

www.fireglassuk.com

## Highly successful Schöck thermal break workshop at the IStructE

Professor Maxwell Hutchinson, President of the Royal Institute of British Architects, radio broadcaster and television presenter, was on fine form as an insightful and entertaining keynote speaker for the 'Designing Effective Thermal Breaks' workshop at the Institution of Structural Engineers in London last month. The event, which was organised and hosted in the main IStructE theatre by international thermal break specialists Schöck, was extremely well received by a large audience of predominantly structural engineers, along with architects and contractors, from over 30 different companies.

As Professor Hutchinson, still an active architect with his own practice, stressed during his opening session: "the topic of thermal bridging is now becoming more and more prevalent and it has never been more essential to take the time to understand how to calculate and design effective structural thermal breaks".

The various sessions covered a number of



specialist subjects, including how to achieve optimum thermal break solutions at cantilever connections; deflection calculation using market software and services; and an understanding of the latest Schöck software.

There was also a demonstration of other helpful Finite Element Method software; and an overview of additional tools and software currently available on the market.

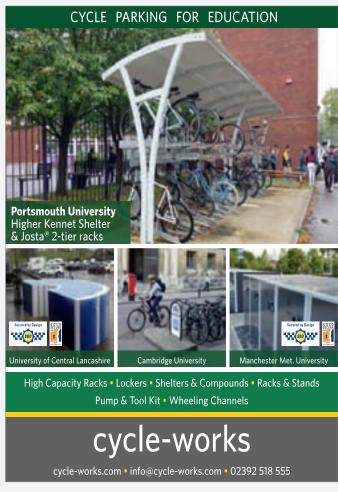
UK Managing Director for Schöck Ltd,

Chris Willett (right of picture during his introduction to Professor Hutchinson seated) comments: "We were delighted by the numbers and general audience response to the workshop. It is an ideal way to get across some quite complex issues and we will be holding more of this type of event next year, including an architect focussed workshop".

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# Smoke ventilation maintenance – the hot issue for HAs and LAs



By Simon North – Service and Maintenance Division Manager with SE Controls

ngoing budgetary pressures and a lack of familiarity by local authorities and housing associations about the strict regulations that govern the maintenance of smoke ventilation systems, has given rise to a worrying trend that will leave them exposed to prosecution for non-compliance unless it is addressed.

In an effort to integrate fire systems maintenance and save money in the process, many HAs and LAs are 'bundling' smoke ventilation maintenance into a multi-disciplined 'fire service' contract, where the contractor is responsible for all fire and smoke system maintenance, often across several locations and building types.

However, under the scope of various British Standards, including BS9991, BS9999 and BS7346 Part 8, together with Building Regulations ADB; the European EN12101 standard and best practice guidance documents from the Smoke Control Association, there

are specific maintenance requirements and procedures that must be followed.

The real 'teeth' behind this complex and vital legislative framework is the Regulatory Reform Order (RRO). This gives fire service officers an extensive range of enforcement powers in situations where smoke control systems have been inadequately maintained under the demands of the various pieces of legislation.

The penalties for non-compliance can be significant, including the prosecution of companies, building owners, landlords and individuals responsible for building maintenance, resulting in punitive fines as well as custodial sentences.

At SE Controls, we have already been directly involved in a significant number of projects to correct problems caused where general fire contractors have found themselves out of their depth and unable to maintain the smoke control system within the demands of the regulations.

In one instance the maintenance company had

failed to notice a smoke vent that had been 'nailed shut' rendering it in operable and dangerous, while another recent case or poor maintenance from an inexperienced contractor resulted in an automatic smoke vent falling out of the building. A major internal review followed, together with the involvement of the HSE and prosecutions are now being considered.

On a number of other remedial projects, fire officers or building control have already imposed close notices on the buildings, resulting in disruption, the removal of tenants and large unbudgeted costs for the housing association. Clearly, these could have been avoided if the specialised smoke ventilation maintenance contract was kept separate and handled by a specialist company with the necessary skills, experience and expertise.

01543 443060 www.secontrols.com

#### From concept to completion



Brexit has pushed the UK Government into new and uncharted territory, causing political and economic instability, and until Article 50 is triggered the housebuilding sector may stay in limbo. On the other hand, a record half a million homes in England now have planning permission granted, so for many housebuilders it's business as usual. As a leading PVC-U & PVC-UE building product manufacturer Freefoam Building Products are committed to providing help and support with a comprehensive package of specification and supply to ensure projects run smoothly from concept to completion. Freefoam manufactures and supplies the ultimate fit and forget low maintenance PVC-U & PVC-UE product range. From fascia and soffit guaranteed to last for 50 years to rainwater systems designed to give leak free performance, Freefoam products offer life-long benefits and peace of mind for housebuilders and clients alike. With a CAD Library, technical accreditation and compliance certification, Freefoam provides products that are 'specification ready' – designed and tested to meet exacting standards every time.

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#### Don't set your watch... watch it set!



Introducing the new smart mortar adhesives from Simpson Strong-Tie – the first chemical mortar to change colour as it cures. There's no need to guess when to start loading studs in masonry or concrete, because our latest fast curing range of mortar resins change colour (from blue to grey) as they set. So you'll know at a glance. Simpson Strong-Tie Sales Director Jon Head says, "We're pleased to announce our innovative range of mortar resins, which offer some great features to make the job simpler for builders. Our general purpose Poly-GP is ideal for solid or hollow block masonry, and our AT-HP high performance resin is approved for use in threaded rod and rebar concrete. Jon continues "Both mortars cure in as little as 20 minutes, and being styrene free, they doesn't give off any nasty odour. What's more each cartridge comes with two mixing nozzles – another breath of fresh air!" A full range of tools and accessories is also available – including threaded rods, pumps, brushes and applicator guns. For more information visit the website.

