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## MULBERRY PARK COMMUNITY HUB, BATH

How BDP worked with an enlightened client to extract maximum social value from a cantilevered community centre

## INTEGRA HOUSE, TYRIE, ABERDEENSHIRE

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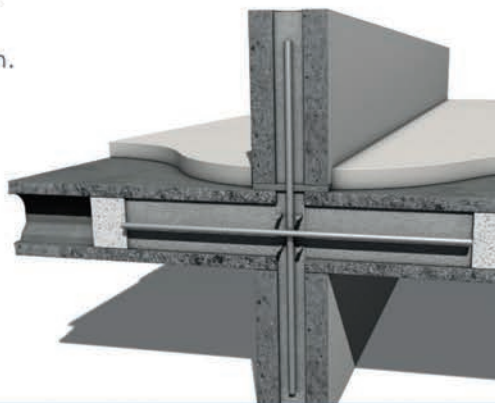
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# FROM THE EDITOR



The momentum for putting efforts to address climate change at the top of the agenda is showing no signs of ebbing. This continued sense of urgency is the least we need in order to make some inroads; the UN recently estimated that we have 11 years to prevent the damage to the planet caused by climate change from being irreversible.

A group of 17 Stirling Prize-winning architecture firms have joined forces to form the 'Architects Declare' initiative, which is predicated around the idea that while research and technology exists to transform construction towards low impact, what's been missing is "collective will."

Along with the usual statements around raising awareness, advocating for faster change and Government funding, and establishing best practice via knowledge sharing, is something that's more challenging to the profession. As part of the move towards "more regenerative design principles," the group advocates "upgrading existing buildings for extended use as an alternative to demolition and new build whenever there is a viable choice."

The traditional model of architecture could perhaps be described as creating a unified and even hermetic vision for a particular need on a particular site, whose proportions ultimately need only be governed by its own form, in the most distilled interpretation. However, if we are to look at a much greater emphasis on re-use, reinvention and sometimes, extension of existing buildings, a much more multi-layered set of aesthetic and structural criteria come into play.

Of course, a lot of great architecture has come about as an adjunct to existing forms, but many of the most celebrated works create their own new language – or dialect at least – relating to nearby buildings but not depending on them, and normally not connected to them. Adaptive reuse projects such as recent standouts by Heatherwick have received worldwide architectural acclaim, but the notion of them being seen as on a par with something like Gehry's Guggenheim seems hard to imagine.

With the debate on climate change moving into a high gear of 'must do now,' rather than 'needs looking at,' approaches that address our existing structures in an exciting way need looking at through a new, carbon-first prism. However, driven by momentum such as that crystallised in the Architects Declare initiative, such projects should be judged on their own terms too. It could soon be a world less about new statements and more about preserving and enhancing the best of the past.

**James Parker**  
Editor

**ON THE COVER...**

BDP's new Community Hub in Bath is a shining example of how an enlightened client can maximise community capital, with the help of a like-minded architect.

For the full report on this project, go to page 30  
Cover image © Hufton+Crow





## LEISURE

# Guy Hollaway Architects' Ashford regeneration

Guy Hollaway Architects have completed Elwick Place, a £26m leisure complex for regeneration specialists and property developers Stanhope on behalf of Ashford Borough Council.

One of Ashford's 'Big eight' regeneration projects, Elwick Place sits opposite County Square shopping centre in the heart of town and comprises a 1,000-seat, six-screen Picturehouse cinema, nine food and drink outlets, a new meeting and events space at Elwick Square, a 58-room Travelodge hotel, new homes, and a new surface car park.

Designed to stimulate Ashford's day and night economy, the project is set to offset some of the recent high street and town centre decline that has been felt more widely across the UK. Elwick Place is expected to provide hundreds of jobs and be a catalyst for further regeneration and investment in the area.

Guy Hollaway Architects' masterplan for the project included a new public square designed to contribute to a "sense of

destination" at the heart of Ashford's town centre, and cultivate a sense of community, with cafes, restaurants, film screenings, events and pop up markets which will bring energy into the town throughout the day and into the evening. A new public walkway improves city centre and pedestrian flow, strengthening the link to the existing and much used public footbridge and enhancing connectivity to the railway station and Victoria Park to the south of Ashford.

Working within the constraints of a tight budget and a "highly technical cinema specification," Guy Hollaway Architects developed an innovative facade concept to give Elwick Place its distinctive visual presence. Taking the series of black boxes typical of the acoustic and visual integrity required of cinema design, the practice has wrapped the building at first floor level with sections of gold, woven, anodised aluminium mesh to create a "sculptural, articulated and softly tapering form."

The practice also worked closely with LightIQ to develop a dynamic lighting scheme. The mesh reflects daylight to create a subtly changing and opaque facade and then after dusk, illuminated within, the mesh becomes a transparent gauze and "beacon" for Ashford's nightlife. A terrace bar with glazed balustrade features at the west elevation leading out from the cinema bar and allowing cinema-goers to enjoy a drink outside overlooking activities below. A gold aluminium composite cladding on the Travelodge towards the eastern end of the cinema creates a complementary dialogue between the two anchor buildings of the scheme.

Guy Hollaway of Guy Hollaway Architects said, "This is the first new build 'Picturehouse' cinema in the country and will create a new destination for Ashford, giving people a reason to come into the town centre in the evenings. When so many towns are building out of town cinemas, Ashford is bucking the trend and investing in its town centre to bring about positive change."

Gary Bourne, development director at Stanhope said, "We hope that Elwick Place will become an important part of the future of Ashford as a whole, while celebrating its unique heritage and importance to the people of Ashford."

# EVENTS

## AWARDS

Architecture MasterPrize  
14 October, Spain  
[www.architectureprize.com](http://www.architectureprize.com)

## FESTIVALS

London Festival of Architecture  
01 - 30 June, London  
[www.londonfestivalofarchitecture.org](http://www.londonfestivalofarchitecture.org)

## OPEN EVENING

LFA Open Evening at RIBA Incubator  
14 June, London  
[www.architecture.com/whatson](http://www.architecture.com/whatson)

## SEMINARS

RIBA + Vitra Talk: Intergenerational Dialogues  
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## RIBA Conservation Course London

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## TRADE SHOWS

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## LEISURE

# Grimshaw-led team announced for arena in repurposed aircraft hangars

Developer YTL has announced the design team for its plan to deliver an arena for Bristol in the historic Brabazon aircraft hangars. The company has selected architect Grimshaw, working in partnership with Manica Architecture and landscape architect Grant Associates, for the project to create an arena by repurposing the aircraft hangars at the former Filton Airfield.

YTL's vision is for an arena capable of housing up to 17,000 people that puts Bristol on the world map for hosting large-scale events, while also celebrating the site's place in aviation history.

Following the announcement of the design team, the aim is to submit a full planning application for the YTL Arena to Bristol City Council in the coming months.

The arena forms part of a wider transformation of the local area. The hangars sit on the edge of Filton Airfield, which is now being transformed into Brabazon, a thriving new neighbourhood for Bristol. The 380-acre site will become a "new urban community," with more than 2,600 homes, creative workplaces and a vibrant town centre set amongst public squares and parkland.

Planning approval to deliver Brabazon's



first 278 new homes was awarded in March 2019. Construction of the scheme, which was designed by architects Feilden Clegg Bradley Studios, is due to start later this year.

YTL Arena Bristol managing director, Andrew Billingham, said, "We are very excited to announce our design team. This represents a very positive step forward for us. We are now working up our firm proposals to repurpose the Brabazon hangars to create a visionary arena that will put Bristol on the world stage."

Seb Loyn, planning and development director of YTL Developments, comments: "We have secured an exceptional team to drive the arena project through the planning process. We are now focused on delivering a design which respects the rich heritage of the site, ensuring the YTL Arena becomes a destination Bristol can be proud of."

## OFFICE

# Belfast's "most exclusive new business address"

TODD Architects has announced that construction has commenced on The Mercantile office development in Belfast following approval by Belfast City Council. The landmark building is located on a prime commercial site within the main public square and civic space in Belfast City Centre.

Killulagh Estates appointed the architects when the property initially came to the market. The subsequent design development was "not without its

challenges along the way," said the architects, but has resulted in a planning approval for 95,000 ft<sup>2</sup> of development over nine floors together with a basement.

The architectural approach is "contemporary but respectful of context," utilising cut stonework and bronze anodised aluminium to articulate the verticality.

It is anticipated that the ground floor and basement will be occupied by restaurant or leisure uses to provide "activity" at street level," with the upper levels providing high-quality and flexible office space capable of a variety of fit-out and workplace permutations and bespoke solutions accessed via a double-height corporate foyer.

The Donegall Square South facade is primarily glazed with three projecting

bays providing good daylight quality and outlook. The floorplates start to set back to reflect the notional 'shoulder' height adopted around the Donegall Square area providing accessible roof terraces looking across the wider city centre area.

Laura McCarthy, senior asset manager at Killulagh Estates said, "We are delighted to have appointed TODD Architects to have the pivotal role within our creative team behind The Mercantile. This is a key development for us and demonstrates our commitment to the city, where we see this development as a rebirth of one of Belfast's foremost business locations overlooking the magnificent City Hall."

The demolition of the existing building is underway with construction of the new building due to complete in 2020.



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## OBITUARY

# Louvre pyramid architect IM Pei dies at 102

Renowned Chinese architect IM Pei, designer of the glass pyramid outside the Louvre in Paris, the Museum of Islamic Art in Doha, Boston's John F Kennedy Library and Museum, and many other key buildings, has died aged 102.

Famous for designing buildings which displayed precision in their geometry as well as employing natural

light, Pei continued working into old age, designing the Doha museum in his eighties. He was born in Guangzhou, China and studied in the US, at Pennsylvania, MIT and Harvard, before working for the US Government during World War Two.

He founded his own practice in 1955, and became one of the 20th century's most prolific architects, designing

buildings across North America, Asia and Europe. His modernist style was influenced by cubism and a love of Islamic architecture, and often combined glass, steel and concrete.

Pei was quoted as saying that architecture was a "pragmatic art," and "to become art it must be built on a foundation of necessity." He received the Pritzker Prize in 1983.

## REDEVELOPMENT

## Bangor town centre to be 'revitalised' in £50m scheme

Queens Parade in Bangor, Northern Ireland, is set to undergo a major £50m redevelopment which will see the area transformed into a revitalised, sustainable and contemporary seafront.

TODD Architects are the designers behind the new waterfront redevelopment, working closely with North Down & Ards Borough Council, the Department for Communities NI and the developer Bangor Marine, a consortium which includes Farrans and the Karl Group.

The proposed redevelopment plan

includes the refurbishment of existing commercial properties and the creation of outside events space. Marine Gardens' public realm combines external events space, cafes, sheltered promenade and kiosks, beach, seafront lawns, children's play area, water feature, plus a hotel. It also includes a destination/cinema building, residential units, commercial, retail and restaurant space, office space, a play zone, as well as the refurbishment of existing commercial properties.

Peter Minnis, director at TODD

Architects, commented, "We are delighted to announce our involvement in this transformative scheme, for which we are working closely with North Down & Ards Borough Council, The Department for Communities NI, and Bangor Marine consortium. This exciting opportunity will see the area regenerated into a revitalised, sustainable and contemporary seafront, enhancing Bangor's appeal as a top Northern Ireland destination."

The planning process has commenced, with work expected to begin in 2020.



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UNIVERSITY OF CAMBRIDGE

# Bennetts Associates completes Cambridge Student Services Centre

Bennetts Associates has completed a new Student Services Centre for The University of Cambridge. The centre significantly improves access to student welfare services, provides highly flexible teaching spaces and rejuvenates an important historical site.

Student wellbeing and more flexible teaching space are “two of the pressing issues that universities face,” said the architects. The university wanted to significantly improve access to both, while also reinvigorating a historical urban site that had been vacated by science faculties moving to the west of the city.

The 6720 m<sup>2</sup> project co-locates seven student support services from across the city into a single, easily accessible location. Located on a historic site in the city centre, the development combines new build accommodation and refurbished Grade II listed buildings.

The architects commented, “By working with potential users and carefully analysing the existing fabric we brought clarity to what was an extremely complex project.”

Each of the services has a clear entrance and identity, with a new atrium space providing a focal point. Weaving the

circulation of the three buildings interconnects the different uses, while allowing several discreet approaches to sometimes sensitive services. The newly built column-free examinations space can be easily reconfigured to form flexible teaching and social spaces, which complements a refurbished 210-seat lecture theatre. Three floors of further accommodation provide adaptable space with plenty of natural light.

The proportions of the new building “relate to the neighbouring historic buildings and use an enduring palette of brickwork, concrete and timber that will age with dignity.” The original Examination Halls portal has been re-used as an entrance to the new building, “preserving memory of the site’s significance in the evolution of the university.”

The former Arts School has been refurbished to provide a range of facilities for students and University services, including the Disability Resource Centre and Careers Service. Minor alterations done were sensitive to the original design while undertaking a major reconfiguration of the spaces.

The project also implements the second phase of the New Museums Site masterplan, which will greatly improve the surrounding public realm through the creation of a series of urban courts with better connections to the city. As part of the wider restructure and regeneration, a new passageway has been created through the Old Cavendish building, which improves access to the site from the north forming the main gateway to the New Museums Site from the medieval core of the city centre.

Natural ventilation also plays a key part in the project – the spaces having a high degree of exposed thermal mass. A robust concrete frame ensures future adaptation, and thermal modelling was undertaken to predict possible future climatic conditions.

Peter Fisher, director at Bennetts Associates, said, “We are absolutely delighted to have been able to work so closely with the university, to help improve access to student welfare services and to rejuvenate such an important historical site. It is nevertheless a building that can continue to adapt to changing welfare and teaching needs well into the university’s future.”





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## SCHOOL

# Former Northampton Sorting Office transformed into school

A derelict former Royal Mail Sorting Office in Northampton has been renovated and reopened as a 2220-place academy school for Northamptonshire County Council and the East Midlands Academy Trust.

London-based practice Architecture Initiative undertook the project to turn what was a largely windowless, utilitarian, industrial building into an education hub “filled with natural light and expansive views; designed to motivate and inspire.”

The 1970s building stood derelict for 11 years and had become a local eyesore, attracting antisocial behaviour. Architecture Initiative identified the opportunity to “ambitiously reimagine the vast brutalist structure” as a school, while celebrating the best of its exposed concrete and features such as its massive open spaces and waffle slab ceilings.

Northampton International Academy accommodates 420 primary pupils 1500 secondary pupils, and a 300-place sixth form. The main mass of the building structure remains largely unchanged. A screen of perforated, polished metal wraps around the building’s brick exterior, and primary and secondary pupils each have a dedicated entrance, directly off the new public plaza.

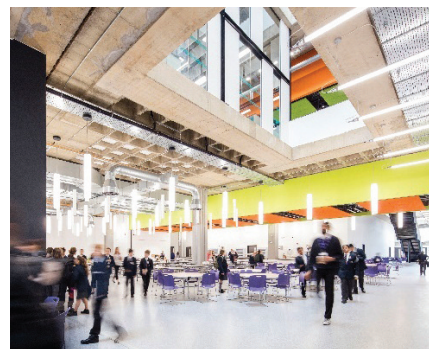
The internal floor area greatly exceeded the school space requirement, and this

“allowed a unique opportunity to create larger and enhanced teaching spaces,” said the architects. Arranged around the building’s perimeter, enabled by steel-framed mezzanine levels inserted in the 6-m-high spaces, the teaching rooms are allowed maximum access to natural light through new window openings punched through the existing external walls.

Extensive circulation corridors are used as break-out learning spaces and social areas. Vertical voids through the existing waffle-slab structure were added, as well as roof lights to bring daylight into the heart of the interior and create open circulation with visual links between floors.

Part of the undercroft car park and the south side of the building has been remodelled as primary school teaching space with adjacent outdoor play areas. On the top floor, a four-court sports hall lined in perforated plywood panelling has been inserted in a former courtyard, with translucent polycarbonate panels allowing diffused natural light.

As much as possible, the existing finish of the original building has been respected and reused, with a clear distinction created between old and new. The existing waffle-slab structure remains exposed, as do the new mechanical and electrical services, and its standardised 0.9m-centred



modular grid is used as a basis to inform and set out the spatial arrangement of the entire school. Differentiating the old and new, white plastered partitions have been inserted into the concrete shell to divide teaching rooms from the atria.

Rowan Parnell, director at Architecture Initiative, said, “Our work shows that legacy buildings considered ‘beyond the pale’ can – with an innovative and ambitious approach to design – be completely repositioned as useful, thriving and beautiful assets for the community.”

The full scheme also includes planning approval for additional education space located on the building frontage that will create an active and a welcoming entrance looking out over the shared public plaza.

## FESTIVAL

## ‘Please Be Seated’ for London Design Festival

British Land has announced that Paul Cockledge will design the Landmark Project for Broadgate as part of London Design Festival 2019.

The large-scale installation, called ‘Please Be Seated,’ fuses innovation and technology, and is said to be the most ambitious of British Land’s commissions to date. “Responding to the changing rhythm of the community,” the design feature curves for people

to sit on and walk under, further enhancing London’s largest pedestrianised neighbourhood.

Made from scaffolding planks, Paul Cockledge is collaborating with Essex-based flooring company, White&White, to “re-imagine” and re-use the material.

British Land has been confirmed as Headline Partner of London Design Festival for the fourth consecutive year,

which will see the developer “immersing its Broadgate and Paddington Central assets in London’s most important design event once again.”

Paddington Central will also once again be one of the festival’s Design Routes, and will include an installation by Paddington-born designer Adam Nathaniel Furman, who will “enliven the Grand Union Canal with his signature vibrancy and impactful colours.”



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## NATIONAL INFRASTRUCTURE COMMISSION

# National Infrastructure Design Group finalised

Design and engineering professionals have been chosen by the National Infrastructure Commission (NIC) to complete its Design Group, which will champion design excellence in new national infrastructure.

The group has been formed to “ensure that design is considered at the outset of every major project, and at every stage of delivery, to make the most of infrastructure schemes without increasing cost.”

The group is chaired by Professor Sadie Morgan, a National Infrastructure Commissioner and Stirling Prize winner. Announcing the Group members, she said its formation hailed a “pivotal moment” for the future of UK infrastructure.

A group of five will sit alongside three members of the Commission’s existing expert panel, who informed the design recommendations in the first National Infrastructure Assessment, published by the

Commission last year, which set out the benefits of effective design.

The tenth member of the Group is a representative from the Commission’s Young Professionals Panel who “will ensure a strong voice for the next generation.”

The experience of the members spans transport, engineering, architecture as well as landscape. The Design Group is expected to meet formally at least four times a year, undertaking research examining the added value that design can bring to infrastructure, and developing design principles that could be applied to all “nationally significant projects.”

The members of the NIC’s Design Group are:

- Professor Sadie Morgan (chair) – architectural designer – national infrastructure commissioner and founding partner of dRMM Architects

- Isabel Dedring – lawyer and management consultant – global transport leader at Arup
- Anthony Dewar – civil engineer – professional head, buildings and architecture at Network Rail
- Clare Donnelly – architect – director at Fereday Pollard Architects
- Andrew Grant – landscape architect – founder and director of Grant Associates
- Professor Hanif Kara – structural engineer – co-founder and design director of AKT II
- Madeleine Kessler – architect – Haptic Architects
- Lucy Musgrave – urban designer – founding director of Publica
- Judith Sykes – civil engineer – director at Expedition Engineering
- Louise Wyman – chartered surveyor and landscape architect – design lead for the West Midlands Combined Authority.

Andrew Grant of Grant Associates commented, “I will be looking to ensure landscape and ecological design excellence is embedded within the design principles and procurement strategies for future infrastructure projects.”

## PARTNERSHIP

## Medical Architecture joins forces with extra-care housing specialist TM



Medical Architecture has joined forces with TM Architects to offer clients a wider range of skills and resources, and a capacity for larger and more complex projects.

Medical Architecture said it will “build on its record of leadership in complex healthcare projects with new opportunities developing NHS and other public assets across the UK.” TM Architects will

“capitalise on opportunities for the development of health and social care infrastructure,” the firm added.

Founded in 1991, Medical Architecture is a multi-disciplinary practice claiming a unique focus on the health sector, providing a full range of services including strategic planning, business cases and estates development planning, architecture,

interior design and post occupancy evaluation. The practice is based in the UK, with offices in London and Newcastle upon Tyne, but works both locally and globally.

The leadership team at TM Architects has more than 20 years’ experience working for housing providers in London and the south east of England. The firm prioritises “understanding clients’ requirements and working closely with them,” and has skill, detailed knowledge and experience of the planning, technical and legislative environment.

TM Architects director, Judith Tranter, said: “This partnership infuses our business with greater expertise, services and resources. We can offer our clients’ enhanced BIM capability as well as quality assurance and it enables us to provide our staff with increased opportunities to work on diverse projects.”

Christopher Shaw, senior director of Medical Architecture said: “Our firms have worked alongside each other, and share common values for high quality and socially useful architecture.”





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## MIXED USE

# Phase3 completes first mixed use London project

Emerging architecture practice Phase3 has completed its first landmark scheme in London, a mixed use project titled ONE Putney.

The practice commented, “At a critical moment when the shifting format of retail is challenging our town centres, our aim was to create a well proportioned and well crafted building for the future.” Designed to simultaneously mitigate the scale of the high street and the adjacent neighbourhood, ONE Putney required a “thoughtful response committed to supporting the transformation of the high street,” said the firm.

