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FROM THE EDITOR



hile many practices have been expressing their fears over Brexit (not least on behalf of their EU staff) and the likelihood of a strengthened victorious Conservative government pushing through a 'hard' Brexit, the world will continue to turn following the Election.

Major UK schemes are continuing to be approved, such as Fosters' controversial £1bn redevelopment of Whiteleys shopping centre, following tweaks by Westminster council. Things will certainly be different both during and post-Brexit negotiations, but it may well be more a case of an extended 'limbo' during which things will still need to get done.

Norman Foster himself has said recently that although he was a Remainer he urges a pragmatic approach from architects to the realities, with something of a 'keep calm and carry on' message. He commented at a recent British Council for Offices conference that whether or not you agreed with the decision to leave the EU, "you get on with it and you optimise," adding a clarification, "I am an optimist."

He also attempted to pour cold water on previous reports that his firm had made close to 100 staff redundant at its London office due to Brexit, saying it was due to "much wider" global forces. With so many offices spread across the world it is unlikely that dark Brexit predictions will have been the cause, but will the realities mean more cuts for practices?

The RIBA's recently published 'election manifesto' unsurprisingly (but commendably) says that the Government needs to confirm the status of EU nationals working in the UK as quickly as possible. Around 25 per cent of registered architects are from the EU, bringing diverse, valuable talents to the sector. Using them as bargaining chips against UK citizens overseas is not only morally questionable at best, it is dangerous for the continued health of UK architecture firms in what may be a challenging few years ahead.

James Parker Editor



ON THE COVER...

Alai, a residential development by Zaha Hadid Architects on the Mayan Riviera south of Cancun in Mexico, offers luxury but also a low environmental impact approach

For more information, go to page 7.



TEST COMEBACK

Arup completes Lords stand revamp

Engineers Arup, alongside architects Populous and contractor BAM, have completed the redevelopment of the Warner Stand at the historic Lord's Cricket Ground in London.

The new stand was described as "a triumph of design where the outcome is an absence of structure" as the seating tiers' geometry was engineered to maximise the viewing experience without using transfer systems to resolve the misaligned structure. The stand is also equipped with a top-floor restaurant and bars on the lower tiers that will operate all year round.

The design respects the existing buildings, including the Grade II listed Pavilion, and continues Arup's work at Lord's after the consultancy provided engineering designs for the Grand Stand, Mound Stand and the Stirling Prize-winning Media Centre.

Will Whitby, lead structural engineer at Arup, said: "Our work brings this historic sporting institution into the 21st century, whilst retaining the club's heritage look and feel. The improved sightlines and upgraded hospitality features, combined with behind-the-scenes improvements to matchday facilities, have enhanced this famous cricket venue, ensuring the viewer experience now matches its reputation for world-class cricket."

The Warner Stand's roof is made of highly insulating semi-translucent material for "an elegant, ethereal feel" and to allow natural light in. The roof is supported by a tubular steelwork, which is itself supported on strong glulam American White Oak timbers to give the stand an identity.

To match the client's sustainability objectives, a zero fossil fuel solution has been

chosen, including all-electric systems, PV roof panels, and an open loop ground-source heat pump for water heating.

Philip Johnson, Populous senior principal and project lead, said: "This is a very special moment for everyone at Populous and a privilege for the practice to add to the wonderful heritage of the 'Home of Cricket'. Lord's has a special place in the hearts of cricketers and fans, and this new stand will help cement its position as the finest cricket ground in the world."

Mike Donegan, construction director for BAM, said: "Creating the new Warner Stand has been a very challenging pleasure for BAM. A colossal amount of work and care has gone into the construction. There is no doubt that the team here has produced something very special."

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NEW MEXICO RESIDENCES

Zaha Hadid Architects' Alai serves up sustainable luxury in Mexico

Designed in response to its natural surroundings, Alai "marries ecological considerations, engaging design and a reinterpretation of local architectural tradition,

The number of visitors to the Mayan Riviera is increasing by over 10 per cent each year – surpassing 20 million arrivals in 2016, while its residential population has almost doubled since the year 2000.

Accommodating this continued growth in popularity while also curtailing its impact on the environment must be the principal driver for all new projects in the region, Zaha Hadid Architects says.

Located on a site prepared by a previous owner for an unbuilt complex, Alai's design is guided by these principles of integrating a new residential community while also minimising the effect on local ecosystems. The design has significantly reduced its environmental impact by limiting the combined footprint of all residential buildings to less than 7 per cent of the site's total area, enabling existing vegetation to be retained and a majority of the site to be returned to its natural state through an ongoing programme of replanting planned in conjunction with landscape architects, Gross Max.

The residential buildings share an elevated platform with integrated perforations, allowing natural light to flood the ground below and enabling tropical vegetation to grow upwards through the platform. Amenities for sport, leisure and wellness are located on this raised platform, nine metres above the ground, to ensure local wildlife can cross the entire site on the woodland floor

without barriers. Being just above the canopy of the surrounding vegetation, residents and guests have views over the treetops to the Caribbean coast and lagoon beyond from all shared amenities.

Echoing the rich textures and surface complexity within the local Mayan masonry and architectural tradition derived from the repetition and variation of a small number of geometric components, the differing texture and patterning of each building's facade within Alai is generated by assembling the balcony units and facade elements in varying sequences. This enables elements of relatively few different designs to create a unique facade for each building, yet maintains a cohesive design language throughout. These textured facade and balcony units provide solar shading to the apartments within.

EVENTS

SEMINARS

Business Skills – Architect as a developer 08 June, London www.architecture.com/whats-on

Ricardo Bofill Lecture

13 June, London www.architecture.com/whats-on

RIBA International Week

03-07 July, London www.architecture.com/internationalweek

Reveal Festival

30 June-07 July, London www.vam.ac.uk/exhibitions/reveal

FESTIVALS

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

EHIBITIONS

The Japanese House: Architecture and Life after 1945
23 March-25 June, London
http://www.barbican.org.uk/artgallery

TRADE SHOWS

100% Design 20-23 September, London www.100percentdesign.co.uk

Healthcare Estates

10-11 October, Manchester www.healthcare-estates.com

Restaurant Design Show

26-27 September, London www.restaurantdesignshow.co.uk/

Surface Materials Show

10-12 October, Birmingham www.ukconstructionweek.com/

Smart Buildings Show

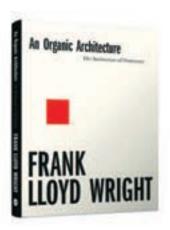
10-12 October, Birmingham www.ukconstructionweek.com/

Timber Expo

10-12 October, Birmingham www.ukconstructionweek.com/

BOOKS

Two books mark 150th Frank Lloyd Wright anniversary



Two books celebrating the legacy of Frank Lloyd Wright were released to mark 150 years since the American architect's birth.

"Organic Architecture", a record of four lectures the architect gave at the Royal Institute of British Architects in London in 1939, was reissued by art-book publisher Lund Humphries and includes an introduction by architectural historian Professor Andrew Saint. The book sets out Wright's core philosophy and the design principles



behind the Usonian houses – his homes and studios in Wisconsin and Arizona – as well as Fallingwater and the Johnson Administration Building.

The second title, "Travels With Frank Lloyd Wright, the First Global Architect" by Gwyn Lloyd Jones (also published by Lund Humphries), traces the architect's journeys across Europe, Asia and the Middle East, revealing the architects' global architectural legacy.

BRONZE CUBOID

CPMG Architects completes science hub

A flagship bioscience centre in the shape of a striking anodised bronze cuboid has been completed in Nottingham. The fivestorey mixed-use facility is adjacent to the UK's largest bioscience incubation centre, BioCity, and includes laboratories, offices, cafes and chemical and solvent storage rooms. The building's standout feature is a Wolfgang Buttress artwork made from more than 1,000 stainless steel cables wrapped around the centre's southern and western elevations. It lights up at night and acts as a solar screen for the building during the day. The artwork is linked to NASA satellites monitoring sun activity and the lighting colours change as the sun rotates.



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ENTRIES PLEASE!

Spotlight on housing at 2017 RIBA President's Awards for Research

Innovative students, academics and practitioners are invited to submit their research entries to the 2017 RIBA President's Awards for Research.

The annual awards bring to light the best research in architecture and the built environment in three categories – Cities and Communities, Design and Technical, and History and Theory – with a special addition of Housing for 2017.

The deadline for entry is 31 May 2017 at midnight GMT – there will be one winner per category, and the best overall research will scoop the RIBA President's Medal for Research

The 2017 jury panel will be chaired by Feilden Clegg Bradley's Peter Clegg, with six more judges on the panel including Zohra Chiheb of Levitt Bernstein; Dr Elizabeth Darling of Oxford Brookes University; Hattie Hartman of Architects Journal; Dr Matthew Jones of University of West England and Coombs Jones Architects; Dr Kerstin Sailer of Bartlett School of Architecture, University College London; and Professor Chris Tweed of Cardiff University.



ACOUSTIC GIG

Bids invited for new landmark London concert hall

An expert design team is being sought to create "an inspiring and innovative" music venue in central London.

The international competition, led by the Barbican, London Symphony Orchestra, Guildhall School of Music & Drama and The City of London Corporation, is inviting "creative and world-leading experts" to develop a concept design for the new Centre for Music in the City of London.

The organisations are seeking to appoint architect, building service engineer, civil and structural engineer, acoustician, and theatre consultant to develop "a state-of-the-art building of acoustic and visual excellence" consisting world-class concert hall, education, training and commercial facilitates "fit for the digital age."

The first stage of the procurement is for architect/lead designer. Companies can submit their responses to a Selection Questionnaire available on the City of London Corporation procurement portal (www.capitalesourcing.com) by the

deadline of 9 June (12 pm BST).

Six schemes will be shortlisted and architects will receive £10,000 to submit a detailed response to the brief, the company's approach to delivering the project, details of the design team, and a fee proposal. The commission, worth up to £12m, will be granted following a detailed interview process.

The competitions for building services engineer and civil & structural engineer are also open, with deadlines set for 14 June (12 pm BST). Both contracts are worth an estimated £40m in fees. Invitations to tender will be issued to interested parties for the acoustician and theatre consultant roles without an SQ process.

The Centre for Music will occupy the site of the Museum of London once the museum relocates, and form a new 'cultural corridor' running from Tate Modern through the Millennium Bridge and St Paul's and to various cultural stops in the Square Mile.

WINNER

David Chipperfield wins Edinburgh auditorium commission

David Chipperfield Architects has been chosen to design the new concert hall in Edinburgh following a two-stage international contest.

Arup, WME, landscape architects Gross Maxx, consultancy Theatre Projects and acousticians Nagata will also work on the project.

The 1,000-seat concert venue, which will house the Scottish Chamber Orchestra (SCO), will be built on a gap site behind the historic headquarters of the Royal Bank of Scotland, Dundas House, and host a broad range of musical genres. The design by DCA has been described as "intriguing" as well as "well-expressed".

David Chipperfield said: "We are

thrilled to have been selected to design this project. Edinburgh is a wonderful city and we are very much looking forward to working with IMPACT Scotland, the SCO and all those involved to develop a new concert venue for this extraordinary site."

The architects saw off five practices to win the commission, including London's Adjaye Associates and Allies and Morrison, Edinburgh's Richard Murphy Architects, Barozzi Veiga from Switzerland and Canadian practice KPMB Architects.

The two-stage competition was organised by Colander Associates and the six finalists received £10,000 for their designs.



RAISING THE ROOF

UK Roofing Awards 2017 – winners announced

The National Federation of Roofing Contractors (NFRC) recently announced the winners of this year's UK Roofing Awards. They were revealed at a ceremony on 19 May at Park Plaza, Westminster Bridge, London.

Commenting on the quality of the diverse array of winners, James Talman, chief executive at NFRC said: "The Awards is the highlight of the roofing calendar, and this year has been no exception. The judging panel was truly blown away with the quality of entries and every winner should be proud of their achievement."

Talman added: "We would like to thank everyone that entered the competition and all those who have supported the event, including headline sponsor SIG Roofing for their continued support, as well as all of the other sponsors."

Winners across the 11 competition categories were as follows:

Green Roofing

Skygarden working with Topek Project: The Macallan Distillery

Hard Metal Roofing

Roles Broderick Roofing

Project: Exeter College, Oxford University

Heritage Roofing

Emerton Roofing (Western) Project: The Boat House

Lead Roofing

K&M Leadwork

Project: Goring Clock Tower

Liquid Applied Roofing and Waterproofing

Mitie Tilley Roofing

Project: North Terminal, Gatwick Airport

Mastic Asphalt / Hot Melt

Prater with Radmat Building Products

Project: Fitzroy Place

Reinforced Bitumen Membranes

M&J Group

Project: Fleet Bank House

Roof Slating

Contour Roofing (Essex) Project: St Joseph's College



The Roof of the Year Award (sponsored by SIG Roofing) was presented to Rowlands Roofing working with Marley Eternit on Quintain House, a residential project designed by John Phipps and Kirkland Fraser Moor

Roof Tiling

Rowlands Roofing with Marley Eternit Project: Quintain House

Sheeting and Cladding

Lakesmere

Project: Greenwich Energy Centre Single Ply Roofing

Carlisle Construction Materials working

with Topek

Project: The Macallan Distillery

In addition to the category winners listed above, awards were also presented to the following companies for their outstanding standards of workmanship and technical excellence:

Roof of the Year – sponsored by SIG Roofing, this award was presented to Rowlands Roofing in association with Marley Eternit for work on Quintain House. This award was chosen by the UK Roofing Awards Judges from this year's winners.

CITB Exceptional Contribution to Training This award went to Beverley Sexton of Jackson Jackson & Sons

Young Leadworker of the Year (Lead Sheet Association) – this award was scooped by Jay Stubbs, a self-employed leadworker trading as LDN Leadwork

Murdoch Sponsor's Award (Lead Contractors Association) – Celtic Leadwork won this award for its work on a Primary School in Notting Hill, London

Murdoch Award (Lead Contractors Association) – Conservation Leadwork won this award for its work on Culham Court Chapel

Full details of all competition winners can be found at the website URL www.nfrc.co.uk/uk-roofing-awards





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GENDER DIVERSITY

Making the case for encouraging women into architecture



Architect Simone de Gale has used a recent award win to highlight the need to to encourage other women into the industry.

Following winning Architect of the Year at the Women in Construction Awards, de Gale commented that now is the time for advocating women to consider joining the UK construction industry. "The numbers of women working in the construction industry have been growing steadily over the last decade or so but we are still far outnumbered by men," she said.

"Women tend to overlook architecture in favour for other choices where they can apply their creativity and flair. This is a crying shame for my industry because there are so many great opportunities for hard-working, bright and intelligent women."

De Gale said that a shortage of women joining the industry could be attributed to a lack of a level playing field: "Just as is the case across so many industries and professions, some areas of construction are failing women in terms of pay gaps and opportunity to become partners or directors of firms, when taking time away from the practice to have children.

"It's upsetting that even in 2017, men and women still aren't seen as equal, despite them doing the exact same job and possessing the same qualifications and experience."

The thirtysomething born and bred Londoner was chosen for the Architect of the Year Award over three strong rivals. The judges made particular comment on her commitment to customer satisfaction. Her Belgravia-based practice is in its seventh year, and has played "key roles" in the Hammersmith Flyunder project and London's Spherical Art Gallery as well as residential and retail schemes including masterplanning such as a scheme in Tbilisi.

De Gale concluded: "It is vital to the success of the industry that new blood joins our industry because we need bright new ideas, fresh thinking and an injection of energy."

OASTLER BUILDING

A new outlook for uni in Huddersfield

A striking new university campus with a curved glazed frontage has opened in Huddersfield.

Oastler Building, designed by AHR and delivered by Morgan Sindall, occupies a prominent town centre site and will house the University of Huddersfield's law and humanities schools.

The £28m facility has achieved BREEAM 'Excellent' rating for sustainability and EPC A rating for energy efficiency thanks to its solar-control glazing and the building's shape, which enables it to 'self-shade'.

According to the architects, the design achieves a 28 per cent carbon reduction in comparison to a standard equivalent building, while the main contractor sourced all raw materials and service suppliers locally.

University vice chancellor, Professor Bob Cryan, said: "The design AHR produced is brilliant, but complex and innovative. The site itself presented problems due to the limited space and access. These factors add greatly to the achievement of our main



contractor, Morgan Sindall, in delivering this fine building with the minimal disruption to the campus and the town."

Oastler Building is named after Richard Oastler, who campaigned to curb child

labour and improve conditions for factory workers during the Industrial Revolution. The facility was opened by university chancellor His Royal Highness The Duke of York on 28 April.



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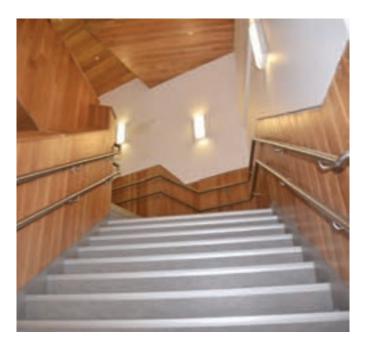
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SHORTLIST

27 schemes now in the running for Scotland's architectural awards

The wait for entrants to the 2017 RIAS Awards, held by the Royal Incorporation of Architects in Scotland, is nearly over as the organisation prepares to hold its annual awards dinner later this month.

In March, the RIAS shortlisted 27 projects from 84 entries to compete in the 2017 competition. The only practices with multiple nominations this year are Michael Laird Architects (three), jmarchitects (three), Hoskins Architects two) and Reiach & Hall (two). MLA and Reiach & Hall share one nomination for their City Campus for the City of Glasgow College (in Glasgow).

