

The image shows a large, multi-level atrium with extensive wood cladding. A prominent wooden staircase with a slatted railing leads up from the ground floor. The upper levels feature glass railings and large windows that let in natural light. The overall design is modern and organic, emphasizing natural materials.

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Cover

Faculty of Arts, University of Warwick

Feilden Clegg Bradley's education building uses a wooden stair and atrium to connect spaces
page 10

BLOSSOM COURT, ST ANN'S HOSPITAL

A new acute mental health facility in north London provides users with an unusual level of access to outdoor spaces and activities

WOOLWICH WORKS, SOUTH LONDON

Bennetts Associates' adaptive reuse performance space revitalises a site

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CONTENTS

01.22

NEWS, VIEWS & INSIGHTS

- 04 Industry News
- 12 **View Point:** Nigel Ostone of
Hawkins\Brown on Pre-Construction
Services Agreements
- 16 **Practice Profile:** Lead8
- 20 International Focus
- 22 CPD Focus
- 39 Appointments & Company News
- 41 Surface Design Show Preview

PRODUCTS

- 42 Groundworks
- 43 Structural Elements
- 46 External Envelope
- 54 Insulation
- 56 Heating, Ventilation & Services
- 59 Interiors
- 65 Landscaping & External Works
- 66 Safety & Security
- 67 Classified & Directory

PROJECT REPORTS

- 25 **Balancing act**
Creating a major new performance space to help revitalise a deprived part of south east London meant a delicate balancing act for Bennetts Associates in its adaptive reuse of five historic listed buildings. Roseanne Field reports
- 34 **Environmental health**
A mental health building by Medical Architecture in north London took a simple, 'first-principles' design approach to providing access to external space and daylight interiors. James Parker reports

FEATURES

- 45 **STRUCTURAL ELEMENTS: ROOFING**
Minimising fire risk on the 'fifth facade'
Will Wigfield from Rockwool shares best practice advice on how to limit fire risk in flat roof constructions, and explains the limitations of current testing
- 53 **EXTERNAL ENVELOPE: EXTERNAL WALL FINISHES & RENDERS**
Rendering life-long success
Matthew Allen of Sika discusses the key considerations when specifying render to ensure that a long life, as well as aesthetically pleasing, result is achieved
- 57 **HEATING, VENTILATION & SERVICES: RADIATORS**
Pumping up radiators' profile
Chris Harvey of Stelrad Radiator Group examines the relationship between radiators and heat pumps, and how they can work effectively together
- 63 **INTERIORS: STAIRS AND BALUSTRADES**
Steps to balancing safety and aesthetics
The British Woodworking Federation's Kevin Underwood looks at how to balance the important twin drivers of aesthetics and safety in staircase design

Managing Editor
James Parker
jparker@netmagmedia.co.uk

Publisher
Anthony Parker
aparker@netmagmedia.co.uk

Editorial Co-ordinator
Shelley Collyer

Editorial Assistant
Laura Shadwell

Editorial Contributors
Tom Boddy
Roseanne Field
Jack Wooller

Studio Manager
Mikey Pooley

Production Assistants
Georgia Musson
Kim Musson

Account Manager
Sheehan Edmonds

Sales Executive
Steve Smith

PR Executives
Suzanne Easter
Kim Friend

Managing Director
Simon Reed

Advertising & Administration
t 01435 863500
info@netmagmedia.co.uk
www.architectsdatafile.co.uk

Press Releases
editorial@netmagmedia.co.uk

Subscription Circulation Enquiries
info@netmagmedia.co.uk

netMAGmedia Ltd
Cointronic House
Station Road, Heathfield
East Sussex, TN21 8DF



Annual subscription costs just £48 for 12 issues, including post and packing. Phone 01435 863500 for details. Individual copies of the publication are available at £4 each inc p & p. All rights reserved

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FROM THE EDITOR



As we enter a new year, and hopefully an improved context where it comes to the pandemic, it's important to reflect on what we have lost. Two greats of the industry, Richard Rogers, and very recently, engineering innovator Max Fordham have gone, leaving a huge amount of admiration, but more importantly, great buildings, in their wake.

Both were celebrated by their professions, but Fordham had a lower public profile, not helming headline-grabbers like the Pompidou or Lloyds, but bringing his ingenuity to swathes of important projects, benefitting architecture and society. Notable schemes included the late 1970s Alexandra Road Estate in north London, designed by Neave Brown and Grade II* listed in 1993. He also worked on the Contact Theatre in Manchester which opened in 1972, and the Tate St Ives in Cornwall, designed between 1991 and 1993.

He was pushing the sustainability agenda long before everyone else caught up, and the 1990 RMC headquarters building he designed with Cullinan Studio in Surrey was one of the first commercial projects of its kind to be naturally ventilated. Keynsham Civic Centre (2014) has a CLT frame, and an 'energy in use' A rating. Fordham designed his own home as a Passivhaus with architect Justin Bere recently, adding automated integrated shutters to minimise energy loss.

As sustainability comes more and more to the fore, the highly functional, yet boundary-pushing concepts that Fordham drove through a wide range of projects must inspire the architects and engineers to innovate and hone future building performance. There could be no more fitting tribute.

We look forward to the projects 2022 will bring, but also let's remember some of the other great names we lost in 2021, who have helped to influence the designers of the future – Chris Wilkinson (76), Art Gensler (85), Owen Luder (93), Helmut Jahn (81), Paulo Mendes da Rocha (92), and Oriol Bohigas (95).

Architects' Datafile is very happy to be continuing to bring you the projects that matter to architects from across the board in 2021, from the mainstream to the 'landmark' structures. We will also feature great thought leadership as always – this issue, Nigel Ostime from Hawkins\Brown delves into Pre-Construction Services Agreements and why your clients should get one. Also, we profile Lead8, one of the biggest names out there in international mixed use and retail projects.

Last but not least, a belated welcome on board to our new Editorial Assistant, Laura Shadwell, who is a great addition to the team. Laura's already crucial to helping us keep on top of the workload as we continue to navigate the balance between home and office, while keeping quality to the fore.

James Parker
Editor



ON THE COVER...

Feilden Clegg Bradley's education building uses a wooden stair and atrium to connect spaces.

Cover image © Hufton+Crow
For the full report on this project, go to page 10

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AWARDS

Maggie's Leeds wins in World Architecture Festival 2021 Awards

The World Architecture Festival (WAF) has announced the winners of the WAF Awards in a virtual ceremony held in December. Prize winners are selected from a shortlist of projects that exhibited “outstanding use of engineering, colour, natural light, timber and ‘building visualisation,’” said the organisers.

Maggie's Leeds by Heatherwick Studio, a centre providing support for people affected by cancer, won the Best Use of Natural Light Prize, the judges commenting: “The biophilic design creates a unique experience that connects with its users.” The prize, supported by Velux, is awarded to projects that provide “human wellbeing, performance and joy.”

Majara Residency by ZAV Architects won the Best Use of Colour Prize for a holiday community of 200 brightly coloured domed residences on an island in Iran overlooking the Persian Gulf. The judges commented: “The domes provide an impressive visual treat to an otherwise desolate area.”

Nikken Sekkei picked up The Engineering Prize for Ariake Gymnastics Centre, a 12,000-capacity timber structure building designed for the Tokyo Olympic and Paralympic Games. The judges admired the structural use of timber spanning 90 metres, with “elegantly resolved geometry



Maggie's Leeds by Heatherwick Studio © Hufton + Crow



Majara Residency by ZAV architects © Tahmineh Monzavi

and detailing.” The building is also designed for a “second life” as an exhibition hall.

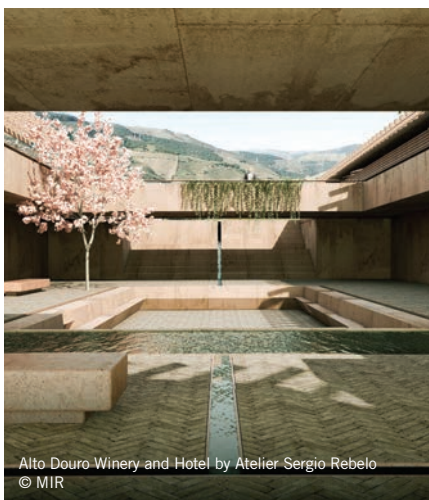
Atelier Sérgio Rebelo won the Visualisation Prize, supported by Lumion, for a presentation of Alto Douro Winery and Hotel, a concept celebrating Port production in Portugal's Douro Valley. “The video offers a serene visualisation that explores the buildings, their locations and their spaces,” commented the judges.

Finally, RTA Studio and Irving Smith Architects won Best Use of Certified Timber

Prize, supported by the Programme for Endorsement of Forest Certification (PEFC), for Scion Innovation Hub, Te Whare Nui o Tuteata – a workplace located on the edge of the redwood forest in Whakarewarewa Forest Park, New Zealand. The judges noted that the building achieved embodied carbon zero at the time of completion, awarding the prize, for “innovative, educational and artistic use of timber within architecture.”



Ariake Gymnastics Centre by Nikken Sekkei Ltd + Shimizu Corporation © Ken_ichi Suzuki



Alto Douro Winery and Hotel by Atelier Sérgio Rebelo © MIR



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MIXED USE

Mosaic secures planning for Glasgow mixed use refurb

Mosaic Architecture and Design has secured planning permission and listed building consent for the project to redevelop 50 Bothwell Street in Glasgow city centre. The development will provide refurbished office accommodation with a 'subdivision' of ground floor retail, and a new cafe and business hub at street level.

Along with creating a light-filled atrium, the proposals include plans for a redevelopment of the fifth and sixth floors within the roof to create "impressive office floor plates, flooded with natural light and landscaped roof terraces for outside enjoyment and appreciation of the local skyline," said the architects.

The development will provide modern and energy efficient office accommodation in a complete refurbishment that is "both contemporary and respectful of a listed building with this character."

The architectural design is a result of a collaboration between Mosaic Architecture and Design and the international design studio 10 Design. The project team also includes Ryden, Woolgar Hunter, Hollis and Atelier 10. The building is intended to be ready for occupation towards the end of 2022.



AWARDS

BIG's ski slope-topped Copenhagen power plant wins international title

CopenHill – also known as the Amager Resource Centre – in Copenhagen, has been declared the World Building of the Year 2021 at the 14th annual World Architecture Festival (WAF). The scheme designed by BIG (Bjarke Ingels Group) was selected from the awards' Production, Energy and Recycling category.

Sitting in an industrial zone, CopenHill is a mixed-use 41,000 m² waste-to-energy plant. The project combines "community and leisure with sustainable ambitions, aligning with Copenhagen's goal of becoming the world's first carbon-neutral city by 2025." The building includes a rooftop bar, crossfit area, climbing wall and viewing plateau, as well as a 490 metre tree-lined hiking and running trail and ski slope, within a mountainous terrain designed by Danish landscape architects SLA.

On behalf of the judges, Paul Finch, programme director at WAF, praised the way the building "addresses the role of architecture in the new world of recycling and zero carbon, and reminds us that buildings can be fun!"

The internal size of the power plant was determined by the precise organisation and distribution of machinery in height

order, creating a sloping roof suitable for a 9,000 m² ski terrain. On the longest vertical facade is what's believed to be the world's tallest artificial climbing wall at 85 metres. The building's waste incineration facilities are said to integrate the latest technologies in waste treatment and energy production.

The 10,000 m² green roof has been designed to "address the challenging microclimate of an 85 metre high park, rewilding a biodiverse landscape," while absorbing heat, removing air particulates and minimising stormwater runoff. Beneath the slopes, furnaces, steam, and turbines convert 440,000 tonnes of waste annually into enough clean energy to deliver electricity and district heating for 150,000 homes.

The awards were supported by Grohe, and had a jury from across global architecture. The panel consisted of Paul Finch, Nuno Gonçalves Fontarra, associate partner at Mecanoo, Kim Herforth Nielsen, founder and creative director of 3XN Architects, Christina Seilern, principal of Studio Seilern Architects, and Abdelkader Damani, director of Frac Centre-Val de Loire and artistic director of Biennale d'Architecture d'Orléans.



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MASTERPLAN

FaulknerBrowns to design Dublin's Guinness Quarter

FaulknerBrowns Architects has been announced as the masterplanner and lead architects of a “sustainable urban quarter” at St James' Gate in Dublin, home to the Guinness Brewery for over 261 years.

FaulknerBrowns were appointed by Ballymore to design proposals to redevelop a 12-acre site freed up by modernisation of the brewery, for Guinness' parent company, drinks giant Diageo.

The project represents “one of the most significant development and regeneration opportunities in Dublin and Ireland,” said the architects. Ballymore's vision for the Guinness Quarter is to create the city's first “zero carbon district,” with up to 500 homes, offices, commercial space, community facilities, and public realm. The proposals look to “re-imagine the site's future while respecting its iconic heritage,” said the architects.

St. James's Gate is home to a mix of historic buildings and structures, “many of which can be retrofitted and re-used,” said FaulknerBrowns. Consultation on the plan is now underway, with a planning application expected to be submitted to Dublin City Council in 2022.

Niall Durney, associate partner at FaulknerBrowns, said: “The 261 years of existing fabric on this iconic site is the best possible starting point in creating a major visitor destination and sustainable urban quarter.”



© Rachel Ferriman

EDUCATION

University of Warwick opens FCBStudios' Faculty of Arts

The University of Warwick has opened the doors of its Faculty of Arts, a £57.5m eight-storey building designed by Feilden Clegg Bradley Studios with Buro Happold, and constructed by Bowmer & Kirkland.

James Breckon, estates director at the university, said: “The building is a great example of successful professional collaboration from the design and construction sector.”

The building design is based on the principles of “collaboration, creativity, inspiration and innovation,” and spans 15,000 m² of floor space with four “distinct clusters” set around a grand central staircase within a full-height atrium. It offers an ‘antiquities’ room, as well as cinema and screening rooms, theatre studios and rehearsal rooms, plus collaboration spaces, a media ‘lab’ and edit suite along with multi-purpose events and exhibition spaces.

The grounds will feature a grove of trees originating in the historic sanctuary



of Delphi (a gift from the Greek Press Association in honour of the work of Professor Michael Scott of the Department of Classics and Ancient History). New artworks specially commissioned for the building include a large-scale ceramics mural by Matthew Raw and a poem by Raymond Antrobus MBE.

Sustainable construction methods have saved approximately 264.8 tonnes of carbon compared to the use of cement, and the building's roof contains photovoltaic panels. “The sustainability agenda for this project goes beyond energy efficient design,” commented Andy Theobald, partner at FCBStudios. “Constructed out of materials that will last, it has future flexibility built-in and is designed to be both life enhancing and responsive to change.”

The building has achieved a BREEAM Excellent rating and an EPC A energy rating; it is a “fully integrated smart building, designed to reduce operating carbon footprint, increase user comfort, and inform operational performance,” said the architects.



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VIEW POINT

In the first of two articles, architect and partner at Hawkins\Brown Nigel Ostime looks at how Pre-Construction Services Agreements (PCSAs) can better engage contractors to tackle issues early on, and offers advice on what to tell clients before they sign one

A Pre-Construction Services Agreement enables the client to employ the main design and build contractor to provide logistics and costing services, before the construction contract itself commences. This enables them to iron out issues prior to work starting on site, and typically, is part of a two-stage tender process – used in the first stage to procure contractor involvement in the design process.

For architects, a PCSA, either for the contractor or prospective contractor, can be a help or a hindrance. It is important to know what to look out for and be able to advise your clients accordingly.

There are many benefits that PCSAs can bring to a project but there are also some pitfalls to look out for.