“Sitting comfortably within its context without conforming, the apartments and retail scheme establishes a new dialogue in order to transform a neglected stretch along this main thoroughfare.” The six-storey

BREEAM Excellent building includes 15 residential apartments, a shared rooftop terrace and green roofs. The design “plays with interlocking volumes, reinterpreting the original structure in a new way.” Curved corners emphasise the continuous lines along the high street and Montserrat Road, activating more pedestrian space. Horizontal and vertical elements are formed from precast concrete, echoing townscape materials.

Carefully respecting scale and the relationship between the high street and bordering residential road, the development establishes a “strong identity and active retail frontage,” with the rear elevation stepping down to reflect the height of the two-storey terraced housing behind.

Tyen Masten, founding director of Phase3, commented, “Our concept was to



create a timeless building that can adapt and evolve with Putney High Street. We were delighted to get such a positive approval for the scheme from the local authority, particularly as it is our first London scheme.”

## COMPETITION

## Arup to design acoustics for world-class Munich Concert Hall

Following an international design competition, Arup has been selected as the room acoustics designer of the performance spaces in the new Konzerthaus in Munich, home to one of the world’s oldest symphony orchestras, the Bavarian Radio Symphony Orchestra (BRSO).

Arup’s work will focus on three primary spaces for music performance and rehearsal – an 1800-seat concert hall, a 600-seat small hall, and a 200-seat creative music workshop space.

The winning proposal submitted by Arup centred on defining the bespoke sound aesthetics and experience of the hall for artists and audiences from the city and region.

The lead architect of the project is Cukrowicz Nachbaur Architekten ZT, Bregenz, Austria. Arup will work closely

with the clients, the architects, the entire planning team, the Bavarian Radio Symphony Orchestra and the Academy of Music and Theatre to deliver the three halls.

Project Director, Tateo Nakajima, London, said, “It’s a huge honour to be working in this fabulous city and its music community with its long and storied history of music making. My team and I are looking forward to working with the project team to shape unique acoustical experiences that will reflect their traditions and open up opportunities for contemporary and future expression.”

The Bavarian Minister for construction and transport, Dr. Hans Reichhart, added, “Excellent acoustics have always been at the heart of the discussions about this concert hall and have played a decisive role from the very beginning. Acoustics



consist of far more than physical parameters! I am pleased that we are able to celebrate another successful milestone with the appointment of Arup.”

The new hall in Munich follows internationally acclaimed concert halls created by Arup’s specialist acoustic designers, including The National Forum of Music (Wrocław), Harpa (Reykjavík), Musikkens Hus (Aalborg), Bartok National Philharmonic Hall (Budapest), the Sage-Gateshead (Gateshead), Milton Court (London) and King’s Place (London).





# VIEW POINT

Following the recent Stress Awareness Month and Mental Health Awareness Week, Charles Bettles of architects and interior designers gpad delves deeper into the importance of good design in “optimising the workplace for our mutual good”

**M**ental health charity Mind recently published their third annual Workplace Wellbeing Index for 2018-19. The research reveals that mental health problems are not unusual in the workplace, and the charity emphasises it is crucial that organisations now make staff wellbeing a priority.

Workplace cultures aside, the spaces that we work in have a great impact, and there is much that we as architects and designers can do to employ great design.

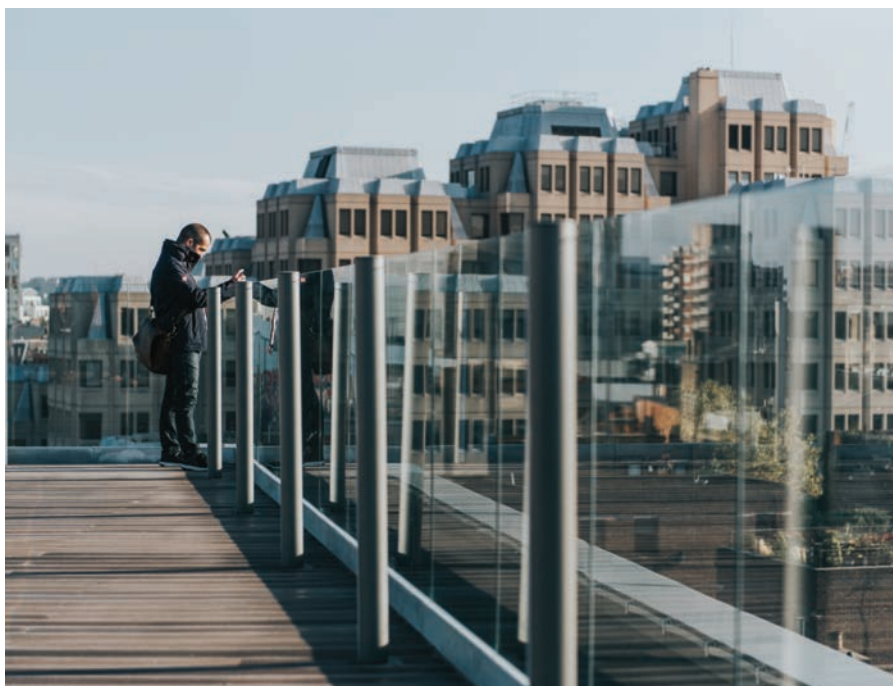
## What drives wellbeing?

Several factors can be attributed to this. Awareness of the importance of prioritising workforce wellbeing is increasing among companies, as past research clearly demonstrates how it improves productivity and therefore profits. Employers are also beginning to recognise that they have responsibilities towards their staff. Today's workers also know to be more demanding, being aware of what their office could be and the effects of their environment on their mental and physical health.

## Demand for healthy buildings – an opportunity

From a developer's perspective, wellbeing measures are an essential part of meeting their brief to stay competitive in the market. Investing more money in developing a strong design at the early stages of a project will almost guarantee that a developer reaps greater commercial rewards further down the line, be this for better lighting conditions, effective acoustics, or optimum air quality. The knock-on effects from a healthier building are significant – happier, healthier occupants mean lower staff turnover and increased productivity.

We should see this as a great opportunity to produce better buildings for all of us,



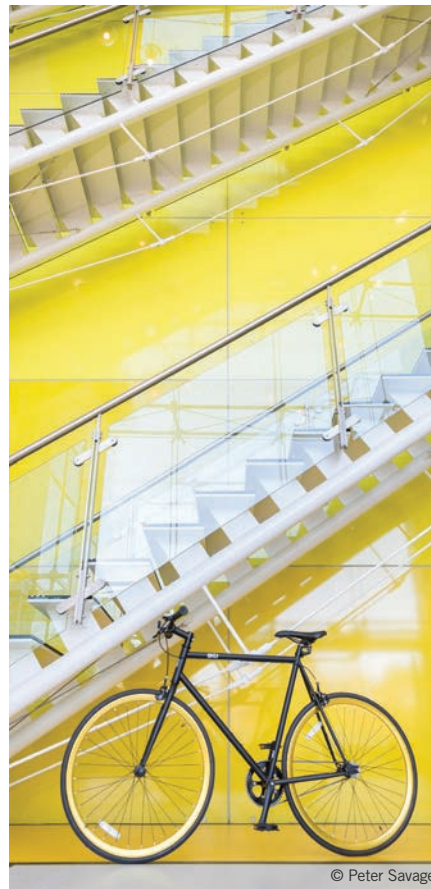
rather than an unwanted challenge. Debates that we were having not that long ago around whether amenities such as cycle stores, showers, lockers and roof terraces are provided are now provided as a given, as they should be. And we're discussing other considerations to encourage more active and fulfilling lifestyles and how they can be incorporated into our working lives, and the buildings we produce.

Making the physical workplace more appealing to workers is beneficial to developers and agents alike. There are numerous ways to achieve this; some offices install anything from bars and cafes to slides and mini golf, and recreational spaces are increasingly needed, in an age where the boundary between life and work is blurred.

## Tech to serve our needs

Healthy buildings are increasingly 'smart' buildings too. Yet, while investing in integrating technology into a building, we need to be mindful that it may have a design shelf life. Architects and designers have to carefully assess technology and see will it make people's lives better or is it just a shiny new toy. The purpose of technology, after all, is to improve our lives rather than to be fetishised.

It's crucial to create spaces that are adaptable and allow for flexibility and ease of implementation in years to come. Yet the spaces need to accommodate all the ways in which we work today, with co-working environments, private spaces, break out areas and cafes.



### The outside inside

Healthy living is a consideration we always take into account when designing buildings at gpad. As an example, One Cathedral Square in Bristol was a tired office building we transformed. It now has huge amounts of natural light, spacious reception areas and internal terracing to encourage movement. Further than that, there are showers, changing areas and enough storage for 50 bicycles.

The centrepiece is a naturally lit atrium, surrounded by large, open floorplates. This is also home to a vast living wall extending 13 metres high. It offers an impressive, lush focal point, and draws the eye upwards into the atrium. This naturally connects the building users to the outside and blends the boundaries between outside and inside.

### Biophilic design

Research shows that biophilic design can be powerfully beneficial on productivity and wellbeing by lowering stress levels. The CBRE's 2016 report 'The Snowball Effects of Healthy Offices', suggested that exposure to nature murals and live – or artificial – plants resulted in people perceiving their

performance to be 10 per cent better. 65 per cent said they felt healthier, 76 per cent more energised and 78 per cent happier.

Floor-to-ceiling glazing is clearly benefitting workers on the upper levels at One Cathedral Square. It gives stimulating views across the foyer and the natural wall, as well as maximising the natural light entering the space. While the greenery is a statement, it is also a calming natural backdrop allowing relief away from the desk and screen.

### Conclusion

Research shows how good design is a tangible way to improve happiness and productivity – Competing budgets, such as training; management development and benefits have a more easily quantifiable, reliable return on investment, which complicates things.

We need to find ways to show exactly by how much good design helps. Studies such as Bill Browning's 'The Economics of Biophilia' (2015) already show how relatively small investments incorporating biophilic design in workspaces can significantly reduce company costs by

**Making the physical workplace more appealing to workers is beneficial to developers and agents alike. There are numerous ways to achieve this; some offices install anything from bars and cafes to slides and mini golf**

minimising absenteeism and savings in healthcare costs.

Inspiring spaces can make a major difference to worker health, happiness and productivity. Designing workspace today is also about creating an environment that can evolve as our working methods evolve. It's about constantly striving for the best possible environments for wellbeing, while future proofing the spaces we're creating.

*Charles Bettles is managing director of gpad*





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## PRACTICE PROFILE



# Apt Architects

A rebrand of a fast-growing practice gave it a facelift and left staff re-energised. Sébastien Reed speaks to Apt's studio leader Jason Geen

**"I**t wasn't the best time to set up a studio," says Jason Geen, studio leader at Apt. "We were founded in 2009 in the months leading up to the world banking crash, and lack of trust in the stock market." Despite these potentially turbulent beginnings under the practice's former names – first Robin Partington Architects, then Robin Partington & Partners – the firm was a success.

Founder Robin Partington established the studio after having spent his architectural career designing for renowned practices such as Hamiltons and Foster & Partners, managing to secure a series of large projects early on which went to propel the new practice into the next decade, high profile examples include Park House, a mixed use scheme opposite London's Selfridges, and a residential scheme in Paddington, Merchant Square.

"We never set out with a manifesto," says Geen, who joined the practice in 2011, "just as the studio was really beginning to get into its stride." From the beginning, the architects always wanted the studio to develop into "a place of trust and fun; a collaborative think-tank of all ages and experiences," with a more pragmatic shared aim of "being problem solvers."

The architects' recent rebrand – infusing the name Apt – marks 10 years of robust architectural output, amounting to nearly 30 projects, along with a set of other new organisational changes and a renovated vision for the future of the studio.

### A positive ripple

The studio began with Robin, the sole owner of the business, who took on all the financial commitments. After a number of years in operation, questions about success and succession, and promotions and growth began looming: "How could we prepare for this?" asks Geen rhetorically. "How could we adopt the John Lewis model – of an employee ownership trust?"

He continues: "We live in this incredibly expensive city which is undergoing huge change. What we wanted to do was to get into a position where there was a completely fair structure; where if you were talented, there was nothing blocking your elevation and promotion through the studio?"

The rebrand was, for the architects, a way of reflecting their



### WORKPLACE

1 New Street Square, a retail/office development in the heart of the City of London saw the creation of an award-winning, landmark building



#### BACK TO LIFE

Parker House, a collection of apartments in Covent Garden that brought an old building back to life

## From the beginning, the architects always wanted the studio to develop into “a place of trust and fun”

new internal constitution to the outside. Since making the change to being an employee ownership trust – accompanied also by a move of studio – through which Apt retained all its staff. Geen says: “Personally, it has really energised the studio.”

As for the name – Apt – the architects chose it not only on linguistic merit; being short and punchy, semantically there was a joint desire for “a single word that would communicate astuteness and resourcefulness.” Geen is also keen to clarify that: “We’re not A-P-T; we’re Apt.”

At the time of the rebrand in October, the architects didn’t want to have a big press launch. Instead, clients, family, and friends were invited to a more informal big party as a celebration. “There were a few press releases, but friends promoting the rebrand produced great referrals – a positive ripple,” says Geen.

### The practice

Apt – currently made up of 55 individuals – is helmed by three studio leaders; Niall Monaghan, Robin Partington and Geen himself, each of whom are involved in multiple projects at any one time. Then there are four project leaders; the “individuals who drive the talent”: James Ewen, Mark Williams-Jones, Nat Lee and Stephane Piazza.

Over the years, Apt has honed a mechanism for driving an energetic approach towards each brief, having established a board of directors and a board of trustees made up of both

internal and external personnel, including non-executive chairman David Hearn. In practice, “the directors report to the trust and the trustees, holding everything accountable, encouraging energy and being at the top of our game.”

The architects claim to champion a “contextual response” in their approach to each brief. Over the course of a six to seven year project, the brief’s essence can gradually be manipulated or even lost. Through exploring the context of a project, Apt respond to this problem by building a project ‘manifesto’: “one sentence that becomes a key thing that excites us about the client’s brief at the project’s outset”, explains Geen. “We keep that at the head of every one of our design reviews amidst all the other opportunities and challenges that come.”

### Innovative craftsmanship

According to Apt, two emblematic words summing up their output are ‘craftsmanship’ and ‘innovation’. Geen substantiates the former referring to Merchant Square, a master plan which enveloped the design for a number of buildings: “One of the things I’m very excited about is materiality. ‘Craft’ would be what materials we thought would resonate with the people, and for Merchant Square, cast iron was chosen.”

The architects experimented with the material by cooking it at various temperatures to preserve its aesthetic as well as preventing the surface from rubbing off on the clothing of users: “450 degrees celsius, 550, 600 – it would come out at different colours and textures – the whole process became a journey of material exploration.”

On the subject of innovation, Geen describes a design-stage project in Hammersmith, where the client came to the architects with a brief which was ultimately about scale, the amount of space, and the type of space. Geen explains: “The innovation here appeared when we wrote our manifesto for the project – it was about what the future of the office environment was.”

According to Geen, some of the most successful buildings are those which require limited architectural attention for 20-30 years after construction; those that had multiple uses over time and no fixed typology; “from office to residential to education; buildings that morph, change and adapt.” In this same vein, 66 Hammersmith Road incorporates numerous measures that will allow it, once built, to adapt in time to the specific demands of the occupier.

### The future for Apt

Other more niche projects that Apt has collaborated on include a room in Oxford’s Bodleian Library, The Treasury, which houses a host of artefacts. “This was a space that we created that is about elegance and simplicity, in which the architecture became secondary. I’d love to see the studio explore more of these things.”

Members of Apt’s studio also contributed to an “energised piece of collaboration” with Russian architect Alexander Brodsky on a temporary pavilion, which only had a life of four weeks. Geen notes: “Looking ahead, it would be nice to build on these smaller collaborations.”

Reflecting on their progress until now, Apt has, as one of its core aims, to communicate and share its projects with a variety of audiences. As the practice’s efforts in creating inspiring architecture in the past have not gone unrewarded, Geen and his colleagues are hopeful that the rebrand will follow suit, embellishing the talent behind the name.



# ASK THE ARCHITECT

Ed Higgins from Hosta Consulting answers *ADF*'s questions on landscape design and green infrastructure



## WHY DID YOU DECIDE TO TRAIN AS AN ARCHITECT?

Like many at the start of their architectural education part of me, somewhat egotistically, wanted to create beautiful statement buildings that received a lot of attention and make my mark on the world. During my university education my views became more sensitive and I wished to create places that people love to be in, progressing in recent years as my love of nature has intertwined into our work.

## WHAT DO YOU LIKE ABOUT YOUR JOB MOST?

I like the variety of people I meet in my job; nature is a connecting force that many people appreciate, particularly in an increasingly environmentally aware world. There is so much opportunity to re-introduce nature back into our everyday lives, each project we complete explores different elements. Working with plants, the design is not complete at handover – it develops and changes, often in unexpected ways; this is a great pleasure to watch.

## DO YOU FEEL THAT LANDSCAPING SHOULD AND CAN BE REGARDED AS ARCHITECTURE?

Any space made for people to use is both landscape and architecture; I believe they are words used to describe our interaction,

and impact, on the environment. The sensibilities that inform architecture were founded as we evolved in our natural landscapes. If the arrangement of spaces that invoke feelings within us is to be called architecture, then I believe that landscaping should be regarded as architecture. The development of landscape spaces, however, require specialist skills, it should not be taken that architects can design landscaping.

## HOW WOULD YOU DESCRIBE YOUR APPROACH TO PERSUADING CLIENTS ON THE IMPORTANCE OF GREEN INFRASTRUCTURE?

As we have established ourselves on our sustainable and ecological designs, many of our clients come to us to already persuaded. We always stress that landscape should be functional as well as aesthetic, and highlight benefits for instance improvements in biodiversity, mental and physical well-being, and mitigating the effects of climate change, which for clients means increased productivity, lower bills and a delightful place to relax, work, or play.

## WHAT IS YOUR FAVOURITE SECTOR TO WORK IN?

I love the challenge of adding nature in all sectors, but the biggest impact can be made in the public sector, where schemes are



© Ed Higgins





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accessible to more people. The social housing schemes we have worked provide crucial spaces for community development. Office spaces allow you to be 'trendier' and create green spaces for workers to refresh and increase the enjoyment of their jobs.

### WHAT'S YOUR BIGGEST CHALLENGE CURRENTLY?

Ongoing maintenance in public projects is difficult, there is a shortage of skills and training, as well as funding. However, this provides interesting constraints, which we believe can partly be solved in the design stage. We are continually pushing harder and constantly testing new naturalistic planting plans combining plants and seed mixes to limit maintenance naturally – it's a great opportunity!

### HOW HAS THE RHS AWARD CHANGED YOUR PROFILE?

The RHS award from my show garden last year (and for the show garden with Hosta Consulting in 2016) both gave me the opportunity to show what I can do as a designer, which is particularly important when a company is in its formative years. The award has given me recognition within the industry to try something different.

### WHAT'S YOUR CURRENT FAVOURITE BUILDING MATERIAL IN PROJECTS?

Following my RHS Tatton Park Show Garden 'Finding [urban] Nature,' my current favourite building material is waste

aggregates, including crushed brick and concrete. Inspired by nature, which colonises brownfield sites, we have been using this material to create landscapes which limits the damaging importation of topsoil into urban sites and uses a waste product. It's a great material, with the right choice of planting, we can create colourful, floral ecological havens in cities.

### DO YOU SEE THE ROLE OF ARCHITECTS AS ADVISORS TO BE AS IMPORTANT AS THAT OF BUILDING DESIGNERS?

Architects have a unique set of skills; thorough architectural education teaches a holistic approach to dealing with the places that we live. As a whole, architects, working collaboratively with others are a great resource to tackle problems in the built environment.

### HOW DO YOU USE TECHNOLOGY WHEN DESIGNING?

Like many practices, we use technology in most of our designs, however we alternate between hand drawing and computer work to get the best from both worlds. Fundamentally, technology is a tool and the ultimate goal is usually creating drawings that are legible to the client and stakeholders, visualisations that present an experience, or 3D models that allow the testing of designs.

Technology has allowed us to refine our processes to make them more efficient – for example our planting plans

automatically generate plant lists containing quantiles, required densities and details about the plants. We can then use this data to generate maintenance schedules – each of these were previously time consuming processes, and now can be completed instantly.

### DO YOU THINK YOU HAVE A ROLE TO DRIVE BRIEFS OR SHOULD ARCHITECTS BE REACTIVE?

Our role is to make projects as good as they can be. Some clients are un-confident of what can be achieved, and we can tailor the brief to push elements such as biodiversity, water re-use and soil health, as well as other elements. Other clients are much more sure about what they'd like to achieve, therefore the relationship is more collaborative, rather than a guiding hand.

### WHAT ARE YOUR HOPES FOR THIS YEAR AND BEYOND FOR YOU AND YOUR PRACTICE?

We have a few exciting projects in the pipeline, which are currently under wraps, but all deal with interaction with nature in urban areas. We have recently completed our largest intensive roof garden for a social housing provider Nottingham City Homes, and we're hoping to develop more work similar to this. In the future we have made an active decision to stay small and work collaboratively with artists, sculptors and other designers to create new opportunities for nature. ■



# SE Controls high flying hybrid ventilation and smoke control for St. Helena Airport

St. Helena, one of the world's most remote island locations is using actuators, monitoring and control solutions from SE Controls Africa as part of a new hybrid environmental ventilation and smoke control solution at its airport terminal on the East coast.

A British overseas territory, alongside, Ascension Island and Tristan da Cunha, St. Helena's airport is operated by St. Helena Airport Ltd and currently receives a weekly flight from Johannesburg, South Africa.

Handling around 400 passengers each week, the airport terminal's ventilation system is designed to monitor and control both temperature and carbon dioxide (CO<sub>2</sub>) levels, to help maintain a comfortable environment for travellers and staff, while also ensuring that escape routes are kept free of smoke in the event of a fire.