Some of the projects up for awards include the Dunfermline Carnegie Library & Galleries, for which Richard Murphy Architects integrated a modern extension with two graded buildings, the sensitive redevelopment of a warehouse into a modern headquarters for the National Theatre of Scotland by Hoskins Architects, the renovation, adaption and extension of a dilapidated former shepherd's cottage in the north-west Highlands by Scampton & Barnett, and the new Portobello High School in Edinburgh with generous breakout spaces and light, bright interiors (by jmarchitects – pictured above). The full shortlist is available online at rias.org.uk/awards/rias-awards/rias-awards-2017

Willie Watt, president of the RIAS, said: "Despite an economic climate which continues to squeeze fees and challenge professionals' ability to deliver, Scotland's architects are delivering work of truly international quality. As this brilliant shortlist demonstrates, Scotland's architecture is in very good heart."

The winners will be revealed at the RIAS Awards Dinner 2017 on 14 June at the Murrayfield Stadium in Edinburgh.



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APPLE DUBAI MALL , UNITED ARAB EMIRATES FOSTER + PARTNERS

The new store for tech giant Apple, Apple Dubai Mall, occupies a pivotal position in the city, alongside the iconic Burj Khalifa and the Dubai Fountains. The store, which spans over two floors, "embraces the theatre of the fountains" say the architects, with a terrace that is 56.6 m wide and 5.5 m deep – the first space of this kind created for an Apple Store. The terrace offers views of the spectacular setting and the choreographed display. The design of Apple Dubai Mall was described by the architects as "a celebration of the sun" as it utilises daylight to create ambience within. Reinterpreting the traditional Arabic Mashrabiya, innovative 'Solar Wings' shade the outside terrace during the day and open in the evening. Made entirely of lightweight carbon fibre, each wing has multiple layers of tubes forming a dense 'net'. Following an in-depth study of sun angles, the rods were distributed in higher concentration where the solar radiation is the most intense.

Ref: 88452



URBAN HOSPICE, COPENHAGEN NORD ARCHITECTS

Nord Architects has unveiled its latest design: a contemporary Urban Hospice intended to create a positive environment while offering support for patients in need of palliative care. Located in the tranquil setting of Frederiksberg, Copenhagen, the vision was to provide a "warm and protective atmosphere" for up to 16 patients. Kebony wood was recommended and was chosen to complement this setting and has subsequently been used throughout the build. The project was designed to adapt to the neighbourhood, presenting a combination of spacious views and privacy for patients. Incorporating both curved and linear elements, the design allows for an impressive functional layout, built around a private inner courtyard.

Ref: 48380



TEMPORARY MARKET HALL, SWEDEN TENGBOM

Scandinavian practice Tengbom has been awarded the Architizer A+ Award, Prize of the Jury, in the Commercial Retail category for the Temporary Market Hall at Östermalmstorg. 128 years after being originally built, Östermalm market hall was in dire need of upgrading and development. Throughout the reconstruction, the City of Stockholm decided to erect a temporary building where business could continue.

Tengbom's work, both with the temporary market hall and with the upgrading and renovation of the old one, is said to have contributed to the "increased vitality" of the area.

Ref: 67827



HVB-TOWER, GERMANY HENN ARCHITECTS

"Square, triangle, diamond - these terms alone don't do justice to the pearl white HI-MACS interior design found in the entrance hall of the HVB-Tower of HypoVereinsbank," say Munichbased HENN architects. They "made the DNA of the building visible for everyone,' following the brief by the owner. The HVB-Tower is equipped with an attractive 'smart working' concept that meets the bank's request for flexible and interactive work spaces appropriate to the digital age. HENN converted this listed high-rise building into a sustainable building offering savings in heating energy, electricity and water. Even though the monocoque facade was completely removed and replaced by a double-skin structure, it was possible to preserve parts of the original facade. Ref: 21917

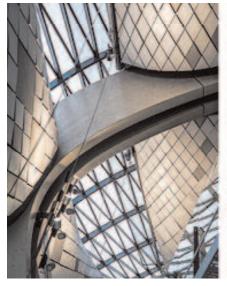


BARANGAROO SOUTH, AUSTRALIA GRANT ASSOCIATES

Grant Associates' designs for two hectares of public realm at Barangaroo South have been revealed, as the next phase of Sydney's landmark waterfront development is submitted to planners. Grant Associates aims to integrate Barangaroo South's stunning waterfront location with a range of public spaces. These will see the former industrial container terminal completely transformed into a pedestrian friendly area with open views across Sydney's harbour. Designs include Waterman's Cove and a fully-accessible amphitheatre-style boardwalk on the water.

Ref: 58619







OSLO AIRPORT EXPANSION, NORWAY NORDIC-OFFICE OF ARCHITECTURE

Designed by Oslo-based practice Nordic-Office of Architecture, the $115,000~\rm m^2$ expansion of Oslo Airport sets new standards in sustainability. The competition-winning design, which uses snow as a coolant, has achieved the world's first BREEAM 'Excellent' sustainability rating for an airport building. The expansion doubles the size of the existing terminal building with the addition of a new, 300 metre-long pier. The multi-disciplinary design team applied a holistic approach to sustainability, including the harvesting of as much on-site energy as possible. Snow from the runways will be collected and stored during winter months in an on-site depot to be used as coolant during the summer.

Passenger comfort and well-being have been key drivers of the design throughout. Artificial lighting is designed only as a minimal supplement to high levels of natural daylight, and can be set to reflect different moods according to weather, season and time of day. The compact layout of the building, transparency and open spaces enhance visual legibility and wayfinding, providing reassurance and peace of mind for travellers. A panoramic window at the north end of the pier, a 300 metre-long skylight and curved glazed windows on both sides open up the view to the surrounding landscape and beyond.

Ref: 65474

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





NEXT GENERATION LEADERSHIP BDP

BDP's practice leadership group has remained very steady for the last five years and, in advance of a number of colleagues nearing retirement, it has taken steps to introduce the next generation of leaders by appointing seven new principals to the board.

Benedict Zucchi has been appointed architecture profession chair. Benedict is an "inspirational designer," says the firm, and has been responsible for a broad portfolio of exceptional projects across a number of work sectors. He is currently leading the National Children's Hospital of Ireland project in Dublin, the largest, most complex capital investment project ever undertaken in healthcare in Ireland. Andrew Swain-Smith has been appointed building services engineering chair at BDP. Andrew previously led the education sector for the practice's BSE group, collaborating with both in-house architects and other leading architectural practices to design award winning educational facilities throughout the UK. He drives a people friendly engineering ethos across the team.

John McManus, chief executive said: "These are exciting times for us and I wish all of those taking on board new practice leadership responsibilities every success. We are now embarking upon a new and more ambitious international development plan that will not only strengthen and consolidate the practice's current international studio network but will lead to the establishment of more BDP studios outside the UK. In over 30 years of experience in the practice, I can honestly say that there has never been a more exciting time to be part of our continuous collective."



MATT KINGSLAKE THEATREPLAN

With an expanding portfolio of theatre design projects across its three offices in London, Hong Kong and Sydney, Theatreplan has welcomed Matt Kingslake to its growing team of consultants. Matt graduated from the Royal Northern College of Music in Manchester in 1989 and went on to work for Holiday on Ice, touring the world for eight years within their electrical department, rising to the role of chief electrician. After returning to the UK he was technical manager at Grimsby Auditorium before becoming the first technical manager for the Grove Theatre, Dunstable. Matt says he is "delighted to be part of Theatreplan's expanding team".



CARL GALIOTO HOK

Carl Galioto, FAIA, managing principal of HOK's New York and Philadelphia offices and member of the firm's executive committee, has been promoted to the position of president at HOK. Galioto also serves on HOK's board of directors and leads its technical board, which includes HOK buildingSMART, the firm's virtual design and construction initiative. In this additional role, he will work directly with chairman and CEO Bill Hellmuth, FAIA, and the other members of HOK's executive committee to lead the global design, architecture, engineering and planning firm. "I joined HOK in 2009 to be part of a design firm whose core values of sustainable design and focus on human wellbeing are those that I share," said Galioto



MARK RENSHAW BAKERHICKS

BakerHicks has appointed Mark Renshaw as associate director to head up its Civil and Structural Engineering team in London. Mark has spent the past 10 years delivering a range of RIBA award-winning projects in London and the south east. Mark has worked across a broad spectrum of new build, development and refurbishment projects. His expertise spans the public and private sectors; from state-of-the-art schools to high-end residential developments, including the multi award-winning Alfriston School swimming pool and Princess Square residential development projects, as well as Thompson House, also award-winning and noted for its innovative use of materials.



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PRACTICE PROFILE

Hogarth Architects

From radical refurbishments and modern extensions to ventures into housing development, Hogarth Architects has made a success of the residential sector, as Teodora Lyubomirova found out

Stick to what you're good at – this has been the underlying notion underpinning Hogarth Architects' business philosophy, according to Ian Hogarth, director of the practice. However, while this might suggest playing safe, the west London architects have made a name for themselves designing 'radical refurbishments' – exemplar modern extensions displaying a bold vision for incorporating space and light into schemes.

Formed in 2003 out of the ashes of Littman Goddard Hogarth, where Ian was a partner before the trio decided to split, Hogarth Architects had fairly tough beginnings. "When we started in 2003, it was literally me and an assistant working in my daughter's bedroom," says Ian Hogarth. Within four years, the firm had moved into what is still the practice office, at the corner of Dawes Road and Estcourt Road in Fulham. He says the key to success was starting with low overheads and focusing on a single sector – residential – instead of competing with other practices for 'massive buildings'.

The office is itself an example of the architects' transformative approach to space. In owning it, Hogarth is in the unusual role of a landlord and tenant of this modest basement and ground floor property, which had previously been used for various functions ranging from a grocery store to a massage parlour before the architects turned it into "a nice place to work."

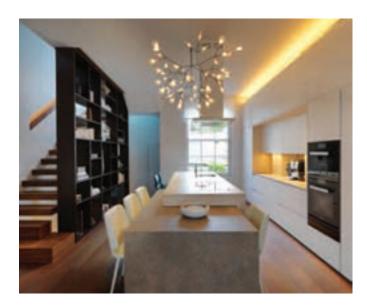
This was done through a careful adaptation of the internal spaces to fit in a naturally-lit reception and waiting area at upper level, with a translucent glass wall through which visitors can see the architects working downstairs. There's also a subsidised canteen at the back and a secluded meeting room near the reception.

Downstairs, the architects – consisting of three associates, three project architects, and a number of architectural assistants in the process of completing their professional qualification – sit together in an area that enables them to "call out from where you sit and talk to every member", as Hogarth puts it.

When asked whether there's a desire to expand elsewhere in the capital, Ian concedes that a move to a central London location could be on the cards, particularly if an opportunity to transform the current premises into housing arises. He jokes, "My older practice used to have very swanky offices on the river and we used to watch the river all day and lose money," adding, "I think we are settled in this size at the moment."

Cosmopolitan ethos

The 18-strong team at Hogarth Architects is formed by a multinational bunch of professionals from a range of countries including Greece, Lithuania, Slovakia and Canada. "We are



VERTICAL LIVING

The practice's refurbishment of an apartment in Oakley Street, Chelsea



VICTORIAN TWIST

The bright new build development at Ash Row, Bude, in Cornwall



You can see the threads going through our work – light and space, modern ways of living, getting the maximum value

Ian Hogarth

'nationality-blind' – we take the best people regardless of where they come from," explains Hogarth. All three associates are from overseas – Stella Nikolakaki and Maro Kallimani from Greece and Laurie Maclaren from Canada – and a number of trainees hail from the continent. Moreover, the associates have all either worked at bigger firms including Foster + Partners and ZHA or ran their own practices (or both), but for a variety of reasons chose to work at Hogarth Architects.

Hogarth comments on the trade-offs some staff have experienced from working at larger practices: "To do this sort of work may not be as glamorous, but they [the associates] have authorship on their work – they meet the clients and dictate the direction of the project." Quizzed on how much design freedom is granted to his employees, Hogarth explains, "We don't have a house style per se but we all plough the same field," with some at the practice having a stronger interest in sustainable methods, and others focusing on historic buildings and restorations for example; this diversity bringing a breadth of expertise. "You can see the threads going through all our work – light and space, modern ways of living, just getting the maximum value out of a site or property."

There's also a focus on nurturing talent within the practice rather than employing 'ready-made' professionals. "We tend to train our own [architects], says Hogarth, adding "we take on Part 2s and provide for their training, and in return for we ask them to sign a trivial contract to stay – it's very rare that we'd actually advertise for a senior position."

Branching into development

The practice works for private individuals or developers but also for hotel firms, and on restorations and refurbishment projects. "What we do is 'radical refurbishment', says Hogarth, "We take a building and do massive structural work to bring in light and volume." He adds, "On listed buildings we tend to restore and then add modern extensions – we don't do 'fake' old extensions – we like to be able to say 'this is our work'."

Another commendable strategy adopted by the practice is specifying as standard sustainable solutions, such as heat-recovery ventilation or good levels of insulation. "We ask the client 'why wouldn't you do it?' rather than 'would you like it?" says Hogarth.

Beyond their work for private clients, the practice is increasingly focused on schemes created under Hogarth Architects'

development arm, Hogarth Homes. This includes the development of four brightly-coloured houses on Ash Row in Bude, Cornwall, which are designed 'upside down', with double-height living spaces on the top floor overlooking the vast green expanses and the sea, with bedrooms situated on the first floor. Each house is equipped with high-quality bespoke kitchens and staircases, bedrooms with en-suites and terraces overlooking the scenery. "My interest in Cornwall is really just because I'd like to try and test my own beliefs and decisions in the market," says Hogarth, who is planning to build eight luxury town houses in the area under Hogarth Homes, including one for himself. This will be on farmland in the picturesque village of Poughill on the north Cornwall coast, and each property will be designed to make the most of its setting and equipped with high-end features such as plunge pool and hot tub.

Work in progress

Back in London, Hogarth Architects are working on a scheme just round the corner from their office, transforming an old tyre shop into two modern maisonettes in Estcourt Road, South Norwood. Other schemes include a 55-room hotel in a conservation area in Kensington; a modernisation and extension of a listed building in Primrose Hill, which will benefit from triple-height spaces above the living area and a mezzanine in the loft; a retrofit of a private home, where the architects are remodelling the interiors for openplan living. Another project in a conservation area is the stone-built Grafton House in Wandsworth, which will be remodelled into four generous flats, with a new basement created and a modern timber/metal-clad extension adjacent to the existing property.

A post-Disco home

Ian Hogarth's name hit the mainstream when TV show *Grand Designs* picked Hogarth's family home for one of its episodes back in 2012. The property, most notable for its 'disco' basement, with illuminated floor and club-worthy lighting and audio equipment, became so popular the architect and his wife, Claire Farrow, had organised weekly club nights ever since, which became a victim of their own success, as he explains: "Our nights have outgrown the house – we have to hire a club now." He adds that the property may have to be repurposed when his children, who were both teenagers when the home was completed, 'fly the nest'.

However, until then, the 2,600 ft² property is occasionally let out via home-swapping websites, while Hogarth focuses on his new project in Cornwall, as well as the occasional office outing. "The whole office is going to Cornwall this weekend," he says. "We'll do coasteering and some long walks and to talk about the design of the new homes," Hogarth concludes, affirming the practice's image of a closely-knitted group of architects with a shared passion for work and life.

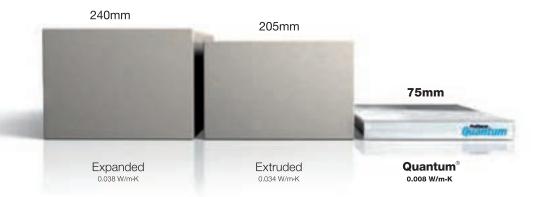
HOGARTH ARCHITECTS' VITAL STATISTICS

Location: Fulham, London Number of staff: 18 Key specialism: Residential

Unusual fact: Director Ian Hogarth runs club nights at his

Grand Designs-featured Disco House

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VIEW POINT



Rory Bergin examines 'the ethics of development' in the context of current practice

ast year I was asked to speak about ethics and architecture at the APRES 2016 conference and I had to consider what 'ethics' means in a professional context and how relevant they are to the architectural profession in particular.

My colleague and president elect of RIBA Ben Derbyshire shares my concern that as a profession we haven't quite grasped the nettle of ethics in a way that can be easily communicated among architects. He plans to launch an interdisciplinary and international 'Sustainable Development and Ethics Commission' during the forthcoming RIBA International Week taking place this July.

Since ethics are primarily about how we deal with each other, architects might be forgiven for wondering what that has to do with buildings built with inert materials. But since the purpose of building is to serve the needs of people, clients, users, occupants and society, there are ethical implications to every aspect of design and construction, some of which are covered in part by legislation, and many which aren't.

Below I try to highlight just a few of the ethical issues that arise in each area.

Early considerations

Much of the ethical considerations arising during the early stages of the building's life are covered by the stages of the Plan of Work and therefore the RIBA Code of Professional Conduct. But even early-stage design raises ethical issues, such as whether people need to be moved and rehoused to

Since ethics are primarily about how we deal with each other, architects might be forgiven for wondering what that has to do with buildings built with inert materials

enable a regeneration project, or whether their needs are being balanced by the needs of those who will be housed in the new development.

Another valid question is whether we are designing buildings that will minimise the harm to those who are going to build them. Here, CDM legislation has helped enormously to raise awareness of safety in construction and in the use of buildings, but our traditional construction methods and procurement behaviour impose risks, which look less reasonable with every accident.

Local and global context

Another area where ethical dilemmas can arise is the building's place in the local context, the wider context and the global context. Planning law and national legislation covers some of these considerations, but others, particularly the building's impact on the global context of material extraction, are not. For example, there has been some recent discussion on the impact of tall buildings on the surroundings and how much 'weight' designers should give to such considerations when there is no legislation and little guidance relating to this impact.