01827 155600 www.strongtie.co.uk

# Latham's range of FR products is second to none



James Latham offers one of the biggest ranges of high performance, fire retardant panel and timber products on the market, all directly available from stock through its nationwide network of depots.

Fire damage in buildings can be devastating and as a result, flame retardant products are being specified in construction to help reduce this impact.

Latham's extensive collection of fire retardant products includes; CE marked Birch Plywood, Timber Cladding, Chipboard, MDF, MF/MDF, OSB, and Decorative Products for interiors including Valchromat, MFC, HI-MACS solid surface, Laminate and Fire door blanks.

All products are certified and independently tested to Euroclass B or Euroclass C and copies of these reports and the Field of Application are available to download from the website.

These fire tests are carried out for the manufacturer by an approved third party



and measure readings such as; rate of fire propagation, lateral fire spread, total heat release and smoke production.

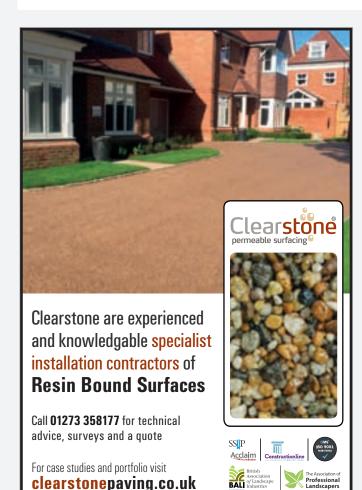
Andrew Wright, Director of Lathams Limited said, "The number of projects where Fire Retardant products are being specified is increasing. When the correct fire retardant product is specified and installed in accordance with the Field of Application, they can provide the first line of defence in a



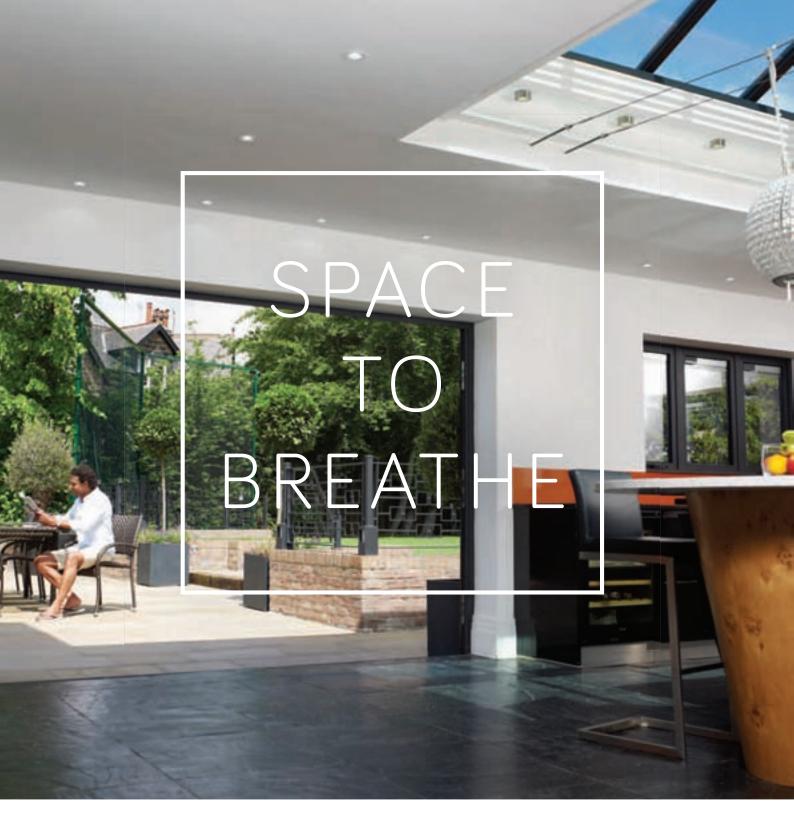
fire, helping to protect lives in both commercial and residential properties."

Mr Wright added, "We are continually reviewing our range to ensure we have the most up-to-date offering available for all our customers and our team of knowledgeable and experienced staff can provide information and samples for all these products."

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regulations. Most pumping stations are held in-stock for next day delivery. For more information about JT Pumps and to see the full range of products, please call the company directly or visit the website.

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The Selfbuilder & Homemaker website is an online provider of past and present products and news items for selfbuilders.

Regularly updated with hundreds of press releases, sbhonline.co.uk is a one-stop source for all the latest self build information.

It is also a gateway to our other online assets, from our archives of digital issues and newsletters to our social media outlet on Twitter.



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#### Air tight timber frames



Introducing the latest innovation from leading construction connector manufacturer Simpson Strong-Tie; the timber frame panel closer, or TFPC. This useful connector provides the quickest and most accurate way of drawing together timber frame panels and eliminating gaps – and that's important, because those gaps contribute to air leakage and insulation issues. The TFPC features an angled plate which guides a structural screw (included) into the adjacent timber frame panels at precisely the angle necessary to pull them together to form an air tight bond, with the added benefit that it won't damage the substrate. The special design of the screw cinches the panels together and gives 3kN of shear capacity – keeping them that way. Simpson Strong-Tie Timber Frame expert Fraser Pilkington explains: "It seems such a simple solution, but we put a great deal of thought into making it easy to use, with no room for error. The combination of the guide plate and screw achieves exactly that." The TPFC is supplied as a kit, which includes the guide plate, structural screw and two square twist nails. Search TFPC for a demonstration video as well as performance data and installation advice.