To achieve this, 46 SE Controls SECO N 24 40 chain actuators with a 600mm stroke length automatically open and close the



airport terminal's windows and vents, depending on the CO<sub>2</sub> concentration and interior temperature, which is monitored by four combined sensor and control units located in different zones within the building.

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If a fire should occur, the building's alarm system triggers the ventilation system to switch into smoke ventilation mode, which automatically opens high level vents while also allowing replacement air to enter the terminal at low level to ensure that smoke can be quickly vented from the building and keep escape routes clear.

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## REFURBISHMENT

# Paul Cashin Architects refurbishes key West Sussex cottage



Island Cottage, constructed in 1830 in a conservation area at the southern limit of Sidlesham Quay village in West Sussex, and highlighted by the local authority as a key local example of rural character, presented a challenge to Paul Cashin Architects in its refurbishment and extension.

The cottage is sited in a major flood risk area, “a precarious context which demanded a considered approach,” said the firm. The original building had been extended over many years, “mostly with insensitive and cumbersome additions.”

The practice’s brief was “to restore the cottage and reconcile its history of extensions to the landscape of the nature

reserve of Sidlesham and Pagham beyond.”

The original house’s identity having been lost, the architects’ “first move was to establish the lines of the original cottage and draw a single route through the house.” This is experienced as a simple door from the library at the formal end of the house, leading north to south straight towards the rear garden.

Reinstating the library and guest bedrooms and bathrooms enabled the original cottage to be distinguished from later additions. A flowing movement was created between downstairs rooms and views through and across the house were opened up, with each room “open on many sides.”

The roof is accessible, allowing for



informal gathering on a grass terrace gaining views far beyond the immediate gardens. The facades have been uplifted with larch cladding, new timber windows and a series of timber loggias set into the gardens.

The landscaping strategy alleviates flood risk by providing “a bung to the garden edge,” said the architects, while encouraging native species planting to take over the new timber structure directly connected to the house.

The client sourced much of the interior fixtures and finishes from salvage yards and online second hand boutiques, and the house is decorated with reclaimed materials, giving it a worn-in, ‘beachy’ feel.



# CPD FOCUS

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## A NEW CPD FROM HORNE: LET'S TALK ABOUT HAND WASHING



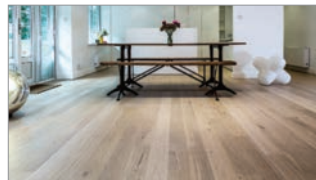
Considering the march of antibiotic resistance, rightly described as a global threat that equals climate change in terms of its seriousness, the need to break the chain of infection through effective hand decontamination becomes ever more important. In spite of this, hand hygiene compliance – its frequency and technique – in the healthcare environment remains woefully inadequate. **Horne Engineering's** new CPD seminar raises the question what are the barriers or disincentives, to achieving effective hand hygiene compliance? And how can engineering help? [goo.gl/gvzeDZ](mailto:goo.gl/gvzeDZ) [www.horne.co.uk](http://www.horne.co.uk)

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## SPECIFYING HARDWOOD TIMBER EXTERNAL DOORSETS



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

## MULTI-DWELLING IMPACT SOUND ISSUES ON THE INCREASE



This new RIBA Approved **Schöck** CPD looks at why the prevention of impact sound on staircases in multi-dwelling units is becoming an increasingly important issue and how it can be resolved.

There is a marked increase in the density of residential living and in the interests of noise health protection, existing mandatory soundproofing standards – of which common stairs and impact sound is an important feature – are coming under scrutiny.

With conventional solutions, such as an unsecured individual elastomer support under the stairs, any displacement can result in a broken concrete edge due to incorrect support.

This in turn means the risk of dirt and gravel getting into the gap between staircase and floor slab, which can easily reduce acoustic insulation performance by around 10 dB.

This session provides a guide for all Specifiers as to how the acoustic performance caused by impact sound from stairs can be improved by using a fully integrated solution.

It also looks at what current regulatory guidance exists and how it might change in the future. 01865 290 895 [design@schoeck.co.uk](mailto:design@schoeck.co.uk)

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## AL JANOUB STADIUM, QATAR ZAHA HADID ARCHITECTS

Inaugurated in May to host the Amir Cup Final of the Qatar Stars national football league, Al Janoub Stadium was the first new stadium commissioned for the 2022 FIFA World Cup in Qatar. Zaha Hadid Architects (ZHA) together with Aecom began designing the stadium, along with its new precinct for the city, in March 2013. Given the stadium's context within the coastal city of Al Wakrah, the client asked that its design reflect the maritime traditions and history of the location, in particular, the traditional boat of the region – the dhow. ZHA responded with a design that incorporates these cultural references in an abstracted manner and combines them with practical responses to the climate, context and the functional requirements of a football stadium. "The abstraction transforms the literal into something new and appropriate for a football stadium; allowing multiple interpretations of these cultural references both in terms of how they are applied and how they are read" said the architect.



## EMEA HQ, THE NETHERLANDS ASICS CORPORATION

ASICS has opened its new EMEA headquarters designed to reflect its 'Sound Mind in a Sound Body' philosophy. The new office in Greater Amsterdam has been designed to encourage movement and reduce stress through the use of space, light and natural materials and through fitness and wellbeing facilities. Designed in partnership with CBRE, RED Company and Power House Company, the building has achieved a LEED/WELL Gold Building Standard Certification to ensure a sustainable and healthy environment for all employees. The 11,600 m<sup>2</sup> building has been designed around a central atrium with state-of-the-art digital showrooms to showcase ASICS' innovation and craftsmanship.



## SHANGRI-LA FUZHOU, CHINA LEAD8

Lead8 has been announced a winner at the Asia Pacific Property Awards for its design of the future Shangri-La Mixed-use Development in Fuzhou, China. The future Shangri-La Mixed-use Development in Fuzhou is an exciting undertaking by one of the world's premier developers, owners and operators of hotel and commercial properties. The scheme will see the smart transformation and expansion of the existing high-end hotel, which completed in 2005, into a mixed-use urban resort combining luxury hotel, business, retail, dining and entertainment. The original hotel will be renovated and interconnected to a new multi-level recreational and retail podium and Grade A office tower, totalling more than 120,000 m<sup>2</sup>.





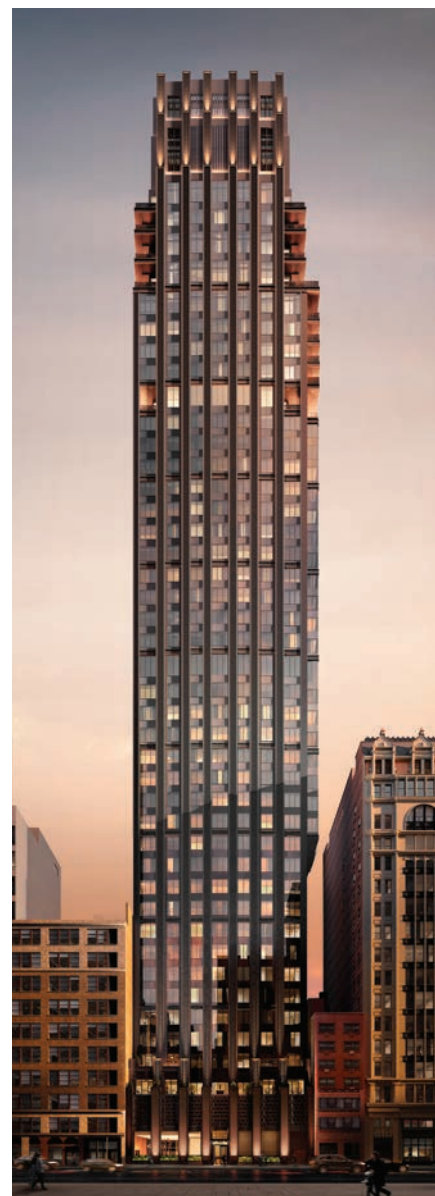
### WPP CAMPUS, FRANCE BDG ARCHITECTURE + DESIGN

BDG architecture + design is working with WPP on its latest colocation programme of investments to bring agencies together under one roof. The 28,000 m<sup>2</sup> building, located at 145-149 rue Anatole France in Levallois-Perret, is currently undergoing a significant restructuring by owner developers Ardian and LaSalle Investment Management. Split over eight floors, the world-class workspace will be designed to “encourage greater creativity and closer collaboration, and give clients easier access to WPP’s talent and expertise” said the architects. The campus will include a double-height auditorium, co-working areas, restaurants, two gardens and a rooftop terrace with 360° views of the city. The new campus for agencies in Paris is due to open in 2021.



### PERM, RUSSIA TWELVE ARCHITECTS

Twelve Architects have been given the go ahead for a £120m retail and leisure destination in the Russian city of Perm. This is the practice’s second major retail project in the country, following its design of the 120,000 m<sup>2</sup> VEER development in Ekaterinburg. The 152,000 m<sup>2</sup> development will house a retail and leisure mall, art gallery, conference centre and a 175-bed hotel. The project is the landmark development within the overall regeneration of Perm’s Kama River Promenade and central Esplanade park. The vision for the external form is to create a distinctive identity more akin to a major public building to attract retailers and the general public, taking a lead from Perm’s culture of performing arts and civic sculptures.



### ROSE HILL, USA CETRARUDDY

Designed by architectural studio CetraRuddy, RoseHill, a new 45-storey residential tower in the NoMad neighbourhood in Manhattan is near completion. Rising over 600 ft, Rose Hill pays homage to the city’s historic skyscraper architecture, while being a “building of the future that has been created for contemporary urban living,” said the architects. The building is clad in a “bronze-tone” facade, accented by intricate detailing that frames expansive glass windows. Taking its place among New York’s architectural icons and inspired by the Rockefeller Group’s landmark developments, decorative lighting will illuminate the tower’s base and crown to highlight the building’s “unique articulation.”





**BUILDING  
PROJECTS**

**MULBERRY PARK COMMUNITY HUB  
BATH**

# Building community links

Linking a housing estate in Bath with a new housing development, BDP's new community centre and school provides a local landmark that also offers strong links back to the site's D-Day heritage. James Parker reports





**T**he new Community Hub designed by BDP and built at the interface between a challenged housing estate in Bath and a new housing development, is a shining example of how an enlightened client can maximise community capital, with the help of a like-minded architect.

Housing association Curo is managing an ongoing regeneration project for the Foxhill estate, just to the south of the city centre, but far from the wealthy Georgian splendour Bath is famous for. As well as refurbishing houses it owns across the site by 2024, Curo is also building 700 homes at Combe Down next door. The development is on the former MOD Foxhill

site where the Admiralty designed the floating Mulberry Harbours used at D-Day, with the site being somewhat cut off from the city due to its historic role.

The housing association fully engaged the community, consulting them on what they would want from the refurbishments, the housing scheme masterplanned by HTA, and the new community hub, which included a new primary academy. The scheme's name was a result of this consultation process – a resident suggested calling it Mulberry Park in order to reflect the site's history.

Project director at BDP Nick Fairham tells *ADF*: "We've never worked on a



**The resulting composition of stacked boxes overlapping and appearing to 'slot' into each other was directly inspired by the site's heritage**

project which had so much community engagement. It was a well orchestrated piece of work, including Curo having a dedicated liaison officer who could direct us to some of the harder to reach residents."

He adds: "One of the things Curo was keen to do was to link the site better into the city – take fences down and use it to help in the regeneration of Foxhill by creating a single combined community across the new development and the estate."

The new Community Hub was also intended to provide the vital linking piece between the old and new housing, however its genesis was more pragmatic – a Section 106 agreement that required 'social infrastructure' to support the new development. Curo spotted this opportunity to create a shared resource for residents of Foxhill and Mulberry Park; Fairham says that Curo's ambition to make this a significant asset – one that would "galvanise the two communities" – was evident from the outset.

### **Briefing & optioneering**

The Section 106 agreement required a primary school, plus 100 m<sup>2</sup> of community space. However, reports Fairham, "Curo said 'what good is 100 m<sup>2</sup> to anybody' – they wanted considerably more."

Early on in the briefing process, the client built a business case including a cafe plus bookable community space, spaces for

wellbeing activities, and 'enterprise space' as its three key components. As a result of Curo's drive to make "a serious investment in local prosperity, the brief ended up consisting of nearer 1000 m<sup>2</sup> of flexible accommodation for use by local groups.

Fairham further explains the vision of how the centre would work in practice: "Parents could drop the kids off at school, meet up in the community cafe, do some wellbeing – e.g. 'Yogalates,' singing or dancing classes – or use the employment space." The centre proposed would offer a wide range of facilities that would not only benefit local residents' wellness and prosperity (many classes are run by locals), but also that of the region.

The client's ambition was clear at the initial interview: "The enthusiasm that came across was fantastic, we all came away saying we really hope we win this one," says Fairham.

Following appointment, BDP explored a number of options – together with users – around the mix of spaces, on criteria of commerciality as well as community benefit. The consultation phase threw up some interesting findings: "Interestingly, things like a big fixed gym space, which we thought would be picked up on, wasn't seen as a priority; it was more about having flexible spaces, says Fairham.

The project was a single-stage design and build, with Rydon being the successful



contractor. Fairham says that, at least in his BDP Bristol office, this procurement method isn't particularly popular with builders, and the fact that there was "a lot of interest" illustrates how attractive this project was. He adds that this was also down to the "resolution of the design information."

Following Rydon's appointment, Fairham says briefing with the client was a "pretty straightforward" process of identifying key areas of interest: "We nailed down the bits that were really important to the client and the local community, and with other buildability and construction aspects we left more flexibility for the contractor to come up with best practice." The £9.1m build cost was set early on following optioneering, and the project coming in on budget "offered a lot of bang for buck," says Fairham.

## Form

From early dialogue with the client, it was clear they wanted the building to have "a special character," says Fairham. The masterplan includes an avenue which runs parallel to the site to a large green open space to the north, and the new building is a landmark for anyone travelling north-south – or east-west – across the site.

During the optioneering phase, BDP developed one option called the 'Beacon,' which as the name suggests, stood out from the others. It took the material palette of the new Mulberry Park in terms of the brick used (albeit in a more restrained and Bath Stone-like creamy variant), and combined it with a dynamic cantilevering form which would make it a focal point.

The building's steel frame cantilevers to the side at second level, and double-cantilevers front-to-back at third. The resulting composition of stacked boxes overlapping and appearing to 'slot' into each other was directly inspired by the site's heritage. "The concept is effectively a stack of Mulberry Harbours," says Fairham, adding that the practice had "really positive feedback about it" from the local community.

Planning was granted under a 'delegated approval' – "a rarity in Bath," says Fairham. He says that achieving the right balance in terms of proportion, while adhering to height constraints for planning, "reinforced the stacking concept" which the architects adopted.

The community centre and nursery are offset from the school by about two metres at the request of the academy that runs the



school, and so the development effectively forms two separate buildings. They were designed as a unified entity by BDP however, and as such are linked by a continuation of the roof terrace that runs along the front elevation. The top storey's cantilever extends to around 5 metres at the back, and covers a portion of a larger roof terrace, providing protected outdoor space for wellness classes. To the rear of the Community Hub is a 4G pitch, the fruit from a close relationship between the client and the nearby Combe Down rugby club, and a variety of sports activities can be viewed from the rear roof terrace.

As part of the "long-life, loose-fit, simple maintenance" approach by the architects, the Hub has an exposed steel frame and exposed precast soffits, plus acoustic panels internally to increase the spaces' usability. The soffits assist night time purging of heat, and underfloor heating throughout also helps to maximise the thermal mass of the slab.

One way in which the two buildings are unified is by the use of a copper alloy cladding, which has a bronze-gold colour and is perforated in a pattern based on aerial photography of the Mulberry Harbours. It creates an attractive variation to the exterior, enclosing the cantilevered, overlapping third storey, but also the school hall – which bookends the other side of a new public space formed in front

## HEART SPACE

The cafe area blends with a double-height volume at the centre of the building, which sits behind the front door, and provides a visual connection between the ground and first floor





Images ©Hutton+Crow

**The fact that the building has already been well adopted by a wide range of community groups and individuals, providing a diverse range of activities and clubs, is the practical evidence the building is working**

of the two buildings' entrances.

Car access does not spoil the immediate surroundings of the building; as befits its school and community role, the whole frontage has been made a pedestrian piazza, including an area where the cafe can spill out in good weather. The space is also intended to be used for local amenities like farmer's markets or fetes, and to be a safe space for children exiting the school.

### Internal arrangement

The ground floor of the Community Hub contains a cafe, as well as some bookable wellbeing space, and the nursery to the rear. A sliding/folding screen allows the downstairs to be opened up into one large area for community functions, or closed to provide an area separate from the cafe. According to Nick, it's been well used already: "Every time I've been there it's been closed and is being used for something."

The cafe area blends with a double-height volume at the centre of the building, dubbed the 'Heart Space' by the architects, which sits behind the front door, and provides a visual connection between the ground and first floor. Adjacent to the stairs, this volume "helps the spaces flow as a sequence, rather than just being a ground floor and then stairs," says Fairham.

Up the stairs, the first floor is divided broadly in half by the double-height space. A large exposed truss carrying the main load of the storey above runs front to back and backspans across both areas. "We didn't worry too much if a cross member went past a window or not, we kind of saw it as part of the playfulness of the interaction of the structure and the mass of the building," says Fairham.

On this floor are further wellbeing spaces – potentially for use by health professionals such as a GP, and there is a mechanically ventilated room suitable for physiotherapy (the rest of the building is naturally ventilated). A smaller balcony/roof terrace at the front provides visual connection to the pedestrianized 'piazza,' and offers some breakout space from the group rooms.

The double-cantilevered second floor contains the 'enterprise space' – this is comprised of open-plan office space with a raised floor. "The intention is that over time community uses or local businesses will populate it," says BDP's project director. Fairham adds that this will "help to activate the space, by looking at opportunities including training."

### Flexibility of adaptability

The client was "very keen that the building chassis was as flexible as possible," for example to cope with future demand scenarios like the enterprise zone "becoming totally oversubscribed."

However, Nick Fairham says it's "more about flexibility of adaptability – over time, as the community changes, and what they want out of the building alters, it can be adapted to suit that changing need. He adds: "Because it's going to be owned by the community in the future, having that flexibility to adapt to their needs is very important – it should be able to deal with most things."

The 'loose-fit,' easily screened-off spaces are designed to be shallow in plan so they can be naturally ventilated and lit, but "deep enough to allow some flexibility in use," says Fairham. By the same token, the fact that the vast majority of spaces aren't highly serviced means their function can easily be switched if required. The flexibility of the building in terms of being able to use outdoor areas as well as indoors is "already being shown" a few months since opening, says its architect.

The school is something of an unknown quantity, as it serves the new Mulberry Park development and demand is as yet uncertain (it will be taking in one initial year group only). In terms of design, it also has "large, flexible volumes," says Fairham, as befits the unknown nature of how it may need to adapt. The designers hope that the school, although physically separated, will, like the nursery, be able to use the community spaces within the centre as needed in future.

### Conclusion

The fact that the building has already been well adopted by a wide range of community groups and individuals, providing a diverse range of activities and clubs, is the practical evidence the building is working. In more symbolic terms, the Community Hub is an important example of a developer and architect maximising value for the local community, in a built result which offers something visually exciting as well as highly functional.

According to the architect, working with Curo, an organisation whose values he says align with BDP's, has been "really refreshing – we are based around social value, and a huge proportion of our work is around community and the public sector. There is a real ambition to make the most of opportunities like this as they come." ■





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# Green house effect

Nestled into the Scottish highlands, a new kind of sustainable house design makes a simple, repeatable and inventive structure from abundant local materials to yield big cost savings. Sébastien Reed speaks to architect Gokay Deveci about Integra House

**I**ntegra House is a new home built for a client that's also the product of a research project at Robert Gordon University to improve provision of energy efficient, sustainable, healthy and genuinely affordable housing. Prefabricated truss construction used for the entire house construction is claimed to be a potential way to not only eliminate fuel poverty, but also address capital and life cycle costs and indoor air quality, in a fully repeatable model.

"The client specified a budget for a two to three bedroom house, and she wanted it to be environmentally friendly," so says Gokay Deveci – professor at the university and the designer behind the pioneering, all-timber house. The architect has made a name for himself over recent decades for his contributions to affordable eco-housing, of which Integra represents one of his latest iterations.

Excluding the foundations, the project's budget was set at £140,000 – around £1,000 per square metre – posing tight financial constraints to an already isolated plot which was challenged further by the often aggressive Scottish weather. Deveci continues: "The client came from a granite cottage before and was very concerned about the running costs. So, I had a very limited amount of money to build a new house that was also energy efficient."

The slightly sloping rural site, located in Tyrie, near Fraserburgh, Aberdeenshire, consisted of a farm building and derelict sheds, served by single-track access. Early proposals made attempts to integrate a house inside one of these pre-existing

buildings. "There were some existing stone walls," says Deveci, "but their structural conditions were so bad I had to abandon that." Regarding planning, Deveci notes that the project received encouragement from planners: "They were comfortable with us being a little experimental."

Given these circumstances, a saving grace for the architect was that the client had no particular fixed idea in terms of the architectural identity of the new building. So, partnered with the generous size of the site, the design was allowed more space to breathe in certain areas. Unknown at the time of the brief, these parameters would serve as a platform for innovation in affordable green living.