In the wider context, architects are faced with the dangers of climate change, and while there is some legislation to address that in both Building Regulations and planning law, its implementation is patchy and the final building would often fail a detailed post-occupancy performance test. The Code of Professional Conduct is weak on the subject, so architects need to consider if the profession can be strong if local or national Government is going to be weak.

Purpose and effect on users and the region

There are various ethical considerations arising from the purpose and use of the building and the way it affects the client, the funders, owners, operators, through to

The priority is to satisfy the client, and if this is done within legislation, most architects would feel they have achieved an adequate result

local residents, the neighbouring region and the rest of the planet. Some of this is covered by Building Regulations or the legal duty of care, but much of it isn't. The impacts of building low-rise homes on agricultural land is a case in point. For example, building low-density homes in suburbs that are far removed from services and amenities is already an obviously poor strategy in social and environmental terms, yet the majority of new homes in the UK fit into this category. Architects need to consider what the profession can do to represent the people who are only being offered a cardominated environment to live in.

User requirements

The ranging needs of users is yet another area of ethical considerations. Maslov's Hierarchy of Needs provides a ready-made structure so architects may only need to assess how this structure relates to their work as designers and whether they are giving due attention to the different needs of building users. Fundamentally, the industry needs to assess how well or badly it addresses this we even begin to think about improving matters.

Currently, the clear priority is to satisfy the needs of the client, and provided that this is done within legislation, most architects would feel they have achieved an adequate result. However, the real question is whether architects should have a stronger obligation to society even in the absence of legislation, as our work has a long-lasting impact.

CPD FOCUS

The latest CPD courses, seminars and documents for architects

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Quantum Flooring Solutions' CPD looks at the guidelines for the specification of a safe stairway. The presentation deals with the subject of how to make commercial stairways safe and meet with all current building regulation guidelines. The CPD presentation includes: What stair nosings are designed to achieve and how to select the right one; Key Legislation and Industry Standards; How recent BRE and Equality Act (Formally DDA) guidelines affect specifications; Environmental and Health and Safety considerations; Examples of best practice. The seminar lasts 45-60 minutes including time for a Q and A session. All seminars are part of the RIBA core curriculum syllabus. 0161 627 4222 www.quantumflooring.co.uk

TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



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

TWO NEW MCRMA CPD MODULES



The Metal Cladding & Roofing Manufacturers Association has announced the addition of two new online CPD modules. Mineral wool insulation installation sets out an overview of the factors that need to be taken into account in the storage, handling and installation of mineral wool insulation in builtup metal roof and wall cladding systems. Serviceability states and deflections criteria explains the importance of setting the deflection criteria at the design stage and implementing them at the construction stage to ensure that all elements of the construction perform as expected. 01633 891584 www.mcrma.co.uk

CHIMNEY DESIGN AND RESTORATION OF FLUES AND DUCTS



Flue Liner Solutions are offering a RIBA approved CPD presentation entitled Chimney design and restoration of flues and ducts. This seminar will give an overview of chimneys, factors to take into account when designing buildings and an awareness of common problems. It will help architects to understand the following topics: chimney design and sizing; flue lining systems and suitability for different appliances and fuel types; remedial works to existing chimneys; maintenance requirements for chimneys as well as understanding chimney terminals and chimney fans. 07925 142789 www.fluelinersolutions.co.uk

SPECIFYING HARDWOOD TIMBER DOORSETS



Urban Front offer a RIBA certified CPD: Specifying Hardwood Timber doorsets which has been updated for 2017 to include for changes in building regulations and to include the more complicated fitting of timber doorsets into frameless and architectural glass. The CPD aims to educate specifiers on all the aspects of fitting hardwood timber doorsets into various private and commercial dwellings. Urban Front also have RIBA certified blogs which you can find on the RIBA website and on Urban Front's website. To make a booking please call Urban Front. 01494 778787 www.urbanfront.co.uk

KINGSPAN TAKES THE DEVIL OUT OF DETAILING



Kingspan Insulation has released a new technical bulletin and RIBA approved CPD article, designed to support enhanced detailing. The documents explore the effects of linear thermal bridging around openings in the building envelope, and present new research on allowing specifiers to use Kingspan Kooltherm Cavity Closer as a premium performance solution. The CPD article and technical bulletin are based on a thermal modelling study of jamb details by BRE Scotland. The study covers a variety of cavity wall constructions closed using Kooltherm Cavity Closer. 01544 387384 www.kingspaninsulation.co.uk/

www.kingspaninsulation.co.uk/psidetails

UNDERSTANDING MECHANICAL VENTILATION WITH HEAT RECOVERY FOR COMMERCIAL APPLICATIONS



importance of effective ventilation in the commercial environment' from Airflow Developments Ltd guides the participant through the need for better indoor air quality in the UK and the benefits improved indoor air has on the inhabitants and the fabric of the building. Understand the technical aspects of a whole building approach to ventilation and the energy savings that can be achieved by implementing a ventilation strategy in commercial buildings that encompasses Mechanical Ventilation with Heat Recovery (MVHR). By explaining the principles of operation variants in equipment design, the drivers encouraging specification and the regulatory landscape, including European ErP legislation and its future, and Passive House approval, the participant will learn and understand the features and benefits that this technology can delivery for their projects. Studies have found that improving indoor air quality through providing fresh, clean, filtered, warmed air also has a positive benefit on productivity and occupant wellbeing, including reducing the symptoms of respiratory issues such as asthma. Using MVHR as part of an integrated ventilation system also helps the building to be assed to BREEAM, the most widely used environmental for new buildings. 01494 525252 www.airflow.com

WWW.ARCHITECTSDATAFILE.CO.UK

CRITTALL OFFERS CPD TRAINING APPROVED BY RIBA



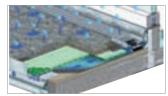
Crittall has launched two RIBAapproved CPD modules. One presents 'A strong case for specifying exterior steel windows and doors', while the other addresses 'Inspirational interiors - specifying steel partitions and screens'. The presentations, which each last for about an hour with full supporting material, are aimed at architectural practices and other specifiers who wish to bring their staff up to date with the latest developments in the field of steel fenestration. The growing use of steel for internal partitions and screens will be addressed in the second CPD presentations. hq@crittall-windows.co.uk www.crittall-windows.co.uk

LIGHTWEIGHT VENTILATED GLASS AND STONE RAINSCREEN CLADDING



New RIBA-Approved CPDs from Alsecco examine the use of lightweight stone and glass facades in modern construction methods. Each one-hour CPD examines the specification considerations for ventilated rainscreen cladding with the use of both lightweight natural quarried stone and lightweight glass, providing the architect and consultant with design freedom, bespoke design and aesthetically pleasing details for ashlars, mitred corners, visible edges, soffits and fins. The Lithodecor Airtech systems offer the benefits of natural stone and glass panels with speed and simplicity. 01785 818998 www.lithodecor.com

BAL LAUNCHES NEW RIBA-APPROVED OUTDOOR TILING CPD



BAL has launched a new RIBAapproved CPD seminar on external tiling to balconies and terraces. The new seminar provides an overview of external tiled living spaces, how to ensure perfect lifelong installations and comparison of available assemblies and system design. When specified with the correct tiling systems, all types of tile installations are possible for outdoor use including ceramics, porcelain, some natural stone and pavers. Explores design considerations such as construction, waterproofing, insulation, falls, drainage, movement joints and edge details. 0797 0450 205 www.bal-adhesives.com

SPECIFICATION OF HINGES



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

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Porsche West London adds style with Encasement

he recently opened Porsche Centre in West London is using 22 'Forma' decorative aluminium column casings from Encasement to conceal structural steelwork while adding to the showroom's stylish and high quality interior design.

Located in Chiswick on the Great West Road, the Porsche Centre's extensive twostorey showroom not only provides display areas for the different Porsche models, but also a customer reception foyer together with a number separate sales and administration offices on both floors.

The circular Forma column casings are manufactured from 3mm thick aluminium and are coated with a protective RAL 9007 metallic light grey PPC finish to integrate with the interior design scheme and brand guidelines. While 20 of the casings are 450mm diameter and range in height from



2,396mm up 3,300mm depending on their location within the showroom and sales

areas, the two other casings are 400mm diameter and stand 6,696mm high, spanning the building's full floor to ceiling height. To reach the extended height, the casings are stacked using 3,000mm standard lengths and seamlessly joined, while also being cut, trimmed and fitted around existing structural beams to provide a high quality precision finish to the interior.

Encasement's Managing Director, Martin Taylor, commented: "Our column casing solutions have proven popular within automotive retail, as there is usually a need to cover structural steelwork in open plan showrooms and offices, such as those within Porsche, while the immense choice of finishes available, enable us to tailor the products to adhere to brand colours, as well as interior design colour schemes."

01733 266 889 www.encasement.co.uk

GEZE UK grows its specification team



GEZE UK is enhancing its commitment to specification and enhancing customer experience by expanding and re-organising its specification team. Richard Richardson-Derry, who joined GEZE UK in May 2014 as area specification manager for the Midlands and North region, now heads the expanded team. He is ideally suited for the post of national specification manager – with his ambition to drive specification and technical support across the company's entire product range, to our customers nationwide. He will be responsible for ensuring that GEZE UK's growing customer base benefits from state-of-the-art products, backed by the support and care of a team of committed product experts with extensive industry knowledge. Commenting on his appointment, Richard said: "Our aim is to make specifying easier for architects and as we continue to develop ever more sophisticated products, technical knowhow, provided by a team of professionals is invaluable. I am looking forward to the wider remit of ensuring that the specification process is as seamless as it can be – efficient, 'right first time', exceeds customer expectations resulting in improved delivery for all parties."

01543 443000 www.geze.co.uk

JDP celebrates 45 years in water management



Water management specialists JDP is celebrating its 45th anniversary with a period of significant expansion, growth and investment. The company is driving major investment in new branch openings, continuous branch improvement and upgrades, expansion of sales teams, sales office support, technical services and marketing and trade counter staff. Having grown over 45 years to become one of the UK's leading and most respected distributors of water management systems, JDP has dedicated manufacturing capabilities through its partners in Tessenderlo Group and close partnerships with the world's leading manufacturers of drainage, civil engineering and building products. From a nationwide network of branches, JDP provides a one-stop shop for residential, commercial, public and industrial building as well as civil engineering, utilities and agricultural projects. In this milestone year, managing director Steve McLellan invited local MP Rory Stewart and Val Tarbitt (Cumbria County Council) for a guided tour of JDPs head office facility to learn about JDPs growth and investment plans.

01228 791503 www.jdpipes.co.uk

BoilerMag sales team expands



Heating system filter specialist Eclipse Magnetics has expanded its **BoilerMag** sales team with the appointment of Bernard Barrett in the role of Specification Sales Manager covering the Southern Regions. Based in Dorset, Bernard has over 30 year's commercial experience within the

heating sector working with leading radiator suppliers. Working closely with local authorities, contractors, and architects, Bernard's role will aid in BoilerMag's continued development in the commercial and industrial sectors. Bernard will also be instrumental in the delivery of BoilerMag's new Continuing Professional Development Course.

0114 225 0600 www.boilermag.com

Signbox plays a key role at The Mille



Following its successful interior and exterior signage refit of Vantage London, Signbox headed west and has delivered again, this time for The Mille. As part of a full refurbishment of this 12 storey building, Signbox

worked closely with building owners, architects and contractors to deliver high quality bespoke signage. Signbox were able to provide a design solution to erect scaffolding at the top of the building in order to complete the crucial high-elevation aspect of the project. This was a hugely complex challenge. Signbox was able to deliver a workable solution to this problem – both in theory and in practice.

01784 497550 www.signbox.co.uk

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GEZE supports Scottish architecture



GEZE UK has pledged its support to the best of Scottish architecture for the third year running – through its sponsorship of the Royal Incorporation of Architects in Scotland (RIAS) Awards Dinner 2017. The prestigious, black tie event will take place at the Murrayfield Stadium, on Wednesday 14th June. This year's 27-strong

RIAS awards shortlist comprises a diverse range of projects, a number of which feature GEZE UK automatic doors. Andy Howland, GEZE UK sales director said, "We are once again delighted to align GEZE UK with the creativity and skill that embodies Scottish architecture."

01543 443000 www.geze.co.uk

Aggregate Industries invests £2m



Aggregate Industries' Masterblock business has invested $\pounds 2$ million into improving its block product operations at three of its factories across the country, in response to a steady increase in demand from the housing industry. With the need for new

homes in the UK increasing, and strict targets imposed on councils, there has inevitably been a surge in housing activity. This has led to an increase in demand for block products, and the investment in Masterblock will enable it to increase its production capabilities of lightweight and dense concrete blocks to help meet the demand.

01530 510066 www.aggregate.com

2017 marks 40th anniversary for Vortice



Burton-upon-Trent based ventilation systems manufacturer Vortice set up business in the UK in December 1977. To celebrate, Vortice will be running a series of promotions based on the 40th theme, for the six months up until

December. General Manager Kevin Hippey said: "Vortice started with a core range of ventilation products, establishing itself as a renowned manufacturer with some of the most energy efficient, beautifully styled ventilation products in the world."

01283 492949 www.vortice.ltd.uk

Saracen arrives in Manchester



One of the UK's leading workplace consultant, Saracen Interiors has committed to growing its business in the North West with the announcement that it has opened an office in one of Manchester's most vibrant and dynamic, mixed use spaces, Media City.

Initially a South East concern, Saracen has made an impact across the whole of the UK in the last decade. The team has been building on established links to secure contracts in the North West and is now keen to develop further relationships in the region and to become a fixture on the commercial property scene.

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BUILDING

HIDDEN HOUSE, KENSINGTON & CHELSEA

The house that isn't there

A private family home in Knightsbridge is virtually invisible from the street, concealed below ground and providing a precision-engineered result. Stephen Cousins reports

If such a thing as "stealth architecture" exists, then the Hidden House, a three-bed family home located in the wealthy Royal Borough of Kensington & Chelsea in London, is one of the most covert examples around.

When seen from the street, the property's single-storey white painted facade, sandwiched between two brickbuilt Georgian terraced houses, looks no different today from how it did five years ago, before the extensive renovation project began.

But the facade now conceals a sleek and precision-engineered new home, featuring 200 m² of internal space spread across three floors, including an expansive new basement level, open plan living areas and even a small garden. The project's designer, London-based LTS Architects, had to tackle

HIDDEN

The white-painted facade has not changed in five years, but now conceals a sleek new home

ADF JUNE 2017 WWW.ARCHITECTSDATAFILE.CO.UK



BIM DEBUT

The project served as a test bed for LTS Architects' implementation of BIM using Revit



various planning and site constraints to deliver the property on the land-locked and overlooked site.

"There were a ton of constraints," explains Greg Shannon, co-founder and director of LTS Architects. "Initially, we thought, there's not much space, is there? But when we looked closer at the site we saw that it would enable us to produce a form of introverted architecture, more about moving light around inside the property than creating views out."

Tight fit

The Hidden House is the reworking of a former shop and two former workshop buildings located behind it – a 1980s block used as a children's furniture showroom, and a paid storage space.

The private client, based in Bath, owns the building next door, and wanted a London base for sporadic use by different members of his family, who have business engagements in the capital.

The original plan was for an aboveground development, but this had to be rethought after the planners demanded the retention of the existing gap in the street frontage. Any redesign would therefore have to work within the existing silhouette.

The prospect of a basement redevelopment was daunting – excavations on the same street had been refused in planning – but the fact the excavation would expand

The original plan was for an above-ground development, but this had to be rethought after the planners demanded the retention of the existing gap in the street frontage. Any redesign would therefore have to work within the existing silhouette

on an existing basement satisfied the Local Authority and the project was given the go-ahead.

Shannon says: "That was five years ago and the same decision might not happen today, London borough councils have really clamped down on basement excavations, which can be messy, noisy and intrusive."

The existing brick buildings were in a poor state of repair so the decision was made to demolish the interiors and excavate the site back to its footings, while preserving the exterior shell and party walls.

The roughly L-shaped plan defines two intersecting perpendicular volumes. The



main living areas, on the ground floor, are arranged as a sequence of linked open-plan spaces. The front door opens directly onto a large lobby with an atrium/staircase at one end, designed to pull light from an overhead skylight into the basement, and a kitchen at the other. The ground floor living room, to the rear of the property, has a glass floor on one side and provides access to a second stairway down to a small sunken courtyard.

The lobby staircase ascends to an upper level mezzanine, nestled below a trussed roof that extends out towards the rear of the property. The basement level houses two double bedrooms and a large master suite with an en-suite bathroom, located under the arched pavement vaults.

Urban rustic

The crisp, minimal aesthetic and limited palette of materials, including timber, brick and concrete, is intended to create a calm, contemplative environment. The design might seem at odds with the

sensibilities of the client, who runs a country manor hotel business and was keen for a property with a 'rustic' environment.

However, the challenging parameters of the inner city context made that ideal impossible – for example there could be no views out through windows – but a compromise was reached with the concept of an "urban barn". The idea was to create two large perpendicular volumes, with gallery spaces, covered by a roof structure of deep timber trusses.

"We thought the owners would never go for the idea, but from a very early stage they bought into it and were genuinely intrigued about what was possible," says Shannon. "After a few meetings with the client we realised there was going to be a lot of freedom on this project and when a client wants what you are doing, the collaboration suddenly becomes very interesting."

The chunky laminated oak trusses are a key rural reference point. The timbers are deep enough to shield oblique views from

ABOVE & BELOW

The crisp, minimal aesthetic and limited palette of materials, including timber, brick and concrete, is intended to create a calm, contemplative environment





CNC

The joiners exported the Revit model to run CNC milling machines used to manufacture the trusses and staircases on the project

the windows of neighbouring properties, and simultaneously allow diffused light to penetrate vertically into the property. The roof above the lobby incorporates a layer of glazing on one side of the pitch to bring light into the interior.