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#### Vortice selected for winning project



Voted the UK's best regeneration project in the National Housebuilder Awards, Branston Leas by St Modwen Homes, has selected Vortice system 1 centrifugal Quadro fans for its two, three, four and five bedroom properties in Burton upon Trent. Technical Marketing Manager Jennifer Quinn said, "We are delighted to be working alongside local electrical contractor PCE Installations of Burton Upon Trent

in supplying our range of Quadro fans to this prestigious local project. These energy efficient ventilation fans are stylishly designed and fit beautifully into the interior decor at Branston Leas."

01283 492949 www.vortice.ltd.uk

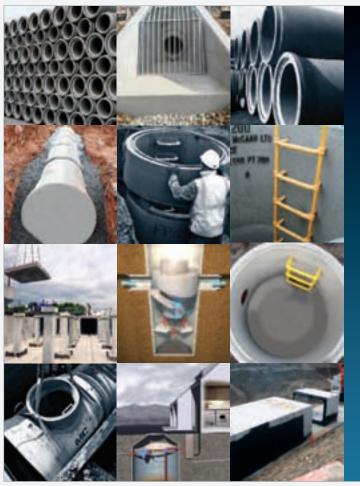
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Now that autumn is here, keep warm, stylish and comfortable while being protected at work with **U-Power's** prestigious, creative and original safety clothing. Performance is a brand-new line from U-Power. The range includes the Quick soft shell unlined jacket, which boasts a multitude of up-to-the-minute extras such as an internal multimedia

pocket with Free Sound technology, a detachable hood engineered with a reflective rain visor, reflective panels for optimum winter visibility, and a breathable keep-dry membrane that protects from wind and water in autumnal conditions.





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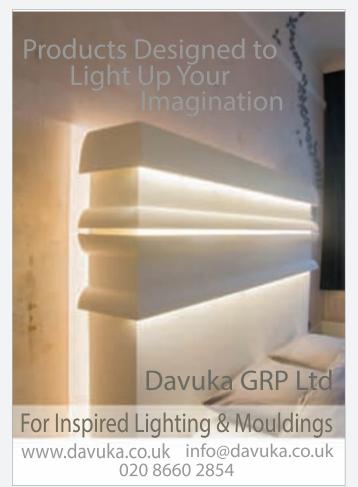
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# Help create a stand out property with Cedral

oth self builders and renovators can make their dream home a reality with the help of Marley Eternit's Cedral fibre cement cladding, creating a long lasting and individual property. Cedral's range of colours and finishes allows homeowners to successfully combine design with practicality through the product's durability and low maintenance properties.

Reflecting the visual appeal of timber, Cedral is an alternative to more traditional weatherboard materials. Its resistance to rot and external elements including wind, rain and sunlight makes it an attractive choice for both self build and renovation projects.

Cedral Click is the UK's first and only flush fitting, fibre cement, tongue and groove weatherboard product. It creates a contemporary flat finish to the exterior of a property, showcasing a modern look.

Cedral Lap is installed in a clapboard effect with the fibre cement boards overlapping to reflect a more traditional exterior style.



A recent example of where Cedral Click has been specified to help create a standout home is a self build project located in Worcester.

The new property of approximately  $257\text{m}^2$  has been built within the grounds of a home in Hanley Castle. The two storey five-bedroom house benefits from the best of both worlds with modern interiors and exteriors to give a classic yet contemporary look.

Cedral Click was specified by David Bull Architects to produce an exterior design that was not only aesthetically pleasing, but ensured that the owners had a property that required minimal maintenance.

David Bull, Principal at David Bull Architects, said: "The landowner had been keen to build on the plot for a number of years, and the landowner's daughter took the build project on once planning permission had been secured.

"One key desire the client had when we were appointed for the project was to ensure the property had minimal upkeep, and to source products that would support this. Cedral Click was the perfect solution due to its low maintenance properties."

Over 120m<sup>2</sup> of Cedral Click was used in grey and fitted in a horizontal style to create a design that was not only cohesive and complementing to the main house, but also in keeping with the surrounding locality. Cedral Click was used on the first floor of the property, with the ground floor maintaining a traditional brick exterior.

Cedral Click is an external fibre cement weatherboard cladding material that offers





installers the flexibility to implement a unique design with a life expectancy of at least 50 years, making it an attractive and durable alternative to other cladding materials.

David added: "Cedral Click played a key role in the property's aesthetic as the owner wanted to ensure the exterior had a unified appearance. To help achieve this, other materials such as the rafter ends were colour matched to the Cedral Click, resulting in a smart and elegant finish.

"We've had a great working relationship with Marley Eternit, and the team has even come out to site to train our contractors on how to fit the product, which is invaluable for projects now and in the future. I'm delighted with the finished result, and I know the homeowner is too."

For more information on Cedral, please visit the company website.



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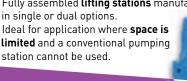
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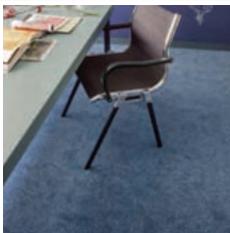




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# FASERFIX® SUPER channel runs drain quayside at Royal Portbury Dock, Port of Bristol

The Port of Bristol is a major deep water port with the harbour and its operations designed to routinely accept large cargo Capesize vessels of up to 130,000 DWT (Dead Weight Tonnage). With over £330m invested by First Corporate Shipping Limited in the dock estate in recent years the Port is now recognised as being one of the most productive and technically advanced in Europe.