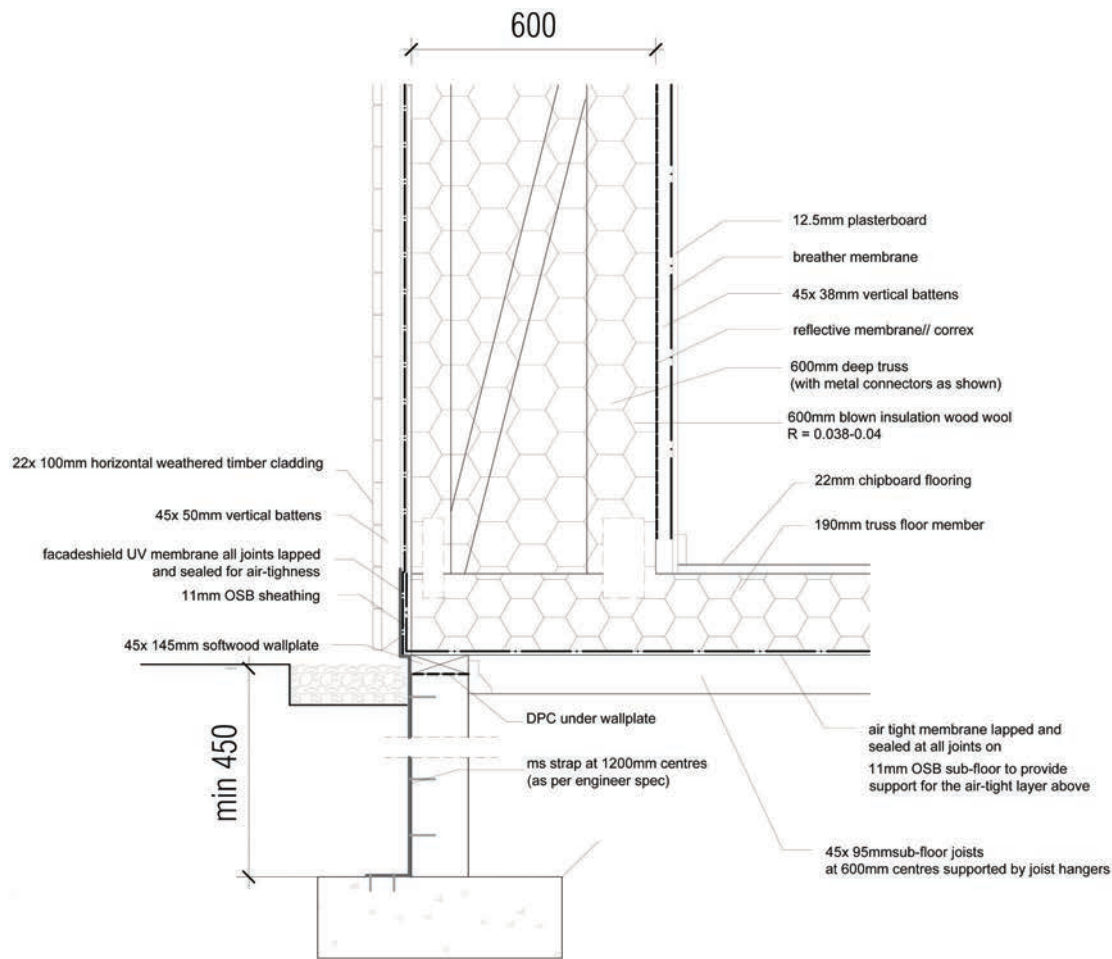
## Plan & provision

In plan, Integra house is long, simple and rectangular – roughly 18.2 metres by 7 metres – for practical structural reasons, as Deveci explains: "It's to do with the gable ends and the way the roof trusses stand side by side." It's an extremely windy site and as a result the building gables were located facing the prevailing wind.

The building is almost as simple in form as in plan, featuring a pitched roof which combines 60 degree and 25 degree angles, serving to displace the roof's peak to the eastern side of the house's mass: "It came entirely from the materials, the structure, and the way that things were put together." The entire structure, skin and insulation is comprised of timber.

The architect explains that a flat roof was considered early in the design process due to



**ABOVE**

Foundation junction detail (suspended timber floor)  
wood wool insulation; wall U-value = 0.08 W/m<sup>2</sup>K /  
floor U-value = 0.19 W/m<sup>2</sup>K

it being cheaper, however because of the climate and conditions it would have needed a specialist sub-contractor: “Different trades always add to cost of ‘affordable’ housing,” he says.

Externally, the geometric form of Integra house is complemented by a near-monotone specification of material for the external envelope – the building being almost entirely shrouded in larch strips, interrupted only by the glazing and dark steel frames holding them in place. The house sits on a timber platform, providing a sort of terrace which wraps around its periphery. Internally, the building houses two floors: The ground level covering the entire expanse of the plan – except for some intrusions at both ends of the building; and the first floor houses three-metres-wide ‘attic’ space extending along the total length of the building.

At ground level, the southern side of the scheme houses a open-plan kitchen and living area, a utility room and concealed storage space, while at the northern side two bedrooms and a bathroom are situated.

When entering the building through the main entrance situated on the house’s western elevation, the user enters a hallway which provides access to these two wings, as well as a generous staircase leading up to the first floor attic space. This houses a bedroom plus WC, a modest study, and further storage areas towards the northern side, while a void on the southern side turns the living area below into a double-height space, while providing the client with the flexibility to add a fourth bedroom later on if desired.

**Structurally resourceful**

The innovation that Integra House champions has to do with its structure. “Standard normal timber frame become so expensive due to energy efficiency and airtightness requirements,” says Deveci, adding, “I could afford much more roof truss.” The architect says he “interrogated himself” on why a robust, laser-cut product using good quality structural timber like a roof truss couldn’t be used for the walls, floors and the roof. So, by using





off-the-shelf roof trusses and having them extend to these areas to construct the building's superstructure the design produced significant cost savings of around £20,000-30,000, and reduced construction time considerably.

Integra House took nine months in total to build; three months longer than anticipated because there was no main contractor. Instead, a separate contractor was used for the groundworks, another for the joinery, and Deveci got hands-on, doing the plumbing and electricity himself. "Workmanship was difficult, and a bit more time-intensive," Deveci admits.

In addition to specifying budgetary constraints, the client was, says Deveci, "very involved." Weekly meetings were arranged over coffee to which "she would always bring a magazine and try to hint that there were certain aspects that she liked and didn't like." The architect compiled a wish-list of features which included a wood-burning stove and far-reaching views from the kitchen and living area over the Aberdeenshire countryside.

In order to retain the monolithic aesthetic of the building provided by the timber cladding, Deveci also specified a drainage system whereby rainwater flows through the timber cladding on the roof via thin slits, down a corrugated iron roof beneath and

into a hidden gutter. "I didn't want a plastic or metal gutter; it would have been a much less elegant solution."

There were already agricultural sheds and stables around the site, and the ageing of the materials plus the shape of the plan make the house look "almost agricultural in nature," says Deveci, "particularly to the north of the scheme, where there are very few openings in the house's external envelope."

In terms of acoustics, Integra House is well-suited to the building's intended function. "My client is single – if there were others in the house then there may have been some challenges." According to the architect, the double height spaces tend to create some constraints when it comes to acoustic performance: "It's best to have some kind of mass in an all timber-framed house." The internal organisation of the building was impacted by the gable ends in that first floor space was particularly tight due to truss wind load calculations, and there was also a need to be conscious of the direction of the stairs leading up to the attic space, which had to run parallel to the trusses.

### Green on green

The truss is made from standard structural grade soft wood, the external cladding is 45 mm thick Siberian larch "which does not require external treatment," and the insulation is partly wood fibre, which

### TIMBER

The building's entire structure and insulation is composed of timber

**Using off-the-shelf roof trusses and extending them to construct the building's superstructure produced significant cost savings**



**“Should the houses in the north of Scotland be the same as those in the south of England? I don’t think they should”**

#### PROJECT FACTFILE

- Integra House was a research project funded by the Construction Scotland Innovation Centre (CSIC)
- Truss developed and supplied by Pasquill
- Structure erected by Sylvan Stuart

is, according to Deveci, recycled and more breathable compared to other alternatives. “It’s a good example of how architects can build using sustainable and future recyclable materials as well as addressing circularity.”

The architect says: “The project is ageing nicely, taking a greyish colour which fits with the existing roofs and structures in that part of the world.” Deveci continues, discussing how the material benefits the environmental and wellbeing qualities of the spaces within: “considering health, using healthy materials is important since our buildings are becoming more and more air-tight.” He also notes that “low energy housing solutions, in particular the affordable housing sector, often have their ventilation switched off, which can lead to long term health problems.”

Given all these features, the house almost reaches Passivhaus standards – “in terms of insulation, it’s better than Passivhaus,” says Deveci. The only aspect that didn’t meet Passivhaus was airtightness, which was partly deliberate for the research aspect; it is rare for affordable housing to incorporate the mechanical ventilation systems that would be required to offset extreme airtightness, due to their cost (minimum £4K, according to Deveci).

Instead, the architect designed a bespoke ventilation system which extracts the air from the living room – heated by the woodburning stove – and redistributes it through diffusion into the bedrooms in the north of the plan, or vice-versa. When quizzed on what could’ve been added to further improve the thermal performance of the house, Deveci notes that he would’ve liked to use a concrete foundation to make use of ground-stored heat, however, the environmental and budgetary constraints meant that this wasn’t feasible.

Aside from the ecological sustainability benefits that Integra House provides to the client, for Deveci, the real sustainability is economic: “Affordability is so often only seen in terms of capital costs, and not running costs,” explains Deveci. Integra House incorporates both of these, achieved by using a simple, yet elegant solution. “I think what I demonstrated is that custom and self-build doesn’t need to be one-off or expensive. They can be very cost effective and meet the construction standards. There’s no need to make sacrifices. If it’s not affordable it’s not repeatable!”

In the midst of a housing crisis, a strong case can be made for Integra House as more than a singular example of a passing fad for affordable eco-housing in rural areas. The truss-based system makes it a cool contender among the many solutions being proposed in efforts to ramp up housing production and meet both customer demand and Government targets. While Deveci insists “it’s not just a numbers game,” the house’s simplicity makes it easy to build, easy to maintain – maintenance need not be carried out by specialist contractors, making it especially apt for rural and remote areas and the self build market – and easily customisable, since a wide array of materials can be applied to it to the preference of the client or user.

Also, often overlooked in debates over housing in the United Kingdom is the cultural component – with architectural language being a reflection of cultures, morphing over time and space, and over and within borders. “Should the houses in the north of Scotland be the same as those in the south of England?” asks Deveci rhetorically, before answering: “I don’t think they should.” It makes sense, then, to seriously consider solutions that can be easily tailored to local character and identity. When the solution can be constructed with such ease, giving access to self-builders and smaller housebuilders, an even more enticing answer to the challenges materialises. ■



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The patented Val-U-Therm PLUS® is also inherently sustainable due to careful sourcing of raw materials with a minimal environmental impact. Scotframe's timber is sourced from FSC and PEFC sustainably managed forests and the insulation in Val-U-Therm PLUS® panels is based on renewable vegetable oil, has zero ozone depletion potential and is CFC, HFC and HCFC-free with a Global Warming Potential of less than 5. This means it has a BRE Green Guide A/A+ Rating – the same as straw bales or sheep wool yet is hydrophobic offering flood mitigation.

From the UK's first PassivHaus for rent (which won a Green Apple Award) to examples that significantly exceed the PassivHaus standard, Scotframe has been leading the way using Val-U-Therm® technology in energy efficient building for many years.

The Maryville PassivHaus delivered a total primary energy demand of  $69 \text{ kWh/m}^2\text{a}$  (exceeding the PassivHaus requirement of  $120 \text{ kWh/m}^2\text{a}$ ). This 'Fabric First' approach

is also suitable for commercial buildings – the Rocking Horse Nursery at the University of Aberdeen, which caters for 78 pre-school children, achieved an air tightness of 0.475 ACH.

Hence Scotframe homes and buildings are warm and draught-proof in winter, cool and well ventilated in summer, healthy for all the family and enjoy remarkably low energy bills. Scotframe Val-U-Therm PLUS® allows the construction of typical family homes that can cost less than £95 a year to heat.

The great news is that building to these high standards is not necessarily more expensive or time consuming using Scotframe Val-U-Therm PLUS®. Edinburgh Napier University compared the cost per square metre of superstructure using 10 different building systems.

Scotframe Val-U-Therm® cost £1092 when built to PassivHaus standards, while the other nine systems ranged from £711 to £1138 when built only to existing Building Regulations. It took 65 days to build a Scotframe home to PassivHaus standards; the other 26 homes ranged from 49 to 126 days to build, again only to Building Regulations.

So, if you are looking to design a dream home or superlative building – think Scotframe Val-U-Therm PLUS®.

Scotframe Timber Engineering and Val-U-Therm are proud to be part of the Saint Gobain Group of Companies.

01467 624 440 [www.scotframe.co.uk](http://www.scotframe.co.uk)

## Frontier Pitts at IFSEC 2019



Frontier Pitts will be exhibiting at the IFSEC Exhibition at Excel, London between the 18<sup>th</sup> and 20<sup>th</sup> of June 2019. Frontier Pitts will be showcasing a fully operational LPS1175 Automatic Bi-folding Gate SR2 on the stand.

Many clients had been installing unrated Security Gates that had not been tested alongside LPS1175 security rated fence lines. By testing and upgrading certain elements on all models of our Automatic Security Gates, Frontier Pitts is now pleased to bring to the market the first complete LPS1175 Anti-Intruder Gate Range to the market, introducing another perimeter security layer to the security onion.

01293 422800 [www.frontierpitts.com](http://www.frontierpitts.com)

IFSEC INTERNATIONAL STAND NO IF450

## New Managing Director for Euroclad



Euroclad Group is delighted to announce the appointment of Aiveen Kearney as Managing Director. Aiveen will replace Simon Thomas who has elected to leave the company after 30 plus years. Paul O’Gorman commented: “On behalf of the Kingspan

Group, I want to thank Simon for his considerable input and leadership into the business”. Aiveen started her role as Managing Director on 7<sup>th</sup> May, 2019. She joined the Joris Division some 15 months ago, prior to this worked in a range of senior roles for Holcim, a global building materials and aggregates company, in both Australia and USA. Euroclad wishes Aiveen every success in her new role.

[feedback@eurocladgroup.com](mailto:feedback@eurocladgroup.com)

## A. Proctor Group supports trade



The A. Proctor Group is committed to promoting the highest standards of workmanship across construction trades, and this year is sponsoring the NFRC in supporting SkillBuild the largest multi-trade competition in the country for trainees and apprentices. There has been much debate about the skills shortage within the construction industry and the need to attract young people and promote training. In support of the competition, the A. Proctor Group is supplying Roofshield® – recognised by architects, developers and contractors as being one of the highest performing pitched roof underlays, which is both air and vapour permeable.

01250 872261 [www.proctorgroup.com](http://www.proctorgroup.com)

## GEZE UK sets new standards



GEZE UK is setting new standards having achieved the ISO 45001:2018 accreditation for Health and Safety – one of the first in the industry to gain the new award. The company is also the first of GEZE’s worldwide subsidiaries to gain the accreditation. ISO 45001 is an international standard that specifies the requirements for a management system that uses robust and effective processes for improving work safety in global supply chains. Designed to help organisations of all sizes and industries, ISO states that the new international standard is expected to reduce workplace injuries and illnesses.

01543 443000 [www.geze.co.uk](http://www.geze.co.uk)

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**IFSEC****18-20 JUNE 2019**  
INTERNATIONAL EXCEL LONDON UK

# Join the global security industry at IFSEC International 2019

IFSEC International is the UK and Europe's leading integrated security event, taking place on 18-20 June at ExCeL London

**I**FSEC International is the global hub for energy and innovation in the security industry, showing where the biggest developments are happening, and helping visitors set their security agenda for the year ahead.

Visitors can source over 10,000 products, including video surveillance, cyber security, physical and perimeter security, intruder detection, access control, and fire. There are over 500 security suppliers exhibiting, and the most innovative technology in action, including deep learning analytics, behavioural biometrics and smart locks.

Among the exhibitors confirmed are HID Global, Cortica, CSL, Jacksons Fencing, BT Redcare, Genetec, Traka, Vidsys, AnyVision, Hisilicon, Abloy UK, Anixter, Avigilon, MIT Technologies, Azur Drones, Hanwha Techwin, IDIS and Texecon.

IFSEC's 'Show Me How' initiative gives you the chance to pose questions directly to the dedicated technicians behind the tech, enabling you to learn how products are installed, operated and maintained. Hanwha, briefCam, Advancis and Octopus Systems are amongst the companies involved in this year's programme.

## Testing the defences

The LPCB Attack Testing Zone is one of the show's most exciting features, seeing firms put accredited perimeter defence equipment to the test. Technicians will conduct live attack tests on a range of perimeter and facade security products, plus safes, security enclosures and padlocks, featuring products from leading suppliers such as Abloy, CLD

Fencing, Insafe, Jacksons Fencing, Kingsley Plastics and Sunray Engineering among others. These rigorous tests help you source and identify the solutions best suited to your security strategy by proving their efficacy live on the show floor.

## Thought leadership

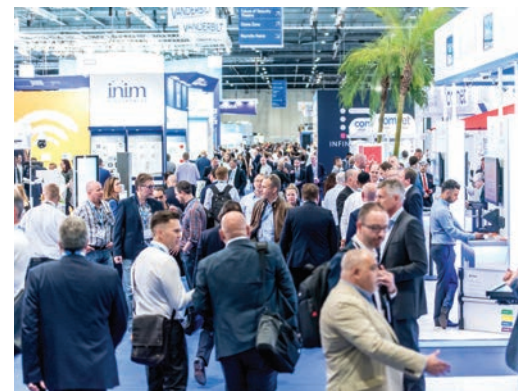
IFSEC's comprehensive conference agenda comprises over 35 hours of free content.

At the Keynote Arena (sponsored by Western Digital), security journalist Frank Gardner OBE presents a world-class agenda of security thought-leadership. Topics include using drones, organised crime reduction, social media and internet security, and tackling artificial intelligence and machine learning.

IFSEC International offers several other theatres including the Future of Security Theatre (sponsored by Tavcom) where experts will share their visions for the future of security, covering topics such as autonomous vehicles, AI in the electronic security industry, and future proofing CCTV networks. There will also be seminars on the "transformative value of integrating physical and cyber security."

It's now easier to tailor your network at IFSEC with the 1-2-1 Meetings Service, which lets you build an agenda of pre-arranged formal meetings with suppliers, and the VIP & Hosted Buyers Lounge.

Your IFSEC International 2019 ticket gives you complimentary access to three other co-located events: FIREX International, Safety & Health Expo and the Facilities Show.



Secure your free ticket at [www.ifsec.co.uk/adf](http://www.ifsec.co.uk/adf)

# Tee for two at Mapei!



It's a world of sport for Mapei this year, with the UK subsidiary announcing two exciting collaborations in golf.

Fans of the sport with a keen eye will have seen the Mapei logo appear on the apparel of Adrian Otaegui. The Spanish professional golfer has risen into the world's top 60 this year, following successful results on PGA and European Tours.

Mapei UK Managing Director, Phil Breakspear commented "Mapei is a global business, with historical links to sport. Working in partnership with Adrian, as a professional golfer, competing all around the world makes perfect sense to our brand values of globalisation and performance quality".

Adrian responded with equal enthusiasm, "I am very excited to be working with Mapei

and I am already excited about being at their golf event later this year. Mapei are a world class business and I'm looking forward to representing them at all the events I compete in all around the world." Adrian will proudly be wearing the Mapei logo at the US PGA and the Open Championships this year.

Mapei UK national golf days have become a staple event amongst their customers for more than a decade and this year's promises to be an event not to be missed, with appearances from Adrian and premier golf coach Chris Ryan, the second of Mapei's exciting golf partnerships this year.

Chris has an impressive coaching history and is currently Director of Coaching at the FIT Academy, Forest of Arden. Having conducted than 10,000 lessons to both novice players and those in the professional ranks,

Chris has taken this experience online in the last 5 years and is now the 5th biggest golf instruction Youtuber in the world. Chris' channel has more than 115,000 subscribers and has received more than 25 million views.

On the collaboration with Mapei, Chris commented, "I'm delighted to partner up with a company who are so passionate about sport. With their Italian roots visible with the work they have done in football and cycling, I'm pleased to be in the very lucky position to promote their business using golf as the vehicle to do so."

Mapei look forward to working with Chris on upcoming new and innovative instruction videos.

0121 508 6970  
www.mapei.co.uk



# Icynene goes green

**S**pray foam insulation specialist Icynene, is doing its bit to reduce the ever-growing mountain of plastic waste by incorporating recycled plastic into the formulation of its closed-cell foam insulation product.

Every year, Europe generates roughly 25m tonnes of plastic waste but less than 30 per cent is collected for recycling. (The Guardian). As a first step in tackling the problem, Icynene has started to process recycled PET bottles as one of the basic ingredients in its spray foam insulation. Over the coming year, Icynene expects to recycle in excess of 750,000, biting a fair-sized chunk out of this ever-growing mountain of plastic.

Spray-applied foam insulation is one of the quickest and most effective ways to reduce heat-loss from buildings. And by making our homes, offices and factories more thermally efficient, Icynene insulation also makes a significant contribution to reducing CO<sub>2</sub>



Icynene foam insulation is one of the most effective ways to reduce heat-loss from buildings

emissions – one of the principal causes of global warming.

Icynene spray foam insulation is already an environmentally friendly system. The closed cell foam uses HFO [Hydrofluorolefin] as a blowing agent and has a global warming potential [GWP] of 2 [Two] and an ozone depletion potential [ODP] of 0 [Zero]. Furthermore, Icynene does not emit any harmful gasses once cured and is completely inert.