Benefits

A PCSA brings a range of benefits, contributing to the design process itself and ironing out design issues. It can help inform on buildability, sequencing, phasing and construction risk, the packaging of the works (including the risks of interfaces between packages), and on the selection of the specialist subcontractors delivering them. It can also be used to price work packages or suppliers on an open book basis.

The cost plan, construction programme, and construction method itself can be encompassed in a PCSA, as can preparation of a site layout plan for the construction phase, and subcontractor bid documents. Further matters concerning the build phase that may affect the planning application (including waste disposal, traffic movement, tree preservation orders).

A major benefit for the construction stage is continuity of relationships within the contractor team. In addition, the contractor better understands the project's ambitions,



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Hawkins\Brown's project for Oxford University benefitted from a Pre-Construction Services Agreement

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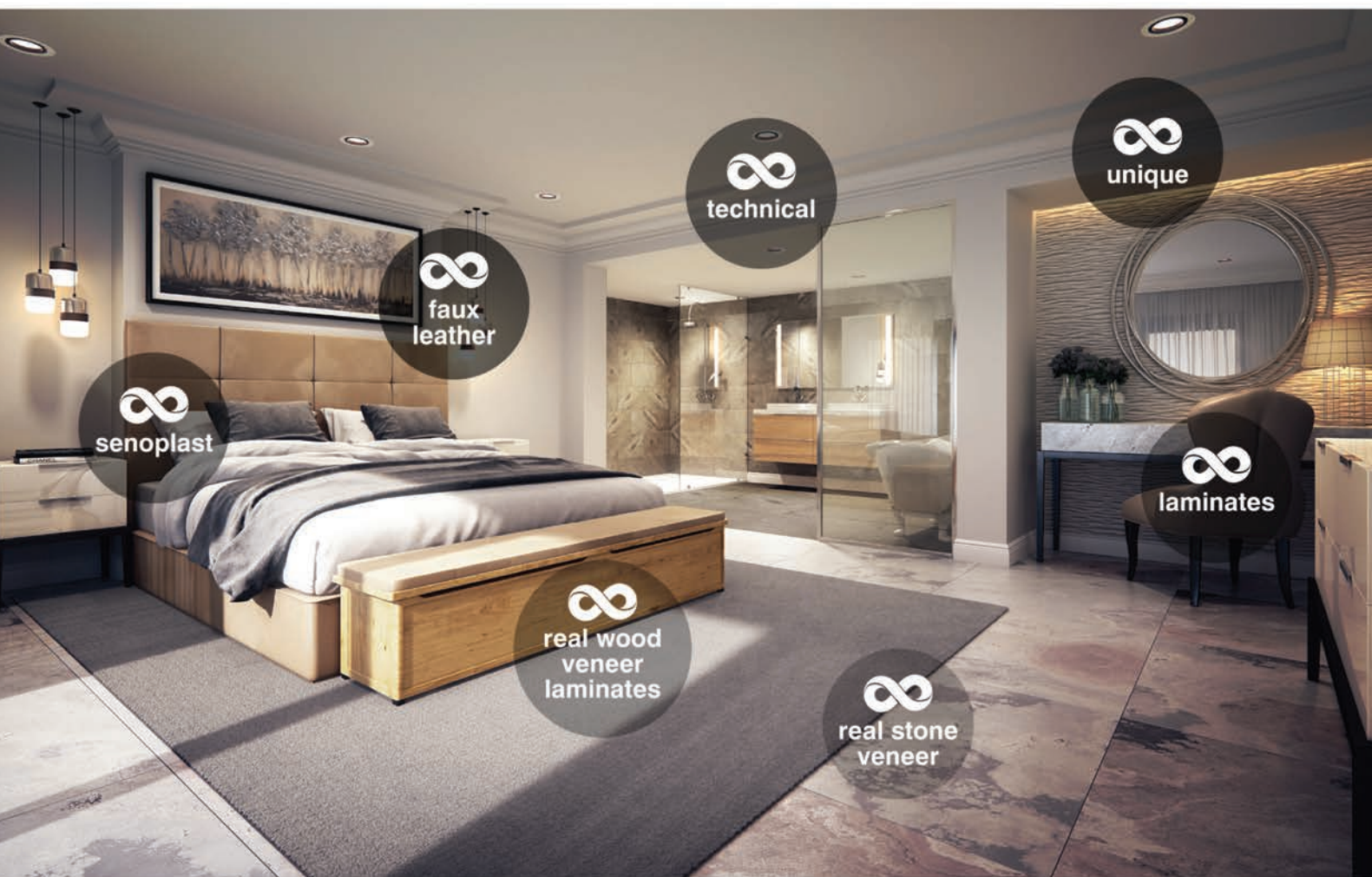


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risks and the design overall. Once specialist trades are involved, a PCSA can result in innovative design development while reducing construction risks.

Potential issues

There are several caveats when advocating that clients engage in a PCSA. Firstly it can just be a period of paid tendering for the contractor, and can cause additional work for the design team that has not been envisaged in the initial fee proposal.

There is potential for duplication of work and out of sequence working, where costing of packages is driving the programme. Production of the Employer's Requirements (ERs – sometimes termed RIBA Stage 4a), can end up being duplicated. The architect/lead designer should explain this to the client and agree the principle of pricing (and programming) variations. Also, the process does not always achieve cost saving, especially after the cost of the PCSA itself is accounted for.

There can be insufficient time for comprehensive design development, as the contractor needs the information too early in the process. Clear understanding of (fully resourced) programming of workflow is

essential so the contractor knows when costing can commence which requires more complete information.

Bringing in design by specialist subcontractors can help, but main contractors often don't want this as they prefer to defer the tendering process to keep pricing keen. It can be advantageous to bring in sub-contractors outside of the main contractor's PCSA, but the latter generally don't desire this.

Effectively the project is priced on RIBA Stage 3 information, so any additional details which affect cost are resisted by the main contractor. This can lead to time being spent arguing over what was costed at Stage 3, and design flexibility is lost.

The tendering schedule is typically based on going out with enhanced Stage 3 information, but contractors want final design and co-ordination complete, to minimise cost changes and risk. Even with an agreement in place, this is hard to manage. Value engineering discussion stalls design development and adds pressure on the team later.

Contractor-guided proposals can drive changes that affect the client's brief and in turn project compliance, however the PCSA

It can be advantageous to bring in sub-contractors outside of the main contractor's PCSA, but the latter generally don't desire this

process rarely has sufficient change-control measures to verify what has been agreed. If this is not integrated into the contract documents (or derogated list) the work is lost. Conversely, if this is adopted into the ERs the consequences to client requirements are left for the next stage to reconcile – causing additional work that is not accounted for in the program.

PCSA periods sometimes force changes to the design and specification without the requisite time for reflection and discussion with subcontractors, as it can be a time-limited process linked to funding and cash flow.

The PCSA process is carried out with the design team which includes the services engineers who only develop a performance MEP design. However most services efficiencies and coordination benefits are only realised later when the MEP contractor is appointed, which can undo or alter key decisions made earlier.

Typically the PCSA team from the contractor's side has dropped away once they are into contract. This leads to a lack of ownership of decisions made from the contractor's side in the next stage.

In next month's edition I will explain how to get the best outcome from a PCSA.

KEY RECOMMENDATIONS

- Advise the client of benefits and pitfalls that a PCSA can bring
- Aim to influence the way the PCSA is set up and managed to mitigate potential problems
- At the start of the PCSA, hold a meeting with the contractor and other members of the project team to establish the 'rules of engagement,' aims, activities to be undertaken, and the programme – this should form part of tender documents

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PRACTICE PROFILE



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Lead8

Multidisciplinary practice Lead8 has ascended quickly to global status since founding in 2014, picking up numerous accolades along the way. *ADF*'s Tom Boddy speaks to co-founders Christine Hau and David Buffonge

Despite being among the 100 top international firms, Lead8 was only established relatively recently – in Hong Kong in 2014. The practice was formed when its co-founders, who had been working together for a number of years, decided to pool their various expertise and begin their own journey.

Christine Hau, one of the firm's co-founders and executive directors, explains to *ADF* how this decision was driven by the group's aspiration of creating their own vision and "build a portfolio of projects in their own way."

Since its foundation, the practice has boomed internationally, with design studios opening up in Singapore, Kuala Lumpur, London, and most recently, Shenzhen. From just a small group of architects and designers, Lead8 now has around 250 employees, and a host of completed projects, particularly in Asia.

This rapid business expansion over a few years would usually be a challenging task for any company to manage. However, as the practice has adopted a strategy in which they only "expand in line with their portfolio," only physically growing in the territories that their work takes them to, as Hau explains, they

have managed to stay on top of it.

The co-founding team also had previous experience working in large global design firms, and this experience was invaluable during key decision making in Lead8's early years.

But it's not just the practice's growth that's been impressive, they've also picked up a variety of awards over the last few years. In 2021 alone, Lead8 won more than 30 accolades, including five Asia Pacific Property Awards, as well as six PropertyGuru Asia Property Awards.

Multi-disciplinary

Lead8's portfolio over the seven years since founding has mainly consisted of retail-led, mixed-use and transport-oriented developments, and they expect this mix to continue moving forward. The staff's remit crosses several disciplines, often on single projects – regularly delivering the architecture, as well as masterplanning, interior design, and specific areas such as signage design.

"At Lead8, we are skilled at delivering multiple design scopes



Hubei Coordination Urban Renewal Scheme, Shenzhen



Shougang Park Urban Weaving District, Urban Regeneration, Beijing



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on one project, so our teams know how to collaborate closely yet ensure their areas of speciality are not compromised in the process,” asserts David Buffonge, co-founder and executive director.

An illustration of this is high-end retail complex MixC Shenzhen Bay, an 80,000 m² project, where Lead8 provided the architecture, interior design and retail planning. The project was completed in 2018, and has since gone on to become Lead8’s most award-winning commissioning.

Buffonge explains how providing a wide variety of services on projects is backed by Lead8’s “strong collaborative approach” as well as the staff’s “proven track record of delivering design from conception to built development across different disciplines.”

Each studio is also multi-disciplinary. To ensure every project is matched with the right expertise, it’s very common that project teams include designers from Lead8’s studios around the world.

Values

The practice directors claim to adhere to the same philosophy since its origins, with every project regarded as a unique opportunity to “weave shared visions” with clients and “transform ambitions into meaningful built environments,” says Hau. This is as “true today as it was when we founded the firm,” she asserts.

The practice describes its approach to working with clients on designs as “an invitation to be part of the conversation” and to “contribute meaningfully,” says Buffonge. This approach has reportedly developed strong partnerships over the years which “continue to grow and evolve.”

However, challenging clients’ briefs is part of the methodology: “We believe clients come to us for a reason, and if we see the opportunity to enhance the brief or look at the site in a different way, we like to engage in these discussions,” says Buffonge. In more recent times, he admits briefs have tended to be more “fluid,” with Lead8 being engaged to collaborate with clients in the earlier stages of projects to help “explore the potential of a site.”

This strong emphasis on collaboration and cohesion is a central part of Lead8’s mantra and overall ethos. Internally, the practice currently runs weekly design reviews where project teams are given the chance to present their ‘work in progress’ to the other studios. “The idea is to have an open discussion, to learn from each other, and share expertise widely across our offices to enhance our portfolio,” explains Buffonge.

A project that Buffonge feels exemplifies their design values is the Hubei Coordination Urban Renewal Scheme in Shenzhen. Again delivering both the retail architecture and planning, Lead8’s work will look to transform and protect a 500-year-old village as part of a major regional cultural, commercial and tourist destination. As one of the largest urban regeneration schemes in Shenzhen, the project has required Lead8 to demonstrate its skills in handling “unique and challenging site contexts,” as well as “respecting the history of the site while imagining and creating its future,” in the words Buffonge.

Eco focus

When it comes to designing for the future, Lead8 place a large value on building climate-resilient structures. “Creating resilient cities that deliver a greater urban contribution to the environment as a whole will be significant going forward,” says Buffonge.

While architects and designers have been “fortunate enough” that building materials are becoming more sustainable and the



MixC Shenzhen Bay

technology to monitor energy use has advanced, says Buffonge, he explains there is still work to be done to “future-proof building designs to allow for adaptation and evolution over time.” He adds: “The more flexible spaces are, and the greater the mix of uses they offer, will make these developments more sustainable.”

A key driver of Lead8 is integrating “living ecologies” within urban spaces – connecting people with nature in new and meaningful ways. An example is the firm’s recently completed project The Ring, in Chongqing. “Our teams are exploring new ways to bring natural and built environments together. We all know the power of biophilia, and now, more than ever, we are seeking out this connection to the natural world,” says Buffonge.

The practice is also exploring this vision on a broader scale, shown through a recent competition design, also in China. The Urban City Cultural Plaza concept “looks at how architecture, technology and ecology can come together to create future city urban realms.”

Future

Looking ahead, as the pandemic continues to rage, a substantial firm like Lead8 naturally has key immediate goals of ensuring staff wellbeing – including providing them with a safe working environment. So far however, crediting “robust partnerships as well as strong delivery of projects,” they have managed to navigate the pandemic almost unscathed as a firm.

Looking longer-term, Hau explains that practice staff are excited about some of their high profile projects in the pipeline. While currently confidential, she says they “are truly defining the future direction of Lead8.”

One current project that provides an insight into where Lead8 is heading however, is the Shougang Park Urban Weaving District in Beijing – a high profile scheme that will form a future gateway to the Beijing Winter Olympics site. The project is part of a significant rejuvenation taking place in the city, with a 100-year-old Capital Steel Factory Park being transformed into a thriving multi-activity destination. Lead8 will look to preserve the original urban fabric and rebuild the historic buildings, while retaining the authenticity of its industrial heritage.

The scheme is a demonstration of Lead8’s range of design skills, including preserving history and identity of places while they deliver striking, modern designs for the next generation. Such a combination of skills has seen the firm become a big player in retail and urban mixed use in a short space of time, and despite the global impact of Covid, more projects and proposals are in the pipeline. ■

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IDEA FACTORY, CHINA MVRDV

MVRDV has completed construction of the Idea Factory, a former factory in the Shenzhen 'urban village' of Nantou that "sustainably reuses and improves the building." The project contains a mixture of offices for Urban Research Institute of China Vanke, and offices for rent. The original facades have been removed, with the building's concrete frame exposed to "show traces of the building's history," said the architects. The new facade is set back from the perimeter of the structure, creating open loggias that wrap around the whole building. Facing a small public square on the ground floor, a protruding tube-like structure clad in timber marks the entrance to the public staircase that "carves its way through the building." Inside, the staircase is clad in mirrors and bright neon signs, creating an "aesthetic reminder of the early days of Shenzhen's urbanisation," said MVRDV. On the fourth floor, it extends outside the building, allowing a view of the surrounding rooftops. On the roof is a green bamboo "maze" that divides the area into 'rooms,' each containing a different activity, including a glass box for performances and events, seating areas, a gym, trampoline and swings, a tea house, a dining room, a dance floor, and a chess set. The design was completed in collaboration with the Urban Research Institute of China Vanke, vaValue Design, and the Shenzhen Bowan Architecture Design Institute.



LE RAY, NICE MAISON EDOUARD FRANÇOIS

Designed by Maison Edouard François, the Le Ray development in Nice has now been completed. Having achieved BDM accreditation for 'Sustainable Mediterranean Buildings,' the 1.2-hectare project, named BiodiverCity NF Habitat HQE, is claimed to include "Europe's largest green facade." Previously a stadium, the site is now a 25,000 m² mixed-use development including 350 apartments (first-time-buyer and social housing) and 6,000 m² of commercial floor area, plus an underground parking garage. Situated overlooking Nice, Le Ray is a 10-minute tram ride to the city centre. "Despite the apparent density when looking at the cross-section of the project, the heart of the development offers outside space to relax and socialise," said the project team. The trumeau and other facades have stone window surrounds, and the other buildings are finished with a lime-based coating, in colours selected from the city of Nice's guidelines.