578 metres of Hauraton FASERFIX® SUPER 150, channels have been installed along the redeveloped quayside and container handling area at the Royal Portbury Dock, Port of Bristol.

Cat Jones, Hauraton's South West Area Projects Manager outlines the features and benefits of FASERFIX® SUPER channels that made them ideal for the Royal Portbury Dock project: "Hauraton have for the last 50 years. been at the forefront of manufacturing robust Fibre Reinforced Concrete (FRC) surface



water drainage systems that are today distributed and installed around the world in some of the harshest environments. The FRC perfected by the company in the mid 70's allows our FASERFIX® channels and trash boxes to have much thinner walls yet are very much stronger when compared with similar non-reinforced concrete products. A standard feature of FASERFIX® SUPER channels are galvanised steel pressings securely moulded on to the top edges of the channel during



production, this detail allied with the Class F900 ductile iron gratings supplied for the Portbury Dock project, provides exceptional wear resistance and increased load bearing capability. Unlike some other well known makes, our FASERFIX® components are so strong, even prior to installation they are able to endure the rigours of site work and then the twisting wheels of container handling vehicles' once installed".

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# Window security – a clear solution

#### By Martin Oates – Commercial Director with SE Controls

indow security is a key design requirement with all market leading systems tested to the PAS 24 standard to meet the demands of the Secure By Design (SBD) initiative and Building Regulations Approved Document Q (ADQ).

Automated windows that are utilised for ventilation strategies will also need to comply to the standard, which requires the actuators to resist 3000N of negative force when the window is closed. This is becoming commonplace in applications such as school refurbishment where façade automation remains a popular and cost effective solution of providing improved ventilation performance over manually operated windows.

The SECO N 24 25 twin actuator from SE Controls has successfully passed the PAS 24 test and in addition to presenting physical resistance to intruders, it also provides a signal to the controller, should the window fail to close fully, to maintain the integrity of the security system, as requested by the SBD schools standard. Two locking points in one neat enclosure with programmable gasket relief optimise weather performance and security to meet BS 6375 parts one, two and three in addition to the PAS 24 test.

Bespoke fixing brackets and reinforcement to the window is often required to provide sufficient strength for the fixing, which is usually the weakest point of resistance, as the actuator provides two x 4000N of resistance to forced opening.

The ability to manufacture bespoke body lengths allows SE Controls to locate the locking points on different size windows exactly as tested, relative to the corners, to maintain consistency of performance and compliance. Test conducted with an actuator located at the centre of a vent will either not pass the test or can only be utilised for different widths.

Similar to EN12101-2, the fabrication and installation solution requires a process that is



audited by an independent notified body and must be re-tested annually.

If you have requirements for SBD or ADQ certified automated windows, please contact the SE Controls team for further information.

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# EGGER helps Wyder reach new heights!

E GGER UK's new OSB HDX 30mm load-bearing panels have been used by Wyder Engineered Timber Systems Ltd as part of a £250,000 expansion to its manufacturing facility near Preston in Lancashire.

Wyder, which celebrates its 10th anniversary next year, specialises in the design, manufacture and supply of I Joist Flooring and engineered wood products to the UK construction industry.

The company has expanded its production facilities on-site by creating a 280sq.m mezzanine level using EGGER OSB HDX boards to house modern, spacious offices for its growing workforce, new meeting rooms, catering and washroom facilities.

EGGER UK specialises in the design and manufacture of structural flooring boards for use in both residential and commercial build projects throughout the UK and Ireland.

The high cost of moving premises is leading many businesses to look at installing mezzanine floors as a way of utilising space.

Produced using a special recipe, EGGER



OSB HDX is a game changer for those involved in mezzanine flooring projects. The new 30mm structural flooring board is ideal for use in industrial, commercial and warehouse flooring applications — being wider, lighter and stronger than conventional 38mm boards, as well as having higher load points and UDLs.

EGGER OSB HDX is a 2400mm x 675mm board with a tongue and groove on the two long edges. Against a typical 38mm chipboard equivalent with a 600mm width, the user gets just over 11 per cent more coverage per panel. Despite this extra width, it is around 20 per cent lighter than 38mm

chipboard making it easier to manoeuvre and quicker to fit. The low swelling properties of OSB HDX means the board is less likely to pick up moisture that can lead to uneven floors, which is another added benefit to the installer.

Wyder Engineered Timber Systems currently employs 33 permanent staff at its Preston depot. It has grown steadily since 2008, with a strong customer base in Lancashire, Merseyside and Greater Manchester, serving major national housebuilders Bellway, Morris, Keepmoat and Elan Homes. It also supplies regular clients as far afield as London and Glasgow.

The company focuses on and specialises in the design and supply of structural engineered wood products and the manufacture of floor, wall and roof panels and creating bespoke solutions for the construction industry from self-build projects to large timber frame and commercial projects.