To further reinforce the Company's green credentials, Icynene is committing a portion of sales revenue to a tree planting programme in woodland near its manufacturing base in Central Europe. For every barrel of basic product sold, Icynene will plant trees in the forests surrounding the Tatra Mountains in Slovakia – an area devastated by storms a few years ago.

Forests are Mother Nature's lungs and, by helping rebuild them through this programme of tree planting – the Company expects to plant over 40,000 this year – Icynene hopes it will help in the fight to reduce carbon emissions and slow the rise in global warming.

info@icynene.co.uk www.icynene.co.uk



Icynene incorporates recycled plastic into its closed-cell foam and begins major tree planting programme

## P C Henderson present Top Award at BCI Asia Awards in Indonesia



P C Henderson's Sales and Marketing Director – Andrew Royle – was honoured to present the award for the Top 10 Architects and Developers at the BCI Asia Awards in Jakarta, Indonesia last week. Invited as a guest of honor by Indonesian distributor – Roda Bangun Mandiri – Andrew was delighted to attend as a way of paying homage to the long term partnership with the company. The BCI Asia Awards, now in its 15<sup>th</sup> year, aims to recognise leaders within the architectural and building industry across South East Asia. Roda Bangun Mandiri, a long term distributor of P C Henderson, sponsored the Top 10 Architect and Developers Awards and invited Andrew Royle, Sales and Marketing Director, to provide an opening speech and hand out the awards. Bernadus Rizky, Head of Marketing and Sales at Roda Bangun Mandiri commented: "As a sliding and folding door hardware provider, we work with a lot of architects and developers who are looking to incorporate our hardware into their designs. Sponsoring the award was a huge honour for us, it's a very prestigious awards programme in Asia and we were delighted to be involved."

www.pchenderson.com

## Recycled content for recycling bins



Method has found success following their considered waste reduction design process that ensures a long term focus is maintained. Method recently announced that the black components of their bins now include at least 50 per cent recycled materials, which is more impactful than it may seem. Method design and manufacture good-looking recycling bins for the modern workplace. Helping some of the world's most influential organisations to recycle more, and waste less. Method believes in facilitating the circular economy, and the introduction of 50 per cent recycled content is a small but important step in the organisation's journey.

07763 525 668 www.methodrecycling.com

## Launch of the CLG-W10 Outdoor Subwoofer



The new CLG-W10 subwoofer is designed to bring the bass outside. It can be partially buried in a garden border or positioned on a deck or patio area. The compact dimensions make it extremely versatile and provide

the system designer with a variety of installation options. The CLG-W10 is the latest addition to Monitor Audio's Climate Garden System and is designed to augment the low frequencies when teamed with any of the outdoor speakers in the series.

monitoraudio.com

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## Roofshield® chosen for transport hub



Roofshield, the unique vapour and air permeable pitched roof underlay from the A. Proctor Group has been chosen for a multi-million-pound project set to transform the transport links across Northern Ireland. Danny Harkin Managing Director of D. Harkin & Co explains the reasons for the selection of Roofshield:

"We chose Roofshield because of its superior air permeability, which removes the need for any additional ventilation and assures comprehensive protection for the new hub facility." The use of Roofshield can lead to savings in labour and material costs, due to no VCL being required.

01250 872261 [www.proctorgroup.com](http://www.proctorgroup.com)

## Firestone launches V-Gard AVCL



Firestone, the EPDM roofing system specialist, has launched V-Gard; a next generation air & vapour control layer (AVCL) system suitable for use as part of all

Firestone warm roof build-ups. Developed to combine exceptional levels of vapour control with excellent adhesion to both the substrate and the insulation layer, V-Gard™ is a glass fibre-reinforced aluminium foil membrane with a self-adhesive backing. A unique film coating on the aluminium face ensures excellent compatibility with PU-adhesives and the new system has been designed for use with Firestone's ISO Twin-pack PU adhesive.

01606 552026 [www.firestonebpe.co.uk](http://www.firestonebpe.co.uk)

## Imperial matches bricks for restoration



Imperial Bricks has supplied bricks for a new structure within an 18<sup>th</sup> century National Trust listed property. Quarry Bank Mill in Styal, Cheshire, was a complete industrial community built around a cotton mill in the Cheshire countryside. Imperial Bricks was approached to

provide bricks for the new lift shaft to match the existing brickwork around the lift shaft area. Brick matching is a service offered by Imperial – if stock bricks can't offer a close match, it's possible to have a custom product created. The brick matching service will compare colour, size, texture and weathering to produce an exact match.

01952 750816 [www.imperialbricks.co.uk](http://www.imperialbricks.co.uk)

## Centaur salutes contractors at awards



The Centaur Technologies' Annual General Meeting and inaugural contractor awards took place on the luxury Sunborn London Yacht Hotel. The Centaur Quality Partnership Awards (CQP) awards recognise the outstanding installation skills

of Centaur contractors and Centaur contractors themselves voted for the worthy winners. Taking first place in the 'over 500m<sup>2</sup>' category was Inspire Roofing, who completed a flawless Centech PU 10 year installation on one of the control towers at London Airport. Gable Roofing and Cladding took the top spot in the 'under 500m<sup>2</sup>' category for a challenging Centech PU 20 year Tapered BUR system installation.

01772 453107 [info@centaurroofing.co.uk](mailto:info@centaurroofing.co.uk)





INSPIRATION m<sup>2</sup>

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## Kemperol 2K-PUR stands the test of time

**A** liquid roofing and waterproofing system, which was the first of its kind to be launched in the UK, has turned 20.

KEMPEROL 2K-PUR, which is manufactured by Kemper System, has retained its unique market position over the last two decades. It remains the only cold liquid-applied wet-on-wet waterproofing product in the UK which is sustainably sourced, solvent-free and completely odourless.

Manufactured using an 80 per cent castor-oil formula derived from sustainable sources, the liquid system bonds directly to the substrate forming a seamless, elastomeric waterproof membrane that cannot delaminate and is UV stable.

Stuart Hicks from Kemper System said: "The 20th anniversary of Kemperol 2K-PUR

is a major milestone and demonstrates our forward thinking commitment to innovation, quality and sustainability.

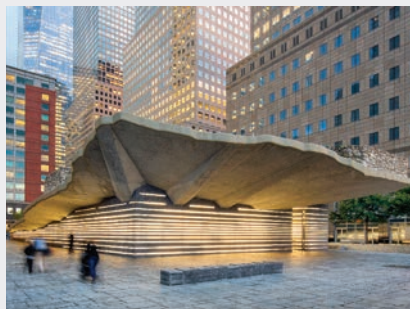
"The system has stood the test of time with a proven 20-year track record and continues to be one of the most popular and sought-after systems for all sorts of projects. Its unique qualities make it ideal for waterproofing buildings where environmental considerations are a priority or for occupied properties when the work has to be carried out without disruption from strong odours."

Kemperol 2K-PUR is applied using a reinforcement fleece, which has recently been upgraded by Kemper System. The new fleece is perforated as part of the production process rather than needle punched post manufacture. This makes it stronger and

greatly reduces the formation of air bubbles under the fleece allowing the resin to saturate the fleece more quickly and improving the speed of application.

"As the liquid waterproofing industry continues to grow, it is vital that we keep innovating and providing the highest quality products to meet our customers' demands," continued Stuart. "The launch of the new time-saving fleece keeps Kemperol 2K-PUR ahead of the game and is another major benefit for roofing contractors. Its design enables them to apply the liquid resin very quickly and easily, helping them to work even more efficiently."

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





# Conscious uncoupling

David Wilson of BAL takes a look at why specifying an uncoupling system is a sensible option for making a floor tiling installation as efficient as possible

With today's requirements for faster installation of tiling and the use of more demanding substrates, 'uncoupling' matting and membrane are being used more frequently and in some cases are a necessity.

Uncoupling principles have actually existed for centuries, with the Romans being the first documented users of the building process, which incorporated an "uncoupling" method.

These early practices used a mud bed to separate the substrate (then a two-inch thick layer of packed and flattened sand and cement) and the tiles. Both systems use the separating layer to provide an uncoupling buffer between the tile and the substrate, enabling the substrate to move independently to the tiles.

Modern uncoupling system methods have improved dramatically, but the same basic principles still apply for today's uncoupling mat systems, which are now in common use on floor tiling installations onto a variety of different substrates.

Coming in many forms, from thin, lightweight matting, to traditional cavity mat and floating systems, they give architects and contractors peace of mind when designing floor tiling installations.

Designed to provide a buffer layer when tiling onto floors, they protect against a variety of problems that can cause tiles to crack or de-bond.

One common problem is the potential for the substrate to contract or expand. In particular, newly laid sand: cement screeds or concrete may contain large amount of moisture, which as evaporates, causes the screed to shrink.

However, all substrates will expand and contract naturally due to humidity and/or temperature fluctuation, and this is especially true where under floor or under-tile heating has been installed. What's more, certain water-sensitive substrates, such as anhydrite screeds (or calcium



sulphate) will lose their cohesive strength if they get wet.

Wood is a hygroscopic material, and this, therefore, increases the potential risk of dimensional changes occurring within boards due to moisture expansion and drying shrinkage movement, resulting in lateral movement stress being generated between the board background and the rigid ceramic tile finish.

Any movement, whether shrinkage or expansion, can cause stress cracks that can transfer through to the tiled surface, causing the tile to either fracture, or de-bond from the background. Uncoupling matting helps to prevent these lateral stresses from transferring through to the tiled layer, by absorbing these stresses and transferring them evenly over the floor. Matting also has the ability to bridge static cracks i.e. shrinkage cracks up to 2 mm wide and joints between sheet & board backgrounds.

Another of benefit of modern matting systems is their suitability for

**Coming in many forms, from thin, lightweight matting to traditional cavity mat and floating systems, they give architects and contractors peace of mind when designing floor tiling installations**



waterproofing. In areas subject to moisture exposure where additional movement can occur, uncoupling mats can be used in conjunction with tanking products to ensure a combination of waterproofing and uncoupling can be achieved. When waterproofing or no priming of the matting is required, such as with a waterproofed uncoupling mat, do ensure that the membrane and liquid coating can interface with the chosen drain.

While the uncoupling membrane was originally devised for the installation of ceramic tiles, uncoupling systems are now recommended for use when tiling natural stone on all substrates. Importantly, uncoupling mattings are recognised by most floor trade associations related to the tiling industry as a major benefit. Both the TTA and the Stone Federation of Great Britain recognise the value of using these products and also gives reference to their use in BS 5385 part 3, 4 and 5.

Non-cavity uncoupling mat systems are perfect for use in commercial or domestic environments, with some products actually capable of accepting loads on floors immediately following installation, due to having a condensed profile with almost no

compression. This makes them perfect for car showrooms, hospitals, and shopping centres, areas where vehicular traffic is present, and areas with mosaic tiles.

Relatively new to the UK market, floating mats are loose laid onto the substrate and as such provide 'true' uncoupling – similar to the ancient use of sand as a buffer layer between the tile and substrate.

The use of a floating uncoupling system seriously reduced preparation time and project cost – particularly when equipment such as floor grinders and sanders have to be purchased or hired in to remove any laitance on screed which could react to the adhesive used with bonded mat systems. Floors often need additional priming before accepting any cementitious tile adhesive.

Floating systems also take away the need for the screed to be fully cured, because any residual moisture in the substrate is evenly distributed through a system of channels and then drawn off through the perforations in the mat via the grout joints. In this way, substrates that are still damp are not encapsulated.

*David Wilson is UK head of technical standards and information at BAL*

## PUDLO Waterproof Systems introduces a new comprehensive range of solutions



A leading UK waterproofing systems provider, PUDLO Waterproof Systems, part of the DB Group (Holdings) Limited, is excited to announce its comprehensive range of gas and waterproof membrane solutions and cavity drain systems, providing a one stop solution for all your needs. With the introduction of this full range, PUDLO Waterproof Systems is a one-stop solution for all your waterproof and gas protection solutions. Its range fully adheres to the waterproof and gas standards BS8102:2009 and BS8485:2015 and is supported by an industry-leading service throughout your project. "PUDLO Waterproof Solutions continues to expand its product range, looking at providing the best products and services for the market. By continually listening to the needs of our customers, we introduce products to ensure our range represents a full, one-stop solution." commented Liam Leonard, Technical Standard Manager at DB Group. With the inclusion of Types A, B and C into the PUDLO waterproofing range, systems can be combined to create a dual or triple solution, providing more choice than ever before. Get in touch to find out how it can help you on your project!

01954 780687 [www.pudlo.com](http://www.pudlo.com)

## Helifix adds to its vast portfolio



Structural repair specialist, Helifix, has recently made an addition to its extensive range of over 100 Repair Details, which give full technical and installation information on how to overcome a wide variety of structural faults. The new Repair

Detail, RD WT35, gives guidance on how to connect a new timber frame to an existing masonry wall, when the new timber stud is erected within an existing masonry building and there is no access to install wall ties from the outside. The full range of Repair Details can be viewed, and individually downloaded, on the Helifix website.

020 87355200 [www.helifix.co.uk/downloads](http://www.helifix.co.uk/downloads)

## Marley's latest clay tile used on project



Marley pulled out the stops recently to help a customer complete a roofing project, which included the supply of its brand new classic red smooth acme double camber tile before it had even launched. Marley's Regional Sales Director, Andrew Rooke commented: "It

became clear that a soon to be launched Marley product – a new classic red smooth acme double camber tile – could well be the perfect answer." Determined to ensure the customer got the very best service, Marley subsequently arranged that the required small quantity of the new product from the trial run was supplied without delay.

01283 722588 [www.marley.co.uk/case-studies/henley](http://www.marley.co.uk/case-studies/henley)





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# Schöck Isokorb for largest UK Passivhaus development

Claimed to be the UK's largest Passivhaus development to date and Camden Council's largest community project, Agar Grove Estate is undergoing a major regeneration, due for completion in 2025. It will deliver 493 high-quality homes for existing residents, with ground floor maisonettes and apartments above with full width balconies.

As the project is to Passivhaus standard, the high levels of insulation mean exceptional levels of airtightness; and a critical requirement is the avoidance of thermal bridging. A frequent cause of increased heat and energy loss, condensation and likely mould growth.

The risk of thermal bridging is at connectivity points involving the balconies and parapets. And one of the most effective countermeasures is the Isokorb range of structural thermal breaks from Schöck. The Isokorb type used for the balconies has been awarded the "low thermal bridge construction" certificate by the Passivhaus



Institute in Darmstadt and transfers both negative moments and positive shear forces.

The conventional insulation method for parapets is to wrap the perimeter of the wall with an insulation barrier. However the Schöck Isokorb designed for parapets avoids the need for wrapping. It is more cost-effective than conventional wrapping and

its 120mm insulation dramatically reduces heat loss.. Also there is no risk of any additional thermal bridging through balustrade fixings, it requires no maintenance and no expensive restoration due to waterproofing problems.

In addition to the Isokorb types used at Agar Grove, the comprehensive Schöck range also offers solutions for concrete-to-steel and steel-to-steel situations. When any Isokorb product type is incorporated into residential buildings, the required fRsi value is always comfortably met. Products meet full compliance with the relevant UK building regulations, have NHBC approval and offer LABC Registration. There is also the security of independent BBA Certification.

Contact Schöck or visit the website for a free copy of the Schöck Thermal Bridging Guide; the Schöck Specifiers Guide and to view the full range of downloadable software.

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

## Metal Technology enlightens office



Grade A office development, Aurora, at Bristol's Finzels Reach, is the perfect example of design and sustainability working seamlessly to create a striking architectural landmark using the latest technology from architectural aluminium systems' firm, **Metal Technology**. The seven

storey 95,000 sq ft building features a stunning glass atrium, basement car and bicycle parking, plus five upper levels of accommodation. Utilising Metal Technology's System 17HR curtain walling on all elevations, this impressive office development not only meets high sustainability standards, it also delivers a striking aesthetic.

028 9448 7777 [www.metaltechnology.com](http://www.metaltechnology.com)

## Creative collaboration and communication



A world leader in the production and distribution of slate, **CUPA PIZARRAS** prides itself on building positive relationships with clients. 'People and Partnerships' is the latest video that showcases the company's long-standing partnership with Bobby

Halliday Architects and Crammond Select Homes. 'People and Partnerships' highlights the unique heritage developments where architect, Bobby Halliday has specified CUPA PIZARRAS' Heavy 3 natural slate, located within the natural landscape of Stirling, Scotland. See more at [www.youtube.com/watch?v=HUYCz8KBVpw&t=13s](http://www.youtube.com/watch?v=HUYCz8KBVpw&t=13s)

020 3904 3001 [www.cupapizarras.com/uk](http://www.cupapizarras.com/uk)

## Senior gets creative at the Confetti Institute



**Senior Architectural Systems'** SF52 aluminium curtain walling has helped to create the stylish facade of a new creative industries college in Nottingham. Manufactured from fully recyclable aluminium and offering high levels of

thermal performance, Senior's glazing package has been installed by supply chain partner Acorn Aluminium Ltd for main contractor Stepnell and has helped to contribute to the building's excellent BREEAM rating. The SF52 system has also been used in conjunction with Senior's high performance thermally broken SPW501 aluminium commercial doors to create the building's modern and welcoming entrance.

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

## Screening with a difference at BFI



Continuity has been taken to new lengths at the British Film Institute's latest screening. The screening is actually the architectural louvres concealing and ventilating plant on top of the redeveloped BFI Southbank bar and restaurant, underneath the Grade II listed Waterloo Bridge. The louvres, from **Gilberts Blackpool**, have been precisely engineered to follow the bridge contour, while maintaining blade alignment. This effectively but aesthetically screens the plant rooms from people on the venue's rooftop outside balcony which spans the width of the bridge and beyond, while ensuring the plant still achieves adequate ventilation.

01253 766911 [www.gilbertsblackpool.com](http://www.gilbertsblackpool.com)



# ALUCOBOND® PLUS | A2

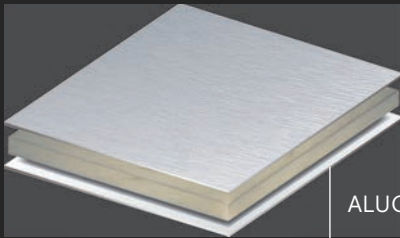
ALUCOBOND® is the original aluminium composites material



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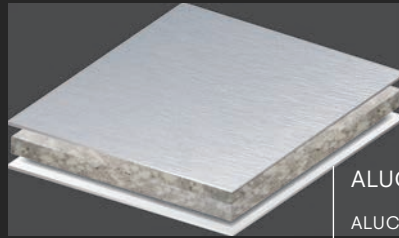
- ALUCOBOND® PLUS and A2 have been in continuous production for over twenty years.
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- ALUCOBOND® PLUS and A2 were tested to BS8414 large scale tests pre June 2017.
- 3A Composites is member of the MCRMA and furthermore collaborating with National & European Authorities to enhance regulations and standards.
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# Terracotta cladding to play important role in sustainable new build projects

**P**aul Richards, Managing Director of Aquarian Cladding, explains how terracotta cladding is proving an increasingly popular option when it comes to using environmentally friendly products.

Sustainable construction and building in a more environmentally friendly way is now a fundamental consideration that must be addressed by every forward-thinking architect, building contractor and building owner.

At Aquarian Cladding, where we have been supplying cladding systems to the UK for almost 12 years, we are seeing terracotta cladding play an increasingly important role in such considerations.

In fact, Terracotta cladding is proving to be an increasingly popular choice for architects and contractors as an environmentally friendly cladding solution when it comes to sustainable new build projects.

As a natural material composed of clay and fired at high temperatures, terracotta is durable, recyclable, and is fast and easy to



apply. Its excellent resistance to extreme temperatures, weather and corrosion mean that terracotta cladding maintains an unchanged high-value appearance for many, many years.

It is also robust, recyclable, sustainable and UV-stable, and is a material that's easy to care for and maintenance-free.

Terracotta is suitable for use in both traditional and contemporary buildings and has proven to outperform alternative cladding systems for durability.

It is another big tick in the box for terracotta cladding as an alternative cladding solution.

After the combustible cladding ban for all new schools, hospitals, care homes and residential buildings in England above 18m following the Grenfell Tower tragedy, terracotta cladding is proving a perfect non-combustible cladding solution for high-rises.

It also gives buildings an outstanding aesthetic appearance with lasting vibrancy of colour and excellent resistance to water penetration, making it a reliable and adaptable facade too.

But it's the materials sustainability alongside its suitability as a solution for high-rise buildings and the design freedom and flexibility it offers, that makes terracotta cladding an ideal facade material.

Building sustainable and eco-friendly homes could be the contributing factor to reducing the world's carbon footprint, and terracotta is set to play a big part in that and take the construction industry by storm.

0808 223 9080 [www.aquariancladding.co.uk](http://www.aquariancladding.co.uk)



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# The practicalities of providing an outdoor living space

Balconies can enhance residential developments and provide the amenity of outdoor living space for residents. Lee Barber of Balcony Life explains how bolt-on cantilevered steel systems can avoid structural issues and problems with thermal bridging

**B**olt-on cantilevered steel balconies are an architectural feature that is becoming increasingly popular both in new build apartments and the housing market more widely, as they provide visual interest and signify a quality development to prospective buyers. Balconies offer homeowners an outdoor living space and are seen as a desirable addition to a dwelling.

From a structural perspective the difficulty with balconies (and for that matter any architectural feature located outside of the building's insulation envelope), is how to support the balcony while avoiding a thermal bridge between the internal building structure and the balcony steel frame in order to comply with the Building Regulations Approved Documents and meeting the requirements of the thermal modelling calculations for limiting thermal bridging. Thermal bridging occurs when conductive materials, such as steel or concrete, provide a path for heat energy to flow across a building's thermally insulated layer, resulting in heat loss and the potential for condensation to form.

