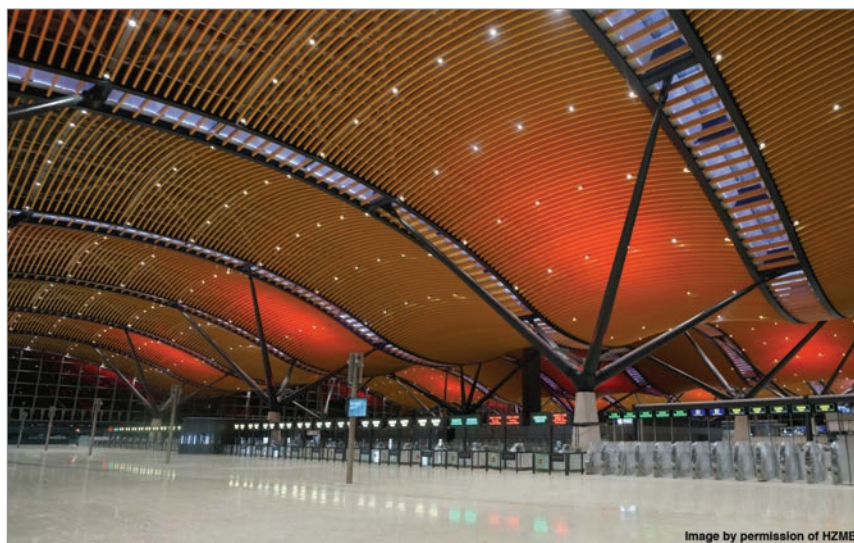


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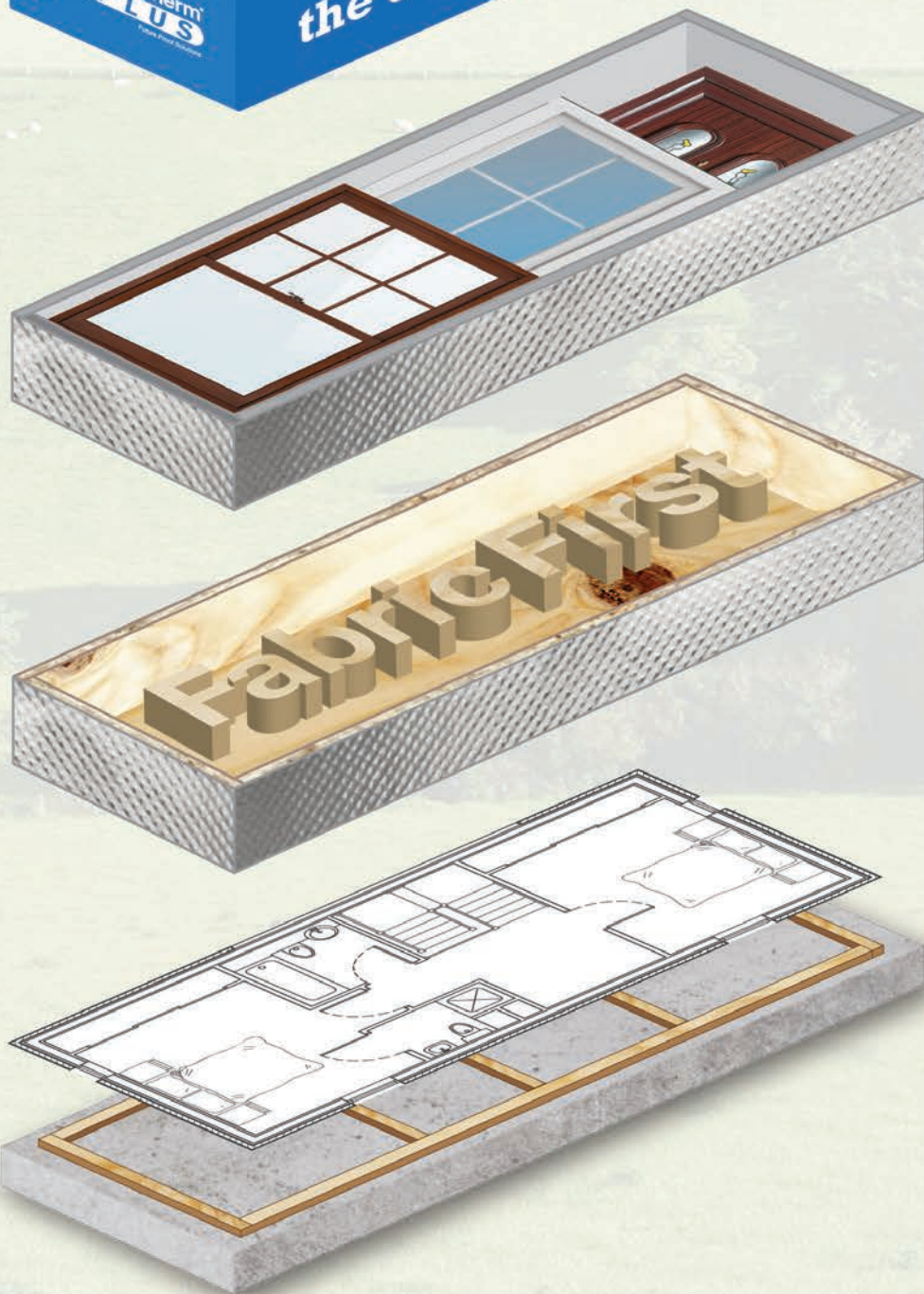
#### THERMAL PERFORMANCE