0845 602 4444 www.egger.com/hdx



#### Reducing noise in the first Welsh Passivhaus School



The Burry Port Community School is the first Passivhaus School in Wales. In a design collaboration between Carmarthenshire County Council and Architype architects, this ground-breaking project unites the town's infant and junior schools, accommodating 210 pupils and a 30-space nursery class. Its aesthetically pleasing, comfortable and noise reduced environment is also a showcase for the use of Troldtekt acoustic panels. The original school building has been refurbished, while the extended block accommodates four new classrooms, as well as two further teaching spaces, staff and meeting room facilities. Sitting between the new and old buildings, a dynamic multi-use 'pod' offers group recreation and performance space. A major contribution to the pleasant environment was the choice of Danish manufactured Troldtekt acoustic ceiling panels, especially in the classrooms and potentially noisy open spaces. Specified throughout the UK and Europe, the benefits of the 100 per cent natural wood fibres panels include high sound absorption, high durability, natural breathability, low cost life cycle performance and sustainability documented by Cradle to Cradle certification at silver level.

info@troldtekt.co.uk

#### Three designs, three shapes, three textures; one holistic workplace



Forbo's new Synergy collection brings together carpet tiles and Luxury Vinyl Tiles (LVT) that have been specifically designed to work together, enabling designers to create an almost infinite number of stimulating, on-trend floor designs for multi-use, commercial interiors. The collection is split into three designs – Seagrass, Hybrid and Marble. Each design has four Tessera carpet tile and four Allura Flex LVT co-ordinated colourways, complemented by pure colour from the Tessera Clarity cut pile carpet tile range. Reflecting the growing trend for different modular formats, Synergy offers planks and extra large tiles in addition to 50 x 50cm tiles. The new Synergy collection is as convenient as it is stylish. All of the products can be easily installed using the same tackifier and can be fitted directly next to each other without the need for transition strips, additional profiles or sub-floor build up. Designers can concentrate on achieving their desired scheme as there is a standardised cost per square metre. For more information please visit the Forbo website or contact the company directly.

info.flooring.uk@forbo.com

## **MODULAR SHOWERING SOLUTIONS**



#### **Colour flooring for creative interiors**



Polyflor has recently announced the launch of Bloc PUR, a vibrant collection of solid colour sheet flooring in a broad spectrum of 16 enticing colours. Designed to provide either a subtle backdrop or a bold, modern statement in the retail, leisure and commercial sectors, Bloc PUR is a high performance heterogeneous sheet floor-covering with a textured matt finish. Developed

after feedback from the marketplace revealed a desire for a much sought after plain decoration flooring, Bloc features an innovative, fully pigmented, homogeneous 0.7mm wear layer of pure colour.

0161 767 1111 www.polyflor.com

#### neaco featured at winning scheme



neaco's contemporary balustrade has contributed to an award-wining development at the new Barker's Furniture Store in Northallerton. Designed by SP&Architects, the store won Best commercial building/scheme in the North

& East Yorkshire region at Local Authority Building Control (LABC) Building Excellence Awards 2016. Nigel Peacock of SP&Architects said: "We are very pleased with the excellent aesthetic of neaco's balustrade which contributed significantly to the urban industrial themed interior design."

sales@neaco.co.uk

#### Bostik launches new floor levelling compound



Bostik has launched Screedmaster Speed 30, a new rapid-drying floor levelling compound with a walk on time of just 30 minutes – making it ideal for contractors who require a fast track solution for their flooring project. Formulated from the latest advances in cement technology, the Screedmaster Speed 30 will smooth sound, uneven surfaces prior to the laying of decorative floor coverings in as little as three hours, with a loose lay time of 45 minutes. Consisting of a

20kg bag and four litres of polymer liquid, the two-part product is suitable for use with under floor heating systems and will cover up to  $5\,\mathrm{m}^2$ .

01785 272625 www.bostik.co.uk

#### Neaco offers lasting visual appeal



Neaco have supplied a wide-ranging balcony and balustrade specification at a development of luxury waterside apartments in North Yorkshire. The company's glass panelled Juliet balconies and bespoke walk-on balcony designs are featured alongside balustrade installed to an interior mezzanine and a communal roof terrace. Handrails and balustrade

have been precision-manufactured in aluminium featuring a powder coated finish in one of Neaco's standard metallic colours. The rails and stanchions combine superbly with tinted toughened glass infills for a stylish modern aesthetic.

#### Hadrian cubicles add to Shake Shack style



Fast food chain Shake Shack sprouted from a hot dog cart in Manhattan in 2001. All UK locations feature Hadrian Elite Stainless Steel toilet cubicles in the washrooms including one of the latest to open in the St David's Centre in Cardiff. Hadrian cubicles are manufactured in Canada and distributed in the UK by Relcross Ltd, the door and washroom hardware specialists. Shake Shack were familiar with Hadrian toilet cubicles in the USA and were delighted to find they were readily available in the UK too but with specifications adjusted to match UK requirements with longer cubicle doors and sightline gaps around the door edges eliminated. The Elite cubicles are finished in brushed stainless steel and they don't just look good but are highly durable with easy clean low maintenance. Like Shake Shack, Hadrian is very committed to sustainability. These cubicles feature a high 91 per cent recycled content. Relcross Marketing Director Stuart McMaster said: "with Hadrian Cubicles we can offer the best from both sides of the Atlantic with world leading manufacturing and design quality made to British specifications and styles."

01380 729600 www.hadrian-cubicles.co.uk

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# Millbrook Tower stands tall following replacement of rainwater drainage stacks



ne of the tallest buildings in Southampton has had a complete drainage solution designed and installed without the temporary re-homing of any residents.

Formerly the tallest building in Southampton, the Millbrook Tower stands at 240 feet. Built over 50 years ago, the building had a cast iron drainage system installed that had started to rust and fail, causing excessive leaking in the 144 flats in the development.