One solution to this problem is to design the balcony with support posts on concrete foundations and bolt the balcony steel frame to the outer masonry leaf. This approach is likely to avoid the thermal bridging issue and is generally the only viable option on existing properties. However the dwelling outer leaf may not be load-bearing, for instance lightweight cladding materials, and support posts are widely considered to be detrimental to the appearance of new build dwellings.

Fortunately for architects the construction industry has addressed these issues with companies specialising in bolt-on cantilever steel balconies offering complete balcony packages which are practical and excellent value for money, and comprise the balcony and

structural thermally broken building connection systems.

Typically these balcony packages are installed as a first fix and then a second fix item. The first fix installation commences with the building connection plate which, depending upon the floor construction, is either bolted to solid timber joists or a concrete floor slab. The essential structural thermal break component is bolted to the connection plate and is ideally located within the building insulation layer, thereby minimising or eliminating the thermal bridge. A steel stub is bolted to the structural thermal break, which is designed to project beyond the face of the external envelope and position the balcony steel frame at the correct floor level. After the first fix is installed, the contractor continues with the wall construction so that when completed the stub faceplates are left exposed for the second fix balconies.

The installation of the balconies usually takes place towards the end of the build programme on site and is simply a matter of offering the balcony steel frame up to the stub face plates with lifting equipment and bolting them on, after which the balcony glass balustrade or metal railing balustrade and balcony decking are installed.

Balcony rainwater drainage is frequently raised as a concern, but here again companies specialising in bolt-on cantilever steel balconies provide a solution with a controlled rainwater drainage system which eliminates the need for unsightly external rainwater pipes and avoid taking rainwater pipes into the building, which could have the potential to leak and cause damage to the building fabric and interior. The principle of controlled rainwater drainage is very simple with rainwater being allowed to flow into the balcony, and prevented from draining through the balcony with a soffit panel to the underside of the balcony.





## Bolt-on cantilever steel packages allow architects the opportunity to include their own design preferences, providing a variety of options

The rainwater is discharged from within the balcony through discreet circular drainage holes located – along the front of the balcony. Typically the whole balcony steel is coated with galvanised zinc so that rainwater particularly within the balcony cannot erode the steel, thereby maintaining structural integrity. Balcony specifiers should always ensure that balcony steelwork is galvanised for this reason.

Bolt-on cantilever steel balcony packages allow architects the opportunity to include their own design preferences with a variety of options. These include contemporary frameless glass, traditional metal or clad wall balustrade, tinted glass panels, applying vinyl transfers to the glass panels

to the specifier's colour and design pattern, decking type and colour, as well as a wide choice of RAL colours to select from for the balcony steelwork and the inclusion of a privacy screen. Bolt-on steel balconies also offer flexibility in terms of their size and configuration, that allows the architects' intentions to be realised, or they can simply opt for specialist balcony manufacturers' standard balcony designs in order to achieve a cost saving.

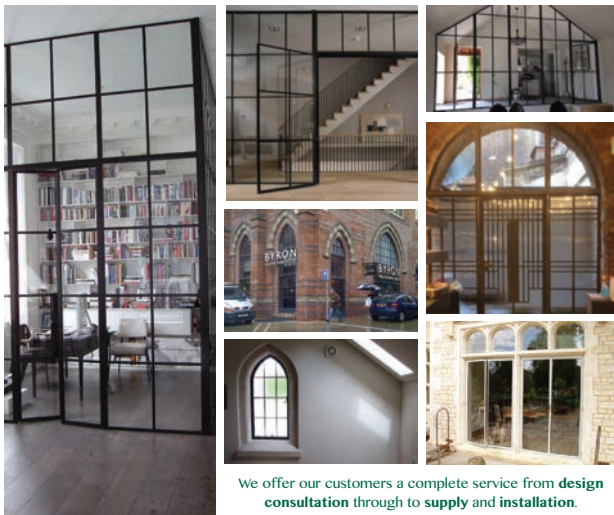
Specialist balcony packages allow architects to incorporate tried and tested balcony solutions into their house type designs – with responsibility for balcony design, manufacture and installation resting with one sub-contractor rather than being divided between the architectural designer, structural designer, steel fabricator and installer. As further assurance, balcony specialists will attend consultant and site design meetings and provide free technical support throughout the design and construction process so that the balcony package they manufacture is co-ordinated with all aspects of the building structure.

*Lee Barber is architectural design manager for Balcony Life*



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Holdsworth Windows, Darlingscote Road, Shipson-on-Stour, Warwickshire, CV34 4PR

## SWA member keeps the heritage alive



Steel Window Association member, Crittall Windows, has renovated Walsingham House which is located in a key conservation area in London. Dating back to the 16<sup>th</sup> Century, the building is named after Queen Elizabeth 1's famous 'spymaster', who lived in Seething Lane. The space was transformed into modern offices, with a reception area and multiple floors of newly-designed workspaces. W20 and MW40 windows were fitted throughout the building and the company also refurbished some internal screens. Choosing an SWA member ensures that the highest standard of fabrication, installation and customer service is achieved.

[www.steel-window-association.co.uk](http://www.steel-window-association.co.uk)

## Crittall windows for iconic London tower



Crittall Windows has been selected to manufacture and install replacement steel fenestration for one of London's most iconic high-rise residential blocks. Trelick Tower remains a major symbol of the Brutalist architectural style of the 1970s. The 98-metre-tall, 31-storey edifice is a significant landmark in West London. The Crittall contract, just announced, is valued at £750,000 and involves replacing windows in the separate stair and service tower, communal walkways, and parts of the main building. Some 860 Corporate W20 windows are to be installed.

01376 530800 [www.crittall-windows.co.uk](http://www.crittall-windows.co.uk)



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# ARP's innovative new design for Sentinel range helps improve lead times

ARP, a market leader in the supply of aluminium rainwater and roofline products is proud to continue on its pathway of bringing innovative design to the market, with the improvement of its Sentinel range of guttering to include a new jointing system for its Sentinel half-round snap-fit guttering and an upgrading of all associated components.

ARP has seen a sharp increase in demand for its contemporary Sentinel range, as specifiers and end users alike recognise the benefits of longevity, width of colour options and cost effectiveness over upvc systems, so the delivering of a simple no-mess jointing system is very timely.

18 months in the planning, the new jointing system works through a simple process of injecting silicone into a specially designed port in a joint (or stop end) and then letting it cure, leaving no silicone residue. In addition to this, all of the components within the Sentinel Beaded Half Round range and

the Vintage Ogee range have been completely redesigned and feature very defined lines and a superior surface finish, which makes these systems some of the most striking within the aluminium rainwater sector.

ARP believes in the importance of continued advances within its supply process, so significant investment has been made in building stocks of all the new components ensuring that they can be classified as "off-the-shelf" and satisfy the demand for short lead times.

All of these progressions are part of a plan which will bring a number of new products and design elements to the market in the coming months. Information on the above and updates on future developments may be found on the ARP website or alternatively please make contact by calling.

ARP pride themselves in offering a quality solution for all your roofline and rainwater challenges and will work with you to fulfil your requirements.



0116 298 2570

[www.arp-ltd.com/new-design-sentinel-range-helps-improve-lead-times/](http://www.arp-ltd.com/new-design-sentinel-range-helps-improve-lead-times/)

## New GRP Garage Door Range from Garador



Garador have completely revamped their GRP garage door range, with 9 new up & over garage doors and 4 side hinged garage doors. Available in a selection of 18 colour finishes, these doors offer a variety of coloured and timber effect woodgrain finishes and are easy to maintain. The GRP up and over garage doors are still constructed around a galvanised steel boundary chassis, ensuring that the door is strong and the infill is protected. Two back braces help to maintain a rigid door panel. These garage doors are available in a selection of realistic woodgrain timber effect designs, as well as some less common coloured designs such as blue and green. With garage doors available in a variety of standard and purpose made sizes, including double doors up to 4269mm wide on certain models, there's a choice of garage doors on offer that will surely fit the garage door opening you specify. Some models, such as the Arden or Kenmore, also have window options with a variety of styles to choose from such as clear perspex, stippled perspex and black non-translucent, as well as those with square or diamond leading.

01935 443709 [www.garador.co.uk](http://www.garador.co.uk)

## New remedy when adding an extension



Stop damp and wet ingress by installing approved products when building an extension. Type E Cavitytrays above flat roof intersections and Type X Cavitytrays above sloping abutments. Both have been awarded European Technical Approval and are manufactured by the UK cavity

tray specialist. Now there is an accompanying remedy for overcoming dampness at floor level where the original outside wall is exposed. Access levels and regulations addressed at the same time, for cavity or solid walls. Ask for the new Technical Manual from Cavity Trays.

01935 474769 [www.cavitytrays.com](http://www.cavitytrays.com)

## Sto creates innovative design at the O2



An integrated package of external wall insulation and render from Sto has been used to insulate an impressive architectural design featured on a major new London shopping mall. The Sto materials were chosen to insulate and finish the 'wave-themed' wall and ceiling design which now forms the centrepiece of ICON Outlet at the world-famous The O2. The Sto system specified for the majority of the project was the StoVentec R ventilated rainscreen cladding system. This features an adjustable aluminium mounting grid which creates a cavity between the facade and the render carrier board.

01418 928000 [www.sto.co.uk](http://www.sto.co.uk)



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## Passivhaus estate constructed with Kingspan



The Kingspan TEK Building System is providing a precise offsite building solution for one of the country's largest Passivhaus developments in Bowthorpe, Norwich. After reviewing the market offering to achieve the demanding fabric requirements, it was concluded that the Kingspan TEK Building System was the best solution for the project on the basis of technical specification and value offered. Kingspan TEK Building System panels can achieve U-values of 0.20 – 0.17 W/m<sup>2</sup>.K, or better 'out of the box'. With an additional layer of insulation, the site team were able to further improve the thermal performance of the external walls.

01544 387 384 [www.kingspantek.co.uk](http://www.kingspantek.co.uk)

## Kingspan helps transport station into future



The Kingspan OPTIM-R Flooring System has been installed as part of the £1bn refurbishment of London Bridge Station. The system was specified in two retail units due to its optimal thermal performance. This allowed the floor construction depth to be minimised, providing an even transition for shoppers entering from the concourse. With an insulation performance up to five times that of commonly used insulation materials, Kingspan OPTIM-R vacuum insulation panels (VIPs) provided a clear solution.

01544 387 384 [www.kingspaninsulation.co.uk/optim-r](http://www.kingspaninsulation.co.uk/optim-r)

## Specification for Marmox Multiboard



A new residential development by Barratt London is including the use of Marmox Multiboard for its outstanding physical performance with two walls around the 20 metre swimming pool being lined with the moisture resistant backing board. Landmark Place is offering purchasers of the 165 luxury apartments and penthouses, stunning views of the Thames, Tower Bridge and the Southbank. The ground floor pool and spa is being fitted out by a specialist sub-contractor consuming close to 100 of the 2500 x 600mm Multiboards for the work, as well as six boxes of dowels to secure them and 30 rolls of Marmox Jointing Tape.

01634 835290 [www.marmox.co.uk](http://www.marmox.co.uk)

## Energy efficiency with Kingspan Kooltherm



The Pines Primary School in Red Lodge has been constructed to provide a flexible, adaptable and sustainable space for education, with the help of Kingspan Kooltherm K15 Rainscreen Board. The Kingspan Kooltherm K15 Rainscreen Board features a fibre-free rigid thermoset phenolic core and offers thermal conductivities as low as 0.020 W/m.K. This allowed the U-value to be met with a slim external wall construction. In addition, all Kooltherm, Therma and KoolDuct insulation products and cavity closers manufactured at Kingspan Insulation's facilities in Pembrige and Selby are certified to BES 6001 'Excellent'.

01544 387 384 [www.kingspaninsulation.co.uk](http://www.kingspaninsulation.co.uk)

## Door closer enhances fire safety in high-rise buildings



British designed and manufactured, Powermatic controlled, concealed door closers from Samuel Heath are gaining increasing popularity for use on fire doors in high-rise flats and apartments. The door closers carry the CE mark and have been independently tested and proved to meet the requirements for one hour and half-hour fire doors under BS EN 1634-1.

Unlike other jamb-mounted devices, Powermatic door closers facilitate a door's compliance with Approved Document M, are the only Certifire jamb-mounted door closer and do not have to be removed from the door to be adjusted.

Totally concealed when the door is closed, the door closers also deliver a host of reliability, safety and performance benefits which make them perfect for high-rise buildings, such as flats, apartments and offices.

0121 766 4200 [www.concealeddoorclosers.com](http://www.concealeddoorclosers.com)

## HSBC banks on Hunter Douglas' credentials



Hunter Douglas Architectural's commitment to sustainability has led to HSBC's new ring-fenced banking headquarters in Birmingham to become one of the greenest in the city. The HSBC UK building on Broad Street is the first in Birmingham to be constructed to the Leadership in Energy and Environmental Design Gold accreditation standard. The international architectural products company supplied 600m<sup>2</sup> of MDF grill finished in RAL9010 white. The panels, 25mm wide and 115mm in height, were manufactured with a 120mm gap to create a modern and light, aesthetically pleasing look for the space.

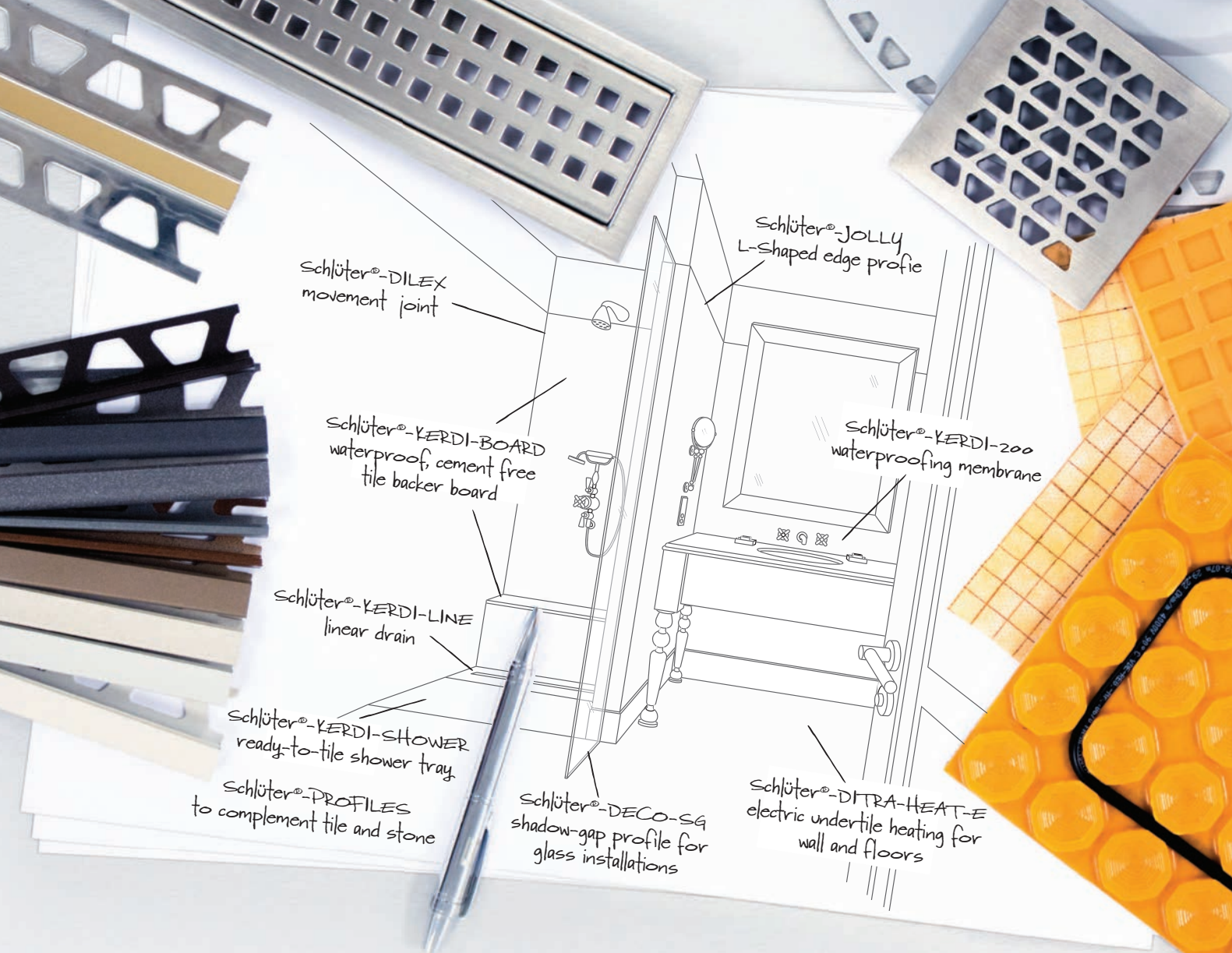
01604 648229 [www.hunterdouglas.co.uk](http://www.hunterdouglas.co.uk)

## NICEIC electrical accreditation for Offsite



Offsite Solutions has become one of the first bathroom pod manufacturers in the UK to achieve NICEIC Approved Contractor accreditation for electrical installations. It now has a dedicated team of engineers inhouse who are responsible for electrical testing at its factory in Somerset. The Offsite Solutions electrical testing team demonstrated that they meet the stringent industry standards and regulations for the factory installation of electrics in bathroom pods. Its qualified supervisors have been assessed for competence in inspection and testing in accordance with BS 7671.

[info@offsitesolutions.com](mailto:info@offsitesolutions.com)



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## Comfort Cooling for High School



Blackheath High School recently invested £18 million to provide new state of the art facilities including a new library and resource centre, and AET Flexible Space supplied an underfloor air conditioning system to provide comfort cooling

for students in the new learning zone. Underfloor air conditioning makes use of the plenum beneath a raised access floor to distribute conditioned air. At Blackheath High School, a single CAM-V33 Direct Expansion downflow unit serves the air conditioned zone, and the conditioned air is supplied into the space by 14 TU4 Fantiles.

01342 310400 [www.flexiblespace.com](http://www.flexiblespace.com)

## Evolutionary heating and lighting panel



Indoor climate solutions experts, Zehnder Group UK, is proudly unveiling its ground-breaking, multi-service 'Foil' product, which encapsulates heating and cooling, lighting and other functions all in one product. The Foil will be targeted at schools, educational facilities and commercial

buildings. The Foil's integrated design is unlike any other solution on the market, due to the number of functions it houses in one panel. It combines all the best features of energy efficient heating and cooling, acoustics and lighting. Services such as speakers, fire alarms, sprinklers and smoke detectors can also be easily incorporated into the design.

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

## Launch of centralised extract unit



Vortice Limited is delighted to introduce the new Vort Platt HCS, compact centralised mechanical ventilation unit into its range. Vortice understands that maintaining a good indoor air quality especially in student accommodation is paramount and has

therefore launched the Vort Platt HCS to address many of these requirements. Suitable for a kitchen and two additional wet rooms, this ERP compliant unit is of slimline profile, fitting easily into many void spaces and is self-balancing, therefore installation will be quicker and easier. The Vort Platt HCS also has adjustable humidity sensors.

01283 492949 [www.vortice.ltd.uk](http://www.vortice.ltd.uk)

## Aquarea Cascade Control for Heat Pumps



Panasonic has introduced a new Aquarea Cascade Controller, to deliver increased energy-efficiency for large applications. The controller can operate up to 10 Aquarea air-to-water heat pumps (160kW) simultaneously or in cascade mode,

helping to meet the heating or cooling demand of commercial buildings more efficiently. The new Aquarea Cascade Controller makes it possible to connect up to 10 Aquarea heat pumps in parallel, to suit the needs of large-scale applications such as shops and hotels. Each heat pump within the cascade requires its own Modbus Interface to allow it to communicate with the Aquarea Cascade Controller.

[www.aircon.panasonic.eu](http://www.aircon.panasonic.eu)

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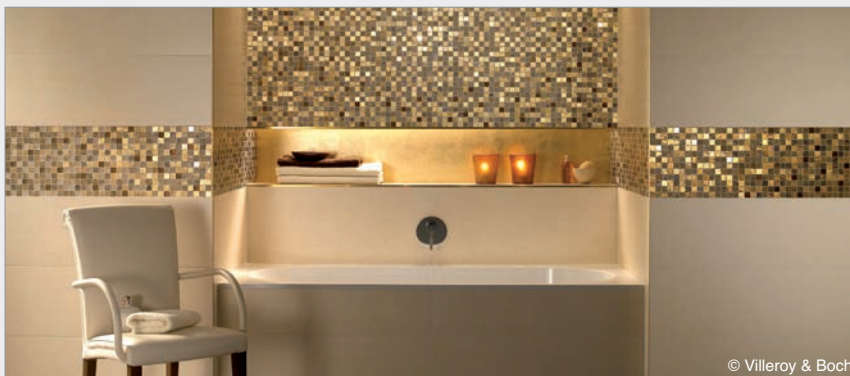
# Profiles on the Pulse of Tile and Stone Trends

Over the past few years, Schlüter-Systems has become a careful trend-tracker, with a stream of profile finishes to complement the latest vogues in tile and stone.

The Schlüter®-TRENDLINE range of textured coatings for wall profiles was launched in 2016, carrying 10 colour options, ranging from the purest ivory right through to richly toned dark anthracite. The coatings can be applied to Schlüter's most popular wall profiles – Schlüter®-JOLLY, -RONDEC, -QUADEC and -FINEC – with selected finishes also available for the cove-shaped wall-to-floor connection profile, Schlüter®-DILEX-AHK.