#### ENERGY EFFICIENCY



#### SPEED OF CONSTRUCTION







# Striving for continuous industry improvements

Throughout 2018 DELTA MEMBRANE SYSTEMS LIMITED invested in technologies which continues to lead the field in innovations within the waterproofing sector. Our range of Waterproofing, Damp Proofing and Ground Gas Protection Solutions offer Specifiers, Architects, Constructors, Civil Engineers and home owners alike a one stop-shop for all their Structural Waterproofing needs.

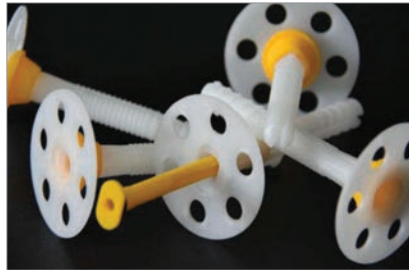
## Flexi Dri Plus Plug

Delta Membrane Systems Limited, is pleased to announce that it has been successful in its application for a new patent in respect of its Flexi Dri Plus Plug, a new achievement that strengthens the company's portfolio.

Delta has been awarded patent number 2698550 by the European Patent Office for innovating the Flexi Dri Plus Plug.

## What is a Flexi Dri Plus Plug?

Flexi Dri Plus Plugs are a handy hammer-in fixings which contain an expandable



waterproof seal for use with cavity drain membranes for use on multiple substrates. The Flexi Dri Plus Plug offers a bellows action, meaning it can expand without splitting (as was the case with the older-style cob plug). This is unique to Delta because it can be used BELOW GROUND.

## Newly designed website

We were delighted to launch our newly designed website. Our goal was to create a user-friendly browsing experience for our trusted and valued customers and business partners alike.



Our fantastic new mobile friendly website will offer an easier, fresh approach understanding structural waterproofing.

Advance your product knowledge with access to our resource section with guides, technical drawings, independent test data and approvals.

Visit our Case studies page for a useful understanding of how different products within projects fit together and how different elements work in creating a robust solution.

01992 523 523

[www.deltamembranes.com](http://www.deltamembranes.com)

## Sounding out multi-purpose venues



The Folkehuset Absalon in Copenhagen is an excellent example of the growing trend towards multi-use and multi-purpose cultural social centres. Designed to promote community cohesion with a flexible space to accommodate a variety of activities and services, multi-purpose venues are used to support everything from sport, leisure and learning through to childcare, heritage, culture, elderly needs, tourism, pop-up shops and events. This award-winning project designed by Arcgency architects has taken a former Church with its high ceilings and transformed it into a flexible community centre with 'living-room' feel. Trolldtekt panels are frequently specified for these types of projects as a key way to control acoustics. If acoustic absorption is wrong, discomfort and irritation will result from the reverberations. If they are designed well, the participant's interest will increase. The benefits of 100 per cent Trolldtekt natural wood wool panels include high sound absorption, high durability, natural breathability, low cost life cycle performance and sustainability as documented by Cradle to Cradle certification at silver level.