NARBO VIA, FRANCE FOSTER + PARTNERS

Narbo Via – a new museum of Roman antiquities in Narbonne – has officially opened. The building, which has been “designed and engineered” by Foster + Partners is “set to become a new landmark at the entrance to the city,” said the architects, on a site adjacent to the canal. The building incorporates galleries for permanent and temporary exhibitions, a multimedia education centre, auditorium, restaurant and bookshop, as well as research, restoration and storage facilities. Externally there are formal gardens and an amphitheatre for outdoor performances. The centrepiece of the museum is a ‘Lapidary Wall’, which forms a natural boundary at the heart of the museum, separating the public galleries from the private restoration spaces. The architects commented: “This flexible display framework allows the reliefs to be easily reconfigured and used as an active tool for learning.” A concrete roof canopy provides thermal mass, sitting over a clerestory “punctured with light wells,” and extends over the walkways around the museum. The glazing around the enclosure simply bolts directly into the concrete walls. The majority of the services in the building are contained within a subterranean void with the high ceilings, creating a “thermal flywheel effect.”



CAMPUS HUMANITAS UNIVERSITY, MILAN FTA (FILIPPO TAIDELLI ARCHITETTO)

Campus Humanitas University in Milan has been designed by FTA (Filippo Taidelli Architetto) as an “international centre of excellence in the training of healthcare professionals,” and will welcome 1200 students from 31 countries, as well as lecturers and researchers. The campus is organised across three new buildings, with a total area of about 25,000 m², and includes one of the “largest and most advanced simulation labs in Europe” as well as “high-tech” lecture halls, a digital library and residential facilities. The design choices for the campus have been “aimed at creating opportunities for interaction between people with different areas of expertise.” The buildings feature ranges of furniture from Italian firm, Arper. The architects commented: “Functional and aesthetic flexibility, and essential design and warmth are the principles that have guided the choice of furnishings for the community spaces.” The campus also focuses on implementing principles of sustainability through significant reduction of energy consumption and maximum use of natural light. The spaces have been designed with furniture modern environmental comfort solutions such as groundwater heat pumps and low-temperature radiant heating panels. The installation of photovoltaic panels on the roofs has led to the project gaining CENED A3 energy certification.



40 EAST END AVENUE, NEW YORK, DEBORAH BERKE PARTNERS AND GERNER KRONICK + VALCARCEL

Investor and developer Lightstone has developed 40 East End Avenue in NYC, a 20-storey Upper East Side boutique condominium jointly designed by architects Deborah Berke Partners and Gerner Kronick + Valcarcel. The building has 28 bespoke residences comprising half-and full-floor, two-to-five-bedroom homes, a maisonette with its own private courtyard and outdoor kitchen, and a duplex penthouse with a private rooftop terrace. Situated within the Upper East Side's East End enclave, the development overlooks the East River and is near Carl Schurz Park. The textured facade comprises charcoal and grey brick detailing with hand-cast ornamentation, which were selected to “age beautifully over time.” Designed with “light-filled” layouts, ceilings as high as 14 feet, and oversized casement windows with views of the East River and city skyline, many residences also have Juliet balconies and private terraces. The finish and details create “intimate interiors of maximum comfort, functionality and luxury,” said the architects. The second-floor suite of amenities includes a library, games room, a catering kitchen, and a fitness centre. Starting at \$3m, residences are now available for immediate occupancy.

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Gilberts helps the Royal Albert Hall

The challenge of taking one of the world's most iconic landmarks, the 150 years-old, Grade I listed Royal Albert Hall into the 21st century has been met by innovative and pioneering engineering solutions. **Gilberts Blackpool** has supported mechanical and electrical contractors Bradgate to achieve effective yet discreet ventilation of the Hall's main auditorium – one of the most famous concert venues in the world and home of the BBC Proms. The ventilation upgrade is just part of a major refurbishment programme to preserve and protect the building to reduce the impact of ageing. Gilberts took the basic concept of its GFS swirl floor diffuser and design-engineered bespoke accessories to achieve, in one easy to install unit, all the elements required. Addition of a sleeve housing an intumescent fire block and damper below the diffusers addressed the fire protection and performance specification. Various versions were produced, depending on the location of the diffuser in the steps or the floor of the auditorium.

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Resin Bound Forecourt at Museum



Two blends of natural stone resin bound paving were chosen to give an effective contrast to each other and blend beautifully within the surrounding greenery and other natural materials at Brooklands Museum, Weybridge. **SureSet** worked closely with the museum to ensure the project installation would cause as little disruption to their opening times as possible. A Mechanical installation method was used to give the highest quality finish to the large areas. Overall, a strong and durable surface was carried out by SureSet Teams and therefore covered by a 21 year guarantee.

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**BUILDING
PROJECTS****WOOLWICH WORKS
LONDON**

Balancing act

Creating a major new performance space to help revitalise a deprived part of south east London meant a delicate balancing act for Bennetts Associates in its adaptive reuse of five historic listed buildings, with close community involvement. Roseanne Field reports

A set of five historic former military buildings in the Royal Arsenal, Woolwich, form Woolwich Works. This new cultural destination, created in what was the UK's largest munitions factory, is a key part of a multi-million pound project hailed as important not only for preserving the history in a new use, but also for helping provide a lift for the local community. It was the "bold vision" of the Royal Borough of Greenwich (RBG), says Matthew Curtis, associate at the project's architects Bennetts Associates, "to use arts and culture as a way to reconnect the community with the old Woolwich Arsenal site."

The practice were appointed in late 2014 to undertake a masterplan feasibility study, which Curtis explains "examined the central group of five Grade II and Grade II* listed former buildings at the heart of the Royal Arsenal and assessed their potential suitability for the development of a new creative quarter." A masterplanning approach was also necessary for the "long term vision of the site," he says, as "the ambition to create an entire district across multiple buildings is quite unique."

Bennetts went on to win the commission to undertake the full refurbishment of two of the buildings, as well as "short-term upgrades" for the other three. "The council had a bold vision for creating a cultural district – accommodating a number of key stakeholders from performing arts to heritage organisations – and we wanted to help them realise it," says Curtis.

Opened in September last year, the buildings provide 15,000 m² of flexible space for performance – including music,



Photography © Timothy Soar



The key objective when considering the design goals was maintaining a ‘light touch’ approach, ensuring the integrity of the buildings

theatre, comedy, dance, and spoken word – and events such as exhibitions, training, and education. A charity (Woolwich Creative District Trust) was set up to run the site, with the purpose of offering “hope and opportunity by enabling people to realise their creative potential.” Current resident arts groups include the National Youth Jazz Orchestra (NYJO), dance company Protein, the ethnically diverse Chineke! Orchestra, and Woolwich Contemporary Print Fair. Theatre company Punchdrunk, assisted by Haworth Tompkins, are currently creating an “immersive theatre show” which will run across the three buildings repaired on a short-term basis, and will be “incorporating the architecture into their sets,” says Curtis.

The hope is that the new ‘district’ will attract both local and national audiences, fed by the Crossrail station set to open this year, “connecting the borough and venue to a far larger audience base,” Curtis comments. He adds that this was “one of the key enablers for the project, as the area is to be much better connected to central London.”

Design approach

The key objective for the practice when considering the design goals was

maintaining a “light touch” approach. This would ensure the integrity of the buildings – which were decommissioned in the post-war period – would remain intact. He explains: “This means retaining the existing character and layout so they’re still innately recognisable – leaving all the brick uncleaned, for instance. He adds: “Heritage was prioritised in any intervention we were undertaking; ultimately it’s still obvious these buildings were once factories.” This approach also helped given the £35m budget, which Curtis describes as “tight” when spread across five substantial listed buildings.

Although Bennetts Associates have had previous experience on similar cultural projects – such as the conversion of an Art Deco cinema into a new cultural centre in Chester, this project presented particular challenges they hadn’t encountered previously. “The unique thing about Woolwich Works is the extreme adaptation of the buildings,” Curtis says. “Their new life as performance spaces is a significant departure from the original use as a munitions factory.”

The buildings that remained (following the early demolition of some structures from the post-war years) were in good

condition, as Curtis explains: “Their historic architectural quality was still good, and through the restoration we were able to reveal their inherent qualities.” This was the focus for the entire project, with the design approach “developed to temper the environment of the found space,” rather than transform it, says the architect. “The factories, for example, have been stripped back to reveal sensitively restored roof trusses and brickwork which celebrates the history of the buildings.”

This approach also kept the interventions within the limitations dictated by the buildings’ listed status. As part of ensuring they respected the historic features and characteristics, the architects liaised closely with the council’s planning officers, Historic England, and conservation architect Consarc.

Throughout the design process the practice also worked closely with the client, who had in turn sought “specialist help to advise on briefing potential future users and the need for flexibility,” Curtis explains. The team assisted the client in trying to ensure that tenants of Woolwich would be appropriate for the buildings as they were, rather than those who would seek to alter them. “The project team helped identify the types of uses and tenants that would work well with the existing buildings, rather than undertaking significant works to the buildings to accommodate the requirements of less naturally aligned uses,” says Curtis.

Performance upgrades

One of the biggest challenges when considering the end use was ensuring the necessary thermal and acoustic insulation standards were met, without detracting from the buildings’ characteristics. “The nature of the large buildings lend themselves to performance spaces, but we had to ensure high technical standards,” says Curtis. “One of the most challenging aspects was insulating the different types of existing roofs without compromising their appearance internally or externally.” Building 41 featured an ‘industrial shed’ roof and this was rebuilt to include an acoustic barrier, while older parts that had slate roofs were lined internally with insulation.

In their bid to make the most of the heritage features, the practice sought not only to highlight them as features but also to leave them entirely untouched where possible. “We took a ‘surgical’ approach to the building, only adding where absolutely necessary,” says Curtis. “Generally we were





The factories have been stripped back to reveal roof trusses and brickwork which celebrates the history

surprised at the good condition of the buildings.” From this approach, what Curtis describes as some “interesting design features” were unveiled and incorporated, such as a flight of stairs in one of the dance studios that rise steeply to fit neatly between the existing beams.

One area where repair work was required – and which became one of the “most protected elements” – was in Building 19 where a wooden cobbled floor had become waterlogged and swollen. Curtis says the construction team was “meticulous” in removing, repairing and restoring the floor.

Keeping sustainable efficiency as well as conservation at the forefront of their minds meant the practice tried to limit the amount of new materials added to the buildings. “Being as efficient as possible through design meant limiting the amount of new material used,” Curtis says. “Sustainability is a key factor in every project, but even more so in heritage and conservation work.”


Where new materials were required, they were “a nod to the materials used in the original design,” Curtis explains, and as a result, largely brick and slate. Similarly, the colour palette was also inspired by the building’s existing elements. “In every intervention, we took our cues from the industrial style of the buildings and reinterpreted them in a contemporary way.” Other necessary additions, such as toilets and other services, were “inserted within the existing structures so they disrupt the main spaces as little as possible,” Curtis explains.

Centrepiece

Building 41 is the largest of the five and is the centrepiece of the overall Woolwich Works ‘cultural district.’ It’s home to a performance space with room for 1,200 people seated or 1,800 standing, and three smaller wings that house five studios, usable for either performing or rehearsing. There’s also an external courtyard and a cafe, bar and events space facing the river are available for hire by the public.

It was also at Building 41 that Bennetts





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“The unique thing about Woolwich Works is the extreme adaptation of the buildings”

Matthew Curtis, Bennetts Associates

PROJECT FACTFILE

Architect/principal designer:

Bennetts Associates

Contractor: Mace

Conservation architect: Consarc

Project manager: Turner & Townsend

Quantity surveyor: Turner & Townsend

Services consultant: Buro Happold

Structural & civil engineer: Buro Happold

Theatre consultant: Sound Space Vision

Acoustic consultant: Gillieron Scott Design

Fire consultant: The Fire Surgery

Associates designed the only new build element of the project – a new foyer and ‘milling space’ that faces the courtyard and connects the east and west wings of the building. The practice described this as a significant intervention that was key in making sure the buildings were suitable for large scaled performances. The entrance foyer, box office, exhibition space, cafe and first floor rehearsal spaces are located in the east wing, while the west wing houses studio spaces on the first floor and ‘back of house’ provision – at ground level. The river-facing events space is within the north wing, along with office space. “It was our main chance to put in a piece of contemporary architecture that complements the other architecture, while not imposing itself on the heritage,” Curtis says. “It becomes the fourth side of the courtyard and is a natural extension to the architectural form of the central factory space.”

The new foyer building also provides important acoustic benefits acting as a “buffer” to the largest performance space. Where possible, hidden acoustic engineering elements were also incorporated into the buildings, but their listed status made this a challenge in some areas.

The noise factor will be an ongoing consideration for the client when programming, as Woolwich Works CEO James Heaton explains: “We won’t be able to do stadium rock and roll shows,” while adding the space “naturally has an amazing room acoustic.” The venue will focus on jazz, folk, world, acoustic, and classical performances.

Building 40 (the Grade II* listed one) – is the smallest of the five, and has been restored to accommodate dance studios and the necessary support space. Buildings 17, 18, and 19 complete the ‘district,’ and are the three that have undergone short-term renovations – for theatre group Punchdrunk’s tenure.

With the impact of the project on the local community such a focus, social sustainability formed a crucial part of the thinking and planning. The client’s focus was “delivering social value,” Curtis sums up, and this has been manifested in a variety of ways. One is that the construction team’s work with the local community meant they were able to provide eight full-time apprenticeship roles, volunteer more than 400 hours for local causes, and donate over £55,000 to charities. ■

A fusion of modernism and traditional design



Eighty Grosvenor Street is set in the heart of the art district in London's prestigious Mayfair not far from Bond Street. Developed by Frelene Ltd, it is an excellent example of how an existing historic building can be reimagined for modern use. Behind the traditional facade, sits a contemporary structure that belies the age of the original buildings on the site.

Originally three individual period townhouses, the building has been transformed into a single, mixed use structure spanning five upper storeys complete with private terraces on the 4th and 5th floors. The new Steel Frame Structure (SFS) has been

created to overcome the challenges of delivering modern day open plan spaces flooded with light in a traditional historic building. The use of reclaimed Suffolk white brickwork and sensitive replacement timber windows to the front ensure the building remains in keeping with the Georgian aesthetic of the street.

Working with Orms Architects, Kier Construction set out to retain part of the original facade at the front of the building as per planning. Due to the company's extensive experience working on retained facade projects, George Barnsdale was appointed to manufacture and install the timber windows

to the front of the building where the Georgian aesthetic needed to be retained. George Barnsdale invested a great deal of time at tender stage to ensure the designs met the requirements of the Grosvenor Estates team. Having worked on a number of properties in the area, the company's experience and knowledge proved invaluable to the design process.

Commenting on the design process, Kathryn Knowles, Architect, Orms said: "We were looking to achieve a bespoke framing element to make sure that we captured the existing window profiles which were originally on the retained facade. Barnsdale were very accommodating and assisted to make sure that we achieved the retained facade replication."

Back on site in Lincolnshire, the windows were designed to incorporate an overall frame thickness of 128 mm which is not a standard product. Taking one of the company's standard frame profiles as a base, two versions of decorative frame add on were developed. This ensured the performance data for the whole window was accurate whilst at the same time incorporating a sympathetic bespoke design. A simple pencil round profile was used with a more ornate profile for the two arched openings.

"The windows are elegant and contextually sit well within the retained facade. They look as per the vision we had for the building," Kathryn continued.



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Bespoke Stairs in Heritage Tower by Spiral UK



Spiral UK created a bespoke spiral staircase to fit an awkward space in a Listed historic battlement.