Southampton City Council (SCC) who wanted a complete holistic approach to the design, manufacture and installation of the replacement drainage system, approached Polypipe. In January 2016, eight members of the Direct Labour Organisation (DLO) department of





SCC came to Polypipe Terrain's Centre of Excellence in Aylesford for training to gain a better understanding of the specification, assembly and installation of plastic fabricated drainage stacks.

Working with SCC, as experts in providing intelligently engineered solutions for the movement of water and air around tall buildings, Polypipe Terrain assessed the failing drainage stacks in Millbrook Tower, and designed a new high-density polyethylene system. Terrain FUZE HDPE was installed due to a number of its key benefits over other more traditional materials.

Lighter in weight than cast iron, Terrain FUZE HDPE can feature longer pipe runs, so less jointing is required. As the system is jointed using electrofusion welding, where the weld area is as strong as the host material, the system integrity is increased and consequently the risk of leaks in the development is dramatically reduced.

Due to the inherent material characteristics, Terrain FUZE HDPE lends itself to fabrication. Utilising Polypipe's unique Terrain Fabrication Service, the system was fabricated to exact specification and delivered to the site, where Southampton's DLO were able to complete the installation work across the 144 properties 40% faster than the average for such works. This meant that the residents of Millbrook Tower were able to remain in their properties, a key consideration when designing the drainage stacks of the building.

Jim Simpkins, Housing Refurbishment Project



Manager for Southampton City Council, said: "Millbrook Tower has been standing for 50 years and so naturally the drainage systems in place were not functioning as well as required. Polypipe Terrain provided a single source for all our drainage requirements, helping in the specification, design, manufacture and installation of replacement drainage stacks, ensuring we had expert advice from start to finish. As with all refurbishment work in our residential properties, it is always our intention to do so with as little intrusion as possible. Working with Polypipe Terrain, we were able to deliver live stack replacements across 144 individual properties with minimum disruption to residents."

Ed Swift, Business Development Manager at Polypipe Terrain, added: "We have worked closely with numerous councils on the replacement of live stacks within tall buildings so understand the issues surrounding this. Training SCC's DLO on the specification and installation of drainage stacks means they are able to use this method, and our fabrication service in future projects. By utilising our service from the design stage of the project, we provided a bespoke design and manufacture service, adding real value to the Southampton City Council project."

01622 795200 www.polypipe.com

# Bauder delivers first class roofing solution

British Airways i360 is the world's tallest moving observation tower and first vertical cable car. At the entrance of the attraction on Brighton Seafront is an accessible roof terrace area that features over 1,500m2 of Bauder's reinforced, inverted hot melt waterproofing system with hard landscaping.

The futuristic British Airways i360 is a 531 foot tall structure located at the landward end of Brighton's historic former West Pier. Eleven years in the making, British Airways i360 is the brainchild of architect-entrepreneurs David Marks and Julia Barfield of Marks Barfield Architects, best known as the practice that conceived and designed the world-famous London Eye. Groups of up to 200 visitors will glide gently upwards to a height of 138 metres in a futuristic, fully enclosed, hand-crafted glass viewing pod to admire 360-degree views across Regency Brighton and Hove, the South Downs, the English Channel and the south coast east to Beachy Head.

Passengers board each flight via the alluring outside terrace deck, which features reconstructed tollbooths of the original iconic



West Pier that now serve as a ticket office and café, where people can relax and socialise. Understandably this roof top area will experience significant amounts of foot traffic all throughout the year, so the client wanted to install a waterproofing system that was both robust and of the highest quality. Given these requirements, Bauder's hot melt structural waterproofing system with hard landscaping was a natural choice. The system is designed to last the lifespan of the building and provides a monolithic, fully bonded membrane that is self-healing to minor punctures and ideal for use on protected roof areas. As part of the system approved contractor Accurate Roofing also installed inverted insulation, to deliver high thermal performance in exposed conditions and help retain heat within the beachfront building below that houses a brasserie, cafe and gift shop.

This new landmark is an exceptional example of how modern architecture and roof landscaping can revive a historical monument, which is expertly and intricately intertwined with over 150 years of history. British Airways i360 has already attracted significant interest and proven extremely popular, welcoming its 100,000th visitor just three weeks after it was opened to the general public in August 2016. The attraction was given a Royal opening by His Royal Highness the Duke of Edinburgh in October.

01473 257671 www.bauder.co.uk



#### Lift your front door up to a new level!

A front door is one of the most used parts of the house. It is the first to greet visitors and a key area that can let in the cold during winter. Garador's recently launched FrontGuard Plus range of entrance doors has been specifically designed to provide the ultimate in functionality and design for a new generation of modern doors. With FrontGuard Plus, Garador has taken front door weatherproofing and insulation to a new level. The door leaf is filled with 65mm thick high-density polyurethane foam, providing high thermal efficiency with overall U-Values down to 0.87 W/m<sup>2</sup>k. Durable, water-proof rubber seals feature on all four sides of the door. Security of course is a vital aspect and these doors come with a five point security locking system as standard. Design is just as important and these doors are available in eye-catching modern and contemporary ranges in a choice of colours and wood effect finishes.