[www.trolldtekt.co.uk](http://www.trolldtekt.co.uk)



## P C Henderson expands its range of sliding barn door style hardware

P C Henderson has introduced a number of new additions to its range of Rustic sliding barn door hardware – including a new top mounted version and a new 'antique rust effect' finish. The new Rustic Top Mount offers a stylish, contemporary twist on the company's classic Rustic 80 system with its matt black hangers being mounted to the top of the door. The company has also introduced a new 'antique rust effect' finish to its classic Rustic 80 system to further complement the range. The company has also recently launched its new Rustic Soft Stop system – an extremely easy to fit accessory which can be installed onto new or existing applications. The sophisticated system catches the door in its final moments of travel and pulls it gently into its final position, preventing slamming and adding to the overall longevity of the product. Ideal for barn and warehouse conversions, period properties or simply for a distinctive feature in the home, the system caters for interior wooden doors weighing up to 80kg and is available in 2000mm and 3000mm track lengths. Tested to over 100,000 cycles, the system guarantees a smooth and quiet system which will withstand the test of time. The classic Rustic 80 system is available in matt black, stainless steel or the newly added antique rust effect and the Rustic Top Mount available in matt black.

[sales@pchenderson.com](mailto:sales@pchenderson.com)



# 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 species 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.

As if 80 pages of door models were not enough, the Vicaima 2019 Interior Door Selector goes one step further, offering a wide assortment of additional modifications. Vicaima



Vicaima Dekordor HD Colours in medical application.

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.

Download a copy of the 2019 Interior Door Selector today by visiting the Vicaima website.

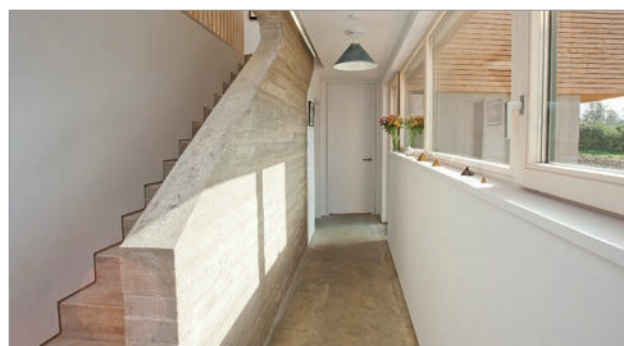
01793 532333 [www.vicaima.com](http://www.vicaima.com)



## 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](http://www.relcross.co.uk)



## 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](http://www.renderplas.co.uk)





# Hauraton beat the competition

The Community Sports Complex in Doncaster has been imaginatively planned and built to the highest architectural standards. The development integrates sport and community facilities in a spectacular parkland setting. Doncaster Council is confident it will raise the town's profile locally, regionally and nationally and help to significantly increase the numbers of local people watching and taking part in sport and other community activities.

At the heart of the complex is a 15,100 capacity community stadium that incorporates an 800 square meter supporters bar, plus a 350 seat restaurant, a gymnasium and martial arts centre. The stadium is complemented by a separate floodlit six lane athletics track with two eight lane straights and its own covered 500 seat mini-stand. Other facilities include two floodlit reinforced and grass sports fields, 11 floodlit all weather pitches for five and seven a-side team games, a 10 acre public park and a 1000 space car park.

The location of the Complex has meant particular attention was paid to rainwater



run-off and pipe depth issues in general. WSP Consulting Engineers were appointed for this part of the project. In discussion with main contractors Carillion, it was decided to use Hauraton injection moulded polypropylene RECYFIX® SUPER drainage channels around the perimeter of the stadium. 640 metres of channel was eventually specified, plus a further 340 metres of pitch-side drainage inside the stadium itself. RECYFIX® SUPER was chosen for being strong yet light enough to comply with manual lifting regulations. Subsequently,

250 metres of same channel was also used to drain walkways and around the five-a-side pitches. Hauraton also supplied the components for the athletic track water jump and the long jump sand trap.