Archirondel Tower was originally built in 1794 as part of defensive works around the island to deter French invasion, with a specialised masonry gun platform ensuring it stayed in use when other towers became obsolete. However, during the Second World War it was modified by German Occupying Forces who removed the original stair and poured concrete to allow for machine gun mounting – there's still a swastika inscribed above the steel blast door to this day.

It wasn't until 2019 that the structure was sympathetically renovated and made into a holiday let, to honour its history and secure its future, with Jersey Heritage overseeing the project. Architects Antony Gibb Ltd designed the sensitive refurb with V&V Stonemasons employed as main contractor. They approached us to help with the conundrum of the stairs.

The accommodation is split over four levels including the ground floor terrace and rooftop space – the Jersey Heritage website description states a 'very narrow spiral staircase takes you up to a sleeping area... then continues on up...' which alludes slightly to the difficulties posed by the space available. It's in such spaces that the compact footprint of a spiral works so well.

The proposed stairwell was of varying width – the first challenge. Was there a way to wiggle a spiral stair up through the space? It was decided the best proposal was

to lessen the clear width of the treads, so they were all the same size but the overall stair would be smaller. The clear width of a stair usually has to be of a certain size, depending on how often the stair will be used and by whom, but in this instance Building Control had to agree that this was the safest option to work with the history of the building. The treads were made of steel pans (supporting timber infills) that have front and rear downturn to ensure compliance with the 100 mm sphere rule – gaps in stairs have to be small enough to stop people tripping or small people falling through.

The next challenge was fixing the stair in place so it would be strong and stable without infringing on the fabric of the building. As it turned out, it was necessary to lay services

right through the centre of the stair foundation, yet another tricky obstacle to overcome, especially as they were having to carve the actual bedrock to make it work. In the end, they were covered with a 170 mm deep concrete slab on over the bedrock, to which the central core pole and welded base plate were fixed, with insulation and 70 mm of polished concrete making up the finished floor.

The final intricacy was the fixing of the handrail, with the design alternating between wall-hung and fixed atop the balusters – there was a lot of tweaking and back and forth between all involved to make sure the result was just right, with Spiral opting for adjustable fixings to allow for on site anomalies.

The finished stair? A fairly unassuming galvanised steel and timber tread spiral that belies the amount of work that went into it but sits snugly in its space and performing the all-important function of allowing visitors to explore the previously neglected building and reach that wonderful view.



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Advanced fire panels selected for site-wide system upgrade at major UK hospital

130 Advanced fire alarm control panels have been chosen to protect one of the UK's largest acute teaching hospitals.

Selected for their performance, quality and ease of use, 96 intelligent addressable MxPro 5 fire alarm control panels and 34 custom AdSpecials panels have been installed at Wythenshawe Hospital, Manchester, as part of a comprehensive upgrade.

As a centre of clinical excellence, Wythenshawe Hospital, part of Manchester University NHS Foundation Trust, has over 5,500 staff providing district general hospital and specialist tertiary services to the local community and the wider population of the North West of England, so fire system reliability was a critical part of the specification.

Manchester-based Grainger Fire & Security, responsible for the 18-month project, chose Advanced's industry-leading fire protection for its robustness, versatility and ease of installation in complex and critical sites.

The system changeover to Advanced involved the installation of new network cable across a live hospital environment as well as BMS integration, and the introduction of a graphics package to provide visual representation of the fire system to end users. The 34 custom-engineered, 6-loop panels with 600 zonal LEDs included in the installation were designed and manufactured by Advanced's AdSpecials department. The network of Advanced panels work with over 20,000 devices using Apollo and Hochiki protocol.



In addition, a full design review of the hospital's existing false alarm management strategy has taken place to ensure that the new system is programmed to effectively reduce unwanted alarms.

Will Taylor, Service & Small Works Manager at Grainger Fire & Security, said: "As our preferred panel choice, we have recommended Advanced for a number of years. Its MxPro 5 panels are both easy to use and install and offer the features required to competently protect the hospital and its multiple buildings that each have individual cause and effect programming."

The upgrade to the system also sees the introduction of ipGateway, Advanced's fully interactive internet portal that presents the user with a detailed description of the current status of the fire system. The ability to remotely interrogate the fire system is a valuable benefit for both the end user and Grainger Fire and Security, who are able to pre-empt problems. Not only does this provide additional peace of mind for hospital users, it also saves time, money and inconvenience by reducing unnecessary service visits to site.

Neil Parkin, Advanced's Regional Sales Manager for the North, said: "The cause and effect programming capabilities of our panels provide tangible benefits to customers when protecting large-scale sites such as hospitals, university campuses or airport terminals."

"With the system at Wythenshawe Hospital up and running, features such as AlarmCalm, our built-in false alarm management and reduction software, work to radically reduce the number of unwanted alarms and the impact they have on patients and staff. It's a pleasure to be able to support Grainger Fire & Security on this project, and I have complete confidence that our products will provide the dependable solution required."



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BUILDING
PROJECTSBLOSSOM COURT, ST ANN'S HOSPITAL
NORTH LONDON

Environmental health

A mental health building by Medical Architecture in north London took a simple, 'first-principles' design approach to providing access to external space and daylight interiors, as well as greater independence and wellness for users. James Parker reports

Blossom Court is a new acute mental health inpatient facility at St Ann's Hospital, north London, which has been designed by Medical Architecture for Barnet, Enfield and Haringey Mental Health NHS Trust as a 'therapeutic environment.' That primarily means giving patients a variety of good quality indoor and outdoor space, to promote wellbeing and recovery, but also to improve the experience for staff.

The 74-bed facility comprises three adult acute wards and an eating disorders ward, tackling a different range of user needs. Shared accommodation includes visiting space, staff rest areas, and a multi-faith room. The building, opened in summer 2020, is part of a wider development of the site masterplanned by Medical Architecture, to create a cohesive, 'people-focused' healthcare campus.

Site context

The context of this scheme is familiar from many similar NHS projects, with the site having been 'rationalised' over many years, with some services moved to other locations. So much so, that by the project's inception, almost half of the buildings were vacant. However, at the same time, maintaining this surplus estate was diverting funds away from healthcare.

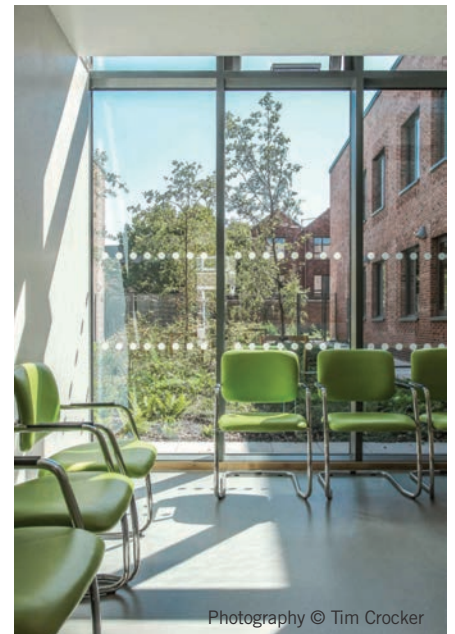
The Care Quality Commission reported on the trust's existing 1930s-built inpatient facilities, finding them outdated and inappropriate. The existing provision was lacking in several ways, explains project architect at Medical Architecture, Ruairi Reeves: "Corridors had no views out and there was no meaningful outdoor space. This

created very internalised space; not good for anyone's mental health." He adds: "Wards on the upper storey were isolated from gardens on the ground floor, and gardens outside bedrooms on the ground floor meant these bedrooms had little sense of privacy."

The trust sold its surplus land to the Mayor of London to be redeveloped for housing, to fund a widespread improvement in the healthcare facilities. With at least half of the new homes being designated as affordable, including dedicated units for key workers that staff might use, the resulting development will be an important way of serving local housing demand.

Reeves explains how the practice had worked with the trust on a design for a smaller inpatient building as part of a previous 'consolidation' of the site, but this never got off the ground. "The project was dormant for a number of years. During this time, we invested some of our own time to develop a 'what-if?' sketch design to provide a vision for the consolidated hospital and prompt a conversation with key stakeholders." The project was finally relaunched in 2017, and the architects were appointed through the NHS Procure22 framework as part of the team of the Principal Supply Chain Partner, Integrated Health Projects – a joint venture between contractors Sir Robert McAlpine and Vinci.

The architects report that a member of the clinical team commented early on that patients "commonly left mental health wards in worse physical health than when they arrived." A key driver of this project therefore was to support the physical as well as mental wellbeing of users where possible, throughout the scheme.



Photography © Tim Crocker

Providing easy access to good quality outdoor space was one of the architects' fundamental design principles



PLAN

The building is formed of two linked volumes each arranged around a courtyard which can be accessed by users, separated by a central landscaped garden



© Medical Architecture

People-focused masterplan

Medical Architecture worked closely with the trust to develop plans for a new two-storey building which would form the initial phase of a new healthcare campus. Reeves explains that the architects ran a series of workshops where clinicians were able to describe a typical day. “This helped inform the brief on what could be shared and where rooms needed to be. We talked through a number of concerns, particularly around visibility and observation.”

The ‘focus on people’ is manifested in several ways in the masterplan, including distributing roads and parking around the edge of the site, to keep cars away from users. The buildings are organised along a ‘boulevard,’ allowing activities to spill out and create an “activated street scene” – without adding risk.

To help create a connection with the local community, the original high perimeter wall was partly demolished, thereby creating a new opening connecting the boulevard with the local streets. The new building has also been designed to integrate aesthetically with the adjoining residential development, “adopting an architectural language that will complement high quality housing,” say its designers, while providing the appropriate security and privacy required for inpatient mental health services.

The facade has what the architects

describe as a “simple” material palette of brickwork that has been specified to help the building blend with the local vernacular and retained buildings on the site, but also to be a robust solution that will age well. “We wanted to create a normalised environment,” says Reeves, helping explain the choice of a single, familiar cladding material. When addressing all the challenges of designing for mental health, he says “The very environment can appear distorted, so the design has to integrate anti-ligature and anti-vandal features that are not conspicuous, so it doesn’t shout ‘mental health.’”

The hit and miss brick relief pattern around the windows draws attention to, and enhances, their generous size, while “creating a sense of play along the elevation,” say the architects. This required careful detailing and included building mock-ups to test whether it could be easily climbed. As well as bringing a “subtle play” to the elevations, it also “unifies elements such as the varying heights of doors and windows.”

The windows – ‘Safevent’ by Britplas – are some of the largest the supplier has ever installed, at 2.1 metres high. These address the ligature risks present while being able to be opened wide, behind a fine perforated steel mesh. This design allows good ventilation whilst providing security,

including preventing the passing of any prohibited items. The architects also worked with the manufacturer to integrate a fine screen within the window that directs views at a controlled angle so that mutual privacy is maintained between users and those in a nearby housing development. The solution offers patients a view out to “something real,” say the architects – i.e. the sky and surrounding landscaping – that would not have been possible by simply using a translucent film.

Therapeutic design

Mental health services – and therefore the design of mental health wards – have a complex set of demands, but the architects resolved to tackle these with “a simple solution and an integrated approach.” The building isn’t designated as ‘secure,’ but the architects were required to design to ‘medium secure’ robustness standards due to the “growing acuity of patients being admitted,” says Reeves.

The four wards are arranged on both levels, around two private two-storey courtyards. The building’s two volumes are separated by a central garden, which can be seen through glazing from the main entrance, giving a reassuring glimpse of nature. The courtyards offer patients private views, as well as providing “abundant daylight and a positive focal point.” The ward plan is a straightforward loop, giving users two choices of route; assisting Covid-safe, one-way circulation.

This, say the architects, also “gives staff or patients the opportunity to back away from escalating and challenging situations.” Wards can also be subdivided, in order to separate patient groups if needed. The architects wanted to use generous levels of glazing to aid observation for staff, as well as provide a feeling of openness in areas such as corridors.

The ward corridors run around the perimeter of the courtyards, forming light-filled colonnades of a generous width. Each bedroom has a recessed threshold for privacy, with seating across the colonnade for clinicians or patients; the extra space allowing patients to pass one another with less potential for anxiety or tension.

There was an “involved” discussion between the designers and the clinicians around the location of the ward office, says Reeves – this being an area which tends to attract patients, potentially leading to a “pressure cooker” effect. With the architects seeking to address this “power dynamic between patients and staff,” a solution was



arrived at of making it a less central feature.

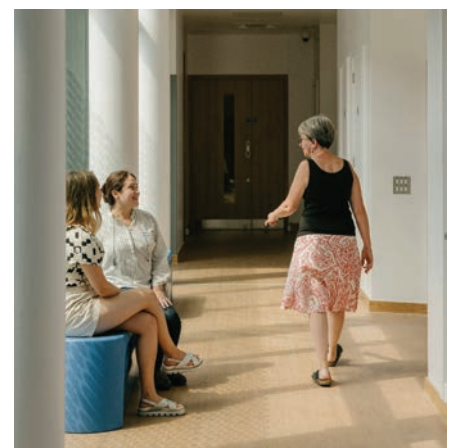
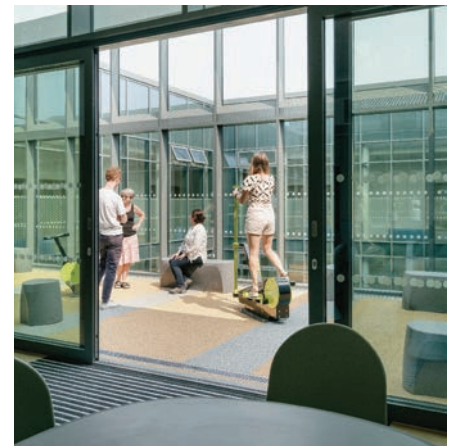
“The model evolved that staff would be more active on the ward itself rather than based in the office; this allowed it to be located away from the main social area, closer to the ward entrance for direct observation of access to and from the ward.” It also has a “touchdown area” – a seated zone where patients could sit and chat that “gets away from the idea of a formal counter.”

Access to outdoor space

Providing easy access to good quality outdoor space was one of the architects’ fundamental design principles, a factor which has taken on heightened importance during Covid-19. As a result of the design, patients have access to the outside on both levels, and can enjoy the courtyards safely without supervision.

“Both storeys are configured to provide direct access to outdoor space without the need for direct staff supervision, something which was severely lacking in the previous inpatient facilities,” say the architects. Facilitating this new level of autonomy reduces pressure on staff and removes potential sources of conflict and frustration.

The ground floor opens onto the courtyard, with a deep overhang in front of the dining and activity rooms that provides shade as well as shelter. Above, this





The ward plan “gives staff and patients the opportunity to back away from escalating and challenging situations”



supports a first floor terrace that is enclosed with a curtain wall, providing a space that feels larger than it is, giving expansive views over the courtyard beyond and below.

Promoting holistic health & wellbeing

As part of a general focus on keeping patients physically active, a variety of appropriately ‘inclusive’ exercise equipment is provided to the courtyards – both on the glazed terrace and on the first floor level. With their greater independence, patients are able to do healthy activity outdoors at a time that suits them.

The layout allows daylight to reach into the core of the building, enabling users to feel a “connection with the hours of the day, the seasons, and the changing weather,” say the architects. The interiors have been designed to provide “calm, organic environments,” with natural oak finishes where feasible.

Futureproofing & sustainability

The building has been designed with efficiency in mind, but also to be as flexible and adaptable as possible for future changes to the trust’s healthcare provision. Wards are designed to a standard template, and stacked to share risers, but that standardisation allows services to “swap or adapt in the future,” say the architects. Medical Architecture’s masterplan also provides a “route for future redevelopment of further inpatient accommodation with an additional three blocks.”