01935 443709 www.garador.co.uk



#### Working in the light

Designed by DarntonB3 architects, this 23,000sqm facility is the new HQ for Airedale International Air Conditioning in Leeds. The production facility is a stunning example of the way in which the Kalwall® translucent daylighting system from Structura has been used in combination with Kalwall panel unit windows. It includes a stateof-the-art test centre and training school regarded as a worldwide hub of excellence for air-conditioning. The dramatic linear simplicity of the design projects real impact on the entrance facade while the architects have configured the levels of the site so that the main mass is concealed from public view and all aspects of manufacturing are kept on a single level. Sustainability is also fundamental to Airedale's core strategy which has been translated into a BREEAM rating of 'Very Good' for the building. Unlike conventional glazing, highly insulating Kalwall eliminates shadows and glare and the stark contrasts of light and shade.

mail@structura.co.uk

# Flame-free roofing solutions for all your needs

here is growing demand for improved safety within the education sector, especially in relation to refurbishing school and academy buildings. In response, flat roof manufacturer Bauder has developed various high-performance waterproofing solutions over the years that can be installed using flame-free methods; removing the need for a naked flame or hot bitumen at roof top or ground level.

#### **Bituminous solutions**

Bauder's bituminous system Airtech has been specifically developed to meet the need for improved safety, combining the latest generation of heat activated self-adhesives, polyurethane adhesives and hot air welding for an unrivalled flame-free installation that is faster and safer than traditional methods.

#### Cold liquid applied solutions

Bauder's cold liquid applied systems, LiquiTEC, are based on the most advanced PMMA resin technology, combining ease of



application, fast cure and durability without using any hot works, making them suitable for use in all kinds of flat roof, balcony, walkway and terrace applications. All Bauder LiquiTEC products are solvent and halogen free; and unlike many other systems do not contain styrene and isocyanate, which are linked to serious health risks.

#### Single ply solutions

Bauder's single ply waterproofing systems, Thermofol (PVC) and Thermoplan (FPO), offer lightweight, fast track, flame-free solutions that are installed using hot air welding techniques with mechanical fastenings or adhesive bonding to provide high-performance solutions, which are durable and give excellent fire resistance. The membranes deliver strong and flexible polymeric waterproofing that is resistant to weathering, chemical oxidisation and UV radiation.

#### Supporting you

Bauder can work with you to choose a roofing solution that is tailored exactly to your building's requirements and school's budget through its honest and expert roof appraisals. Its high performance, safety conscious waterproofing solutions are ideal for any school flat roof project and Bauder's no obligation service means it can perform a comprehensive roof review to evaluate the condition of the roofing area entirely free of change.

01473 257671 www.bauder.co.uk





# WoodEx® recognised as a registered Trademark



James Latham has announced that WoodEx®, its premium quality, engineered hardwood and softwood timber product, is now recognised as a registered trademark with the UK Patent Office.

Introduced into the market four years ago, WoodEx® is made from European Ash, European Redwood, European Oak, Sapele and Grandis and the UK's biggest independent timber and panel products distributor is now seeing this versatile timber being specified in more and more joinery projects.

WoodEx® offers numerous features and benefits. It has two high-quality, clear faces for use in joinery applications and is ideally suitable for use in timber doors and windows as the product offers greater dimensional stability. In addition, Lathams can supply the product either as finger jointed or as one piece.

James Latham's Group Product Sales & Development Manager for WoodEx®, Paul Leach, commented: "Achieving registered



trademark status is great news for us, apart from the obvious protection and exclusivity it affords, it not only enhances the WoodEx® brand but also demonstrates the support and long term plans we have for this great product.

"Demand is increasing all the time and our stock now covers a wide range of sizes and species, providing a versatile addition to our



already extensive timber range."

WoodEx® is available ex-stock in lengths of 0.8m to 3m, (6.0m in finger jointed faced Redwood) and in sizes ranging from 48mm x 95mm to 72mm x 120mm. Special sizes and lengths are also available to order.

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## Chamberlain student accommodation

he University of Birmingham's new Chamberlain Hall Student Accommodation is an impressive example of regeneration which is in keeping with the landscape as well as providing all essential capacity growth for the future. Consisting of two linked tall towers at 17 at & 21 stories and five "finger" blocks.

The facade had to provide function as well as form. Day-lighting is vital to aid with studying, no dark gloomy corners, a light and airy interior is desirable. Natural ventilation was a must, however, in keeping with the structured facade open-in windows were required fronted with ventilation panels, to allow ventilation yet not impact on the facades integrity, maintaining the clean lines and sleek elevations.

Continental Installations worked closely with Comar Architectural Aluminium Systems and main contractor Balfour Beatty on the complex facade. The team designed a bespoke capping profile which was extruded with re-enforced walls capable of fixing the copper panels directly to it. A heavy duty pressure

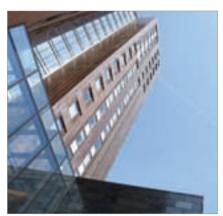
plate with a fixing port arrangement, was used to mechanically fix the capping to the pressure plate. Subsequent regular fixings then transmitted the applied loads back to the rear structural mullion member to ensure there was no thermal bridging. All connections were fully isolated to prevent bi-metallic corrosion.

This bespoke design then included inward full height opening windows which sat

behind the facade, Comar 5Pi Advanced Tilt/ Turn open-in windows were selected. These were perfect for the application as they offer slim sight-lines, thus maximising daylighting as well as the profiles themselves have thicker walls that provide robustness and large spans to ensure they stand the test of time.

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#### Landmark high-rise supplied by Hueck

Another successful collaboration between aluminium building systems supplier, Hueck UK, and facade contractor McMullen Facades Ltd has recently seen the completion of one of south west London's new landmark buildings, The Pinnacle. Rising 170 feet high, the tower construction delivers 88 new luxury apartments, including a number of penthouses, with impressive views of the City. The Pinnacle's fully glazed curved facade has been manufactured using the high performance Trigon L aluminium system from Hueck. Highly versatile, this unitised facade system lends itself to a wide variety of curtain walling designs. Approximately 1,300 unitised panels shape The Pinnacle's striking curved envelope. Aside from Trigon L, the building also boasts nearly 180 Lambda 65 windows and doors. Featuring low thresholds, the doors comply with the Life Time Homes standards, and achieve an impressive 600Pa air permeability/water tightness. Hueck's popular Volato M lift/slide doors have also been specified.