Being such a large environmentally sensitive area, the car park drainage system was a particularly tricky problem. Colin Taff, Hauraton applications engineer explains, "The larger sizes of Recyfix® Super channel were initially considered for the car park. However because of its position and relation to the nearby lake it was essential the depth of the system was kept to a minimum. It was realised there could only be one outlet at the end of each run, located to one side of the car park. Using RECYFIX® SUPER would have entail installing too many trash boxes and deep pipe drains therefore a high capacity channel was the only practical solution. After further consideration our newly introduced RECYFIX® HICAP® system was found to answer the problem perfectly".

01582 501380 [www.hauraton.co.uk](http://www.hauraton.co.uk)

## Offsite solutions launch apprenticeship scheme



Offsite Solutions, one of the UK's leading bathroom pod manufacturers, has launched an apprenticeship scheme to attract new talent into offsite manufacturing. Working with its training partner Weston College, the company is looking to employ up to six apprentices who

will train to be plumbers, electricians and bathroom fitters at its bathroom pod factory in Highbridge, Somerset. The company will also be giving up to 10 existing production staff the opportunity to join a new apprenticeship scheme for team leadership and to train as electricians and plumbers. This will give them additional skills and valuable career progression.

[www.offsitesolutions.com](http://www.offsitesolutions.com)

## OMNIE UFH warms Cotswold homes



A development of six new five-bedroom detached properties, whose construction features the area's distinctive natural Cotswold Limestone, is making full use of the benefits to the ClipPlate system and other products from the range of OMNIE Limited. ClipPlate is amongst the most popular options to OMNIE's LayFast brands: being compact and suitable for in-screed applications. Pipe runs are simply pressed into the profiles without the need for joints and resist being disturbed as the screed is laid. OMNIE offers a full range of solutions for rapid completion and restricted construction depths, as well as its TileOver range.

01392 363605 [www.omnie.co.uk](http://www.omnie.co.uk)

## Mcavoy to build new hospital wing



The McAvoy Group has been awarded its largest healthcare project to date – a £15m contract for the offsite construction of a new wing at Northumbria Specialist Emergency Care Hospital in Cramlington.

The new wing is being constructed by McAvoy using an advanced offsite solution to reduce the build programme by half to less than 12 months. This will help Northumbria Healthcare Trust to meet the rising demand for patient services in the region and maintain its position as a world leader in emergency medicine. For further information visit [www.mcavoygroup.com/healthcare](http://www.mcavoygroup.com/healthcare).

[www.mcavoygroup.com](http://www.mcavoygroup.com)

## Continued growth for Exlabesa's ECW 50



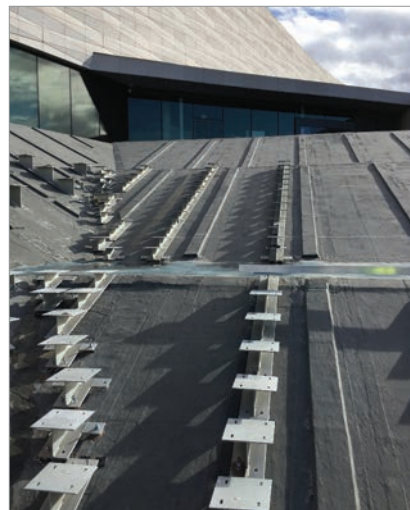
Exlabesa Building Systems' ECW 50 curtain walling system continues to deliver on all levels with a 20 per cent year of year growth being achieved. The ECW 50 curtain walling system has all the hallmarks of an intelligently designed system that has been designed to add value to fabricators' and installers' businesses. The system is fabricated using high quality European components and is tested to CWCT and UNE

EN 13830:2016 standards for weather resistance, safety in use, energy efficiency and heat retention.

[sales@exlabesa.co.uk](mailto:sales@exlabesa.co.uk)



# Kemper System on display at Museum of Liverpool



**K**emper System has helped to refurbish the Museum of Liverpool, completing a complex waterproofing project, which made the final of the Liquid Roofing and Waterproofing Association (LRWA) Awards 2018.

Positioned over the Leeds Liverpool canal link, the museum required remedial works, which involved removing the original terrace steps and the failed single ply waterproofing of two separate terraces.