Passive design measures used include “low-tech solutions to control the internal

environment,” including tall ceilings, high level window vents, and exposed thermal mass to reduce summer overheating. Substantial amounts of insulation to the envelope are supplemented by air source heat pumps and a roof “covered” with PV panels, but concealed behind the parapet – all contributing to the building’s BREEAM Excellent score.

In addition to the renewable energy measures, and low-energy use design, use of natural materials where possible (such as oak finishes internally) helped contribute to the BREEAM score. However, so did the building’s promotion of physical health, including how the open, prominent stair helps encourage users to use it rather than the lift. Good views, enhanced by increased biodiversity, and access to outdoor space are further contributors. In addition, many windows can be opened safely to provide natural ventilation.

Conclusion

Achieving the balance between safety, security and high-quality environments for users and staff in acute mental health units is never easy. However Medical Architecture deployed their deep knowledge to transform the provision at St Ann’s Hospital, to provide a sense of space, and independence to users and staff. Not only that, a focus on healthy activities alongside wellness meant the unit can offer a different level of support to hopefully ensure that users leave the unit in a better physical state than they arrived in.

Part of the success of this project is down to the “great involvement” of clinicians with the design process, says Reeves, including the architects sharing VR visualisations, and providing a series of room mock-ups during design development, before the contract’s ‘guaranteed maximum price’ was arrived at. “We were able to refine the design, then post-GMP, work with subcontractors, particularly windows and joinery, to get the details just right.”

Testimony from one user shows the power of a simple, ‘first-principles’ approach to better quality environments: “The design of the new wards with ensuite bathrooms, more daylight and views of nature will reduce patient stress, anxiety and pain. This will all help to shorten the time service users need to stay.”

The real proof is that since opening, the project architect says the hospital has had “significantly lower levels” of incidents where patients needed to be secluded or tranquilised,” and physical restraint has “almost entirely stopped.” ■

BBA Certification for Huntsman Building Solutions Spray Foam Insulation

The British Board of Agreement has awarded BBA Certification to world leading spray foam insulation company, Huntsman Building Solutions, for its H2 Foam Lite E product.



Huntsman Building Solutions (HBS) is currently the only manufacturer of spray foam insulation solutions to carry the prestigious BBA certification, which covers its H2 Foam Lite E product for use in a range of construction application including pitched and flat roofs, suspended floors and external walls.

Commenting on the award, Gerry Sheridan, UK Business Consultant for HBS said: “Achieving BBA Certification is a long and arduous process and this is a huge win for Huntsman Building Solutions. This level of certification recognises quality, depth and breadth of product performance and puts HBS spray foam insulation right out in front”

The BBA Certification is in addition to KIWA BDA certification that HBS H2 Foam Lite already holds for a similar range of applications. For more information about HBS H2Foam Lite E product please visit huntsmanbuildingsolutions.com/en-GB/tech-library/h2foam-lite-e.



01485 500 668

www.huntsmanbuildingsolutions.co.uk

Hospice powered by Panasonic



Panasonic Air-to-Water Aquarea Heat Pumps are providing energy efficient heating and hot water to the Wicklow Hospice in Ireland. Consultants, J V Tierney & Co and main mechanical contractors Quinn Downes Ltd, created a design for a low carbon heating system to service the facilities of this

new hospice. The solution, featuring a Panasonic Aquarea H Series T-Cap system delivers a low environmental impact, requires minimal maintenance, and is highly energy efficient and yet cost-effective.

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Part F of the Building Regulations



Vent-Axia has welcomed the publication of new Approved Document Part F of the Building Regulations, as a “vital step to improve indoor air quality” as we move toward the Future Homes Standard on the road to Net Zero. Part F (Means of Ventilation) goes hand-in-hand with the new amended

Part L (Conservation of Fuel and Power), which is set to help the UK deliver Net Zero with a reduction of almost a third less carbon for new homes. The new Part F sets out “significant changes”, which will drive adoption of low carbon ventilation as an industry standard and improve the quality of the air we breathe in buildings.

0344 856 0590 www.vent-axia.com



It's good to share

GEZE UK has made donations to three local charities as part of their focus on Corporate Social Responsibility. A total of £1,820.00 was shared between St Giles Hospice, Lichfield Foodbank and the Pathway Project – a charity that supports adults, young people and children who are experiencing or affected by domestic abuse. All of them are based in Lichfield not far from GEZE UK's head office. The automatic door and window control company donated the money they received from Staffordshire County Council for carrying out lateral flow tests on staff during the Covid pandemic. Rather than keep the money it was decided to donate it to good causes or charities that can help people. GEZE UK's Corporate Social Responsibility policy states that the company aims to create a positive impact in society and improve people's lives wherever possible. The company supports local communities and encourages employees to become involved in local initiatives and fundraising events.

01543 443000 www.geze.co.uk

55 years of “making business a pleasure” for Harrison Thompson & Co. Ltd.

November 2021 saw Leeds company Harrison Thompson & Co. Ltd. celebrate 55 years of trading. A testament to an established company that having grown and moved with the times, still holds family values, along with customer service and quality of products, at the very heart of their business.

Established in 1966 by Peter Brumwell and partners, the company is now presided over by his two sons, Graeme and Tony. The day-to-day running of the business being led by a further three Directors who, between them, have clocked up 95 years of service, offering a wealth of experience.

Starting out as installers of wall protection rails, Harrison Thompson soon began to manufacture, supply and install its own brand – Yeoman Shield Wall and Door Protection Products – which are now highly recognised as a leader in the market.

The Yeoman Shield brand has continued to expand with product development at the



forefront along with the addition of Yeoman Shield Fire Door Services, launched to facilitate the growing industry requirement for accredited fire door maintenance and installation.

Yeoman Ranguard Rainwater Systems are also a part of Harrison Thompson's product portfolio offering quality gutters and downpipes to the developer and self-build sectors. Their aluminium gutters, downpipes and fascia range are constantly being

enhanced to keep pace with the ever-growing requirements of easy to fit, maintenance free and ecologically sound rainwater systems.

The growth of Harrison Thompson has certainly brought many challenges along the way but none maybe as unknown and trying as the current pandemic.

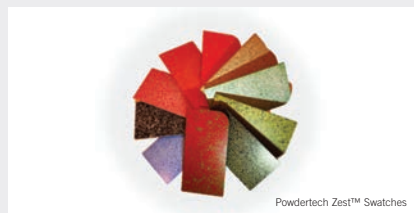
Graeme Brumwell explained: “The commitment and understanding of our team has been key to our company coping as well as we have these last 18 months. Not only have we had to consider the needs of the business and our clients but also the welfare of our employees and their circumstances along the way.”

“It has been a testing time but one that has strengthened our core values and has enabled us to adapt, take on new, smarter more efficient ways of working, enabling the company to flourish and positively celebrate our 55th anniversary.”

yeomanshield.com ranguard.co.uk

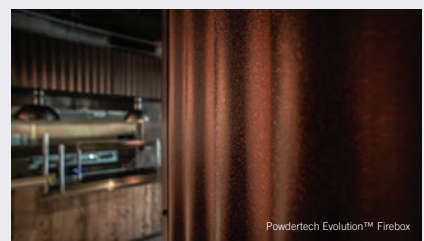
Fabulous new Powdertech finishes on stand 241, Surface Design Show 2022

Architectural powder coating has really come into its own, demonstrated by the progressive Collections launched by Powdertech Corby over the past 24 months. The company has curated three new Collections to complement the popular Evolution Collection, two brand new Collections were launched this year and another new finish will be revealed in the first quarter 2022. The new Collections will be featured in the hands-on Surface Spotlight Live section of the Surface Design Show, Feb 8-10, 2022 as well as on the Powdertech stand.



Powdertech provides professional powder coating services for the architectural and interior design markets using high performance powders from world-leading manufacturers. Working for many years with these powders, the team has developed methods of providing unique effects and textures. Late summer 2021 saw the launch of ‘Zest’, a vibrant range of powder finishes adding a fresh look to architectural metal work. Suitable for exterior and interior use on steel and aluminium, Zest shades really ‘pop’, reflecting the colours of sherbet sweets and fruit crushes..

The popular Evolution range offers shades based on colourful patinas caused in nature by metallic oxidation. Powdertech has added three further ranges – Stone, Rust and Terracotta. These offer designers the chance to achieve the appearance of a natural material, without any problematic issues such as weight, strength, cost, staining from run-off or



the need for time-consuming cleaning and maintenance regimes.

Freeform™ is the very latest new Collection giving customers the ability to have any design, logo or text reproduced by powder coating and easily applied to metal for external and internal architectural metalwork.

Visit the website for more information on Powdertech finishes.

01536 400890
www.powdertechcorby.co.uk

Back to the surface in 2022!

**SURFACE
DESIGN
SHOW**

Following the cancellation of 2021's entry, the Surface Design Show returns to the Business Design Centre in London from 8-10 February, exploring innovation

The design industry will once again be able to meet in person and get updated on the latest surface materials and designs. Attendees will be "enthused by the show's unique content as well as being educated by the wealth of talented speakers who will be telling their inspiring design stories," said the organisers.

The event will "make up for lost time," they added; with some "much-loved areas" as well as new zones for visitors. Included among over 120 exhibitors are 35 new faces.

A sense of place

Many exhibitors will show new product launches, inspired by the show's theme; 'Sense of Place,' promoting "humanity and the planet's wellbeing." Smile Plastics for example are introducing a 100% recycled and recyclable material made from household waste; giving a hint of marble with an attractive mottled 'coral' effect. Armourcoat is launching a new clay lime plaster, developed to achieve beautiful matte stone surfaces while minimising environmental impact. The products have low embodied carbon, contain no cement or volatile organic compounds and are available in a wide range of natural colours.

Surface Matter will be displaying a 'pop up sweet shop,' inspired by the company's 'material studio' in London Fields, east London. Visitors will find anything from LED lights resembling 'hundreds and thousands' to 'chocolate bars' made of a compressed paper composite.

Seminars, debates & features

Hosting debates, panels, trend forecasts and insights into the latest surface design innovations, the Main Stage is the heart of the show, featuring 16 presentations across

the three days. The opening night debate highlights a younger generation of architects and designers, and is entitled 'Climate Change and Future Proofing.' New to the show is a series of 'Legends Live' interviews where an industry personality meets and chats with their 'legend'. Architect Phil Coffey will interview Paul Monaghan of AHMM, and Hamish Kilburn, editor of *Hotel Designs*, talks to Conran's Tina Norden. Colour and material forecasts are always popular at the show, and Hannah Malein Creative Director at Colour Hive will be sharing her forecasts for spring/summer 2023.

Light School (and its content partner, Light Talks), will again be a highlight, showcasing architectural lighting. "Surfaces and lighting are natural partners – good lighting is needed to bring out the best in surfaces," say the organisers. Suppliers have the opportunity to influence architects and interior designers in the role lighting can play in their future projects. This year's Light Talks theatre will be organised in partnership with the Institution of Lighting Professionals, and iGuzzini.

Visitors will also be able to enjoy the Stone Gallery, which in partnership with Stone Federation GB brings an "exclusive preview of natural stone." The Stone Tapestry, curated by Squire and Partners, is a bespoke installation piece exploring innovative textures, light, colour and pattern in the creation of a "tapestry of inspiring materials from around the world." Italy's Confindustria Marmomacchine will make its debut, bringing a pavilion of 10 natural stone companies to exhibit in the Stone Gallery.

One of the highly anticipated and unique parts of the show is the New Talent section, with supporting new talent one of the show's key focuses. This year over 30



2022 will be the 10th anniversary of the Surface Design Awards, held on the final day with 48 finalists from nine countries

participants will display a range of sophisticated and innovative designs, from textile designs featuring augmented reality to 3D tiles of eco resin and waste materials. Many of the participants this year also display a focus on using natural materials and dyes. New Talent is curated by Trendease International and held in Partnership with Canon UK.

Surface Spotlight Live is a "focal point of inspiration for designers to touch and compare the very latest material prototypes," say the organisers. Sustainability is key to this feature too, with developers displaying an "extraordinary range of materials." Surface Spotlight Live will highlight the 'Sense of Place' theme, and will be curated again by trend and colour expert Sally Angharad and held in Partnership with CD (UK).

Registration to attend the show is now open: sds-2022.reg.buzz/website-button

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Sika demonstrates extensive fire safety compliance

Market-leading roofing manufacturer Sika has now completed Extended Application Assessments, testing to CEN/TS 1187:2012 Test method 4 for the entire Sika Sarnafil range of PVC single ply membranes. Subsequently, the most common Sika Sarnafil roof systems are now all classified under BSEN 13501-5 as B_{ROOF}(t4).

Working closely with independent global fire safety testing, inspection and certification company Warringtonfire – part of the Element Materials Technology Group – Sika has undertaken significant investment to attain the B_{ROOF}(t4) classification across all PVC membrane systems. This covers a range of permutations, including membrane type, thickness of PIR insulation, up to a 70° pitch and on any structural substrate.

A project spanning over two years' work, Sika has invested a substantial amount of time and resource, utilising the EXAP standard CEN/TS16459, which is available as a means of covering ranges of system permutations. Dean Grady, project leader and Senior Product Engineer at Sika, comments



Sika Sarnafil single ply on OCL Facades Ltd New Head Office, by Contour Roofing (Essex) Limited

on why Sika has opted to invest in this type of testing: “The market has become acutely aware of fire safety and it is looking to industry leaders to help. We have seen for a while now that specifiers, architects, clients and building control are increasingly insisting on fire test certificates that directly reflect the exact system being installed. As it is very problematic to test every single permutation of a system, when you factor in multiple substrate types, insulation thickness and membrane type/thicknesses, EXAP testing through an independent body allows us to cover most variations of the system being installed. With Sika Sarnafil roof systems classified as B_{ROOF}(t4), we're able to

demonstrate and facilitate regulatory compliance for fire safety and satisfy current market demand.”

Continuing, he explains how the update will affect specifiers: “Having this comprehensive B_{ROOF}(t4) classification, which indicates the highest external fire performance for roofs, means that specifiers and other stakeholders can use Sika Sarnafil on their roofing projects with a very high degree of confidence, assured that they're complying with fire regulations.”

The only people who are permitted to undertake any degree of desktop/extrapolation studies now are accredited, independent fire test houses. This clearly removes the ability for anyone else to interpret or extrapolate the fire test data that may have been practiced in the past.

“We are not offering a view, we are offering wide-ranging test data and evidence that covers most permutations and situations – all with third-party verification, which is key,” he adds.

01707 394444 www.sika.co.uk/roofing



Magply partners with Prokol

A Dutch manufacturer of fireproof flat roof coatings is recommending IPP Limited's Magply boards as the ideal substrate on which to install its liquid applied treatments: based not only on their fire rating and stability, but also because of the material's flatness. A major installation is currently underway in Essex, on an industrial building known as 'The Gloucester's', where a long established local building company Davis Bros is overlaying the old 'northlight' roof over its own premises and that of its neighbours with a Prokol specification that includes 6 mm Magply. The roof structure is formed from concrete planks over steel trusses and has an existing felt waterproofing system nearing the end of its life. This is being overlaid with Soudal Foam and 100 mm of Xtratherm foil-faced insulation, onto which the 6 mm Magply boards are bonded using a polyurethane adhesive. The joints are sealed with Prokol's special high elongation tape before the MonoSeal top layer is applied. Magply MOS boards present a fire-safe and environmentally friendly alternative to conventional plywood or OSB products.

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A mindful eco build from Blue Sky Property Services and West Fraser

Timber frame specialist, Blue Sky Property Services, of Norfolk, is always mindful of the environmental impact of its building and renovating projects. This is certainly true of the conversion of an old engineering unit into a luxury two double bedroom eco holiday rental being built in the Norfolk countryside. The property, owned and managed by Emma and Neil Punchard, will be finished to the exacting standards of their other Eco Barn and Hay Barn holiday lets.