01217 671344 www.hueck.com

## NorDan celebrates 90 years in business

orDan, one of the biggest Scandinavian producers of high quality, high performance timber windows and doors, celebrated 90 years in business in 2016.

The firm was founded in 1926 by Johannes Rasmussen, and is today run by the third generation of the Rasmussen family. NorDan prides itself in using carefully sourced, certified sustainable raw material. Timber from some of the slowest growing forests in northern Europe, to enable it to produce very high quality frames which create energy efficient products for the construction industry.

It is a firm which is constantly innovating. It has designed incredible windows, with credentials and certification that satisfy Passivhaus and beyond. Beyond windows. are solar windows which are in effect solar panels within the window system - the future, today!

Rasmussen the founder invented the world's first tilt and turn window, designed to have good weather properties against high winds and driving rain, but be flexible and easy to clean from the inside.



Earlier this year the firm relaunched its three handled window product as "StormGuard" - a unique offering. A timber window which works on a bolt system with no hinge mechanism. It is highly secure and with added safety features as the third handle can be removed, leaving the window safer in certain applications such as student accommodation and commercial premises, where the window will only tilt in for

ventilation, but still able to "turn" when facilities managers need to carry out any maintenance.

NorDan is frequently the supplier of choice to the UK construction market - capable of supplying, for example massive contracts such as the 3,000 windows to contractor Jerram Falkus for a regeneration project in East London, or one set of low u value windows for this Years European Green Tourism Award Winners "Lewis Long House", a self catering business on the western isles Scottish Island of Lewis. The owners experienced 113mph winds in the last storm, and were hugely complementary of their NorDan sliding patio doorsets, which robustly withstood the equivalent of a hurricane.

And at a leading homebuilding show, this year NorDan launched its SMART door technology to the UK market on an impressive exhibition stand. The stand also featured a 7.5m sliding patio doorset to rival any thoughts of bifold doors.

01506 433173 www.nordan.co.uk

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# Platon system waterproofs iconic fire HQ in student accommodation conversion

riton supplied 3,000m² of Platon P8 cavity drain membrane to waterproof several basements at the iconic West Midlands Fire Brigade building at Lancaster Circus in Birmingham. The membrane forms part of a Type C drained waterproofing system (as defined in BS 8102 2009) to the area, which has been converted to residential accommodation for 463 students from Aston University.



The system was installed by Triton approved contractors, Protectahome, working for Watkin Jones Construction. Cavity drain membranes work by allowing any water ingress to continue to enter the building through the walls, but then controlling it and diverting it down the wall to the Aqua Channel perimeter drainage conduit. In this project, the conduit diverts the water to one of 10 sumps, each housing a Triton Aqua Pump Pro Plus kit (each comprising mains powered and battery back up pumps).

Moisture had been penetrating into parts of the basement for several years through the wall/floor joint and various cracks in the original floor slab. Although large floor areas have been excavated to allow for greater head height and replaced with new floor slabs, many of the original floors have been left in situ. As the Platon system allows moisture to enter the structure there is no hydrostatic pressure



on existing floor slabs and no need to replace them.

Triton's technical team has worked closely with the architect, main contractor and specialist basement contractor from design inception through to overseeing installation and testing of the system.

01322 318830 www.tritonsystems.co.uk

# Flat roof manufacturer Bauder extends BIM library

Pollowing the arrival of the UK government's BIM mandate back in April, which requires all centrally procured public sector building projects to be BIM Level 2 compliant, flat roof manufacturer Bauder has extended its BIM offering with the creation of 19 new waterproofing system objects that are available now for free download on its website.

The launch of Bauder's new generic BIM models means its comprehensive library now includes objects for its bituminous, single ply, cold liquid applied, hot melt and green roof system options, which can easily be dropped into 3D models and plans. This allows architects, designers, specifiers and contractors to easily access and share all of the object information needed at the concept and design stage of a project. All of these BIM objects are available in Revit format, which according to

NBS' 2016 National BIM Report is by far the most popular tool used for producing drawings. In order to ensure that your BIM object meets the exact requirements of your building you will need to register your project with Bauder, who can in turn provide you



with all the necessary technical support

Bauder's Technical Director Nigel Blacklock commented: "A lot of the ideals that BIM is based upon, such as promoting the use of quality, long-lasting materials that deliver life-time value and getting things done properly first time on a project, align with our own principals as a market-leading manufacturer of flat roofing products. As a result, we will continue to invest our time and resources into BIM in order to extend our offering, as we see it as an integral part of the future of the built environment both in the public and private sector."

For more information on BIM and to download your free objects now please visit the website.

01473 257671 www.bauder.co.uk

#### Freefoam launch X-Wood cladding



Freefoam Building Products announce the launch of X-Wood, a completely new and innovative exterior cladding that looks and handles like wood but without all the usual problems of wood. X-Wood is a PVC-U cladding with subtle woodgrain finish

designed to bring a refreshing new look to the exterior of any refurbishment or new build project. In response to the growing popularity of both timber and PVC facades, Freefoam have used their manufacturing expertise to design and produce an attractive high performance cladding comprised of three different layers.

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