Once the original steps and terrace

structure had been removed, Kemper System's solvent-free Kemperol 2K-PUR liquid waterproofing system was used by specialist contractors K Pendlebury & Sons to waterproof the original concrete slab underneath.

A complex steel support system was then bolted through the new waterproofed concrete slab. Further waterproofing was required comprising very specific detailing, including 672m of galvanised steel stepped beams with approximately 200 small

individual supports and more than 3,600 individual bolt heads securing the steel to the slab.

Neilan Symondson from K Pendlebury said: "This was an extremely intricate job which had to be carried out in challenging weather conditions as the building is located on the waterfront. The Kemperol 2K-PUR was applied on slopes ranging from 20 to 35 degrees with very complex detailing.

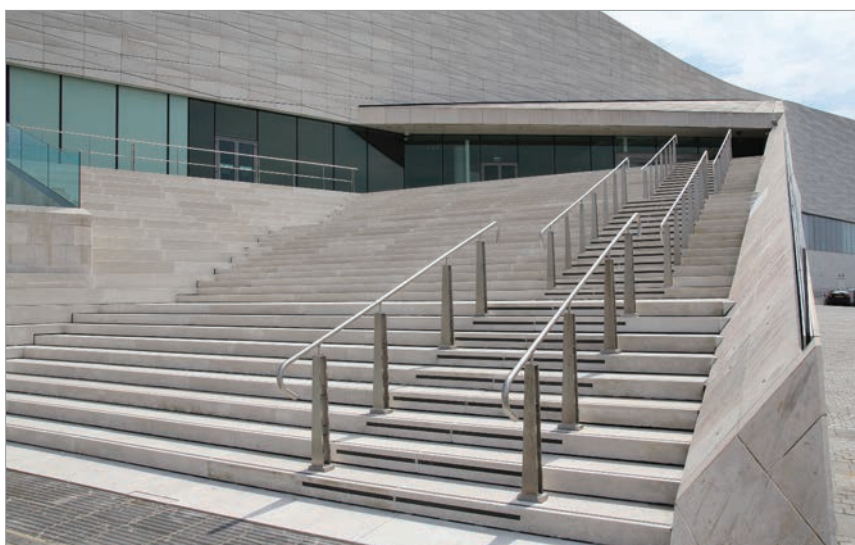
"As Kemperol 2K-PUR is applied wet-on-wet this made it much easier for us to work around the extensive structural detailing and awkward shapes, ensuring they were waterproofed effectively.

"As it's odourless, this also assured the client that anyone visiting or working at the museum during the works wouldn't be affected by any disruptive odours."

Stuart Hicks from Kemper System added: "This was a complex, high-profile waterproofing project that had to meet a number of strict requirements as recognised by the independent judges of the LRWA awards.

"Crucially, the application process for Kemperol 2K-PUR will ensure the waterproofing performs to the highest standards to keep the museum watertight for many years to come."

[enquiries@kempersystem.co.uk](mailto:enquiries@kempersystem.co.uk)  
[www.kempersystem.co.uk](http://www.kempersystem.co.uk)





# 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 much-needed 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](http://uk.abetlaminati.com)

# An artist's vision is brought to life

The auditorium for the Humanities Division of Uppsala University (Humanistiska Teatern) is an innovative and unique building designed in the shape of a horseshoe. Unlike traditional lecture halls, the horseshoe-shaped design of this unique building allows all in the auditorium to see and hear each other, encouraging both speakers and attendees to participate in lectures and debates. This unusual building is encapsulated in a spectacular facade created from over 300

perforated aluminium sheets. The vision of artist Ann Lislegaard has been brought to life by using RMIG ImagePerf technology to transfer her intricate design to the metal sheets.

White Arkitekter has been awarded the prestigious Swedish architectural prize PLÅT18, in recognition of the innovative use of perforated metal.