Such is the versatility of the range, that TRENDLINE colours can be used to achieve:

- Natural flow (by matching to the colour of the tile or stone)
- Subtle complements (by selecting a tone a couple of shades away from the covering material)
- Striking contrast (by picking a tone from the other end of the spectrum)



© Villeroy & Boch

2018 saw the release of 12 new finishes for the Schlüter®-JOLLY profile, providing high-quality solutions to meet the metallic trends that are proving anything but transient. The displays of BAU 2019 demonstrated that finishes such as copper, brass and chrome are still very much at the fore of kitchen and bathroom design. Schlüter's additions capture these trends and also include antique bronze, graphite and nickel/titanium. Satin, brushed and polished

options are available across the majority of these new finishes.

Supporting the latest trends across tile, stone and brassware is a key consideration for Schlüter-Systems. The company combines quality and intuition to produce beautiful profile finish options that hit the mark. For more information, email [pr@schluter.co.uk](mailto:pr@schluter.co.uk).

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# Top architecture university utilises Heradesign in new studios

New intelligent design studios which feature over 1400m<sup>2</sup> of creative studio space, student hub and academic staff offices, were designed by award winning architects Page\Park as part of Northumbria University's £250m development programme. The new architecture studios, complete with a high performance Knauf AMF ceiling system, are set to ensure the very best student experience.

Page\Park worked closely with leading construction company ESH Group to deliver the new-build for which functionality and design were key. Heradesign, a high-performance product which effortlessly retains ambient sound whilst reducing disturbing background noise, provided Page\Park with the acoustic and aesthetic solution required for the project. Heradesign Superfine tiles are a versatile material and Page\Park were able to work with the tiles to deliver a distinctive, geometric herringbone design on the ceilings for maximum design impact.



Commenting on the use of Knauf AMF Heradesign Superfine tiles throughout the project, Page\Park architect Marianne Partyka said: "We were looking for a product that would not only provide excellent acoustic properties but one that would fit in with the overall building aesthetic of raw, natural materials. Heradesign, made from bonded wood wool, in a natural colour finish, sat very comfortably against the building's paired back palette of brick and birch plywood. The flexibility of the system allowed



us to play with pattern, by using rectangular panels on a 45-degree axis we were able to create a herringbone pattern that echoed the original herringbone floors of the existing Grade II Sutherland Building. The simplicity of the pattern against the tartan grid of the dark grey steel beams, is very effective and both the client and users are very happy with the end-result."

0191 518 8600  
www.knaufamf.com

## Saniflo launches Kinedo Kinespace



The new Kinedo Kinespace range of elegant and discrete shower cubicles from Saniflo UK is designed to make fitting shower enclosures swift and easy, while delivering a high-quality product with a 10-year warranty. Available in four sizes, chrome profiles feature across the range with some versions also available in statement black or 'on trend' copper.

Numerous configurations are possible including quadrant, recessed and corner options with pivot or sliding doors whilst fixed panels enable customisation for extra flexibility. Some Kinespace enclosures feature an optional central frosted panel on the glass.

020 8842 0033 www.kinedo.co.uk

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## Hunter Douglas presents new range



Hunter Douglas Architectural has launched an innovative range of wooden ceiling and wall systems with nano-perforations, providing excellent acoustics without compromising on aesthetic quality. The wood veneer panels contain countless microscopic perforations, which at 0.5mm diameter are hardly visible to the naked eye. They have superior absorption qualities than other types of perforated panels, with testing showing them to have a sound absorption  $\alpha_w$ : 0.95, NRC: 0.90 and SAA: 0.90, compared to standard perforations, which generally achieve  $\alpha_w$ : 0.75, with NRC: 0.75 and SAA 0.70.

01604 648229 www.hunterdouglas.co.uk

## CCL Wetrooms launch new membrane



The fundamental key to a successful wetroom remains the same – an effective waterproofing strategy. The growth in smarter, greener technologies that have a lower impact on the environmental footprint can now offer alternative waterproofing solutions. In response to this, CCL Wetrooms have launched Tilesure, a new Butyl Waterproofing and Decoupling Membrane, suitable for waterproofing wetroom floors on timber and solid floors. The Tilesure membrane has decoupling properties of up to 12mm, ensuring that any movement in the floor substrate is accommodated, thus preventing the grout and floor tiles from cracking.

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



# magrini baby changing units

Magrini **baby changing units** provide a hygienic and safe place for changing your smallest customers.

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## Raising the standard



BAL, a market leader for full tiling solutions, are revolutionising the standard-set category with new adhesive technology; BAL Flex One. BAL Flex One give fixers longer working and open times – but still has a faster setting time prior to grouting. Outperforming other products with an excellent 2.5 hour working time and a 45-minute open time at 20°C – this allows more working time to fix in warmer conditions (and less wastage in buckets), more time to adjust larger tiles, and more time when working on particularly complex installations. With a 6-hour set time, the new adhesive allows fixers to grout in the evening or early the next day – significantly cutting down installation time compared to traditional standard setting products that require up to 24 hours to set! BAL's new standard set technology also provides outstanding usability – helping to overcome the many obstacles that face fixers on a modern project. With one of the thickest bed depths on the market for standard sets up to 15mm and, the formulation helps fixers to overcome some background irregularities where isolated building out may be required.

01782 591100 [www.bal-adhesives.com](http://www.bal-adhesives.com)

## Cistermiser valves help to conserve water at Cambridge Assessment's new HQ



The washrooms in the prestigious new international headquarters of exams group Cambridge Assessment feature the latest infrared water management technology from Cistermiser. More than 1,600 Cambridge-based employees, formerly based in 11 Cambridge Assessment offices located across the city, have been brought together in the new HQ complex called The Triangle. The series of linked buildings, sited to the south east of the city centre, have been designed to provide enough office space to eventually accommodate up to 3,000 people by 2025. 96 Cistermiser Direct Flush 'Discreet' infrared urinal flush control valves (DFDs) have been installed in The Triangle's 20 washrooms by M & E sub-contractor Allied Mechanical Services. The Direct Flush automatically flushes the individual urinal after use, using as little as 0.5 litres of water each time. This ensures high levels of hygiene from the minimum volume of water. Tony Buckley, Project Manager for Allied Mechanical Services, said: "From an installation point of view, the Cistermiser DFDs and associated multi-product power supply units are quick and easy to fit."

0118 969 1611 [www.cistermiser.co.uk](http://www.cistermiser.co.uk)

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## Transform bathroom designs with Abacus



Abacus Bathrooms has launched a new interior decorative wall and ceiling panelling system. The transformative M1 Series is a portfolio of fantastic panelling solutions to answer today's demand for design-led, innovative bathrooms and kitchens. Launched

as the perfect alternative to tiles, the inspirational home-improvement range is equally at ease in both modern and classic schemes and offers the retailer and designer the edge in a competitive world. There are 16 stunning colours in total across the four ranges – White & Natural, Design, Sparkle and Concrete.

[www.abacus-bathrooms.co.uk](http://www.abacus-bathrooms.co.uk)

## Sliding version of Crittall screens launched



Creating a seamless transition between internal areas by opening or closing space is now possible with new single or double leaf sliding doors from Crittall's range of InnerVision interior screens.

The new doors offer wider opening areas than more intrusive hinged alternatives by virtue of their sliding design maximising use of inside room space, particularly where it may be limited. Offering the strength and ultra-slim profile which are the hallmark of the Crittall range of products the InnerVision range allows the sub-division of internal commercial or domestic spaces without interrupting the transmission of light or reducing valuable space.

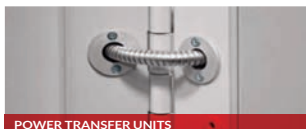
01376 530800 [www.crittall-windows.co.uk](http://www.crittall-windows.co.uk)



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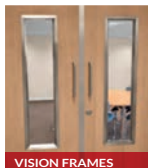


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### TECTUS® Glass – Product overview



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# Open the door to closers

With many different types of door closers on offer, David Saxby of IronmongeryDirect advises on the key features to consider in order to make an informed choice for your project

**D**oor closers are a vital component when it comes to the specification of door hardware for any architectural project. Choose the correct closer and it can enhance the visual impact of a building as well as its functionality, accessibility and safety.

In order to achieve the best result, it is important to understand the many different types of door closer available on the market, and the individual benefits that they each have to offer.

## Consider the door

The first step in selecting a door closer is making sure that it is correctly matched to the door.

Door closers are available with either fixed or adjustable strengths to cater for the size and weight variation of different doors. The wider and heavier the door is, the greater the force required to control it. A closer with an adjustable strength is convenient where the size required is uncertain and facilitates a greater range of adjustment at the time of fitting. You may also require a stronger power size to overcome air pressure in a small room.

## Size and space

It's also important to consider the location and usage of the door. If the door needs to withstand frequent traffic such as in an office or corridor, you will need to make sure you plan accordingly to meet these requirements. There are usually three different levels of usage (level 1, 2 and 3), and door closers will specify which level they are most suited for.

High traffic doors in places such as shopping centres, hospitals, and schools or universities should be fitted with closers that have been tested to perform to the highest number of cycles.

Buildings such as care homes may require specialist fittings for less physically able users. A closer with



delayed action for instance would be an ideal solution as it will allow the door to remain open for a specified period of time, allowing extra time for users to pass through safely before closing at an adjustable speed. It should be noted that the delay function should not be used on fire doors, and most closers allow the function to be disabled for this purpose.

## Aesthetics

While door closers have been seen as clunky and institutional in the past, new ranges have been developed to complement interior design, and seamlessly blend in with the decor. These are generally much slimmer and more compact, and often incorporate architectural finishes to improve their aesthetic qualities. A variety of different finishes such as polished brass; antique brass or satin nickel makes them much more visually appealing.

**In commercial buildings such as offices, door closers are a key part of building security. While keypads or other devices can be added to lock doors, a closer will make sure that only people entering the building have access**



Concealed door closers, which are hidden within the doorjamb, are a particularly popular choice, retaining the aesthetics of an interior whilst adhering to fire and accessibility regulations. This type of door closer also brings practical advantages including improved safety, through reducing the opportunity for the door closer to be vandalised or tampered with.

### Safety and security

In commercial buildings such as offices, door closers are a key part of building security. While keypads or other devices can be added to lock doors, a closer will make sure that only people entering the building have access. Once the door closes automatically, unwanted intruders cannot enter the building.

As specified by Approved Document B of the Building Regulations, a door closer must be fitted to any fire door to prevent the spread of flames and smoke in the event of a fire. The below checklist lists all of the essential components required to make a door closer on a fire door fully operational:

- The closer must be CE marked, and as a minimum, it is recommended a power size of 3 is specified

- The door closer must fully close and engage the latch when the door is open to 5° or 75 mm
- The closer must be free from damage and not leaking
- The closing time of the door must be no longer than 25 seconds
- The door closer must be tested and CE marked in the position it is fitted
- If a concealed overhead door closer is used, it must also be fitted with the correct intumescent material.

Electromagnetic door closers are a particularly good choice when it comes to fire safety, providing a modern alternative. Some can be wired directly into a fire detection system, allowing doors to be held open for everyday use, but which will then close upon activation of a fire alarm.

Door closers are a key consideration, especially when working on public building projects. Understanding the different types will enable you to choose the best solution and achieve the highest levels of safety and security.

*David Saxby is senior category manager at IronmongeryDirect*



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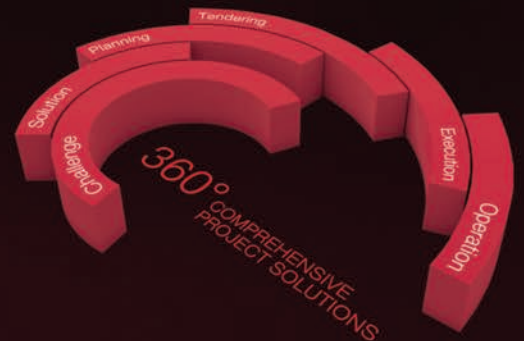
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# The ecological answer to interior design trends

Exclusive to James Latham in the UK, Decospan's inspiring collection of Querkus veneers offer architects and designers an ecological option of using Oak with a contemporary twist.

In a unique production process, Querkus combines both FSC® certified European white Oak and reclaimed Oak timbers, capturing and enhancing the beauty, colour, markings and structure of solid wood along with the



many advantages of a veneered panel.

Using Decospan's unique and innovative veneer matching techniques, boards are created that give designers unprecedented choice in a wood panel product. Wire brushing and patented "saw effect" scratching options impart character, texture and authenticity so that no matter how they are finished, Querkus panels look natural, adding dimension, depth and texture to any project.

Panels are supplied untreated so that a wood stain or varnish can be applied according to taste and specification. Wood oil also offers optimum protection, while retaining the veneer's natural feel and warmth.

Group Veneer Product Champion for James Latham, Dan Mahoney commented, "Querkus is a sustainably designed product that combines authentic materials with engineered stability. With four eye-catching and distinctive ranges in the collection,



including Oak Natural, Oak Vintage, Oak Smoked and Oak Retro, reaction from architects and designers has been really positive, and we are seeing more and more specifications coming through, particularly for high-end residential, retail, commercial and hospitality projects."

As well as Querkus, James Latham's exclusive collection of Decospan's added value products also includes the Shinnoki, Nørdus, and Look' likes collections. For full details, swatches and samples contact your local James Latham depot or showroom.

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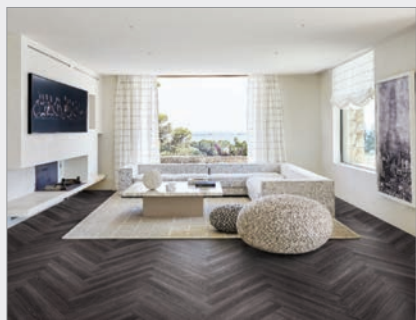
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# Kährs launch new LVT products on kahrsflooring.com

Shown for the first time at BAU, Kährs Luxury Tiles is a comprehensive offering of over 170 high quality, non-repetitive, waterproof and phthalate-free luxury vinyl tile designs, finished with a highly durable and robust ceramic coating.

Kährs Luxury Tiles combine the beautiful and natural appearance of wood and stone with all the benefits of resilient flooring. The modern floors provide excellent durability,



even in areas with high traffic, and are based on wood or stone designs in a variety of colours and looks, including stunning wood herringbone and patterned stone designs. Formats include the easy-to-install Click to versatile Dry Back and flexible Loose Lay – to the Marine collection, specially designed for the marine industry. A PVC-free range – Dry Back Enomer® – is made from a unique material free from PVC, plasticizers, phthalates and halogens.

Not only are the floors attractive and durable, they also promote a good indoor environment as all designs are phthalate free and reduce noise, whilst being easy to install – even with under floor heating. Once laid, the floors require minimal maintenance, with a durable ceramic coating that is easy to clean using a wet mop and standard cleaning products. The coating also makes the floors resistant to daily wear and tear, preventing the floor from getting ingrained with dirt and grime – ideal for both residential and



commercial projects with heavy traffic.

Designs are now available to view on the Kährs website.

023 9245 3045 [www.kahrsflooring.com](http://www.kahrsflooring.com)

## Specifier's Guide takes the floor again



The Specifier's Guide to Flooring is a comprehensive technical guide to product selection – and an invaluable resource for architects, interior designers and facilities managers. Praised as “the industry's leading technical publication for floor specification”, the launch of the new 2019 edition follows that of sibling title – The Specifier's Guide to Tiling – which was launched several years ago to widespread acclaim. Both guides are available in print and online. The Guide is published by Kick-Start, the team behind the contract flooring and tiling trade publications – CFJ and TSJ.

01892 752400 [www.specifiersguide.co.uk](http://www.specifiersguide.co.uk)

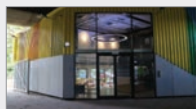
## Polyflor adds to the Expona family



Polyflor, one of the UK's commercial and residential vinyl flooring specialists is pleased to announce the launch of a brand new product format, the Expona EnCore Rigid Loc collection. This exciting new hybrid product has an expertly engineered premium rigid SPC (Stone Polymer Composite) construction with exceptional stability making it ideal for installation over existing subfloors. Expona EnCore's technically sophisticated specification combines: A premium rigid SPC core; 0.55mm heavy commercial wear layer; high clarity decoration layer; 1mm IXPE Acoustic Backing Layer and 5G-i locking technology.

0161 767 1111 [www.polyflor.com](http://www.polyflor.com)

## TREMCO provides a firm foundation



When the call went out to build a much needed community centre in a tragedy struck area of West Kensington, Dartford-based flooring specialist, Arcadia, and tremco illbruck donated their skills and materials to achieve a fast, quality flooring installation. In an intense 14-hour period, Arcadia put a 10-strong team to work sealing and levelling the new composite concrete decks, in preparation for laying the vinyl and rubber floor finishes within the centre and gymnasium. Arcadia's Managing Director, Gary Perry, was delighted with the quality of the finish, explaining: “I was very keen to use TREMCO products”

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

## Flush hinged door systems



Rocket Door Frames offers a chance to keep on trend with your interior style without the interruption of a door. There is literally nothing to see except clean contemporary lines with plastering right up to the edge which, when combined with hidden hinges, completes the look of invisibility. For ease of installation each unit is supplied with its own jig for routing the door. FD30 approved also available. Looking for simple, modern style that you can continue through your whole interior design interior, the flush hinged door system is the perfect answer.

0330 9980617 [www.rocketdoorframes.co.uk](http://www.rocketdoorframes.co.uk)



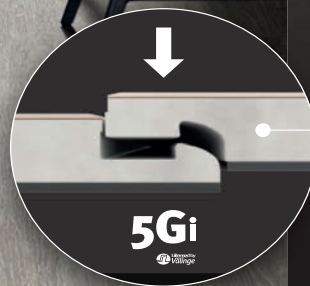
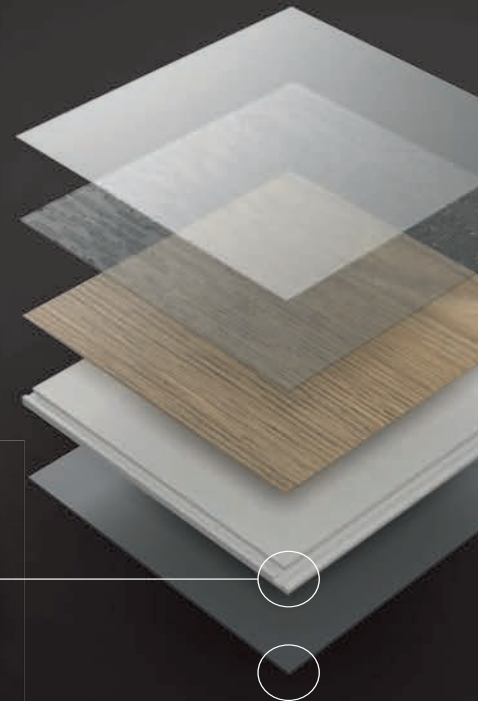
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## In the market for super new flooring? Flowcrete have you covered



The retail sector is a complex world, with each outlet often having different flooring requirements. While shopping centres may lean more towards aesthetics, supermarkets need to blend the decorative with the durable. Whether undertaking a flooring installation as part of a new-build or refurbishment project, time is always of the essence. Retail outlets cannot afford long periods of unprofitable downtime and so often need a new floor overnight to avoid losing business and inconveniencing customers. Luckily, there are several systems within the market that allow for a quick installation. Resins that incorporate methyl methacrylate (MMA), a catalyst for speeding up the rate of cure are particularly ideal, with some systems taking just two to three hours to fully cure. Finding fast curing systems that can also endure the daily challenges inherent in supermarkets may seem like no easy task, but **Flowcrete UK** offer a range of flooring systems that deliver an attractive finish underfoot and can be installed under a quick turnaround. One such system that is ideally suited to the main concourse of supermarkets is the decorative Flowfast Terroso.

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

## Glow+ sliding system is a silent operator



Glow+, a sliding system for wardrobes with two, three or more overlapping doors, is now equipped with a revolutionary magnetic damping system that decelerates the opening and closing action and delivers an extremely fluent and silent movement.

This innovative solution sets a new standard of silent and smooth sliding movement by eliminating the typical noise and resistance produced by spring-action dampers and enables the door to be easily opened.

Glow+ can be used both with wooden doors and aluminium-framed doors, with a maximum weight of 70 kg. Furthermore, with the use of an optional additional strengthening kit, the system can impressively carry doors up to 100 kg.

Assembling Glow+ is very easy and intuitive. It can be installed with screws or automatically with pressure-fixed clips. The system can also be equipped with a magnetic cover that provides further aesthetic enhancement. For further information on the **SALICE** product range please visit their website.

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

## Shine bright with gold mosaics

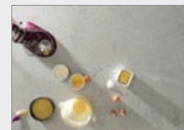


Gold mosaics have been chosen for designs over centuries as gold is an incredibly strong, precious metal that is immune to oxidation and so provides both strength and long lasting beauty. Orsoni, a **TREND Group** brand, which is a traditional Venetian producer of glass mosaics, gold mosaics and Venetian enamel, is encouraging the use of gold in today's modern world.

The company's beautiful portfolio of gold leaf tesserae is made in the last furnace permitted to operate with fire in Venice. Orsoni's gold offerings are ideal for luxurious, high end buildings such as hotels, spas, grand residences and world-leading commercial premises.

[www.trend-group.com](http://www.trend-group.com)

## Concrete-style worktops from Königstone



Industrial style finishes, such as concrete, remain popular at kitchen design shows and, with **Königstone's** new Concrete Collection of worktops, homeowners can easily bring this current trend into their homes. The four shades in this range – Shell, Fossil, Sand and

Clay – expand on the existing 24 colours from the König Quartz worktop portfolio. Perfect for adding style to the kitchen, the striking new worktops echo on-trend industrial materials. In a matt finish, they are hardwearing and scratch and stain resistant. The easy-to-maintain quartz surfaces also have a luxurious tactile feel.