“We always specify West Fraser products as they are easy to use and are produced with the environment in mind. We used CaberShieldPlus on the first floor as we didn’t need to worry about leaving it exposed while we were building. The non-slip textured finish is not only safe; as the waterproof coating is permanent, it means there’s no plastic to throw away!” said James Carter, Director of Blue Sky Property Services.



CaberShieldPlus is specially designed to withstand exposure to wet conditions. It has protection on both sides, not just the exposed upper surface. The top surface features a permanent non-slip coating that not only prevents damage to the board but also ensures a safe working platform. The underside is protected with the smooth coating that not only protects against damage but also makes the board easy to slide into position. For added durability, the coating applied to CaberShieldPlus is not designed to be peeled

off after completion but is bonded permanently on both sides of the panel and waterproof. BBA-approved for up to 60 days’ continuous exposure to the elements when used with CaberFix D4 adhesive, the board lets builders carry on building even with the roof off.

All West Fraser panel products produced in the UK are net carbon negative and manufactured in mills that have obtained the coveted environmental ISO 14001 accreditation. Responsibly sourced, the panels are FSC certified and created from locally grown timber, cutting embodied carbon from transportation. Sterling OSB Zero is also the first OSB product to be made in the UK with zero added formaldehyde, ensuring an even ‘greener’ board that meets all standards with ease. Samples of Sterling OSB Zero, and West Fraser’s other construction panels, can be ordered on the website.

01786 812 921 Uk.westfraser.com

Triton launches pre-applied waterproofing system for concrete structures

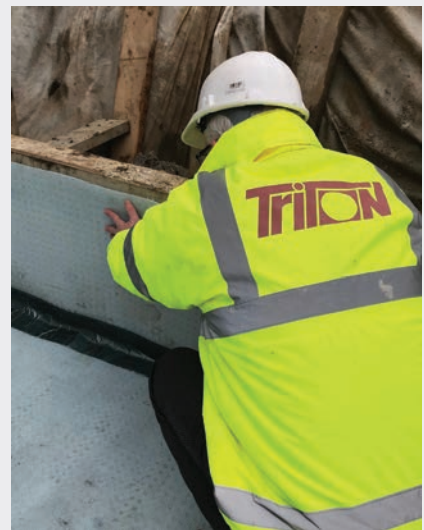
The new Triton Shield System is a reliable form of pre-applied, Type A barrier waterproofing, which provides a flexible approach to specifying a system requiring two different types of waterproofing protection – as defined in BS 8102 (2009). Use the new Triton Shield System in conjunction with concrete made waterproof by the addition of Triton TT Admix (Type B integral waterproofing) or, alternatively, in conjunction with a sealed cavity drain membrane system (Type C drained waterproofing).

Triton’s new Shield System comprises a pre-applied, fully bonded, waterproofing (Type A) barrier membrane for use on the outside of a poured concrete structure – such as a basement slab and retaining walls – and a Stretch Tape that makes easy work of sealing around curved or irregular profiles due to its unique stretchability and flexibility. A key benefit when specifying the new Triton

Shield System is the Triton team’s technical knowledge of all three types of waterproofing system and their extensive practical experience of choosing the right combination of systems for the expected usage of any basement or below ground structure.

The mesh-faced, HDPE Triton Shield Membrane offers a tenacious grip to the concrete poured on top of it. The 2 m x 20 m membrane rolls are light enough to be carried by two people but are still larger than many competitive product rolls. This means fewer side lap or end to end joints will be required with a resulting reduction in the risk of defects occurring.

New Triton Shield System offers a cost effective, fast to install, very lightweight and durable solution for concrete waterproofing – contact the Triton team for further advice and project-specific details drawings, or download the data sheet found on Triton’s website.



01322 318830 info@tritonsystems.co.uk
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Minimising fire risk on the 'fifth facade'

Will Wigfield from Rockwool shares best practice advice on how to limit fire risk in flat roof constructions, and explains the limitations of current testing protocols for flat roof insulation

While flat roofs have long been used to house plant equipment and machinery, their scope and role in contemporary building design is expanding. Now, this 'fifth facade' is frequently used to create green and blue roofs, harvest energy through PV arrays, or provide garden terraces and social spaces.

With this expanding role however, there is also expanding risk. In addition to the hazard presented by hot works – both in the construction phase and during subsequent maintenance – electrical malfunctions in roof-mounted equipment, such as solar panels, have been known to cause roof fires.

If a flat roof is relatively accessible – whether at low level, featuring a terrace, or reachable via scaffolding – it can become an easy target for arsonists. Yet with the right material choices, not only can these fire risks be mitigated, the roof can even perform as a means of escape or place of refuge.

As is the case throughout the building envelope, the use of non-combustible insulation in flat roof design should be considered best practice. However, when selecting materials, changes to Approved Document B (ADB) in 2019 have caused some confusion in the market regarding testing, standards and legislation for fire performance.

A different class

The national classification system (BS 476-3) was previously the principal determinant of external fire performance in roofs. While the European classification system historically ran alongside it, changes to ADB in 2019 saw the national classification become obsolete, with EN 13501-5 'Fire classification of construction products and building elements – Part 5: Classification using data from external fire exposure to



roofs tests', becoming the main reference point for assessing fire penetration and spread of fire in roof applications.

Under the national classification, performances of AA, AB or AC allowed the unrestricted use of a flat roof system and could be applied anywhere on the roof.

BS EN 13501-5 is now the recognised standard for indicating the performance of a flat roof system when exposed to fire from an external source. Applicable to ADB, Test 4 of DD CEN/TS 1187:2012 provides the method for evaluating the performance of a roof under the conditions of 'thermal attack,' which includes external fire spread and penetration by fire. The highest achievable rating is termed B_{ROOF(t4)}.

The tests required to achieve a B_{ROOF(t4)} rating do not subject the roof system to a fully developed fire



Non-combustible insulation in flat roof design should be considered best practice

Reducing risk

While the tests required to achieve a $B_{ROOF}(t_4)$ rating consider surface spread of flame, penetration of the roof membrane, and the presence of droplets or charring – they do not subject the roof system to a fully developed fire, nor do they consider fire penetration from the underside.

$B_{ROOF}(t_4)$ is achievable by virtually all commonly-available roof build-ups on the market, even those that incorporate combustible insulation with a reaction-to-fire rating as low as F.

As such, it's important to note that a $B_{ROOF}(t_4)$ rating does not define the combustibility of the component parts of a roof system – including the insulation. Therefore it cannot be used alone to satisfy requirements that are defined by Euroclass reaction-to-fire ratings, such as those in ADB concerning the crossing of compartment walls (A2-s3, d0), or

attachments to buildings covered by Regulation 7 (A2-s1, d0).

A simple and straightforward way to determine the combustibility of a building product is by checking its Euroclass reaction-to-fire rating, which can be found on the product's declaration of performance.

Safeguarding compliance

In a bid to reduce fire risk and minimise room for installation error, industry is starting to adopt a simplified approach to insulation design, using a non-combustible material across the whole flat roof area.

This proactive approach brings tremendous benefits. Designers can futureproof buildings and specifications against a changing regulatory landscape, and there's the potential for efficiency gains onsite by removing the need for close coordination when using a combination of different insulation materials. But above all, architects and their clients can be assured they are also providing a safer environment for future building occupants.

Will Wigfield is flat roof product manager at Rockwool



Delivering gas protection solution



When it comes to the challenge of waterproofing and gas proofing a below-ground structure, Newton Waterproofing Systems, a leading independent designer and supplier of guaranteed waterproofing systems, stock a range of products that combine effective

waterproofing and gas protection. Newton has a range of products that meet the necessary standards for use as protection against below-ground gases. For more information on combined gas and waterproofing systems, the industry-qualified Newton technical team can provide project-specific advice and product recommendations.

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Sto creates insulated brick slip facade



A combination of external wall insulation and resin brick slips from Sto has helped create a thermally efficient and visually striking appearance for a £7.8m residential refurbishment project. Located on the Stockwell Park estate, Tyler House now

benefits from the use of Sto resin brick slips which have been installed as the final facade finish, onto the company's StoTherm Mineral K external wall insulation system. The BBA-certified StoTherm Mineral K insulation system is ideal for refurbishment projects. Its external installation means that insulation performance can be substantially upgraded without the loss of any living space inside the premises.

0141 892 8000 www.sto.co.uk

Concrete results for Crittall



A listed art deco building exemplifying reinforced concrete construction has been refurbished with Crittall Windows helping to ensure its original appearance was maintained. Victor House was built in 1937, designed by architect Peter Lind, as a headquarters for the British Reinforced Concrete Engineering Company on the site of its extensive cement works at Pitstone, Leighton Buzzard. When the cement works closed and was subsequently demolished Victor House survived as the only original building on the site. At this point it was purchased and refurbished by property company LaForet. After initial use as an office for a legal firm the building became vacant but failed to re-let. Also, single glazed windows contributed to large heating bills. LaForet sought permission to convert the offices into eight apartments and architects EHW Ltd carried out negotiations with local planners who insisted that the upgraded double glazed windows should match the original fenestration as closely as possible. Crittall Corporate W20s, finished in white, were specified as a result. The building has been renamed Portland House as a reference to its original connection with the manufacture of cement.

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ITPL relies on Stertil Dock Products to support 24/7 operation

One of the UK's leading logistics companies, Integrated Third Party Logistics (ITPL), relies on an installation of 32 loading bays from Stertil Dock Products to ensure the efficient loading and unloading of 160 vehicles every day.

Vehicles arriving at the ITPL complex, which include 40 foot curtain sided and box containers, deliver and collect palletised loads with an average weight of one tonne per pallet.

When originally constructed, the ITPL warehouse incorporated 16 loading bays featuring Stertil loading bay equipment. This original installation performed well in a demanding application over many years which led to the decision to install similar equipment to support a recent 14 bay extension to cope with increasing throughputs. The Stertil equipment installed within the new extension includes the latest generation of S-series swing-lip dock levellers. Providing a dynamic load capacity of six



tonnes, these levellers automatically adjust to the changing floor height of the vehicle during loading and unloading operations, even if the vehicle is unevenly loaded.

Stertil also supplied and fitted its W-series curtain dock shelters to ensure exceptional performance of the loading bays. These shelters combine sturdy aluminium frames and strong reinforced curtains to provide optimal sealing between vehicles and the warehouse building.

To complement the energy saving properties of the dock shelters, Stertil also



installed insulated doors from its Thermadoor range. These doors offer a choice of insulation levels including higher value insulation for applications where temperature control is critical.

Completing the range of Stertil dock products installed at the ITPL warehouse are L-shaped rubber bumpers which effectively prevent damage to the loading bay caused by reversing vehicles.

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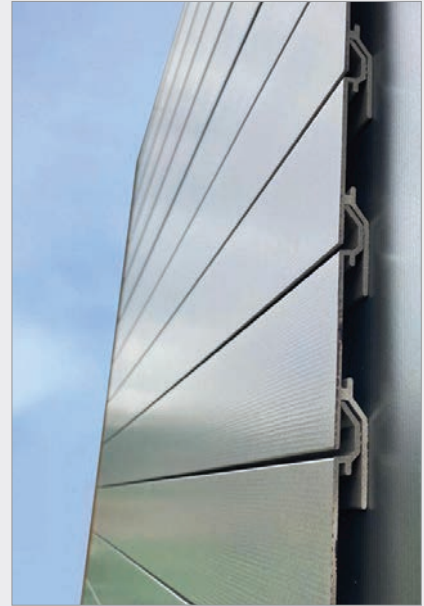
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Metalline launch new Aluminium Extruded Plank System to their Unity Range

Metalline are delighted to announce they have developed a new aluminium extruded plank system to add to their Unity rainscreen range. Unity X-TRU is a cost effective cladding solution designed with simplicity and versatility in mind, making it the perfect solution for both new builds and the replacement of non-compliant ACM, HPL and timber cladding. The new X-TRU plank is functional with exceptional mechanical properties including

strength, durability and fire-resistance and is particularly suited to buildings where dangerous timber cladding is present and needs replacing.

Available in a number of finishes, including wood grain, the X-TRU system is a unique way of transforming the exterior of a building and currently offers designers flat faced interlocking 100 mm & 150 mm planks. In addition to the wood grain effect finish, the extruded aluminium planks can be supplied in a variety of lengths and a vast array of powder coated or anodised colours to achieve A1 & A2 classifications. The panels offer a desirable fast track install and secret fix, connected by an interlocking male/female joint which can be easily fixed either horizontally or vertically to an adjustable support system. This drained and ventilated system creates a weather shield in front of a primary structure.



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Senior has its moment at retirement village



Senior Architectural Systems has supplied the full aluminium fenestration package for a new retirement village in the West Midlands which comprises 261 one- and two-bedroom apartments for the over 55s. The scheme features Senior's SPW600 aluminium windows, SPW501 doors and thermally enhanced SF52 curtain walling; all fabricated and installed by supply chain partner Acorn Architectural Aluminium for main contractor Vistry. Senior's SPW600 aluminium windows fit the brief perfectly by offering attractive slim sightlines, high thermal performance and meeting the requirements of Secured By Design.

01709 772600 www.seniorarchitecturalsystems.co.uk

Reliable overlap welding of geomembranes



Leister's new COMET 500 / 700 automatic hot-wedge welding machines offer optimized hot wedge shapes which ensure efficient heat transfer during overlap welding plus they are ideal for welding geomembranes up to 125 mm overlap.

The digital display shows speed, wedge temperature and welding pressure. Reaching speeds up to 8m/min, they weld with ease on uneven or steep terrain due to powerful drive motors and pressure rollers with tremendous grip, and three well-positioned handles make them easy to guide, lift and transport. The COMET 500 / 700 models are supplied to the UK by Welwyn Tool Group.

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Non-combustible adjustable pedestal for roof terrace and decking areas

Bauder has expanded their pedestal support system range by launching a non-combustible pedestal to complement the other non-combustible roofing products. There is also a new adjustable pedestal system available for an extensive variety of terrace and decking options.

The Bauder Non-Combustible (NC) Pedestal is manufactured from aluminium. It is a light weight, non-combustible pedestal designed for use on a wide range of flat roofs to support paving, decking and grating. There is great demand for solutions on balconies and roof terraces where a non-combustible build up is required. This adjustable pedestal system can be laid at a variety of depths from 42 mm to 77 mm on a slope of up to 5°. The pedestal has an integrated slope corrector which enables paving and decking to be laid where there is an uneven substrate or where ramps are required. The unit is also capable of absorbing 3 tonnes of load. The large

spreader base plate feature ensures the product will not compromise the roof insulation or waterproofing membrane whilst spreading the load across the roof surface.

The non-combustible pedestal is the most advanced Class A1 fire-related pedestal on the market, meeting the current requirements for the roofing industry. Furthermore, the system has been tested with Bauder waterproofing systems to achieve $B_{ROOF}(t4)$. Additionally, the NC range has a suite of Class A fire-related accessories including spacer tabs, edge restraints and joist supports.

Alongside the Bauder NC Pedestal, the Bauder pedestal support system range offers the Slope Correcting Pedestal, and the new Bauder Adjustable Pedestal. Bauder's pedestal range is designed to meet the exacting standards of finishing levels demanded by architects and clients when specifying open-jointed paving and decking finishes.

Find out more: bauder.co.uk



UNITY X-TRU Extruded Plank System

X-TRU is a new extruded aluminium plank system that has been added to the Unity Rainscreen range



Unity X-TRU is a cost effective extruded aluminium cladding solution designed with simplicity and versatility in mind. This makes it the perfect solution for both new builds and the replacement of non-compliant ACM, HPL and timber cladding.