The timber has a personal connection to the owner as it was hand-crafted by Exeterbased Touch Design Group, a joinery business involved in delivering projects for his business. The crisp, minimal aesthetic and limited palette of materials, including timber, brick and concrete, is intended to create a calm, contemplative environment

"We went to meet the company and they were incredible, probably the best joiners I have come across in my 20-odd years as an architect," says Shannon.

Every truss was hand-crafted from sheets of cross laminated marine ply, to very tight tolerances. Each had a bespoke carry box made, similar to a violin case, designed to protect it during transit from the West Country. The firm even invented unique carrying trolleys and hoists needed to lift the trusses into position from the excavated basement floor.

Unlikely BIM

Despite its small size, the Hidden House was a BIM project, and in fact served as a test bed for LTS' implementation of the technology. "Autodesk Revit was a new drafting tool that enabled us to detail components in a way we hadn't been able to before. It is also a great presentation tool, many of the visualisations are a very close match to what we ended up delivering," says Shannon.

Working in Revit enabled the team to gain a detailed understanding of the existing building's geometry – many of the footings and the party walls are out of line – and work to fine tolerances of +/- 0.5 mm, not normally associated with a domestic job.

The joiners didn't work directly in the software, but exported the model to run CNC milling machines used to manufacture the trusses and staircases. In addition, BIM helped the designers achieve important precision connections between the frameless glass floors and brick walls.

"It was crucial to make the connections look effortless, the tolerances we were working to were ridiculous," says Shannon. "The house is almost like a 1:1 scale model, which is credit to the joiner and the contractor, Broseley. I have not been able to get the same level of quality and precision consistently across a project, before or since."

But those beautiful lines and rich natural materials would be wasted if it wasn't for clever tricks deployed to maximise the amount of light able to penetrate into the property.

The small garden and two atria provide a strong flow of daylight to the lower level, low-iron glass floors maximise the clarity of light, and all bedrooms have windows and access to daylight and ventilation, albeit not great views out.

The master bedroom is landlocked and has no window, but incorporates a sliding wall, which when fully open allows light to penetrate through the glass floor from the lobby above. The kitchen adjacent to the lobby even has a glass splashback to increase the amount of 'borrowed light' able to enter the bedroom below.

The sliding door also forms part of a strategy to de-compartmentalise spaces and open up the plan. In normal use, only one or two people will be inside the property at a time, which means the conventional privacy needs of a family disappear.

It's another piece of the intricate jigsaw required to make this difficult site work to its full potential. For his part, Shannon remains modest: "Every site in London is constrained, you're always in someone's pocket or backyard, you just have to be considered and aware of the circumstances before you start," he concludes.

PROJECT DETAILS

Client:

Private

Architect:

LTS Architects

Main Contractor:

Broselev

Structural Engineer:

HRW

Building Services:

SGA Consulting

Cost Consultant:

Corrigan Gore & Street

Bespoke Joinery & Cabinet Makers:

Touch Design Group

Bespoke Glazing:

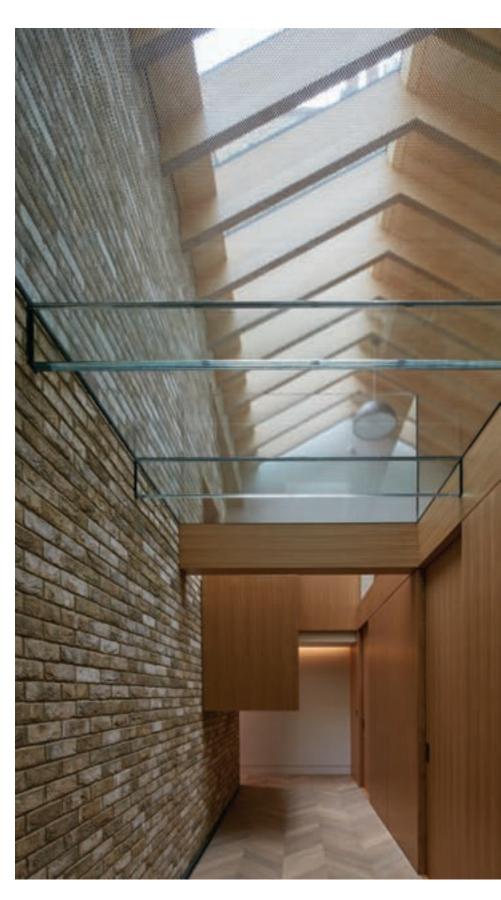
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The potential of Passivhaus



The Kingspan TEK Building System of Structural Insulated Panels (SIPs) has been used to create a contemporary show home that blends ambitious architectural design with the meticulous energy efficiency requirements of the Passivhaus Standard, at the Potton Show

Centre. HTA Design's blueprint for the new Elsworth Show Home centres around a small enclosed courtyard with a large rooflight. In addition to its high thermal performance and construction benefits, the Kingspan TEK Building System was also specified to help the building achieve low air leakage rates.

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Signbox recreates iconic sign



When the world's most famous police headquarters moved from St James's Park to Victoria Embankment, **Signbox** was tasked with replacing the iconic sign that had been seen steadily rotating outside the building since 1968. Not only that, contractors BAM also appointed Signbox to design and install

bespoke brushed stainless steel lettering for the building's pavilion roof. For such high profile signage, everything had to be designed and engineered to exacting detail. As well as being built to a very specific design, the sign needed to be highly robust and durable.

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GEZE UK was pleased to sponsor the prestigious Winner of Winners award at the biennial GAI/RIBA Architectural Ironmongery Specification Awards hosted at RIBA's head office in London. Highlighting the importance of the professional partnership between architectural

ironmongers and architect disciplines, the awards reward entire specifications teams, with the Winner of Winners title going to the pairing that best demonstrates aesthetic excellence, fitness for purpose, functionality, correct specification and originality.

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BUILDING PROJECTS

THE FITZROY FALMOUTH, CORNWALL

Time for CLT by the sea

Perched on a scenic Cornish bay, a fully CLT-framed retirement living scheme promises a better quality of life to residents and a fast construction time. James Parker reports

PegasusLife develops 'retirement living' schemes with a difference. The new specialist company has bought more than 30 sites where it aims to offer a distinctive, site-specific offering to occupants, and a more aspirational, attractive and sociable alternative to traditional retirement homes.

The Fitzroy will be a new stand-out example of the concept, sitting on the impressive bay-front site of the somewhat dilapidated and now-demolished Madeira Hotel in Falmouth, Cornwall. And the concept behind the 34-apartment scheme isn't its only unique selling-point – it is claimed to be the only retirement scheme on this scale yet seen in the UK with a full CLT frame. One of the chief reasons behind the choice of the efficient single method of construction being the project's very tight 12 month programme.

The scheme which is due to start at the end of May, has been designed by the Bristol office of architects Allford Hall Monaghan Morris (AHMM), working closely with structural engineer Symmetrys, both of whom have had a successful working relationship with PegasusLife on past and current projects. Cormac Farrelly, associate director at AHMM, said that the key design challenge was making the most of what was a compact site when it came to maximising space and views for the building's occupants.

He told ADF: "It's an amazing site, only 30 metres from the beach in a quiet, elevated position. However, the challenge was that as it was small, the building would have to work hard, especially making the most of orientation." He continues: "A key driver was that where possible, apartments should have a bedroom and a living room that faced the sea, and that the majority

should be dual aspect, which is really important for this typology."

As a result of this, the building form developed with apartments ranged along the south-facing front of the building, with a glazed 'gallery' along the rear providing circulation. Farrelly says this is no mere corridor, being wider than normal and being lined using "enhanced materials and lighting" avoiding any sense of it being 'back of house.'

The widths provided in apartments are generous, compared to many residential care homes, with 4.5 metre wide living rooms and 3 metre wide bedrooms as a minimum, in addition space standards overall are far in excess of national standards. He says that in addition to providing more amenity internally, this helps make the most of the great sea views.

However, with substantial glazing, there was a need to tackle shading while assuaging the tough local planning authority (the building sits in a conservation area next to a World Heritage Site). Says Farrelly: "We wanted a contemporary take on the Victorian hotels dotted along this seafront, and there were lots of conversations with planners." Luckily the planners were of a similar outlook, wanting a "contemporary building which responded to the gable-fronted existing hotels."

The front elevation achieves both shading and gables using large open balconies under them which are 12 m² in total, so big that AHMM term them "outdoor rooms." With tall apertures in the walls that support the extruded gables they provide views sideways as well as out to sea, and extend the living rooms almost 3 metres.

In addition to providing shading to the balcony below, they provided a "sense of enclosure," in Farrelly's words, as "it gets



PLANThe building offers deep balconies to the south-facing front elevation and a wide gallery corridor to the north



GABLES

The gabled front elevation is a contemporary take on local Victorian hotels, with open 12 m² balconies

quite blowy there." The gables themselves are extended 2 metres, providing shade to east and west. The overall look satisfied the planners to such an extent that the scheme was passed without going to committee – "It's quite unusual to get a delegated decision in a Conservation area for a major project," Farrelly says.

The route to CLT

The client and architect had a strong desire to use a full CLT frame rather than precast or steel for the project, not only for its sustainability credentials but also because of its construction efficiency and acoustic benefits. Ashwin Halaria of structural engineer Symmetrys comments: "Because the CLT is manufactured in the factory, it can be put up very very quickly."

He adds that the fact that the client was able to purchase the site and hotel subject to gaining planning permission "really gave us the opportunity to think about how we were going to build this, and how quickly we could turn it around. It made sense to really explore the structural options, and with the client wanting to build it as efficiently as possible." Farrelly adds, "We thought about CLT early on so we wouldn't have to post-rationalise the design."

A full CLT frame was the goal from the start, for its sustainability credentials, construction efficiency and acoustic benefits

Symmetrys did a comprehensive, 'holistic' cost/benefit analysis on the options, looking at concrete frame, light gauge steel (LGS) and CLT, and in the end came down to a choice between precast and CLT, discounting steel. Halaria explains: "If you just consider the bare cost of the frame, LGS would have been the most cost-efficient. However, when you start to look at it in detail, such as the amount of steel you would need to achieve the spans, and also cost of fireproofing and soundproofing steel, you understand the benefits of each system better."

There is a received view that CLT is the most expensive option, but Symmetrys interrogated this within its comparative analysis. It found that while the CLT frame was the most expensive option in itself at £1.25m, it was the second quickest to build



after LGS at 11 weeks, and only required 175 mm party walls.

Symmetrys, with assistance from the quantity surveyors PMP, estimated that the additional cost of fireproofing and sound-proofing an LGS frame in this case would have been around £200,000, which Halaria describes as "quite phenomenal." In addition, there was the weight issue: "Both LGS and CLT frame are very light, but with LGS you are using concrete floors so it's a heavier frame overall." And due to the limitations on spans, "there would be a lot of hot rolled steel to get it to work, essentially it would become a standard steel frame infilled with LGS."

Cormac Farrelly is complimentary about Symmetrys' analytical approach: "The very helpful thing they did was to look at that cost/benefit matrix, which allowed the decision to be made. If you look at the bigger picture, it's actually cost-neutral."

Speed & efficiency

Symmetrys identified a further reason why steel frame, despite its familiarity for contractors and ability to provide large spans, wasn't the ideal solution. The need to bring in a crane would have involved a "high level of site activity in a sensitive local

environment." On other hand, as witnessed recently by Halaria on a CLT housing project in London's Elephant & Castle by Eurban (Trafalgar Place), fast progress can be made using just a few staff on site. "There was a team of five rapidly putting up a big building, as it's so efficient."

Farrelly comments: "We wanted CLT for the energy advantages of the material, but also its speed – we could get this thing water-tight really quickly." He does offer a note of caution however, saying "We've used CLT in the past where it has been brought in too late in the day, and there has been a lot of steel thrown in to make the spans work."

Halaria summarises why CLT finally won out over a twin-wall precast option – weight of precast being one factor, but the deal-breaker being the roof: "The thing with precast is while it would go up as quickly as CLT, the precast units couldn't span to the ridge to form the roof, so you'd have to bring in steelwork which is another trade on site." In addition it would have a "significant impact on foundation costs," costing around an extra £100,000 for foundations and screed according to Symmetrys' analysis. Even a steel frame with precast floors would have cost an

ROOMS WITH A VIEW

As well as providing more space than normal and great views, apartments also have a sense of enclosure and are shaded by the balconies above





EXTENSION

The gables themselves are extended 2 metres, offering shading

PROJECT DETAILS

Architect: AHMM

Structural engineer: Symmetrys

Developer: PegasusLife Main contractor: Midas Services engineers: WSP Project managers: AECOM Quantity Surveyors: PMP Timber supplier: KLH extra £90,000 on constructing foundations and party walls.

He adds: "CLT on the other hand could go top to bottom without any other trades, apart from forming the reinforced concrete slab under the ground floor." This was the deciding factor for the client, who was determined to find the most efficient solution to delivering its tight programme. CLT is also a sustainable material, and would achieve a saving on the transfer structures required and the substructure due to being lighter than traditional construction methods. Moreover, due to its robust nature, most party walls can be installed as part of the main frame.

Despite this Halaria acknowledges the "strong credentials" of precast, with its efficient factory-constructed, slotted-in units, and admits that there is still some steelwork in the design, such as within the balcony construction. However, The Fitzroy's frame is completely CLT from the ground floor to the roof, including the staircases.

Farrelly says that using CLT has enabled the architects to "really optimise the apartments in terms of stacking, and also the width of party walls." He says that a key goal was to "drive as much repetition in the apartments as possible" for efficiency, to enable living rooms and bedrooms to be stacked (in addition to bathrooms and kitchens), and ease transfer of services.

In terms of the design benefits for this project for users, he says: "Most retirement

homes in the UK to date have been very conventional in terms of design, layout and construction. On this project, thanks to the less complex floor zones with CLT, we will have higher ceilings whereas with steel we would have had much more complicated services distribution meaning lower floor to ceiling heights."

Challenges

Farrelly and Halaria agree that one of the challenges of CLT, despite its efficiencies, is that in terms of services it makes it essential to finalise distribution layouts through walls early, as modifications later on are tricky. Halaria explains: "We are talking about large service holes here – where are the main distribution runs going to go?"

The main learning issue, he says, is coordination of M&E with the design of the frame, so that the designers understand where all the ducts need to go – "it has to be fully coordinated in advance. With a concrete frame you have a slab, service risers and then take your ducts wherever you want them."

Cormac Farrelly admits that there were mixed feelings within the project team when CLT was initially mooted, with some having had "bad experiences in terms of cost, and some people just being nervous of new technologies." However, the overall drive to prove the case for the material from client, architect and engineers won through: "We worked really hard to bring it in," he says.

Having worked with PegasusLife previously, he is confident that if the efficiencies and cost work out as planned on this Falmouth scheme, more CLT projects will follow.

Halaria concludes: "It has been a sharp learning curve for everyone, and it was interesting to know what the CLT supplier couldn't do. It's been an interesting learning experience working out what we are responsible for as engineers, and what they are; each supplier works very differently."

He admits that most contractors in the UK are risk-averse, and won't volunteer to build in CLT: "It's a matter of trying to change people's thought patterns and get them to understand the benefits it could bring to their process. It's still something new, and the first time it might be difficult, but the second time you learn from that and the third time you perfect it." With the design team acting as collaborative partners to an open-minded client in the case, its choice of material was also an informed one.



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VEKA UK invests in BIM



The VEKA UK group has demonstrated its commitment to the commercial sector once again. The company has invested a significant amount in creating highly intelligent, data rich, parametric, three dimensional models of its most popular systems for the Building

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A project of this nature presented several challenges: ensuring that the aesthetics of the facade delivered clean transition lines with both the roof and window units. The



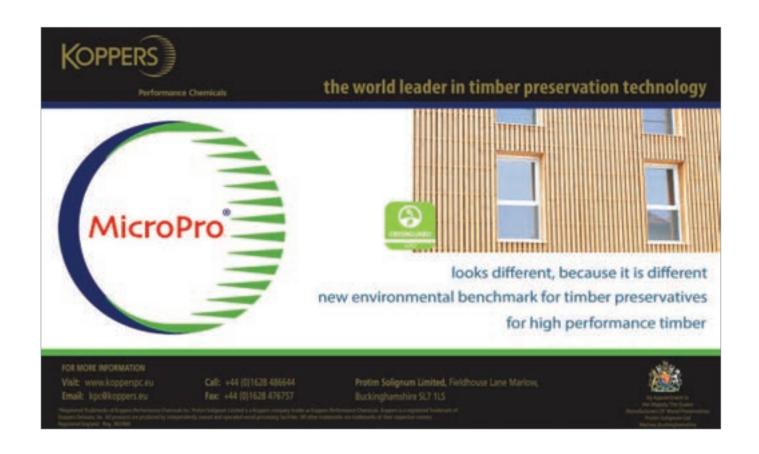
abutment of the seams to the window needed to incorporate vertical zip-up jambs, to match up with the window modules. The complex transition to the roof was alleviated by introducing pre-fabricated welded cranks, where sheets are cut and welded to the return angle under factory conditions, guaranteeing consistent quality and tolerances.

The roof build-up was carefully designed

to achieve a specific acoustic performance level. A perforated liner profile and acoustic slab was used to assist with providing a clear audible, internal teaching environment. Ash & Lacy offer a large suite of test data which can provide sound absorption to a level of class A via our perforated liner systems. This in conjunction with systems that offer high levels of airborne sound reduction and rain noise attenuation, meant that the Ashzip product was the right specification for the project.