01925 839610  
[info.uk@rmig.com](mailto:info.uk@rmig.com) [www.city-emotion.com](http://www.city-emotion.com)



## PROJECT DETAILS

**Humanistiska Teatern,  
Uppsala University**

**University campus auditorium,  
Sweden**

Architects: White Arkitekter  
Artist: Ann Lislegaard

## Technical Characteristics

Raw material: Aluminium  
EN AW-5754  
Pattern: RMIG ImagePerf  
Thickness: 3.0 mm  
Finishing operations: Bending  
Surface treatment:  
Powder coating



# Hauraton drainage channels used at Maritime Transport Headquarters

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

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

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



edges which house the ductile iron gratings.

Complying with the requirements of EN 1433, the PP is given its UV resistance by adding just sufficient carbon black as a stabiliser so that the structural strength of the

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

01582 501380 [www.hauraton.co.uk](http://www.hauraton.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](mailto:salesenquiry@veka.com)



## Extra security with Garador's SBD garage doors

With additional security features, **Garador's** Secured by Design (SBD) up & over garage doors give peace of mind to homeowners with valuables stored inside their garage.

Constructed from high grade galvanised steel, these Secured by Design accredited garage doors have extra security features such as eight back braces along the back of the door, instead of two. They also have a reinforced steel plate added to the lock body, to prevent attacks against the locking mechanism. Additional steel plates have been added to each corner to protect the bottom locking points. Furthermore, an anti-snap cylinder with a sacrificial front prevents entry into the garage even after an attack.

Available in three designs: Carlton, Horizon and Salisbury, as well as 18 standard colour options, these doors are ideal for those seeking extra security for their garage door. For more information, please visit the Garador website or you can give them a call.

01935 443794 [www.garador.co.uk](http://www.garador.co.uk)



# SPSenvirowall's Journey to BOPAS Accreditation



**S**PSenvirowall, 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.

01535 661633 [www.spsenvirowall.co.uk](http://www.spsenvirowall.co.uk)





# Daylighting takes off at Heathrow

Curtainwall 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 ASAD 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.

The exterior face is colour stable and includes a UV resistant, self-cleaning surface. This means that normal rainfall helps to keep the surface free of dust and dirt while at the same time retaining its original colour during the weathering process.

01233 501 504

[www.structura-uk.com/kalwall](http://www.structura-uk.com/kalwall)



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## Freefoam launch new vinyl flooring

**Freefoam Building Products** are delighted to announce the launch of a Luxury Vinyl Composite Flooring system, Klicker Flooring. The newest generation of high quality resilient luxury vinyl flooring manufactured with three layers to create a solid long lasting 5.85mm board resistant to abrasion and impact. With a base layer of 1.5mm pre-attached IXPE underlay, a middle layer of rigid 3.8mm Bamboo PVC Composite and top layer of protected vinyl Klicker flooring is a product designed to withstand the rigors of today's homes and commercial properties. Designed with installers in mind Klicker flooring is quick, easy and straightforward to fit. Expertly engineered with a Valinge style fitting system to click and lock both short and long sides of boards or tiles - meaning no glue is required. Incredibly flexible for refurbishment purposes, flooring can be fitted over existing concrete, ceramic or wood flooring. Suitable for use in a wide variety of situations Klicker flooring comes with stability built in. Incorporating a top vinyl layer to give an extremely stable product with high resistance to drop loads, static loads, temperature fluctuation and guaranteed to be 100 per cent waterproof. Available in a choice of 610mm x 305mm tiles or 1200mm x 181mm planks Klicker flooring comes in a wide variety of finishes including Onyx, Slate, Concrete and Wood effect.

01604 591110 [www.freefoam.com](http://www.freefoam.com)

## Flush Tilt and Turn windows solution



**Profile 22** Flush Tilt and Turn windows were chosen for new residential and retail blocks and a community facility hub in Kirkholt, Rochdale. The project's architects had specified the Flush Tilt and Turn Window for the project because of its ability to deliver aluminium aesthetics but with a better price and performance. The Flush Tilt and Turn Window has a sash that is neatly positioned inside the frame of the window to create an elegant and sleek 'flush' appearance. It has a maximum opening size of 1450 x 2300mm and offers exceptional performance because it has an air permeability value of 600Pa, a water tightness value of 600 Pa and a wind resistance value of 2400Pa.

[info@profile22.co.uk](mailto:info@profile22.co.uk)

## 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](http://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](http://www.tremco-illbruck.com)

## Latest news, views and more



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