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

## Keller's beautiful Blonde Oak kitchen



Keller makes use of beautiful Blonde Oak cabinetry with model, GL2000. The units can be complemented with modern man-made materials, such as a cool concrete-look worktop (as pictured), or a bright coloured splashback (as pictured). Open cupboards can be combined with wall-hung shelving to

make the most of an open-plan or broken-plan kitchen scheme to increase space and storage. Designers can also add a rail or shelving to frontless cupboards to create quirky storage spaces which makes homeowners' most used items easily accessible.

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

## Go Green with Granite worktops



One of the hottest interior design trends is recycled glass worktops made from recovered post-industrial and post-consumer waste material that would otherwise go to landfill. **Granite & TREND Transformations'** offers worktops and surfaces which contain up to 72 per cent post-consumer recycled glass made from used lager, wine and mineral water bottles. Aimed at the 'eco chic' marketplace, the designs display their environmental credentials by featuring glass fragments bonded together with a clear polymer resin, to create beautiful worktops that are extremely tough, heat, stain and scratch resistant, and sustainable.

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# Fire sprinkler boxing and FSC® compliance – Ignorance is no defence

Specifiers, social housing providers and contractors involved in concealing fire sprinkler pipework, as part of ongoing tower block fire protection upgrades, could be inadvertently contravening compliance and sustainability policies, as non-FSC® certified plywood boxing is still available in the UK.

As these products are manufactured from wood, contractors should be purchasing only FSC® or PEFC certified products, as required by the government's 'Timber Procurement Policy' (TPP) guidelines, as well as the latest edition of the Timber Procurement Advisory Note (TPAN) from Defra.

Extracts from Defra's guidance on compliance with the TPP states:

*Government procurers and their suppliers should have documentary evidence to show the timber supplied is at a minimum from legal and sustainable sources. This evidence should include full chain of custody from the forest source(s) to the end user. Suppliers and buyers must check evidence to*



*verify its validity.*

Also, The Forest Stewardship Council (FSC) has stated, 'If you don't know where your timber and paper come from, you could be part of the problem'. The FSC's procurement factsheet provides clear recommendations on procurement procedures and compliance checks that should be made:

- Check that delivery notes and invoices clearly identify the FSC certified products and includes the supplier's FSC certificate code. In addition Encasement Limited advises that to be confident of compliance,

always ensure that the individual product description for every item listed is identified specifically as FSC® compliant.

- Specify FSC certified materials when placing your order and let your supplier know that you need them to make an FSC claim on their sale documents.
- Source from an FSC certified supplier. All FSC certified organisations are included within the FSC certificate database at <https://info.fsc.org>

Encasement's Managing Director, Martin Taylor, explained: "The best way for this to be enforced is to explicitly specify the use of FSC Chain of Custody certified products as the default and diligently monitor the products used by contractors and suppliers. Ignorance is no defence, especially when guidance and information on procedures is readily available."

01733 266 889 [www.encasement.co.uk](http://www.encasement.co.uk)

## Is 'CrashCore' the Ultimate Bollard?



A recent spate of storefront crashes – vehicle drivers crashing through the front of retail or office space windows – led facility protection experts McCue to look into the causes and work on their own solution. Enter McCue's R&D team and the all-new CrashCore

Bollard. Designed and tested to repel 30mph vehicles (to F3016 rating), the CrashCore might just be the most high-tech and innovative bollard the world has ever seen. Thanks to the CrashCore Bollard, no longer will managers live with the threat of vehicle or driving error causing extensive damage or injury in their working spaces.

01908 365 511 [www.mccue.com/uk](http://www.mccue.com/uk)

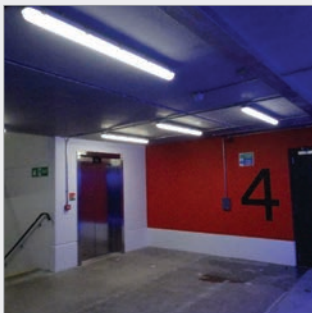
## Furnish with Norbord



Norbord produced the world's first MDF and, in 1979, its Cowie factory became the first to produce MDF in the UK. Today the company manufactures a full range of MDF products for a variety of applications, including light weight and standard weight grades and moisture-resistant versions. Its top-quality grade, CaberWood MDF Pro is designed specifically for the production of high-grade furniture and fittings. Its consistent close-grained texture ensures clean edges and surfaces that will take a smooth finish. The bulk of the furniture industries production relies on sheet materials and in particular, products like Norbord's CaberWood MDF.

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

## Luceco provides the perfect Climate for new Car Parking Facilities



Luceco has recently lit new parking facilities in Telford with Climate Extra, an IP65 rated LED energy efficient luminaire. The International Centre in Telford is a leading national business events venue, attracting over a quarter of a million visitors every year. Southwater Event Group has built the new six level multi-storey car park on three floors with room for 300 vehicles, on land beside Telford Town Ice Rink. Climate Extra is a robust LED IP65 rated luminaire offering a market leading efficacy of 140 Llm/cW and 50,000 hours operational life with increased performance for improved energy efficiency. This cost-effective luminaire is available with integral microwave sensors in on/off or 10 per cent corridor function or batten fit PIR sensors as well as DALI drivers and emergency back-up variants including Self-Test. An opal diffuser enhances appearance and uniformity. Polycarbonate construction with stainless steel anti-tamper clips ensures a sturdy luminaire that is a cost-effective alternative to traditional fluorescent luminaires previously used for many industrial applications including car parks.

01952 238100 [www.luceco.uk](http://www.luceco.uk)



## Lasting peace



As specialists in manufacturing hardwood street furniture that lasts for decades, Woodscape were the ideal choice to be part of Basingstoke's War Memorial Park, with Clifton seats featuring prominently in the long-awaited Peace Garden, opened on 21st September 2018, the International

Day of Peace, commemorating the centenary of the end of the First World War. The Clifton Seating System providing a functional yet stylish framing for the main circular area, with a hardwood cube custom etched to create a wonderful entrance marker.

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

## Porcelain Pavers collection



CTD Architectural Tiles has introduced its Porcelain Pavers collection, an extensive range of 20mm-thick porcelain tiles specially suited to outdoor environments. Comprised of 22 different tile ranges, each and every product in the collection meets all

the technical and design requirements for exterior applications. From contemporary concrete-effect finishes to multi-coloured pavings, the collection combines outstanding performance with exceptional design to help architects, interior designers, developers and specification professionals achieve any manner of exterior project brief.

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## Best foot forward with anti-slip decking



A £140 million shopping and leisure park in Northamptonshire has used Antislip Plus Smooth decking from Marley to provide a durable and effective external anti-slip surface for visitors. The timber decking boards are specifically designed to provide a durable and effective external anti-slip surface to minimise any risk of slipping – even in adverse weather conditions. Marley's Antislip Plus uses a unique formula of resin-based aggregate inserts, which are injected into the deck board grooves. For the smooth boards required by this project, grooves are specially machined into the boards to receive the inserts.

01283 722588 [www.marley.co.uk/products/decking](http://www.marley.co.uk/products/decking)

## Providing a quality sealing solution



Resiblock & South Tyneside have once again combined to provide quality sealing solutions in South Shields. Following successful sealing works of Resiblock '22'

A.F in Ocean Road, South Tyneside realised that nothing could come close to "The Worlds Favourite Paving Sealer" Resiblock, when sealing works were specified for Sea Lane in South Shields. The seafront location comprised of both Concrete Block Paving and Concrete Slabs and therefore Resiblock '22' A.F was the perfect product due to its ability to seal and stabilise a variety of pavers, as shown in the Ocean Road sealing works.

[mail@resiblock.com](mailto:mail@resiblock.com)

## Shade sails installed at Woburn Forest



In spring 2018, Jekells completed an installation at Center Parcs Woburn Forest to create three shade sails at their Cycle Centre. A structural engineer was involved to ensure everything was strong enough and the colours of the posts and sails complemented the surrounding forest environment. The installation was

such a success that Jekells have now been commissioned by Center Parcs to complete a similar project at Longleat Forest.

01603 782223 [www.jekells.co.uk](http://www.jekells.co.uk)

## Seamless surfacing for pathways at park



Over 800m<sup>2</sup> of Addagrips Terrabase Classic Resin Bound porous surfacing was installed to rejuvenate the pathways in Battersea Park on the banks of the River Thames, London. The requirement was for overlay of existing pedestrian walkways with a smooth, low maintenance, seamless finish in a colour similar to adjacent paths. A

special blend of aggregates was required, named 'Battersea'. The natural stone that helped create this bespoke resin bound colour was supplied by Long Rake Spar and was installed with their Terrabase system as a Terrabase Classic paving. Long Rake have a large offering of specialist dried aggregate granules that are perfect for use in resin bound paving.

01629 636 210 [www.longrakespar.co.uk](http://www.longrakespar.co.uk)



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#designthenation

peace garden, basingstoke

Woodscape are proud to be a part of Basingstoke's War Memorial Park, with Clifton seats featuring prominently in the long-awaited Peace Garden, opened on 21st September 2018, the International Day of Peace, commemorating the centenary of the end of the First World War. The area is home to a number of Peace Plaques designed by local schoolchildren, along with a sculpture of local surgery pioneer Sir Harold Gillies.

Woodscape supplied curved timber benches, with the Clifton Seating System providing a functional yet stylish framing for the main circular area, along with one of their popular hardwood cubes, custom etched to create a wonderful entrance marker for the garden.



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# EverEdge is 25 years old!

Formed in 1995 as 'The Edging Company' EverEdge has become the leading supplier of steel lawn, garden and landscape edging products in the UK. Manufactured exclusively in the UK, EverEdge maintains a proud record of high quality service to go alongside an unrivalled range of edging products.

EverEdge has a steel edging product to suit any and all projects from the largest of stately homes, castles and palaces to the smallest of terraced gardens. EverEdge Classic edging is supplied in packs of 5 x 1m pieces and is perfect for edging lawns and flowerbeds. Made from 1.5mm thick galvanised steel, EverEdge Classic is powder coated (painted) in a range of colours. The most common choice is brown to match the existing cut edges of lawns.

For larger projects, perhaps driveways or long flowing pathways, EverEdge ProEdge may be a better choice. Available in 2.5mm thick heavy duty steel and in 2.5m lengths, ProEdge offers a more robust edging system without compromising on flexibility and versatility.



Where a deeper or thicker edge is required, usually for public projects, EverEdge Titan is offered in thicknesses up to 6.0mm and heights of up to 300mm. EverEdge Titan is routinely used in locations such as public walkways and National Trust properties.

Outside of these three standard options, EverEdge also offer a custom made service where edging can be made to virtually any shape or size.

More recently, EverEdge have been manufacturing custom made steel planters to most specifications. These planters can be



made to virtually any size and come in a range of finishes to suit any and all garden or landscape project. EverEdge Planters are all made to order enabling customers to get creative with designs. EverEdge planters are commonly specified by landscape architects, often for roof and podium landscapes. EverEdge can design planters to be used in almost all situations and have a proven track record of working on projects from small offices to new build apartment blocks.

01630 417120 [www.everedge.co.uk](http://www.everedge.co.uk)



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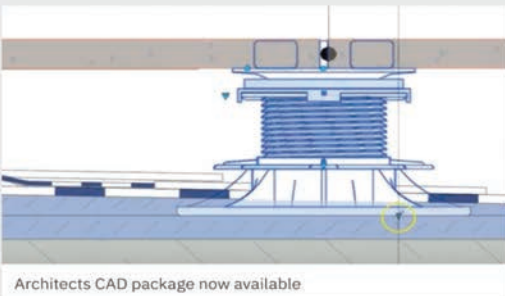
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# The future is permeable

New legal requirements for Sustainable Drainage Systems (SuDS) on developments across Wales apply from January, heralding wider use of concrete block permeable paving. Meanwhile, the trade association Interpave has published the new Edition 7 of its definitive guidance to this essential SuDS technique – ‘Design and Construction of Concrete Block Permeable Pavements’ – now available to download from [www.paving.org.uk](http://www.paving.org.uk).

The Welsh Government has now implemented Schedule 3 of the 2010 Flood and Water Management Act. This includes the establishment of a SuDS Approving Body (SAB) within each local/unitary authority, alongside its lead local flood authority duty. SAB approval will be required before construction of drainage systems can commence on new and redeveloped sites.

The Welsh National Standards point out that: “The SuDS approach mimics natural drainage, managing surface runoff at or close



to the surface and as close to its source as practicable, controlling the flow... and providing a range of additional benefits.” By its very nature, concrete block permeable paving is uniquely placed to meet these requirements, as an attractive, surface-based, multifunctional SuDS technique.

Interpave’s new ‘Design and Construction of Concrete Block Permeable Pavements’ guidance covers the most recent permeable paving techniques, such as overlays to existing

road constructions and enhanced, predictable water storage using flow controls. It can be downloaded from Interpave’s new website [www.paving.org.uk](http://www.paving.org.uk) – an essential resource covering all aspects of design with precast concrete paving, including an inspirational project gallery and case studies, supported by background information for all design stages, as well as for CPD.

0116 232 5170 [www.paving.org.uk](http://www.paving.org.uk)

## Clearstone resin bound paths



The contemporary homes in this North London residential development are linked by undulating walkways – one of which leads onto Hampstead Heath. The discerning homeowners wanted the original worn tar and chip replaced with a light, flexible surface that would look beautiful, feel comfortable to walk on and last a long time. With 20 apartments, there were quite a few clients to please. Clearstone installed resin bound test patches of 1.5m<sup>2</sup> in four different colours and the residents chose Bronze Trio. Clearstone laid 705m<sup>2</sup> over the existing pathways to a thickness of 18mm and, for a clean sharp finish, Clearstone edged the paths with aluminium AluXL. Durable and long-lasting, Clearstone resin bound is a water-permeable SuDS compliant surface, so there’s no puddling, low maintenance and it’s easily cleaned with a quick power-wash. Clearstone uses only the highest quality resins and aggregate blends, so their paving won’t crack or fade and, because they formulate their own BBA certified product ClearBound, they offer a 10-year guarantee. “Everyone is happy. It looks 100 times better than before and the Clearstone people were very professional and helpful,” says residents’ management committee members.

01273 358177 [www.clearstonepaving.co.uk](http://www.clearstonepaving.co.uk)

## Lightweight grassroof alternative



The new Grassroof® is an overlay paving system that can be applied to new or existing flat roof structures. Grassroof® can be used as an extensive or simple-intensive paving layer, or as a base layer for intensive roof designs. Grassroof units interlock together and can be laid either directly onto the roof membrane or via a foil backed polystyrene underlay. A key element in simplifying the installation is the use with a Regarm moisture retaining blanket. The specification of Regarm will enable the omission of a soil layer reducing the volume of heavy bulk materials during installation. Grassroof® with a simple “leave and lay” format incorporates sedum turf; no soil is required, and these succulent plants can store moisture. When installed, the lightweight system weighs as little as 4.39kg/m<sup>2</sup> providing an easy to install and maintain green solution.

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# Solving permeability problems

Duncan Andrews of SureSet looks at how cellular paving systems can offer the ideal solutions for SuDS requirements, in particular in sites with restricted space

Permeable paving solutions are a hot topic at the moment with an ever increase range of products and systems being brought to the market. Often it's not the top surface that restricts permeability but the sub bases beneath it that ends up being the most restrictive factor. Some of the most widely available sub bases come from variations of asphalt and concrete, where the manufacturer will remove 'fines' from the mix and increase the ratio of larger aggregate particles to create a product with small voids, in that allows water to pass through in much the same way that resin bound paving performs.

For most applications this type of sub base is the best performing and most cost effective option when specifying permeable paving areas, but what about those projects with heavily restricted access such as roof terraces, courtyards or pathways between buildings, and those areas that require special attention such as tree pits and tree protection zones?

**Cellular paving is a rapidly expanding paving option due to its relatively low cost and simple installation process requiring minimal specialist tools and its low skill installation process**

Cellular grid structures offer strong, free draining and eco friendly solutions for areas with special requirements and are available in a wide variety of depths and materials. Once laid they can be filled with a crushed and compacted aggregate or, in certain applications, a soil/planting mixture and sown with grass seed. This can then be left exposed as a finished surface, or used as a sub base to then install a permeable wearing course







over, such as resin bound paving. Cellular paving is a rapidly expanding paving option due to its relatively low cost and simple installation process requiring minimal specialist tools and its low skill installation process.

Due to the simple installation methods, most cellular grid structures are available as supply only or supply and installation by the manufacturer/retailer. This allows onsite contractors the ability to complete the installation along with any other groundworks and landscaping before specialist teams come in to complete the final surface course works.

An example of when a cellular grid structure was the perfect solution to a project that required a permeable paving solution but had issues with access was on an installation at St Peter's Church, in Battersea, London.

The project involved the resurfacing of an enclosed courtyard and footpaths as part of a larger regeneration project of the whole building. The brief was to provide a permeable, low maintenance, attractive surface that could be enjoyed all year round by the members of the church community.

Access into the courtyard was restricted due to a low overhanging arch and pillars, meaning traditional sub base options such as tarmac or concrete were inappropriate. This meant the SureCell cellular grid structure could offer would provide the permeable sub base solution they required.

The surfacing works were completed in June 2018 and included the supply and installation of both the cellular grid structure and the resin bound paving.

Another benefit of using resin bound paving as a permeable surfacing solution is the wide range of colours and creative design possibilities that it allows. For this project there was a requirement to differentiate the pathways and steps from the open courtyard area so two natural aggregate blends were chosen, a lighter shade for the courtyard and a darker shade for the paths and steps – which also matched the walls and brickwork of the courtyard.

*Duncan Andrews is marketing communications manager at resin bound permeable paving manufacturer SureSet*

## Blue roof design considerations after BS 6229:2018 update

**N**igel Blacklock, technical director at Bauder, and Chris Roddick, green and blue roof product manager for Bauder, discuss the changes in the BS 6229:2018 update that impact rooftop water management solutions.

### Chris, tell us about Bauder's rooftop SuDS system, BauderBLUE

Chris: BauderBLUE is a blue roof system which attenuates heavy rainfall and controls its discharge over a 24-hour period to tackle standing water and flash flooding in built up areas.

### How will the revisions in BS 6229 update impact the design considerations for a BauderBLUE roof?

Chris: The 2018 update clarifies and reinforces the meaning of a zero falls roof used in most blue roof systems. A zero falls roof is defined as having no more than a

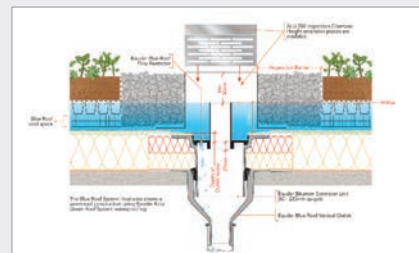
1:80 fall, but more importantly the roof must not have any back falls away from outlets. This will mean all back falls must be corrected with localised latex screed or additional outlets.

### Nigel, what structural considerations are required when thinking about zero falls on a blue roof?

Nigel: A detailed structural analysis of the deck should account for construction tolerances, settlement and deflection under load with a concrete slab level survey carried out to identify any back-falls prior to the waterproofing being installed. Hence the advice "design a fall of 1 in 80 to achieve not less than zero", starting at zero inevitably will lead to back-falls.

### How does the thermal performance update apply to a blue roof?

Chris: The U-value achieved in an inverted roof greatly depends upon the amount of



water that passes through the joints of the insulation and sits on the waterproofing, as this will cause rainwater cooling. This has a negative effect upon the roof insulation value.

Nigel: There is now a note that suggests that not less than 10 per cent is added to the thickness of the insulation to take account of rainwater cooling. However, water on an inverted blue roof might sit on the waterproofing for longer and with a greater depth, BS6229:2018 states no correction factor should be used which will lead to much thicker insulation than is currently used.

BauderBLUE is supplied as part of a full Bauder roofing system and therefore has a single point warranty.

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# Water drainage system installed at new automotive showrooms and servicing centre

Developed by CJ Automotive Group, the £9.5 million Lightcliffe automotive dealership showroom complex and servicing centre is the first in Wales to have all the Volkswagen Group car and commercial vehicle brands; Volkswagen, Audi, Skoda and Seat on one site.

Nearly 700 metres of Hauraton RECYFIX® PLUS 100 Type 010 surface water drainage channels, factory fitted with ductile

iron HEELSAFE 6mm slot grating to loading Class D400 were installed at the new VW Group dealership at The Point, Llandudno Junction, Wales.

Each RECYFIX® PLUS channel component is moulded from 100 per cent recycled polypropylene (PP) with galvanised steel pressings permanently fitted along the exposed top edges.

Channels supplied to the VW site were factory fitted with 6mm slot HEELSAFE ductile iron gratings. The gratings on both channels' and access points' being treated with a corrosion resistant coating (KTL). This treatment is absorbed by the ductile iron, allowing Hauraton to give a life time guarantee against rusting alleviating any concerns raised by consulting engineers, Rolton Group.

Main contractor, the Watkin Jones Group commenced work on this project in 2013, handing over the finished prestigious complex in May 2014. The new showrooms aim to



provide 200 new job opportunities to the Llandudno area.

Ian Burton, the Hauraton project engineer was pleased that ground-workers found the RECYFIX® PLUS easy to install, "With each one metre channel assembly only weighing 10.9kg one man could lift and position each unit during the installation phase".

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Photography by Alex Campbell



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