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A good case for the blues

Phillip Wilcox-Moore of Axter offers advice on how 'blue roofs' can elevate a scheme's sustainability credentials by retaining rain water

ur climate is rapidly changing. Climatologists are predicting wetter winters, significantly increased rainfall over short periods and a certainty of more extreme weather events. This means we need to look at more sustainable and affordable solutions for flood mitigation.

The traditional approach to storm water management was to remove water from the building as quickly as possible causing downstream flooding. Currently, below ground storage tanks with specialist attenuation control mechanisms minimise the impact of storm water on the downstream drainage system. These solutions require substantial earth works and are often expensive, especially if collected storm water must be pumped out of storage.

However, there is a simpler and more cost-effective solution to storm water mitigation and SuDS compliance that is gaining credibility with architects, designers and engineers alike. These measures have been driven by legislative requirements imposed upon new developments within Sustainable Urban Drainage Systems (SuDS) regulation.

Extreme care must be taken when ensuring the waterproofing membrane is not affected by standing water

Cost-effective attenuation

SuDS demands the control of water from where it first lands, at roof level, and attenuating through gravity such as when filtering through earth and rock. Water on the flat roof is engineered to drain away slowly over several hours after the storm event, without overloading the downstream drainage system, thus making it a 'blue roof'.

Gravity provides a simple and



cost-effective way to attenuate storm water flows, by temporarily holding rainwater back on the flat roof. A temporarily retained rainwater depth of just three inches (less weight than a heavy snowfall) on a flat roof would severely reduce ground level flooding and the impact of drainage system overload of even a big storm. The only additional cost to that of a standard flat roof are for slightly higher waterproofing details and a simple flow restriction insert to the roof outlet.

That said, extreme care must be taken when ensuring the performance and composition of the waterproofing membrane is not affected by standing water. Some products are prone to plasticiser migration and premature ageing when submerged for a prolonged time.

A waterproofing failure on a 'blue roof' will have catastrophic consequences over and above those experienced during a standard roof leak.

A two layer fully-bonded waterproofing system is more robust than a single layer system. Constant water immersion can lift the granules on a self-protected granular finished membrane, therefore it would be advisable to apply chippings to

GETTING THE BLUES

Blue roofs are so called because they are designed to allow water to drain away over several hours to avoid overloading downstream drainage

Installing modular load-bearing attenuation cells would keep the roof accessible at all times



GREEN & BLUE

Adding a living roof would temper the amount of water flowing through a roof while enhancing biodiversity

provide permanent UV protection if the membrane is to be left exposed.

Alternatively, mitigated water can be concealed under a raised pedestal and paving system or by the installation of modular load bearing 'blue roof' attenuation cells, which means that the flat roof can still be used for access and a variety of other purposes. Conversely, a living roof would also temper the amount of water flowing through it while increasing biodiversity.

By far the most important waterproofing aspect to note is that 'blue roofs' should be a warm roof construction, and inverted roofs should be avoided. Inverted roofs rely on a water flow reducing layer (WFRL) installed above the inverted insulation to restrict the flow of water, and this is not a waterproofing membrane. Its unsealed laps will not be watertight when a three inch head of water is temporarily retained above. This will result in the calculated thermal performance of the roof not being achieved, higher than expected heating and cooling costs and a poorly performing building. This should be of significant concern to all parties involved.

Go bespoke

Standard thermal calculation methods cannot be used when designing an inverted roof with 'blue roof' finishes. For example, a 0.15 W/m²K design U-value on a standard inverted roof would require approximately 220 mm of extruded polystyrene (XPS). Whereas on a 'blue roof' this thickness would increase to 1000 mm of XPS and a design U-value of 0.12 W/m²K could not be achievable.

In conclusion, because every building is different, it is a key maxim to remember that a bespoke engineered drainage strategy must be designed for every project. The specified waterproofing system must be robust, and installed to the highest quality standards. And, as stated earlier, the roof should be a warm construction and inverted roof designs avoided.

If these three basic principles are followed, I believe we can quickly achieve a successful national strategy for sustainable and affordable flood mitigation at roof level.

Phillip Wilcox-Moore is managing director at Axter

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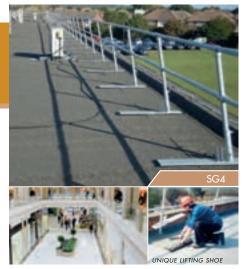
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Sarnafil Plus has market roof covered

he roof refurbishment of Kirkgate Market in Leeds is a story of problem solving and partnership. Rising to the challenge, Protech Roofing and Sarnafil Plus delivered an exemplary solution, which allowed the market to remain open throughout.

Europe's largest covered market, Kirkgate has 800 stalls attracting over 100,000 visitors a week. As part of a £14m refurbishment to improve the market for the stallholders and the public, the leaking roof, extending over both the 1976 and 1981 halls, needed renewing while the building was fully operational.

The original design specification called for the existing felt waterproofing to be removed back to the metal decking. However, this would cause massive disruption and with no guarantee of a watertight building. To combat this issue, Protech recommended a mechanically fastened Sarnafil system that could be overlayed onto the existing substrate.

A full Sarnafil Plus survey and moisture mapping revealed the worst areas for water



ingress before the project started to assist with planning the work.

The nine-month project saw a team of between eight and 10 people working on the roof through all four seasons, including rain showers and temperatures of over 27°C., without the project or waterproofing ever being compromised.

Sarnavap 5000E SA a cold applied, self-adhesive vapour control layer was used to ensure temporary waterproofing for the market while the roofing work was being carried out. The SarnaTherm insulation boards were mechanically fixed into the existing roof and installation of Sarnafil S327-15EL Light Grey membrane with stain-

less steel fixings created a durable, weathertight and aesthetically pleasing finish. Sarnafil membranes are certified by the British Board of Agrement to have a service life in excess of 40 years, giving the client confidence in the durability and longevity of the roof.

A further feature of Sarnafil roofing systems that appealed to the client was that the Sarnafil S327-15EL Light Grey membrane is cold applied – welde together using hot air rather than with a naked flame. The system can be used without restrictions as it meets the fire performance requirements of BS476-Part 3:2004 and BS EN 13501-5:2005.

Six rooflights over 51m long were replaced with SarnaLites, situated close together in rows, making sure that the market continued to benefit from natural daylight. This part of the refurbishment was carried out at night to limit any disruption to the market below.

Sarnafil Plus visited the site regularly and a successful final inspection resulting in the issuing of a Sarnafil Plus guarantee.

01707 394444 www.sika.co.uk

Alumasc delivers bespoke solution



Alumasc Skyline recently designed and manufactured a comprehensive fascia and soffit system for a prestigious private residence in Jersey. The eco-friendly design, involves extensive landscaping and ecology work where quality and

style combine to form a stunning build. Alumasc Skyline's bespoke solution, provided the perfect finishing touch. The challenge for Alumasc Skyline was to design soffits that would fit with extremely awkward overhangs, along with specially tailored nosing fascia and rainwater pipe systems.

0808 100 2008 www.alumascwms.co.uk

Save labour and time on site



Labour and time on site can be reduced by weeks by getting someone else to do much of the work- for the same material cost. Protan is now able to supply rolls of material ready welded, in its state-of-the art factory. It is the only single ply

membrane manufacturer offering the capability to UK roofing contractors. Yet the prefabricated system is cost-competitive with 'standard' membrane material, which still has to have on-site welding factored into the cost. Studies show that Protan's innovative prefabricated roof process can cut welding by up to 70 per cent.

01925 658001 www.protan.co.uk

JB Shingles take guests back in time



Marley Eternit's JB Western Red Cedar Shingles have been specified for the roofs of 28 new medieval-themed lodges at Warwick Castle. The unique additions to the popular tourist attraction give visitors the chance to experience the medieval age like never

before. With approval from Warwick Castle, Willerby Bespoke specified JB Shingles for the lodges due to the robust finish, and the reassurance provided by the accreditation to the Certi-Grade quality assurance label. Shingles also require low maintenance and blend into the heritage surroundings, so were deemed an ideal choice.

01283 722588 www.marleyeternit.co.uk/Shingles

Redland takes the woad north

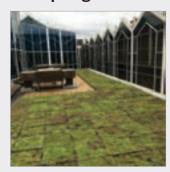


Aesthetically attractive and simple to install, Saxon 10 Slates from Redland were a straightforward choice when it came to roofing a ground-breaking £6.2 million care facility. Manufactured with a riven surface, cut back interlock, thin leading edge and

chamfered side edges, Saxon 10 Slates mimic quarried slate but have features that only machine-made tiles can deliver, such as single nail fixing and no requirement for eaves or top slates. Two vibrant colours are available: a Black that matches the black-grey slate of Scotland; and Blue, which is based on the blue-grey slate quarried in Snowdon.

01293 666700 www.redland.co.uk

It's Springtime....it's time to install a green roof!



M-TRAY® sedum green roof from Wallbarn Ltd is the perfect solution. All the necessary substrate, drainage and filtration elements are correctly measured and pre-loaded into the specially designed plastic module. Sedum plants are pre-grown and fully established and everything is contained. There is no mess and nothing spills out.

Each module can be carried by hand. Just place them down and clip together. The joints will become invisible to form a seamless, fully established green roof. M-Tray® truly is an instant green roof. It is available with a mixture of sedum species and also with native wildflower planting, designed to attract butterflies and bees.

 $M\text{-}Tray^{\text{@}} \ is \ designed \ and \ manufactured \ in \ Britain. \ Please \ contact \ Wallbarn \ Ltd \ for \ more \ information.$

0208 916 2222 www.wallbarn.com

The case for factory finishing Timber: Cheshire Fire And Rescue, Lymm



The benefits of full factory finishing of architectural timber, combined with the use of translucent coatings to bring out the lustre of natural wood, are ideally highlighted in the construction of a new-build fire and rescue station in Lymm, Cheshire. While factory finishing is becoming more prevalent, it is still far from the norm, despite the many distinct advantages shown in this project. Similarly, translucent wood coatings are a less common choice than opaque finishes though, as the Lymm contract shows, they can show off the timber grain to its best effect while retaining all the weather-proofing and preservative qualities of a technically advanced exterior coating. In this case, Mighton Woodstain TP transparent top coat was specially mixed to the colour TR4131 to complement the natural colour of the Siberian Larch specified for the exterior cladding, while the translucency of the coating brought out the timber's grain to best effect. The low-build, high-solids Mighton Woodstain TP is a one-pot solution so the single product is not only applied as primer, base coat and finish – so requires no washing out of machinery between coats – but is also used for repair and maintenance.

01223 902 455 www.mightonproducts.com



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Shattering conventions

Neil Puttock of Boavista Windows, explains why fibreglass window frames have stirred a revolution in the glazing industry





GREEN WITH ENVY

According to the author, fibreglass is superior to both PVC and aluminium when it comes to sustainability

n American engineer and professor by the name of William Edwards Deming once said, "Innovation comes from the producer – not the customer." When it comes to the window industry, I couldn't agree more. After all, there is little incentive for the customer to seek an alternative to reliable products such as PVCu and aluminium windows, when those perform adequately in terms of functionality and security.

However, innovation is a natural human response to a continually changing environment and it helps us shape the world we live in by creating useful products and services. An example of this is fibreglass window frames – a sustainable alternative to plastic and aluminium, which offers durability and performance without compromising on design, function or form.

A green window of opportunity

From a sustainability standpoint, fibreglass is far superior than its PVC and aluminium counterparts due to its reliance on silica, which is naturally found in abundance. This is in contrast to the fossil fuels used to make PVC windows – a resource that is both heavily polluting and finite.

A Trend Monitor report entitled Five Key Trends which will impact on the UK home improvement industry in 2016 highlighted how the millennial consumer looks beyond the cost of a purchase and towards sustainable solutions.

Using the latest pultrusion technology, fibreglass frames are created by pulling resin-soaked glass fibres through heated dyes – a process that only consumes 70 W to produce a linear metre of window frame weighing approximately 1 kg (2.2 lb).

Fibreglass frames are created in a process that consumes just 70 W per linear metre

DESIGN POSSIBILITIES

Fibreglass opens up a world of possibilities due to its strength and stablility, which enable it to hold large surface areas of glass



If the windows need replacing, they can simply be shredded into sections and then mixed with concrete and asphalt to deliver a lightweight, strong and crack and shrink-resistant composite material – a process that requires very low energy to carry out.

Designing out compromise

In terms of design, fibreglass opens up a world of possibilities due to its strength and stability, which enable it to "hold" large surface areas of glass, bypassing the need to produce and fit specialist structural glass.

From the perspective of an architect, fibreglass frames support more adventurous designs that would previously have been prohibitive due to the cost associated with incorporating bespoke glazing solutions. Not only that, but fibreglass also expands in line with window glass, removing the need for unsightly gaskets to hold the pane in place, adding aesthetic value to a building.

Perhaps one of the most striking features of a fibreglass frame is that, despite weighing half that of aluminium, it is exceptionally hard-wearing, highly rot and corrosion resistant, and delivers a much longer life cycle than PVC and aluminium.

In fact, it is these factors that have underpinned the material's success in parts of Europe and Canada, countries that were quick to adopt fibreglass to counteract the weather-related erosion that affects window frames in coastal regions or areas of harsh climates.

In addition, reducing the maintenance associated with repainting – or even replac-

ing – windows would not only cut costs for specifiers but also help enhance and regenerate a locality.

Future proofing the UK

The case for fibreglass is not exclusive to coastal towns or high-spec residential properties or office blocks, but also applies to the wider housing market.

A House of Lords report created by the Select Committee on Economic Affairs entitled 'Building More Homes' concluded that the Government's target of one million new homes by 2020 will not be enough. More importantly, it put forward the case that in order to address the housing crisis, at least 300,000 new homes are needed annually for the foreseeable future. This is by no means an insignificant amount; if the industry is to meet this target then the annual window footprint alone would be considerable and the volume of plastic and aluminium required quite daunting.

Given the renewed focus on sustainability underpinned by Government's objective to reduce the UK's carbon footprint, it's the right time for the industry to embrace new approaches to window frames and consider their role in contributing towards sustainable environments.

While the technology exists, the challenge now is to innovate by making fibreglass windows a standard component within the built environment in order to improve the sustainability credentials of present and future buildings.

Neil Puttock is managing director of Boavista Windows



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We're in! Network VEKA evolves



Network VEKA has announced the next phase in its evolution, rebranding as Independent Network. Built on a solid 20+ year heritage as one of the UK's most trusted independent installers, Network VEKA invested significantly in consumer research to identify opportunities to better connect with consumers. The research confirmed that the

Network VEKA 'recipe' is fully aligned to consumer needs, however its 'packaging' required improvement to better engage with homeowners. Member companies got their first look at Independent Network's new branding at the recent Members' Weekend.

01282 473170 www.networkveka.co.uk

Holdsworth Windows Ltd



Steel windows, doors and screens have slimmer and more elegant sightlines, and they boast better strength and security compared to other products. Steel frames are always hot dip galvanized and usually polyester powder coated in an RAL colour of your choice and they can be double

glazed to meet building regulations and high efficiency targets. All **Holdsworth Windows Ltd** products are manufactured in their own factory in South Warwickshire.

info@holdsworthwindows.co.uk

Ford Windows racing ahead



Sheffield-based fabricator and installer Ford Windows is celebrating a new milestone in its continuing growth and development – its 40th year in the industry. And, despite its maturity, the company is continuing to grow. Philip Shackley believes that Ford Windows'

strong relationship with Eurocell has been a key factor in the company's success. "We chose Eurocell because of its excellent reputation for fabricator support and innovation. It's thanks to its excellent product and our own commitment to best-in-class customer service that we have been able to grow to this size and still expand."

0800 988 3049 www.eurocell.co.uk

Adjustable finger plate for Invisidoor



Argent Alu developed the adjustable finger plate to make the installation of Invisidoor door frames even easier and faster. Any potential play in the mounting is perfectly accounted for with an adjustability of + and -3mm to the left or right. An Invisidoor door frame can still be correctly installed even if the floor isn't finished. The adjustable finger plate is

specifically provided with a marking at 1000mm from floor level when the standard installation height of the finger plate is at 1005mm. Both the Invisidoor Basic and the Invisidoor DL door frames are available with an adjustable finger plate as standard.

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www.pilkington.co.uk/activ



RENOLIT EXOFOL PX Ulti-Matt - The ultimate exterior surface



For an architectural matt surface discover the new RENOLIT EXOFOL PX Ulti-Matt solid colour surfaces which give windows an extremely desirable finish. The new Ulti-Matt with its low gloss and fine structure gives a painted/powder coated look to your profiles but with all the additional advantages associated with a RENOLIT exterior film. The Ulti-Matt surface is available in four colours. White, Cream White and Anthracite Grey plus the addition of the recently introduced true Black. Ulti-Matt solid colours are all produced as a RENOLIT EXOFOL PX grade material, a patented advanced exterior film which also benefits from the addition of SST (RENOLIT's Solar Shield Technology) to reduce heat build-up. RENOLIT EXOFOL PX films offer improved performance with the latest modern designs, colours and textures and was developed to enhance weatherability and extend guarantee periods for up to 15 years in the UK. To request a handy RENOLIT EXOFOL PX Ulti-Matt swatch or an A4 sample of any of the four colours individually, please visit the website. Alternatively please contact RENOLIT Cramlington Ltd by phone.