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Rendering life-long success

Matthew Allen of Sika discusses the key considerations when specifying render to ensure that a long life, as well aesthetically pleasing, result is achieved

A building's external surface is integral to its overall design success. For many, deciding on the most appropriate system which falls in line with their design aspirations can be a challenge, due to the variety of render systems on the market. Companies with experience in building finishing and rendering can support specifiers in identifying a solution that is both practical, sympathetic to the property, and aesthetically pleasing. The correct specification can improve a home's aesthetic appeal, protect brickwork against the elements, and make the building more energy efficient.

Path to perfection

This outer skin adds personality and character to a building, and is one of the principal ways a designer can make their mark on how their creations are perceived by occupants and visitors. This is aided by firms who offer a wide standard range of 'through' colours which can be applied in a variety of textures.

Most renders are suitable for machine spraying or hand application. A spray-applied render is ultimately faster and more efficient than the traditional hand-applied method, and provides a crisp, clean finish on a wide range of substrates. To avoid variations in shade, render should ideally be applied to whole elevations at the same time.

Thermal performance

At a time when the UK needs to improve its 'energy-deficient' building stock, one of the most significant benefits of modern renders is that they can be combined with insulation, to not only improve the external aesthetics but also significantly improve a building's thermal performance without affecting the interior space. 'Wrap-around' external wall insulation systems will significantly reduce heat loss through the external envelope and ensure a warmer more

comfortable internal environment, while at the same time creating a more attractive exterior.

An appealing finish

A successful example of the aesthetic appeal of render can be seen at a recent development of luxury homes, close to the historic market town of Kendal. Situated in the southern gateway to the Lake District, Stonecross Meadows is a stylish development of three, four and five-bedroom semi-detached and detached homes. The developer, Jones Homes, required a weatherproof render in two contrasting colours which offered ease of application and would successfully complement the homes' natural stone facade. This led to the specification of a one-coat weather resistant and breathable render.

Jones Homes specified more than 5,000 m² of render in Pale Yellow and Smokey Grey for the homes, garages and surrounding walls of the development. The render was spray-applied to the concrete blockwork in a consistent finish, and to provide additional reinforcement and crack resistance at stress locations around openings, mesh was embedded during the application process.

Whatever the substrate, there is a render to suit in a wide range of styles, finishes and colours to meet the design requirements. Rendered facades offer versatile, efficient and cost-effective solutions for any new or refurbished building regardless of the type or age of construction. They can be used to improve the outer skin of a building, update the aesthetics, adding huge kerb-side appeal, and can be an important step in improving a building's long-term thermal efficiency.

Matthew Allen is national specification manager for the Sika Building Finishing team



Modern renders can be combined with insulation to not only improve the external aesthetics but also significantly improve a building's thermal performance



Huntsman Building Solutions: The home of insulation

A new name is emerging in the nascent spray foam insulation industry. Huntsman Building Solutions, part of the global chemicals giant, Huntsman Corporation, has been formed following the acquisition of three existing spray foam brands – Demilec, Lapolla and market leading UK and Republic of Ireland based system, Icynene.

The merging of these three brands under the Huntsman Building Solutions (HBS) title creates an organisation designed to bring innovative solutions to the market which had principally offered only traditional forms of building insulants such as mineral wool and rigid board-type products.

Spray foam solutions differ from conventional insulation products in that they are applied only by specialist contractors using bespoke equipment not usually available to the general building industry.

Spray foam insulation is applied as a two-component mixture that comes together, forming a breathable foam that expands 100-fold within seconds of application, sealing all gaps, service holes and hard to reach spaces in a building.

Modern spray foams such as HBS Foam Lite use water as the blowing agent. This

means that the reaction between the two components produces CO₂ which causes the foam to expand. As the material expands, the cells of the foam burst and the CO₂ is replaced by air.

This creates an open cell foam structure with a soft, yielding texture that provides outstanding insulating properties and lets the building breath naturally, resisting internal condensation.

Investment in UK manufacture and distribution

Huntsman's commitment to and planned investment in the UK market is substantial. Rather than importing raw material from their factories in Canada where the system was developed to cope with their extreme winter temperatures, products are now manufactured in a Huntsman facility in Kings Lynn, Norfolk.

According to Huntsman, this "on-shoring" of manufacture has a number of benefits: long distance transportation is eliminated with a big reduction in related carbon emissions, consistency of product availability is guaranteed, and a number of UK based jobs are created in an area where highly skilled employment hard to find.

UK Centre Of Excellence training facility

At the King's Lynn factory site, Huntsman has established what they describe as a Centre of Excellence (COE), installer training facility – believed to be the first of its kind in the UK.

Here, we take a look behind the scenes and share in an introduction to the COE facilities by Iain Stanton, Managing Director, HIFS.

"A year or so ago, Huntsman saw a clear need for proper training programme for contractors working in the spray foam industry. Not just to ensure technical, environmental, health and safety compliance but importantly, to give end-user customer the confidence to choose spray foam insulation over traditional materials". Said Stanton.

Huntsman aims to promote Spray Foam Insulation as the insulation of choice through an extensive marketing and communication programme to educate consumers through press, media and online to explain the benefits of spray foam insulation and continue to train contractors to ensure high quality standards in the industry.

At HBS Centre Of Excellence, existing installation contractors as well as new teams looking to join the industry, go through a



The HBS Centre Of Excellence provides specialist spray foam training facilities for contractors



A fully liveried, contractor installation rig



HBS spray foam expands 100-fold in seconds



Better insulation of the UK's ageing housing stock will provide significant environmental benefits

comprehensive training programme which leads to a “Certificate of Application Training” and Authorized Contractor status. Huntsman Building Solutions sees this resulting in formal NVQ status of a standard comparable with recognised trade qualifications similar to bricklaying, joinery, electrical and plumbing.

Iain Stanton was at pains to point out that, “Only by passing successfully through the HBS training programme will contractors become Authorized Huntsman Building Solutions Contractors and only then they will be allowed to buy HBS products.” Clear commitment to raising standards and skill levels.

Reduce carbon emissions through better insulation

On a wider perspective, better insulation of domestic households is seen as one of the most important ways of reducing carbon emissions and slowing the effects of climate change.

A recent environmental audit, select committee report said that around 19 million UK homes are poorly insulated and that, unless urgent action is taken to improve energy efficiency of these homes, the UK will fail to meet its climate change commitments.

As over 60% of our current housing stock was built pre-1960 when little thought was given to heat-loss prevention, the challenge is significant and one which Huntsman recognises and is tackling through innovative insulation solutions.

Spray foam insulation is seen as a system that can make a real contribution to energy efficiencies and reducing environmental impact. Spray foam is a highly efficient insulation material that seeks out and seals the tiny voids and difficult to reach spaces that traditional insulation simply cannot.

Traditional insulation products also struggle to cope with small structural movements which can lead to air gaps and, when up to 40% of a building's heat loss

caused by air leakage – draughts to you and me – an insulation system that works to prevent air leakage, effectively creating a breathable, sealed-box environment, is essential to minimise heat loss.

Build tight. Ventilate right

Huntsman's aim over the next few years is to promote the benefits of spray applied insulation in both new-build and retrofit applications promote best practice in spray foam insulation.

Their commitment is clear to see in onshore manufacture, market development and better training and compliance.

Better insulation, eliminating air leakage and the introduction of managed building ventilation. Long term goal with real environmental benefits. All neatly summed up in the HBS mantra, “Build tight, ventilate right”

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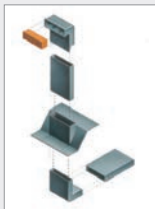
www.huntsmanbuildingsolutions.co.uk



SIMON BAKER, PRESIDENT, HUNTSMAN BUILDING SOLUTIONS AT THE OFFICIAL OPENING OF THE KING'S LYNN CENTRE OF EXCELLENCE

“Our commitment to the UK is clear to see. By investing in onshore manufacture, we can eliminate transportation costs, cut damaging emissions and create valuable employment opportunities. Our new training facilities will raise industry standards and our insulation products will give the construction industry the high-performance tools it needs improve heat loss mitigation in buildings across the spectrum.”

Cavibrick challenge



The Cavibrick is a moulded ventilator from Cavity Trays of Yeovil. Cavibricks have integral louvres, deflectors and an internal back upstand to guard against water ingress. Whilst traditional airbricks generally have two rows of 9 square 8 mm x 8 mm apertures, (Total airflow rating 1,152 mm²) the Cavibrick has louvres promoting an airflow rating of 7,500 mm² – over 600% greater. Meet ventilation requirements

easily and at less cost. Plus there's a supporting range of duct and extension attachments.

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Ventilation for Air Ambulance Headquarters

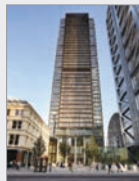


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Breathing Buildings, one of the UK's leading providers of controlled hybrid ventilation systems, has supplied ventilation to the new East Anglian Air Ambulance (EAAA) HQ building. The brand-new section of the building features Breathing Buildings' NVHR 1100 natural ventilation with heat recycling units together with S1500L e-stack ventilation units. East Anglian Air Ambulance CEO Matthew Jones commented: "We are looking forward to operating from the building and working in a space that is both comfortable and healthy to work in."

01223 450 060 www.breathingbuildings.com

Diffusion has supplied fan coils



Julian Abrams © Stanhope

Diffusion has provided heating and cooling at One Bishopsgate Plaza at 150 Bishopsgate, London. "We are delighted that our fan coil units have been selected to provide heating and cooling at this spectacular new development. One Bishopsgate is set to become another iconic London landmark and the Diffusion fan coils will help provide a comfortable and healthy indoor environment", explains Paul Meech, Business Unit Director at Diffusion. "Thermal comfort is an important factor in modern buildings and energy efficient fan coils offer discrete on-demand heating and cooling."

020 8783 0033 www.diffusion-group.com

Panasonic helps Belfast Grand Opera House



The Belfast Grand Opera House is one of Northern Ireland's most iconic theatres, and recently underwent a large-scale renovation, including a revamp of its air conditioning with the help of Panasonic. With a seating capacity for 1,063, the space requires high-performing air conditioning solutions to ensure visitors can fully enjoy the experience with comfort. Aircon Sales & Service installed Panasonic air conditioning solutions in the main auditorium, the baby grand studio and the bar areas. A Panasonic hi-wall split unit, incorporating the unique nanoe™ X technology, was also installed in the front of house office.

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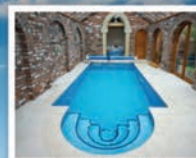
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Pumping up radiators' profile

Chris Harvey of Stelrad Radiator Group examines the relationship between radiators and heat pumps, and how they might be able to work effectively together in future



The recent announcement from the Government of a £5,000 grant available from April 2022 for those installing a heat pump – rather than a traditional fossil fuel driven heating system – has raised the possibility of a significant increase in heat pump installations in the UK. Fewer heat pumps have been installed in the UK in recent years than in any other country in Europe, but the Government wants to see 600,000 heat pumps installed every year from 2028.

The development of lower temperature heating systems, utilising renewable heating

appliances such as air source heat pumps – has given rise to a number of questions including where do currently used components fit into the future of heating? Many people claim that underfloor heating is the only or ‘best solution’ for heat pump installations, but that is not the case.

Heating solutions for homes

More than 90% of all heating systems in the UK currently rely on radiators to share the heat around the home, and despite the arrival of underfloor heating, there is still a marked reluctance to use UFH upstairs in

More than 90% of all heating systems in the UK currently rely on radiators to heat the home



new build. It is also a complex option to fit as a retrofit solution, so radiators tend to win out most of the time. Radiators heat up and cool down far more quickly than underfloor heating, something that needs to be borne in mind when selecting the best way to share heat around the home.

Most radiators are actually ‘convectors.’ More than 80% of the heat is convected; drawn up behind the radiator where the air passes over the metal surfaces of the radiator and heats the air in the room.

In new build housing, using a heat pump-based solution is relatively simple. The heating system can be designed into the home at the outset so you know the parameters in which the heating system has to operate – the method of construction, the size of the rooms, the number, type and size of doors and windows – so the heat loss calculations can be done up front and radiators sized accordingly.

The key to radiators operating well in any situation is to size them properly at the

outset. This involves accurately working out heat loss calculations to achieve the necessary number of BTUs required to provide comfort heating in each room and to select a radiator that can provide that level of heating.

In replacement heating systems for older properties there are additional issues. It’s a fact that simply replacing a boiler with a heat pump will usually see the existing radiators unable to provide the levels of heat needed in a home. So what is the solution – one that is cost effective and straightforward? Do we need to ditch radiators altogether and look for alternatives?

Radiators & heat pumps

The simple answer is no. Radiators will work well with heat pumps, but the size of the radiators will need to be increased to provide a larger metal surface area to heat the air in the room to the level required to provide comfort heating. This need not involve unsightly radiators – for one, modern radiators are aesthetically far more attractive anyway, but there are other solutions too. You can achieve the extra boost radiators need by replacing the existing single or double panel radiators with the relatively new K3 radiators that have three panels and three sets of fins – providing the additional metal surfaces you need but without increasing the radiator footprint on the wall.

Major radiator manufacturers have anticipated the significant move towards air source heat pumps in the UK and have added new, larger size radiators to their portfolio. They have also stepped up the options on the K3 radiator designs available too.

In addition, the popularity of vertical radiators has also offered a solution. With a smaller horizontal footprint than a traditional radiator, they can also be larger overall – taking up floor to ceiling space instead. It may be more practical and more attractive to have two modern vertical radiators in a room than one large standard radiator.

Radiators are very much ‘fit for the future’ but as always, correct sizing will need to be undertaken to ensure that they are effective. Radiators can work well with air source heat pumps and they already are in a host of installations across the UK.

Chris Harvey is head of marketing of Stelrad Radiator Group

AET – a significant refurbishment element



AET's underfloor air conditioning system has allowed the developers, Brookfield Properties, to offer truly adaptable office space fit for 21st century ways of working, thus differentiating their market offering. During the design process

the decision was made to incorporate AET's underfloor system on both the lower ground and ground floors to ensure consistency of interior design aesthetic as well as mechanical services, taking the total area served to just under 13,000 m².

01342 310400 www.flexiblespace.com/casestudy/citygate-house

National Ventilation's new design team



National Ventilation, a leading UK-based ventilation manufacturer and supplier, has launched a new whole-house ventilation design service for design and build projects, with a dedicated new specification team. Aimed at architects, developers and builders with developments of 100 plots or less, the free service provides a full whole-house ventilation design, which will detail unit calculations, a full kit list, recommended duct routes, as well as a pre-order site visit where necessary. The design service is also not limited to domestic solutions; the design team can offer the same support for commercial and industrial applications.

01823 690 290 www.nationalventilation.co.uk/design-service

Helping school design reduce carbon emissions



With heating being a school's primary use of energy, leading independent building services specialist Gilberts is taking steps to help the educational estate optimise its carbon footprint. The move coincides with updates to the required technical standards and performance criteria for schools' mechanical services, within the Department for Education's Facilities Output Specification. The updates are encouraging specifiers to consider utilisation of heat pumps as the most efficient way of warming, ventilating and cooling the building. When powered by electricity from a renewable source, with their high COP verses oil, gas or direct electrical options, heat pumps offer the school long-term benefits and lower energy bills. However, it is important to ensure the heat pumps are installed with support building services systems that can work efficiently with them, so the school has a healthy internal environment for the pupils and staff. Gilberts' MFS hybrid ventilation units do just that. Integrated into the heat pump system, Gilberts' MFS can utilise the warmth brought into the school from the ground or air to maintain a comfortable internal environment in each individual classroom, year round.