01670 718222 www.renolit.com/exterior/en/sample-ordering

Urban Front achieves LPS 1175 - Grade 2 security testing for E80S



Urban Front are very pleased to announce that they have completed and achieved LPS1175-Grade 2 security testing for their E80-S doorset in sizes up to 1200 x 2400mm. LPCB's Window and Doors High Security scheme is carried out to Loss Prevention Standard LPS1175 and involves assessing their resistance to intruders. This standard comprises a range of manual intervention tests and can be applied to doors manufactured from most commonly available materials. The E80-S withstood rigorous testing in the areas of: glass, frame and lock security including vision panels and leaf hardware. As part of the certification, Urban Front also completed and achieved ISO 9001. LPS1175 is a requirement of the current Part Q building regulations. The difference between LPS 1175 / PAS 24* as quoted by BRE Global: LPS 1175 differs in a number of ways from PAS 24, notably in its approach to intruders that are willing to risk making noise in their attempts to enter a property. LPS 1175 evaluates a product's resistance to forced entry by a wider range of intruders, including those unconcerned about making noise.

01494 778 787 www.urbanfront.co.uk







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VBH unveils greenteQ door handle



The TS007 Kitemark sets out to provide effective protection against attacks on the profile cylinder through picking, drilling, bumping, and the snap and extract method. The standard tests profile cylinders and handles together and gives the handle/cylinder combination a three star overall rating. Hardware specialist VBH has unveiled the Alpha 2-Star security door handle set as the latest addition

to the greenteQ range. When used in conjunction with a one star rated profile cylinder the handle enables manufacturers and installers to provide a three star rated solution to BSI Kitemark TS007.

01634 263263 www.vbhgb.com

Full professional service from Unicorn



With over 20 successful years in business, Unicorn Windows Ltd provide a full, professional service from point of contact to after-sales care. Impressive and practicable; Unicorn Windows only install high quality, high security, energy efficient products. Specialising in Heritage works and a wide range of bespoke products for domestic and commercial properties, Unicorn Windows are perfectly placed to turn plans into realities.

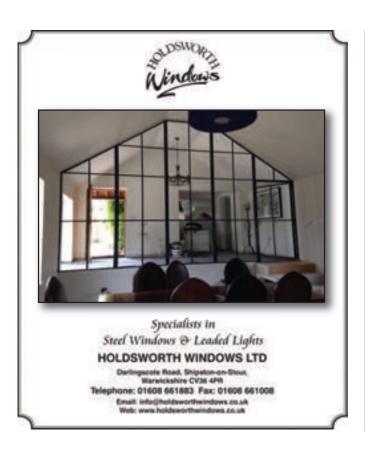
sales@unicornwindows.co.uk



Garador's new Visualise your Door tool

Garador has launched a new website-based tool to show exactly what a new Garador garage door will look like on your property. Garador's Visualise your Door lets you upload a picture of your property, add an image of the Garador garage door you choose and then print it off. You can change the style and colour of the door at the click of a button. It has been designed to be easily accessible from a desktop PC or tablet and the complete range of Garador doors and colours including Up & Over, Sectional, GaraRoll and Side Hinged garage doors is available to use in this new tool. Getting the right Garador garage door helps to maximise the value of your property, and this new tool is the easiest way available on the market to ensure you get it right. Find out more by visiting the website or call Garador for more information.

01935 443709 www.garador.co.uk/visualise-your-door





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Westbury products sound & secure



Westbury Windows & Joinery has recently published its latest in a string of successful test results, following on from its energy and security (PAS24) achievements with acoustic assessment too. The company's products were independently tested at a

UKAS-accredited laboratory and performed well in the reduction of traffic noise. However, the unexpected star of the show was the French doorset; a product that is notorious, industry-wide, for poor sound insulation. Westbury's has proved to be as effective as a casement window, scoring 38Rw on the Weighted Sound Reduction Index.

info@westburyjoinery.com

New generation of mechanisms



GEZE UK has enhanced its range of manual sliding door mechanisms with the addition of the Rollan 40 NT, the Rollan 80 NT and the Rollan 80 NT SoftStop - a new generation of fittings which are ideal for interior use in homes and businesses. They boast a smooth

and simple operating action, are easy to fit and quiet to use. The systems can be used on doors weighing up to 40kg or 80kg and with any door material - wood, plastic, metal and even glass with clamped fittings. Perfect for use in schools, offices, hotels, residential centres as well as in the home, they are ideal space savers.

info.uk@geze.com

Demand on the rise for contemporary hardware, says SDS London



As homeowners look to inject their personal style into every aspect of their home, customised details such as ironmongery are becoming more popular. A director at SDS London says contemporary styles of hardware are high on consumer's wish-lists and that the company has seen increasing demand for its recently launched hardware brand, Oliver Knights. Oliver Knights is a new brand but the team behind it has more than 50 years' experience fine-crafting hardware. The firm manufactures a range of contemporary door handles from its factory in the UK for exclusive residential and hospitality projects around the globe. The Oliver Knights range is available in a wide range of colours including popular shades such as black and chrome finishes. For the homeowner who wants something completely unique, SDS London can also offer bespoke styles of hardware, catering to even the most discerning tastes. SDS London supply hardware to the retail and trade sectors. The company has had its products specified in many major projects in the UK including Claridges Hotel, Jamie's Italian Restaurants and the Imperial College in Kensington.

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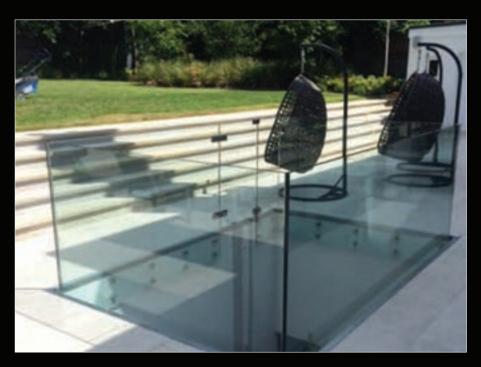


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Senior helps make history in Yorkshire



Aluminium curtain walling, windows and doors from Senior Architectural Systems have been specified for use on the striking new West Yorkshire History Centre in Wakefield. The upper part of the building features dramatic perforated metal cladding

which appears to 'float' above the fully glazed lower levels beneath. The light and airy design of the ground floor office and exhibition space benefits from the slim sightlines of Senior's popular SF52 aluminium curtain wall system and SPW600 tilt and turn thermally broken aluminium windows.

info@seniorarchitectural.co.uk

Network VEKA supports revamp



Rugby Double Glazing recently marked the opening of its revamped showroom with an invite-only open day for friends and customers. The Midlands-based company is a member of pioneering installer support organisation, Network VEKA; members of

which are committed to using PVC-U systems from The VEKA UK Group, and are continually assessed for the highest standards of work. Guests visited one of Rugby Double Glazing's most recent jobs in West Haddon; a garden room, officially opened by six-times World Snooker Champion and Network VEKA Brand Ambassador Steve Davis.

01282 473170 www.networkveka.co.uk

Fast access for cyclists



Encouraging the cycling ethos, TORMAX was specified to install two full-glass automatic sliding doors to the new Gravesend Cycle Hub, providing fast access for busy commuters looking to drop off their bikes before catching the train. The entrances are both powered by low-energy, TORMAX iMotion 2202 operators which have a reputation for exceptional reliability in the long-term, even in a hectic location such as this. A million-pound development, the Cycle Hub is a gleaming new glass building situated next to Gravesend train station, housing more than 280 bikes in a safe, secure and dry location. TORMAX worked with Sealtite Windows Ltd and main contractor Walker Construction to deliver an access solution that minimises the risk of bottlenecks during rush hour at either end of the working day. One door allows bikes to be pushed in and out of the Hub, whilst the other is for pedestrians leaving or entering the facility. With cost an important consideration for Kent County Council, this long operational lifespan lowers the total cost of ownership, allowing for more effective financial planning with reduced ongoing budgetary expenditure.

01932 238040 www.tormax.co.uk





Trojan Manufacturing Group introduce Document Q compliant letterplate

leading hardware manufacturer, the Trojan Group have introduced one of the industry's very few Document Q compliant letterplates. The new TS008 Unicorn letterplate was unveiled at the FIT Show 2017 at the NEC from 23rd – 25th May, 2017.

Manufactured from Stainless Steel for ultimate corrosion resistance, the TS008 Unicorn Letterplate meets the requirements of TS008 which means it can be used on doorsets that need to comply with the requirements of PAS24: 2016 or Document Q of Building Regulations. Tony Chadwick, Group Managing Director, comments: "Trojan is renowned for delivering the products that the market needs and the TS008 Unicorn Letterplate is another example of this."

The features of the TS008 Unicorn Letterplate reflect the skills and ingenuity of Trojan's product designers. The inner protective housing has a unique concealed



hinge mechanism to prevent attack. The inner flap has a positive stop feature for maximum protection from 'fishing' while the inner flap projection is below door handle height for added protection.

The TS008 Unicorn Letterplate has simple but elegant styling that will complement any doorface and is suitable for both composite and PVC-U doors. It is available in a full choice of external finishes including Polished,

Brushed and Satin Stainless Steel, PVD Gold, Black and White. The internal letterplate can be colour coded to match the door colour.

The external flap is manufactured from 304 Stainless Steel for ultimate corrosion resistance (galvanised mild steel is used for painted finishes). The letterplate has a 25 year anti-corrosion guarantee on all Stainless Steel product finishes and there is a 10 year mechanical guarantee on all versions.

Tony concludes: "We have our finger on the pulse when it comes to the latest legislation in window and door hardware and our TS008 Unicorn letterplate is another example of this commitment. The product is suitable for all market sectors and early indication from customers is extremely positive."

For more information on the new TS008 Unicorn letterplate call the Trojan Group or visit the website.

01922 713 933 www.trojangroup.com



New products for inspiring facades



Trespa is introducing a new product range – Meteon® Focus – and welcoming five metallic colours to the existing Meteon® Lumen series. Designers and architects now have an entirely new range of ways to introduce innovative

looks and effects for facades. Metallic reflections of light, coincidental compositions and enigmatic traces can break up surfaces and help create exciting new identities.

0808 234 0268 www.trespa.com

Keeping burglars out with steel windows



Difficult to force because of the inherent strength of their frames, steel windows are not liked by burglars. One of the best deterrents to a prospective thief is the traditional 'cottage' style steel window, divided into small frames, with interlocked steel glazing bars. Steel Window Association members also offer W40 steel windows that comply with Secured by Design requirements. Newly appointed member, Steel

Window Fittings Ltd (swf), manufacture most steel window hardware. Swf has been successfully manufacturing handles, stays, hinges, bolts and openers, since 2011; both in the UK and globally.

info@steel-window-association.co.uk

BREEAM Excellence at Arvalee School



Metal Technology's commitment to performance engineering has contributed to the Excellent BREEAM rating achieved by Arvalee School in Omagh. The school is phase one of a £130m education project and is exemplary in both design and environ-

mental performance. Metal Technology was the perfect fit. System 17 high rise curtain walling and 4-20Hi + casement windows glazed with clear and coloured feature glass helped create welcoming, light filled spaces. This was complemented with System 5-20D Hi+ doors externally and System 10 commercial doors in some internal spaces.

028 9448 7777 www.metaltechnology.com

SmartSecure achieves accreditation



The FUHR 881 multitronic lock, which is at the heart of Carl F Groupco's SmartSecure electronic door locking and smart access control solutions, has achieved Secured by Design accreditation. As the latest in a series of hardware products offered by Carl F

Groupco to achieve Secured by Design, the company was confident of gaining the certification as the lock design, consistent with the established process for all FUHR locking systems, had already passed rigorous security testing.

01733 393330 www.smartsecure.co.uk





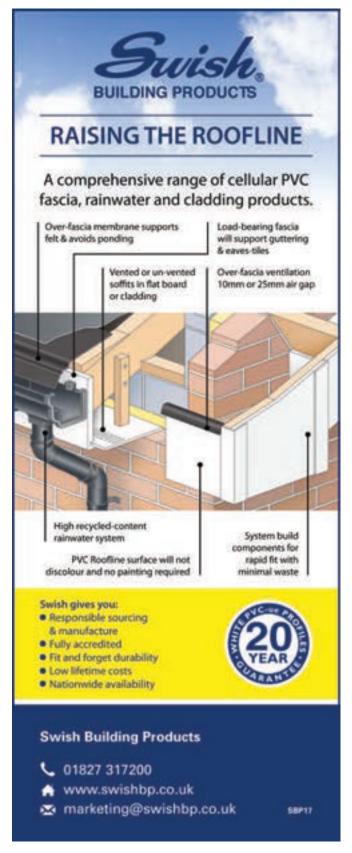
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enquiries@silvatimber.co.uk

















Copper in the Park

Distinctive Nordic Brown Light pre-oxidised copper cladding from Aurubis plays a unifying role in Glancy Nicholls Architects' competition-winning design of the Chamberlain Hall complex for the University of Birmingham. Set in a 'listed' historic park, the new complex replaces 20th century buildings that proved unsuitable for modern, sustainable student accommodation and unfeasible to improve. The footprint of the new complex sits within the perimeter of the previous buildings, minimising impact on the surrounding parkland. The architects' ambition was to create a cohesive concept using materials and building forms to tie together the development as a whole. On the three 'finger' wings, brickwork matching local buildings acts as a 'grounding' material at low level with Nordic Brown Light pre-oxidised copper cladding as a striking, robust and high-quality finish above. The ends of the wings overlooking the park are highlighted by copper frames projecting out to add solar shading.

01875 812 144 www.aurubis.com/finland/architectural



Abet shelters the rescuers

Abet Laminati's MEG exterior grade laminate has been used to clad the exterior of the new offices and crew rooms of the RNLI Station in Brighton Marina. Designed and supplied by Aliva UK, MEG 414 was chosen to match the ceramic facades of the surrounding buildings and was face fixed with colour coded rivets. The cladding envelopes the Station, keeping staff and crew warm and dry in the harshest of weathers. This scheme is a perfect example of high performance MEG in action where the need for incredibly high performance and durability is married up with low life-cycle costs and aesthetic design. Carrying a BBA Agrément Certificate, 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.

www.uk.abetlaminati.com



ADF JUNE 2017 WWW.ARCHITECTSDATAFILE.CO.UK





solarlux.co.uk

Choose the right brick with new app



Imperial Bricks, has created an app to help architects and specifiers identify the right brick for their projects. Whether out on site or in the office, the app makes it easy to view Imperial's

entire range of bricks and the relevant technical data. Users can upload a picture of existing brickwork, and Imperial Bricks' expert team will send the closest brick match from its range – usually an exact match. Enter the dimensions of a wall, and the built-in brick calculator will determine how many bricks are required.

01952 750816 www.imperialbricks.co.uk

Sto chosen to protect new hospital



Some 20,000 square meters of external wall insulation provided by **Sto Ltd** have been used on the largest new hospital campus in Europe, along with a range of different Sto render finishes. The Sto products have been used to clad sections of the new 1,677 bed Queen Elizabeth University Hospital

campus in Glasgow's Govan district. Alan Palmer, Sto's Technical Consultant explains, "This was a major project, and given the nature of the building, effective insulation was absolutely essential in terms of ensuring patient comfort."

0141 892 8000 www.sto.co.uk

Neaco products featured at care home

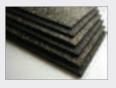


Neaco supplied contemporary balustrade for Parkview Gardens, a new 60-bed residential care home in Barrow. Alston Murphy Associates specified powder coated aluminium balustrade with glass infill panels at an extended height for additional safety

on first floor terraces which also include Neaco's aluminium decking. Iain Murphy of Alston Murphy said: "Neaco provide a one-stop shop for design consultation, measuring, manufacturing and fitting, so working with them removes a lot of the agony that can occur on some projects. We're very pleased with the result."

sales@neaco.co.uk

Cellecta expands its portfolio



Cellecta, one of the UK's leading manufacturer of Acoustic & Thermal Insulation have launched their latest product range to an ever expanding Acoustic range with the introduction of RUBBERfon® ULTRATOP & IMPACT. Made from 100 per cent Recycled Rubber

and Cork content, the product is suitable for all floor finishes including ceramic tiles, vinyl, wood and laminates. Following extensive testing, RUBBERfon® ULTRATOP & IMPACT have excellent Sound Proofing & Noise Reduction acoustic performance.

01634 296677 www.cellecta.co.uk





Hybrid solution hits the roof



Ground breaking ventilation technology is hitting new heights with its latest derivative. Gilberts Blackpool, one of the UK's leading air movement specialist, believes it was the first manufacturer in its field to develop a hybrid system that utilises internal

heat to warm incoming air through wall facade louvres without using a heat exchanger. Now a new version of the pioneering Mistrale Fusion System (MFS) has taken the same concept from facade to roof, with MFS-V (Vertical). MFS-V incorporates two Fusion MFS128 units placed vertically into a rooftop penthouse turret.

01253 766911 www.gilbertsblackpool.com



A programme to upgrade the heating of homes in Essex is helping the Salvation Army Housing Association bring affordable warmth to residents whilst also reducing the carbon footprint of its housing stock. TSG Building Services recommended Ecodan system from Mitsubishi Electric, with units

installed ranging from 5kw to 8.5kw depending on the property size, along with pre-plumbed cylinders. Ecodan is designed for retro-fitting making it suitable for almost any property.

01707 282880 www.mitsubishielectric.co.uk

Salvation to high energy bills

Interflow introduces ecoAzur from GIF



Interflow UK distribute a range of environment-enhancing, sustainable systems from pioneering manufacturers including GIF ActiveVent, Desinfinator and plasmaNorm. EcoAzur from GIF is a new energy saving solution for commercial kitchens. It monitors the heat

and vapours arising from cooking operations, using optical and thermal sensors linked to the BMS, to adapt the airflow and ensure optimal air quality and ergonomics whilst, at the same time, making significant energy savings.

01952 510050 www.interflow.co.uk

LSZH self-regulating heating cable



Pentair leads on innovation with its new Raychem Low-Smoke Zero Halogen (LSZH) self-regulating heating cable range, the first of its kind. Thanks to its unique combination of self-regulating and

LSZH properties, the range provides safe, simple and efficient pipefreeze protection. This offers users superior performance and durability as well as improved energy efficiency. Developed specifically for use within commercial and residential buildings, the range offers unparalleled building safety, thanks to a new LSZH jacket material.

www.pentairthermal.com





Hitachi's VRF with CS Net system control prevents annoying cold draughts



Available across the entire Set Free VRF range managed with CS Net control systems, Hitachi Air Conditioning's innovative cold draught prevention has been improving the working conditions and productivity of staff wherever it's installed, and reducing customer complaints and call outs for engineers. In standard VRF systems the control is only on the Return Air Temperature, so when the heat load demand is low the discharge air temperature could be reduced, sometimes below a comfortable level, creating a cold draught. Staff will invariably adjust the room thermostat to increase the room air temperature to compensate, leading to an increase of discomfort effects and with a possible consequent increase in energy usage and end-user energy costs. Hitachi's innovative CS Net central controller with off coil protection works in conjunction with its System Free indoor units which each have an Air On Thermistor, Air Off Thermistor, Liquid Thermistor, Gas Thermistor and Electronic Expansion Valve. Via CS Net Systems it is possible to set a minimum Air Off temperature in cooling mode for the indoor units to avoid cold draughts.

020 3901 0912 www.hitachiaircon.com

New photography reveals how bathroom fittings can enhance a range of interior styles



Created on the classic Bauhaus principles of simplicity and elegance of design, Landmark from Samuel Heath brings together design, craftsmanship and technology in a comprehensive collection of taps, showers and accessories. The photograph shows how the intelligent use of materials, finishes and textures combined with pure understated form ensures that this new collection will not only complement, but enhance a diverse range of interior styles and settings. "Industrial Chic" is about exposing all that lies beneath to achieve a raw, edgy style. Functional features are refashioned to provide decorative elements. Nowhere is this more evident than on the levers and cross tops of the Landmark "Industrial" twin control thermostatic shower in stainless steel finish with matt black chrome details. By contrast the "Scandi/Nordic Chic" look is all about keeping things simple and investing in quality. The shapes are simple and graphic with strong form. The palate natural and understated is a perfect foil for the pure elegant lines of Landmark "Pure". The soft mellow polished nickel harmonising beautifully with this cool Nordic look.

0121 766 4200 www.samuel-heath.co.uk

Slab to slab restrictions overcome



Underfloor air conditioning has again helped overcome restricted slab to slab dimensions at the recently refurbished 17 Devonshire Square in London. AET Flexible Space, worked closely with consultant Cundall on the HVAC specification to find a solution to enable the main office areas to meet BCO standards in this severely height restricted building.

With underfloor systems, fully conditioned air is fed into the plenum by zonal downflow units (CAM), which is then supplied into the workspace via fan terminal units (Fantile).

01342 310400 www.flexiblespace.com

ONI, the thinnest designer radiator ever



Vasco is launching the revolutionary designer radiator ONI. ONI is made of 8mm reinforced aluminium plate making it the thinnest Vasco radiator ever made. In addition to the progressive design of this radiator, this champion in the lightweight category also offers advantages for the

installer; the story of a perfect match between form and function. The ONI is available with two optional 'cut-outs' in the same innovative soft rounded design as the radiator, which form hanging space for towels.

01254 704 420 www.vasco.eu

Get multizoned with Consort Claudgen



Consort Claudgen has launched the MRX1 Multizone wireless controller which can control up to eight heating zones using the existing CRX2 controllers. Each CRX2 can control

multiple Consort RX heaters in the same room or zone. A seven day programme with six time periods per day can be set separately for each zone and if required, be duplicated across other zones saving time. Temperature adjustments for all zones can also be done simultaneously. With extensive heat control options and energy saving features, the MRX1 controller provides great energy and cost saving.

enquiries@consortepl.com

Expona Bevel Line – Luxury tiles defined

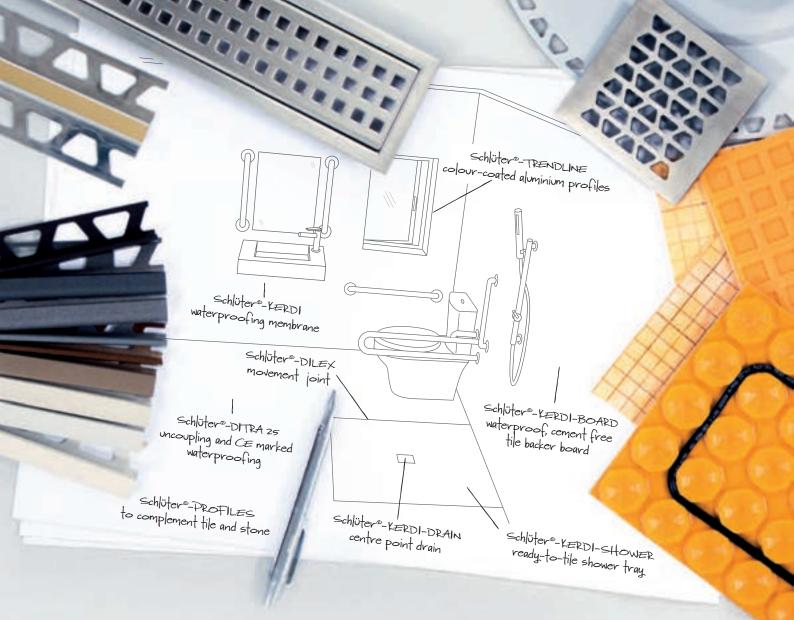


The latest addition to Polyflor's renowned Expona family of high design and high performance luxury vinyl tile products is the updated Bevel Line collection, now rebranded as Expona Bevel Line and featuring brand new wood and stone effect designs. The new Expona Bevel Line PUR range includes a total

of 27 designs and are ideal for heavy footfall commercial interiors. Key design features such as colour variation, pattern formations and complementary surface textures help Expona Bevel Line beautifully replicate natural flooring and achieve a high specification finish.

0161 767 1111 www.polyflor.com

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Cutting through the hype: key trends for bathroom design

From slim ceramics to the growing market of shower toilets, Emma Mottram of Laufen explores the latest innovations in bathroom design

In recent years, the bathroom has become much more than a functional space. The latest trends and technological innovations are evidence of this renaissance and the transition the bathroom has had into an area that is carefully designed to enrich the users' wellbeing and comfort.

So what exactly are the latest trends and innovations within the bathroom industry and how can architects and designers use them to create an aspirational bathroom?

Stretching the possibilities of ceramic

Ultra-thin ceramic materials are one of the key innovations in the bathroom market that continue to gather pace today. With sleek and refined aesthetics combined with their sustainable credentials and light weight, slim ceramics allow architects to push the boundaries of bathroom design.

Manufacturers who blend ceramics with different substances have further enhanced the product variety by creating a high quality material that exceeds the natural qualities of clay. For instance, Laufen's SaphirKeramik is a composite material of ceramic and corundum – a colourless mineral which has been developed to give designeds the benefit of a product which has the flexural strength of steel. Moreover, its precise, wafer-thin walls and radii of one to two millimetres provide architects with a slender profile that renders it space saving, lightweight and environmentally friendly.

Beyond their appearance and strength, ceramic surface finishes that are fired on top of the original glaze inhibit bacterial growth and improve hygiene.

Rolling out shower toilets

Shower toilets are promising to make a big splash across UK bathroom industry this year. Already an established and popular product in Japan and other markets across the globe, manufacturers are using the latest technology to redefine the standard toilet and introduce the shower toilet on a wider scale across the UK.

Combining the functions of a toilet and a bidet, the shower toilet is set to enhance the bathroom experience. Using fresh water, the shower toilet provides the user with unrivalled hygiene and cleanliness, offering a feeling of complete freshness. Shower toilets are able to blend high quality design with technically-sophisticated and user-friendly solutions.

At the heart of a shower toilet is the versatile and intuitively operated shower functions. This can include a standard function with selectable jet intensity, position and temperature, as well as a strong power mode and a pulsating jet mode.

Most products also include a separate setting for a more gentle wash, with individually adjustable strength, position and temperature.

Aesthetically, many shower toilets emulate a classic toilet design and, depending on the manufacturer, the controls are discreet and user intuitive.

With new innovations and technologies coming into the market the sky is the limit for architects and designers to think creatively when it comes to the bathroom.

Emma Mottram is marketing manager at Laufen





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Good for wood

Bathroom experts Saniflo explain why shower cubicles are an ideal bathroom solution for timber frame buildings

The advancements in timber manufacturing and recent developments such as cross-laminated timber (CLT) have encouraged developers to adopt structural timber frame for a growing number of buildings across the UK. The material's strength, coupled with the fast pace of construction it offers and the fact that it can be relatively inexpensive makes timber frame buildings cost-effective, but also highly versatile, as they can be clad in almost any building material.

A traditional shower enclosure in a timber frame building could be a costly accident waiting to happen

Wood's sustainable credentials and the fact that the fabric stores carbon makes it an ideal 'green' alternative to traditional construction materials, and provided that the timber used has been ethically sourced, the environmental benefits become even more impressive.

Today, the vast majority of new-build homes in the UK are built with a timber frame, as the industry tries to catch up with the 70 per cent of the global population that has already adopted timber frame homes as standard. The growth of the glamping (luxury camping) industry is also largely thanks to flexible and affordable timber frame accommodation.

However, some industry professionals are yet to fully appreciate that timber frame buildings require special considerations, especially when it comes to the bathrooms, and in particular, the showers.

Timber changes naturally over time; the material can shift and warp, causing movement to the building, and the bathroom is an area which can be affected. Traditional shower enclosures with their tiles, grout and silicone gel could be more prone to leaking in timber frame buildings.





LOW-MAINTENANCE
Shower cubicles require little maintenance and are quick to install

This is because as the building warps, the grouting in the shower enclosure is more likely to crack. If this cracking happens, it would mean the enclosure is no longer watertight and is therefore prone to leaking.

The potential problem there is that if any water finds its way into a building's timber frame, it can cause rot, which in turn can jeopardise the building's structural integrity. A traditional shower enclosure in a timber frame building could be a costly accident waiting to happen.

Cubicles over enclosures

A growing number of independent house builders across the UK are realising the benefits of shower cubicles and installing them from the outset. Shower cubicles don't require any tiles, grouting or silicone, which means no unhealthy build-up of mould, and no broken or loose tiles to repair. Furthermore, their installation is swift, cost-effective and hassle-free, and the cubicles are also low-maintenance bathroom solutions.

These features make cubicles ideal for timber frame buildings. Since no tiles or grouting is necessary, there's no danger of cracks forming when the house warps over time. There's no risk of leaks forming in the bathroom, minimising the chance of water seeping through to the structural frame and causing it to rot, thus jeopardising the building's structural integrity.

For existing timber frame buildings with traditional shower enclosures, aside from costly periodical maintenance, complete replacement is a viable option.

The replacement can be completed relatively hassle-free, sometimes even in less than a day, guaranteeing homeowners peace of mind and ensuring their bathroom wouldn't be off limits for weeks. Instead, they can have a clean, stylish, future-proof bathroom in no time at all.

Shower cubicles' low-maintenance profile, coupled with their modern design and quick installation times, are ideal for timber frame homes, which need bathroom solutions that aren't prone to leaks. Regardless of a timber property's purpose, architects should consider specifying cubicles as a cost-effective, long-term bathroom solution, which would continue to look pristine for years on end.







New Frameless Grill for wetroom floors



CCL Wetrooms, one of the UK's leading Wetroom Specialist have launched the latest development in Wetroom drainage – the new Frameless Grill – incorporating the minimalistic beauty of a Stone-Infill Grill, but without the border of a metal frame. The new Frameless Grill, which only has a 5mm

shadow gap visible around the perimeter of the drain and no visible frame. The new Frameless Grill surround creates the illusion of a floating tile, perfect for a sophisticated finish to a wetroom.

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

New life to intimate care



The new and improved Vita range of wash & dry toilets give people a stylish solution to retaining independence and dignity in the bathroom. Clos-o-Mat, has applied its 56 years of experience of working with people to optimise their independence in

the bathroom. The Vita range is, the company believes, the most 'fit for purpose' collection of wash & dry toilets available in the UK. It encompasses the Palma Vita, the wall-hung Lima Vita, and the height-adjustable Lima Lifter, all of which look like and can be used as conventional WCs, but have built-in washing and drying.

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



Hadrian stars at the Putney Arts Theatre

Hadrian toilet cubicles starred in the refurbishment of the washrooms at the Putney Arts Theatre. The theatre is run by a charitable incorporated organisation and the new washrooms had to be good value for money as well as bringing the right dramatic style to the venue. Online research brought them to the Hadrian Cubicles UK website, attracted by the complete choice of a powder coated finish in over 200 RAL colours. The steel construction of the cubicles was also ideal for the typical theatre usage where long, relatively quiet parts of the day are followed by intense activity during performances. UK distributor Relcross Ltd supplied the three cubicles for the ladies washroom and one for the gents. The design committee chose RAL 4007 purple/violet for the main colour scheme and the finished cubicles exactly matched the paint finish in other aspects of the washroom decor.

01380 729600 www.hadrian-cubicles.co.uk



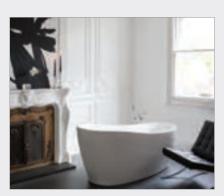
Create a spa-like luxury bathroom suitable for everyday day residential living with Sottini

It used to be just high rise city centre apartments where recreating the look and feel of a five star hotel were typical requirement for architects, designers and specifiers to address.

However, with busy modern day lifestyles, new demands and the growing importance of the role of the bathroom within the home, house buyers are now increasingly looking for a bathroom that offers the luxury look and feel of a five-star hotel or spa, but combined with the appropriate functionalities to deal with the practicalities of everyday life.

Bathrooms are being designed to balance the practical needs of hopping in the power shower before work, with offering users the ability to 'treat' themselves every day in a serene space to have a leisurely soak in a statement bath.

When it comes to making the new home purchase decision, having a bathroom space that offers this lifestyle choice is an incredibly important and persuasive factor.



The new collection by Sottini, the timeless bathroom brand built on a heritage of quality and innovation in design, is geared towards both the house developer and hotel sectors, which ensures residential property developers can create the perfect look that appeals to consumers looking to replicate the very best in high-end hotel luxury style in a domestic bathroom.

The hotel bathroom has a lot in common with its domestic counterpart, not just in terms of creating a spa-like, relaxing sanctuary, but also in creating an individual finish with a sense of character that sets them apart from the competition.

Luxury, style and elegance is what bathrooms of first-class hotels are defined by – and Sottini has collaborated with internationally-renowned and award-winning product designers from around the world to create a collection of elegantly-crafted individual items that can be curated in a multitude of combinations for a domestic setting.

Each piece in the Sottini collection has been developed individually with high design specifications and precision engineering, ensuring each basin, bath and WC is a unique piece: a work of art and a design statement – enabling the integration of the luxury experience of a hotel stay into the bathroom of a new home.

0800 834226 www.sottini.co.uk

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Innovative and practical, Schlüter-Systems' intelligent wetroom solutions allow you to meet the functional requirements of wetroom substrate preparation whilst retaining freedom for design.

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For contractors, Schlüter products save time, hassle and manpower, ensuring a quick installation process and minimising material wastage. With your entire solution obtained



from one source, troubleshooting is easier and there is a clear point of contact for any advice.

The guarantees provided by manufacturers can make or break the decision to specify. Schlüter-Systems Ltd stands by its complete system solutions, and provides advice, specification, and product warranties where required. Where a member of the Schlüter Approved Installer Network has been used,

product and application warranties can be extended, for even greater peace of mind.

Use of the right system at the point of specification pays off in the long-term, preserving reputations and avoiding costly remedial works. Full product specs and comprehensive sets of NBS Clauses and BIM assets are available from the company website, allowing for quick specification time after time.

Want to see our products in situ? Next time you're in London, take a wander to Clerkenwell, the scene of our latest collaboration—49 Leather Lane. Here you can experience a complete Schlüter®-WETROOM system, book out meeting rooms and explore the Porcelain Gallery, which features a multitude of Schlüter products, both installed and in sample form. For booking enquiries, please email specifier@schluter.co.uk

01530 813396 www.perfectwetroom.co.uk



Bona Titan – a new generation of powerful adhesives

Bona, the wood floor experts, has launched Bona Titan, a new supreme performance, silane- based adhesive for high value projects, very wide or oversized solid wood boards - or any installation where the quality of the bond has to be guaranteed.

Bona Titan contains Titanium Technology – a revolutionary new formula comprising quadruple crosslinking that delivers superior durability and an unbeatable initial bond speed – even under challenging subfloor conditions.

Bona Titan can be specified with confidence to bond all types of wood flooring. Its superb shear strength makes installation easy and keeps even the largest, solid boards securely in place. If the subfloor is sound and dry, no primer is required.

The hard, silane-based formula contains no ingredients that can migrate after curing, which eliminates all risk of discolouration at the joints. The smooth, thick consistency makes it easy to use and produces stable ribs,



an extremely high initial grab and zero risk of hollow spots. The bond strength of Bona Titan will not diminish over time so the stability of the floor is guaranteed for the long term.

Bona Titan meets ISO 17178 standards and, in line with Bona's environmental strategy, is a safe, clean formulation which also carries EC1-R Plus, DIBt, Greenguard and A+ low emission certifications.

Bona Titan is compatible with underfloor heating and can be used directly on metal or tiles. Floors bonded with Bona Titan can be sanded after just 12 hours.

Further technical information is available from the website or by calling Bona's technical department.

01908 525 150 www.bona.com



Altro's ranges strike the right chord



Altro has launched new complimentary flooring ranges: Altro Operetta™, Altro Orchestra™ and Altro Serenade™. They have been developed to deliver harmonious design possibilities and meet the needs of diverse areas. Altro's new flooring ranges draw from the same colour palette but offer different

properties so you can mix and match to meet your needs, without compromising on style or performance. Altro's new ranges are easy to clean and compatible with each other.

01462 480480 www.altro.co.uk

Thomas' dream becomes reality



A teenager with quadriplegic cerebral palsy has had his dream bathroom fitted out with adjustable products from Pressalit Care. Thomas Dixon, who lives with his mum and dad in Darlington, is delighted with the new bathroom – especially the lime green colour.

The lime green height adjustable shower chair with arm supports, and a hinged arm support alongside the WC, chosen by the Dixon family, are part of Pressalit Care's Plus range. Pressalit Care's shower chair is fitted onto a vertical track which makes adjusting the height of the chair simple and straight forward as Thomas's needs change

0844 8806950 www.pressalit.com

James Latham to become UK distributor for Abet

James Latham has announced an agreement to become a major distributor of Abet Laminati, one of the World's leading manufacturers of decorative High Pressure Laminate (HPL). In a move which significantly strengthens its credentials as a leading laminate supplier in the UK, Lathams will be offering the full Abet range across all nine of its nationwide panel depots. Andrew Wright, Director, Lathams Limited, commented: "This latest commitment is a clear signal to the market that we are a serious laminate supplier and ensures national availability of Abet's entire range throughout the Latham Group. The Abet collection fits perfectly within our existing portfolio and significantly enhances our laminate offering. Abet has always focused strongly on creativity and innovation and with links to the best Italian and International designers in the business, they offer a diverse range of laminates in many colours, styles and textures to suit almost any application."

marketing@lathams.co.uk

Washroom creates high spec finish



One of the UK's leading commercial washroom designer and manufacturer, Washroom Washroom, has provided a prestigious Covent Garden office with fresh new-look washrooms as part of a comprehensive refurbishment programme. Working closely with office refurbishment and fit-out specialists, Virtus Contracts, Washroom Washroom installed new washrooms, featuring its Alto Kristalla glass toilet cubicles. The cubicle's rebated

edge design creates a flush facade for a sleek finish, making it a popular choice among specifier.

sales@washroom.co.uk

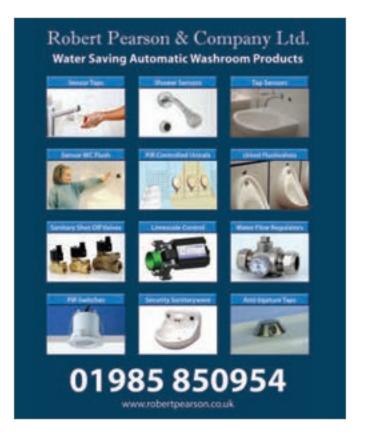
Polysafe flooring helps primary school



High performance wood effect safety flooring from UK vinyl flooring manufacturer Polyflor was recently selected for an £8 million new build school project, Newton Leys Primary School & Nursery in Milton Keynes. Approximately 1200m² of Polysafe Wood fx PUR safety flooring was installed at the primary school. High clarity

timber effect Polysafe Wood fx PUR safety flooring in the American Oak design was used throughout the school, in classrooms and around areas where spillages may occur, such as in kitchenettes and children's sink areas.

0161 767 1111 www.polyflor.com



Lyndon provides a warm welcome



Whether welcoming visitors to the office, or making guests feel at home upon arrival at a hotel, Lyndon's extensive range of handcrafted seating collections offers the perfect solution to make the right first-time impression in any reception area. Several classic and elegant collections provide designers and specifiers with freedom to create softer and more

relaxed open-plan reception areas, without sacrificing functional requirements. Featuring superior timber detailing, combined with a choice of luxury fabrics and leathers, these options are more than capable of providing a striking centerpiece in their own right.

sales@lyndon.co.uk

Design possibilities inspired by nature



Altro has launched the new Altro Wood™ Safety collection, inspired by nature and combining functional performance with modern design to create spaces that really work for the people who use them. Choose from two safety flooring ranges: 2mm Altro Wood Safety and 2.85mm

Altro Wood Safety Comfort. Both give the performance and slip resistance you'd expect from an Altro safety floor (PTV ≥36), with the thicker option providing comfort underfoot and 14dB sound reduction for noisy environments.

01462 480480 www.altro.co.uk

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Hunter Douglas' wins Red Dot Award



Hunter Douglas has won a prestigious international design prize for HeartFelt®, its new sustainable felt ceiling system. Beating thousands of submissions from across the world, Heartfelt®, a modular linear felt ceiling system, won the highest distinction in the

category Product Design in the Red Dot Awards. The jury described the system, which is made of it cradle to cradle certified felt, as "one of the best products of 2017", praising its "exceptional and innovative" design. Hunter Douglas is the first manufacturer in the world to market a modular and linear felt ceiling system.

01604 766251 www.hunterdouglas.co.uk

Altro's first adeshive-free flooring



New Altro CantataTM, the company's first adhesive-free flooring for areas with a low slip risk, is already demonstrating its capabilities at Warrington Hospital, providing a tough time and cost saving solution in a busy non-clinical corridor. New Altro Cantata is a decorative, adhesive-free

flooring that creates maximum impact with minimum downtime. Using Altro's award-winning adhesive-free installation method, it can be welded and walked on the same day, and at the end of its life removed easily, allowing it to be reused or recycled.

01462 480480 www.altro.co.uk



Luceco's Ice

Recent additions to the LED commercial luminaire range from Luceco include Ice Linear and the decorative Ice Circular. Contemporary and stylish, Ice Linear is a transparent optic pendant luminaire providing both upward and downward light distribution. Supplied complete with adjustable wire suspensions, Ice Linear delivers an enhanced lit effect, the sleek transparent design complements modern interiors even when turned off. Ice Circular is an alternative aesthetic luminaire for ambient lighting. Constructed with a transparent disc optic with a balanced forward & back light effect, Ice Circular is suitable for ceiling or wall mounting. Ice offers up to 50,000 hours operational life benefiting the environment with high energy efficiency and no maintenance or re-lamping required throughout the lifetime of the luminaire

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Securiscape helps New Street station



Three planters designed to protect the public using Birmingham's busy New Street station have been installed outside the entrance after a leading supplier of security street furniture answered a call for help. Securiscape was able to supply and fit nine 1.42m² high-tech

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

info@securiscape.co.uk

Anglia Lime Company



The last 25 years have seen the use of building limes develop from what was regarded as a quaint eccentricity to an understanding that they are a central element of building conservation. Since 1992 when Anglia Lime Company pioneered the use of lime in East

Anglia through training courses and the distribution of lime materials, this new awareness has brought about an ever-increasing use of lime. Anglia Lime Company can offer a sustainable lime-based solution, whether you are repairing plaster in your 15th Century cottage, re-pointing Georgian brickwork or installing a lime concrete floor.

info@anglialime.com

Website provides valuable information



Nittan Europe, a leading manufacturer of conventional and addressable fire detection products, has launched a new website providing customers with detailed product information along with an array of support tools and information. The website has been

completely redesigned, with a clean, modern look and intuitive navigation. The new website is content focussed, delivering information and support in easy to access formats. The product section, for example, which is categorised by range, lists all the products within that range including part number, product type and picture.

www.nittan.co.uk

Groundtrax – the optimum solution



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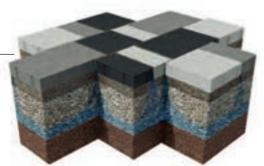
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An installed Priora system removes, cleans and stores surface water.

SuDS: for better neighbourhoods

Embedding SuDS in urban design can bring substantial benefits if adopted from the outset, explains Interpave's Chris Hodson

aking a holistic approach, designers can now embrace sustainable urban drainage solutions as one of the central design considerations from the very start of their projects, forming an integral part of urban design.

The importance of SuDS is highlighted in the National Planning Policy Framework, which requires SuDS to be installed for 10 or more dwellings as well as similar scale, non-residential developments in England. Wider requirements also apply elsewhere in the UK, with the onus for implementation resting with local planning authorities.

Concrete block permeable paving

After more than two decades of use, concrete block permeable paving has proved to be a predictable and reliable SuDS technique. Permeable paving also provides an inherent drainage system that requires no additional land take and addresses flooding and pollution by storing and cleaning water runoff at source.

This technology eliminates pipework, gulleys and manholes, and should therefore cost less than conventional drainage and paving. In fact, it can also accept runoff from other impermeable paving and roofs, giving further savings.

Concrete block permeable paving can simply infiltrate rainwater straight into permeable ground but, more commonly in the UK, less permeable conditions will limit infiltration and on brownfield sites embedded pollutants may preclude infiltration. In this case, permeable paving is used to collect, convey, clean and store water on site during storms, before gradual discharge to sewers or watercourses later, avoiding surcharging and flooding. As concrete block permeable paving removes water-borne pollutants, it can provide a gradual flow of clean water at the head of the SuDS 'management train'. Water in

subsequent open SuDS features can then be used safely to enhance landscape design and biodiversity.

Flow control

Water storage can be optimised for greater cost efficiency by distinct storage 'compartments' of permeable paving. Each compartment has a straightforward flow control chamber with a specifically-sized orifice, demonstrating compliance to local authorities as part of the approval process. Water storage is strategically deployed around developments within paving that is needed anyway, avoiding intrusive storage structures on valuable land – and their costs. This technique can maximise storage in permeable paving on sloping sites, with terraced compartments separated by simple check dams incorporating flow controls.

Flow controls can also detain water to optimise available ground infiltration, so reducing discharge. This approach is exemplified by the SuDS scheme designed by Robert Bray Associates at Parkside Civic Centre in Bromsgrove. Parking is on contaminated ground and the concrete block permeable paving is lined to form 'tanked' compartments, each with an orifice plate flow control chamber. Controlled flow from the car park passes down the site to perforated pipes and stone trenches for infiltration.

Accessible public spaces

The main courtyard is designed as an extensive, wall-to-wall infiltration blanket using concrete block permeable paving and flags, grass surfaces and free draining plant beds. The central lawn is lower than its surroundings, acting as a detention basin in very heavy rain. Some roof water downpipes discharge to a stainless steel spout that pours over a granite sett. It cascades into a wetland rill, for re-circulation by a solar



CONCRETE BLOCK

Parkside Civic Centre, Bromsgrove which features a SuDS scheme designed by Robert Bray Associates



PERMEABLE PAVING

Bewdley School and Sixth Form Centre, which features a SuDS scheme by Robert Bray Associates

pump. This holistic design approach applied from the start has created an attractive, accessible public space defined by water.

Paved surfaces help to form the character of any development. The growing choice of concrete block permeable paving products allows real design freedom combined with well-drained, firm and slip-resistance

Permeable paving made from concrete block removes water-borne pollutants and provides a gradual flow of clean water

surfaces that are accessible to all. Rainwater 'ponding' is eliminated, reducing the risk of ice on the surface and preventing splashing from standing water.

These benefits are also demonstrated at Robert Bray Associates' SuDS scheme for Bewdley School and Sixth Form Centre, again with infiltrating concrete block permeable paving. However, in addition, surface water runoff from roofs and other areas is slowed by collection and conveyance in a series of precast concrete features – including channels and rills used for planting, education and play – then stored in open basins, a pond and storage swales, before controlled release to the neighbouring stream.

Chris Hodson is a consultant to the trade association Interpave



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Introducing ArborFlow



The implementation of sustainable drainage systems is now required by local authorities as a prerequisite of planning considerations. GreenBlue Urban's stormwater management solutions provide a sustainable and effective approach – introducing ArborFlow – an environmentally robust means of managing

surface water run-off. Ideal for use in urban areas where space is at a premium, ArborFlow reduces the velocity and rate of surface water run-off in urban areas. Surface water is discharged into surrounding subsoil or flows into the tree pit's control chamber.

enquires@greenblueurban.com

Clearstone permeable resin bound paving



The planning and design for the roadways, drives and shared spaces of a development of new build homes at Barns Green in West Sussex for Berkeley Homes, incorporated permeable concrete blocks and resin bound to create a mixture of aesthetically pleasing and varied paved surfaces. The two permeable systems worked integrally alongside each other, reducing the need and cost of conventional piped drainage which in turn enhanced the landscape design of the housing estate creating a natural rural look for its village location. Groundworks company Martin Joyce, contractors on site worked with Clearstone for the resin bound areas. Clearstone's specifications, gave detailed instructions for the sub-base required for a resin bound surface that is fully SuDs and NPPF compliant for sustainable drainage. Resin bound surfacing provides a water-permeable surface when laid on an open grade binder asphalt, the mixture has open voids across the surface, allowing air to flow freely and the rainwater falling onto it to filter straight into the ground making it an ideal permeable system for this site which had existing mature trees and newly planted woodland areas.

01273 358177 www.clearstonepaving.co.uk



'Ten out of Ten' for Resiblock



During the The 02 Arena restoration programme, 12,500 square metres of small element flexibly laid internal paving was installed, and then sealed with Resiblock's low viscosity thermoplastic-acryl copolymer emulsion, Resiblock Resiecco. Despite being

trafficked by approximately 80 million visitors since it's opening in June 2007, and subjected to an aggressive daily cleaning regime, Resiblock Resiecco continues to stabilise the jointing sand firmly in place whilst also minimising staining from contaminants including food, grease, hot drinks and chewing gum.

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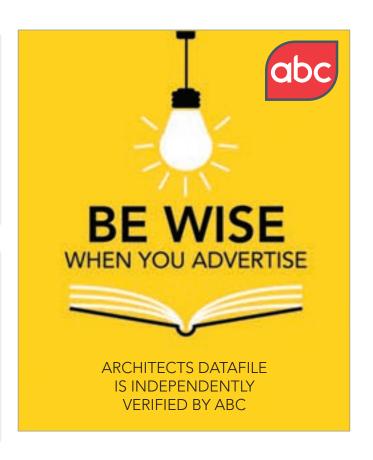
Charcon has enhanced Infilta range



Charcon, has enhanced its successful Infilta permeable block paving range by incorporating a new design element. The premium Infilta range now features a new innovative hidden spacer nib system that ends 13mm short of the face of each block. The outcome is a paving solution that continues to have excellent technical interlocking performance, yet

now offers enhanced aesthetic appeal thanks to the unsightly nibs being hidden from view when laid. Not only is Infilta more appealing from a design perspective, it is a totally unique permeable paving solution that does not compromise on water drainage performance.

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Introducing the METROPOLIS grating

uctile iron gratings on surface water drainage channels don't necessarily need to be utilitarian in appearance with geometric slots or meshes.

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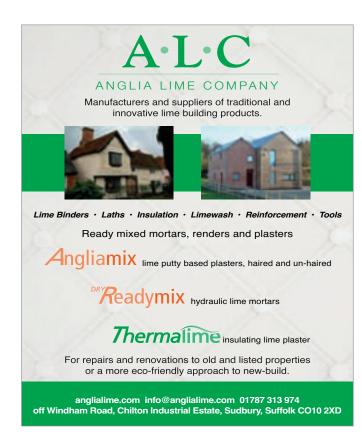


grating to add a touch of class to their schemes in historic and pre-modern townscapes or any surface drainage project where an aesthetic, more decretive look is desired.

The METROPOLIS grating is sold separately to fit FASERFIX® KS channels or factory fitted to RECYFIX® PRO channels. Gratings are available in nominal widths of 100mm and 200 mm Sizing details for FASERFIX® KS 100 and FASERFIX® KS 200, with METROPOLIS gratings can be found in the Hauraton CIVILS catalogue. Sizing details for RECYFIX® PRO 100 and RECYFIX® PRO 200, with METROPOLIS gratings can be found in the Hauraton LANDSCAPE catalogue. The channels provide a loading capacity up to Class D400. All METROPOLIS grating are finished in anti-corrosion, Black KTL finish.

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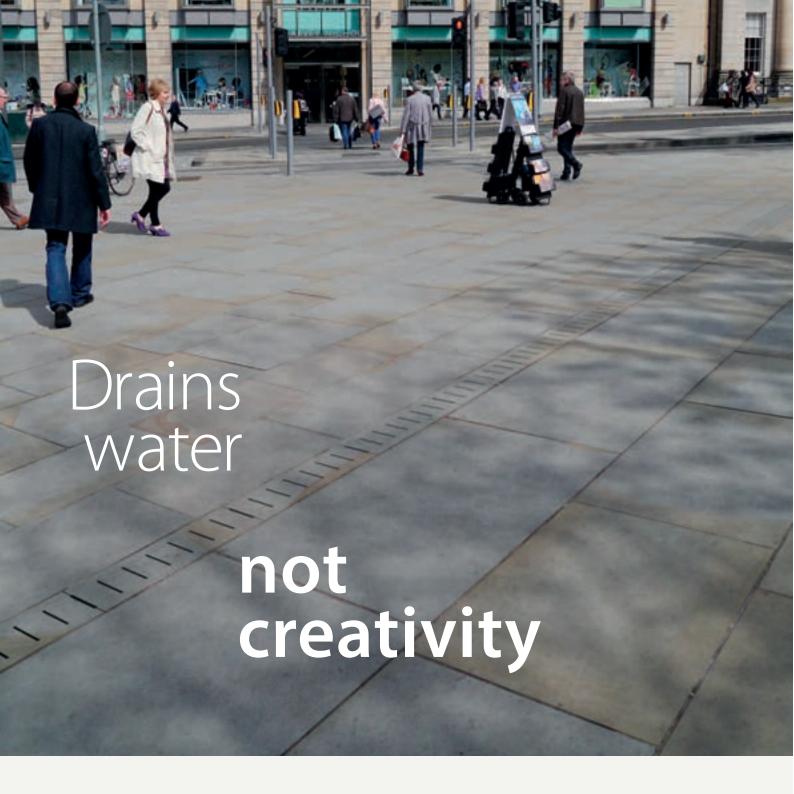
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