01253 766911 info@gilbertsblackpool.com

F. Ball launches RAG® 2022



F. Ball and Co. Ltd. has unveiled an updated version of its highly anticipated F. Ball Recommended Adhesives Guide (RAG®), which includes new floorcoverings launched by manufacturers during 2021 and F. Ball's Styccobond F58 PLUS adhesive, which also made its debut during the year. The RAG® 2022 enables contractors and specifiers to quickly check the compatibility of F. Ball adhesives

with over 6,000 branded floorcoverings from over 200 international floorcovering manufacturers. A copy of the printed guide can be requested by e-mailing.

01538 361633 mail@f-ball.co.uk

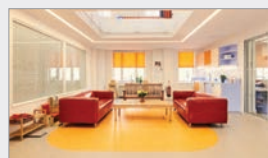


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Obsidiana COMPAC is a truly pioneering surface material made from 100% recycled glass and is itself 100% recyclable, making it the first worksurface in the World to offer a totally sustainable solution. COMPAC have been able to create this unique worksurface without compromising its beauty versatility or performance therefore, Obsidiana COMPAC can be specified with confidence for kitchen worksurfaces, wall cladding, splash backs, bathrooms and shower trays. Obsidiana COMPAC is available in two extraordinary collections – Volcano and Astral and both offer high resistance to abrasions, impact, chemicals and water absorption. COMPAC's commitment to produce safe, circular, and sustainable products is underpinned by a number of prestigious design and sustainability awards Obsidiana COMPAC has won since its launch in 2020. For over 45 years COMPAC have been committed to the environment.

www.compac.es

Small Steps puts its best foot forwards



When charity, Small Steps, secured its new home in the heart of Richmond, it required a warm and welcoming interior environment that would support children living with physical disabilities and their families. Providing the perfect

natural canvas, Forbo Flooring Systems' linoleum brand, Marmoleum, was installed throughout the purpose-built facility. Spread over three floors of a former office building on Worple Way, the 517 m² site that Small Steps now calls home, was funded through a generous donation.

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

Explore the beauty of imperfection with IVC Commercial

Inspired by the ancient Japanese aesthetic of wabi-sabi and acceptance of the imperfect and transient, Imperfection is the new sustainable carpet tile collection designed and made in Belgium by IVC Commercial.

Imperfection explores the idea that beauty is found in the impermanent and incomplete and that by being more accepting of flaws, defects and marks; we can achieve a mindset that finds beauty in the imperfect. A response to demanding and complex times, the collection counters the continual pressure to achieve perfection. And by doing so, Imperfection creates a mood of open-mindedness and relaxation in offices.

The Imperfection carpet tile collection is available in three designs – Grit, Bruut and Rupture. Grit is an all-over grain and Bruut is a surprisingly raw textured design. Rupture's golden crack is a homage to the ancient Japanese craft of Kintsugi. The designs can be used together in a way that

is free of abrupt transitions from one to the next. Through any combination of pattern, workplaces can have a floor covering that is individual and that remains true to the ideal of discovering beauty in the imperfect.

As the first premium sustainable carpet tile from IVC Commercial, Imperfection uses ECONYL® yarn, a performance nylon that's made from fishing nets, ghost nets, old carpets and fabric scraps. Rescued from all over the world, this waste is regenerated through a depolymerisation process that ensures the same purity and performance features of virgin nylon.

All Imperfection carpet tiles also feature IVC Commercial's EcoFlex™ Echo acoustic backing that reduces impact sound by 25% and improves sound absorption by up to 100%. Insulating against the sounds of footsteps and the background noise of busy offices, EcoFlex™ Echo ensures optimal acoustic performance.

Presenting inspired design in combination



with physical comfort, acoustic performance and sustainable materials, The Imperfection carpet tile collection is now available.

01332 851 500 www.ivc-commercial.com

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Minimal frameless shower spaces simple to create with Bellagio



Enabling a bespoke, contemporary showering space to be created in virtually any situation, Bellagio is a new adjustable shower door hinge with cover plates from CRL that taps into the latest trends in bathroom design too. With in-built seals for a seamless, high-performance finish, Bellagio, made from solid brass, features a modern square design and is suitable for use with 8 and 10 mm tempered safety glass. Ideal for creating a wetroom-inspired, spa-like shower area and tapping into the trend for frameless, minimal showering, the Bellagio square cornered hinge has a compact design and minimalist look due to the small gaps and cover plates, which are simple to fix and to remove. Combining design, functionality and quality, the zero position of the hinge is adjustable with a capacity of 50kg, when using 2 hinges, and a maximum door width of 1 metre. This makes it straightforward to create a showering area from an existing space, such as in the corner of a bedroom, in loft extensions or even understairs. Available in three finishes of Chrome, Matte Black and Brushed Nickel, Bellagio can be chosen with a range of matching clamps, support bars and other CRL shower hardware.

01706 863600 www.crlaurence.co.uk

Saniflo parent company wins award



SFA Group – Saniflo UK's parent company – has been awarded a Bronze Medal for Corporate Social Responsibility from EcoVadis, one of the world's most trusted providers of business sustainability ratings. This result places the SFA Group among the top 50% of companies assessed by EcoVadis. Saniflo UK Head of Marketing and

Product Management, Ann Boardman, says: "At Saniflo UK we uphold the same high standards set by our parent company, SFA Group in France. We pride ourselves on our ongoing commitment to being the best we can be in all ways, always. This Bronze medal is well deserved."

020 8842 0033 www.saniflo.co.uk

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Steps to balancing safety and aesthetics

Kevin Underwood at the British Woodworking Federation (BWF) looks at how to balance the important twin drivers of aesthetics and safety in staircase design



It's no surprise that aesthetic considerations are often the key driver behind staircase selection. The BWF's 2021 Home Improvement Index showed that safety lagged behind design and budget considerations when it came to a choice of staircase.

However, stairs can be a common site for accidents and a critical area of non-compliance with Building Regulations.

Poorly designed staircases can result in serious injury – and even death – from slips, trips and falls, making safety a paramount consideration in staircase design. The following paragraphs contain the key factors for safe specification.

The role of handrails

Handrails' primary functional role should be to offer safety support, particularly when a

Stairs can be a common site for accidents – and a critical area of non-compliance with Building Regulations

user slips or trips. If you're unsure whether a handrail is needed, a useful guide is that stairs with a rise of over 600 mm should have one and, where the stair width is more than 1,000 mm, a rail should be fitted on both sides.

When approaching handrail design, be sure to think about practical considerations. For instance, a rail should naturally be within easy reach at all points of a staircase and should contrast with the background, for accessibility to a wide range of users, without being too highly reflective. The surface should be slip resistant and not be too hot or cold to touch, while the ends of the handrail should be finished so as to reduce the risk of clothing being caught.

Safe surfaces

It is of course important to think about the finish of the stairs. Wet or dusty surfaces, worn or thin carpets and various types of hard flooring can all increase risk, so when designing the staircase, the slip resistance of the material should be considered.

Where the 'going' of the stair (i.e. the distance between individual risers) is 300 mm or more, users tend to be less affected by the slipperiness of the surface, but on stairs with smaller treads, thought should be given to a degree of slip resistance at the nosing, as this is where first contact is made in descent.

Nosings, risers & goings

When it comes to nosings, a staircase user must be able to identify where they are for each step. Sometimes a patterned carpet, tiles or timber finish can make this difficult, so consider applying contrasting material to the nosings. It's also worth noting that nosings should not reach too far over the step below as this could create a trip hazard.

One of the biggest influences on staircase safety is the design of rises and goings. The relationship between the two should allow the user a natural stride without the feeling of having to over-reach or take unnecessarily small steps. Keeping the going over 250 mm should ensure that the user can place most, if not all, of their foot on the tread.

Any variations in the rise and going can lead to a person tripping or stumbling as they go, so stairs must be as consistent as possible.

Open risers are acceptable for private stairs, but should be avoided in public buildings. Having an open riser increases the likelihood that a person's foot can get caught below the nosing, potentially causing them to trip. Also, an open riser which allows the user to look through a staircase, can lead to disorientation and loss of balance.

While Building Regulations are useful in providing information on producing stairs with an acceptable level of safety, the Code of practice BS 5395-1 offers the most comprehensive set of guidelines

Suitable guarding

Staircases higher than 600 mm – or where there are two or more risers – should incorporate some form of barrier or guarding to prevent the risk of a user falling over the side. Whether this is a screen or balustrade, it must be high enough to prevent anyone falling over it and strong enough to withstand someone falling into it.

Gaps should be less than 100 mm in any building where the stairs are normally used by children under five, as they could be at risk of becoming trapped or falling through.

The right space

When it comes to the space around a staircase, there needs to be at least 2 metres of headroom above the stairs and landings. When designing the staircase's width, it's important to bear in mind the number of people likely to be using it at once as a means of escape in a fire. At a minimum, stairs in public buildings should not be less than 1,200 mm wide. There should be a landing area at the top and bottom of each flight of stairs that's at least as long as the width of the stair.

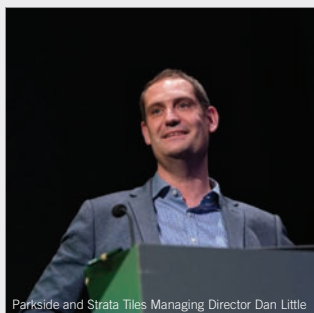
Starting the staircase design process with these key principles in mind will ensure that the aesthetic elements will enhance a building's interior environment without compromising on the safety.

While Building Regulations are useful in providing information on producing stairs with an acceptable level of safety, the Code of practice BS 5395-1 offers the most comprehensive set of guidelines.

In addition, a useful safety resource available to assist professionals who are responsible for the design of staircases is the British Woodworking Federation's Stair Scheme, which has published a number of best practice guides and factsheets.

Kevin Underwood is technical director at the British Woodworking Federation (BWF)

Parkside and Strata Tiles align for a total tile solution

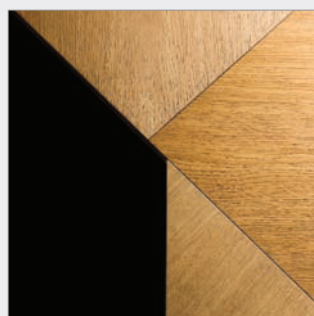


Parkside and Strata Tiles Managing Director Dan Little

Parkside and Strata Tiles are aligning to become sister brands, as the two tile specification companies look to become the market leader in the commercial tile market by 2025. With complimentary approaches to tile specifications, Parkside and Strata Tiles are known for excellence in service, wide-ranging product offer and the expertise of specification consultants. With a goal to grow share and become the market leader in the commercial tile market, Parkside and Strata Tiles are now aligning to provide architects, designers, specifiers and contractors with a total tile solution. By sharing expertise and technical solutions, specification consultants from both brands can offer the complete range of tiles, ancillary products and associated services from either company. Parkside and Strata Tiles have a complete tile range including specialist outdoor, slip-resistant and anti-bacterial collections, over 40 tiles with more than 40% recycled content, natural and composite stone, grouts, adhesives, profiles and joints, pedestals and anything else needed to achieve a first-class tile specification from a single source.

www.stratatiles.co.uk www.parkside.co.uk

A masterful take on oak



Unilin Panels has introduced UNILIN Master Oak, melamine and HPL panelling with lifelike natural oak designs. After several years research and development in the authentic recreation of natural materials, Unilin Panels has released a collection of six ready-to-use designs that bring the lifelike look and feel of oak. Stain-proof, scratch-resistant, colourfast in sunlight and made of 100% recovered wood, UNILIN Master Oak represents the future of decorative panels. Achieving a look this lifelike has seen Unilin Panels combine a matt finish with a uniquely patterned textured surface that's further enhanced with different types of pores and depth variations. Every Master Oak panel enjoys nature's imperfections for faultless authenticity. With very little on-going maintenance required, this finish has many applications. Ideal for use in offices, hotels, retail stores, restaurants, bars and other heavy-duty environments, UNILIN Master Oak lets spaces enjoy the natural beauty of oak with the simplicity of excellent durability and low maintenance. What's more, Unilin Panels makes UNILIN Master Oak decorative panels from 100% recovered wood.

info.panels@unilin.com www.unilinpanels.com

New Luceco lighting solutions specification guide



Luceco has recently launched a new publication demonstrating the range and diversity of their LED luminaires. They have showcased new fittings servicing the healthcare, education, retail, hospitality, industrial and commercial industry sectors. Notable luminaires include Sigma and Callisto as well as new wireless lighting control systems. Sigma is an installer friendly, direct / indirect recessed luminaire for low glare applications to assist with LG7 compliant designs and Callisto, a linear surface mounted luminaire with an IK10 rating that is at home in semi industrial applications as well recreational facilities, offering both wide and narrow optic distribution. Other features include Luceco's new two tier wireless lighting control systems.

The Specification Guide has been carefully designed to provide lighting professionals with detailed information segregated into easy to use categories, complemented by Luceco's website with useful downloads including the new Specification Guide, Industry Specific Lighting Brochures and a suite of BIM Files.

01952 238 100 www.luceco.com

Public realm accessible to all



Marshall's Landscape Protection, part of hard landscaping manufacturer Marshall's Group, has designed, developed and produced a bespoke, accessible seating installation as part of a project to rejuvenate a public space in Cookridge Street, Leeds

city centre. Marshall's Landscape Protection was approached by John Sisk & Son, the contractors delivering the project, to build upon an original concept and develop it further. Additionally, Marshall's Landscape Protection was tasked with producing two bespoke retaining walls that incorporate integral seating within the design.

info@marshalls.co.uk marshalls.co.uk/commercial/landscape-protection

Edenbrook Village sealed with Resiblock



The 'Legendary' Resiblock '22' has been specified as the paving sealer solution for Edenbrook Village. Located just two miles from Fleet, Hampshire, Edenbrook Village is a 600-home development from Berkeley. Resiblock were able to

show Case Study successes at The Greenway in Didcot, and even closer to home for Berkeley, the Alexandra Homes development also in Hampshire, where Concrete Block Paving had been successfully sealed for a number of years with just one application of Resiblock.

www.resiblock.co.uk

MS Fire Retardant, from Delta Membranes



David J Symes from Delta Membrane Systems Limited discusses the versatility of Delta MS 500 Fire Retardant membranes when it comes future proofing construction

In an age where prevention to fire is rightly under scrutiny in the construction industry, thoughts should be given to specifying materials which have properties which not only reduce the risk to occupants' safety, but also have a lesser reaction time in the event of fire.

Delta's new innovative fire-retardant MS 500 membrane gives a unique opportunity to the structural waterproofing sector for Type C systems to be used in reducing the spread of fire or where installation has not previously been possible for fire safety reasons.

Delta's new fire-retardant Type C Cavity Drainage System provides architectural freedom and allows systems to be used in not only deep basements but where national Building Regulations Euroclass B or C are

required, meeting building requirements of today, but also that of tomorrow.

Delta MS 500 Fire offers a B-S2, d0 Euroclass fire rating (EN 13501-1:2018) whilst maintaining its strength, durability, functionality, and workability.

The first and most essential element of a Type C membrane is keeping structures dry. Water ingress will potentially result in a corrosive environment, with structures having a reduced life service. Delta MS 500 Fire Retardant has been manufactured using DELTASAFE, compared to the traditional MS 500 membranes.

In principle a Type C, cavity drain membrane system allows moisture or running water to travel behind the membrane within a controlled drainage system. A cavity drain system requires minimal preparation and disturbance to an existing substrate.

In terms of appearance, Delta MS 500 Fire Retardant has the same physical properties to MS 500, a membrane designed from High-Density Polyethylene with 8mm stud.



Delta MS 500 fire retardant enhances a structure's fire performance. MS 500 fire-retardant not only slows down but will reduce the intensity of a fire, limiting damage to a build's structure and its contents.

David J. Symes, Managing Director
01992 523 523 www.deltamembranes.com



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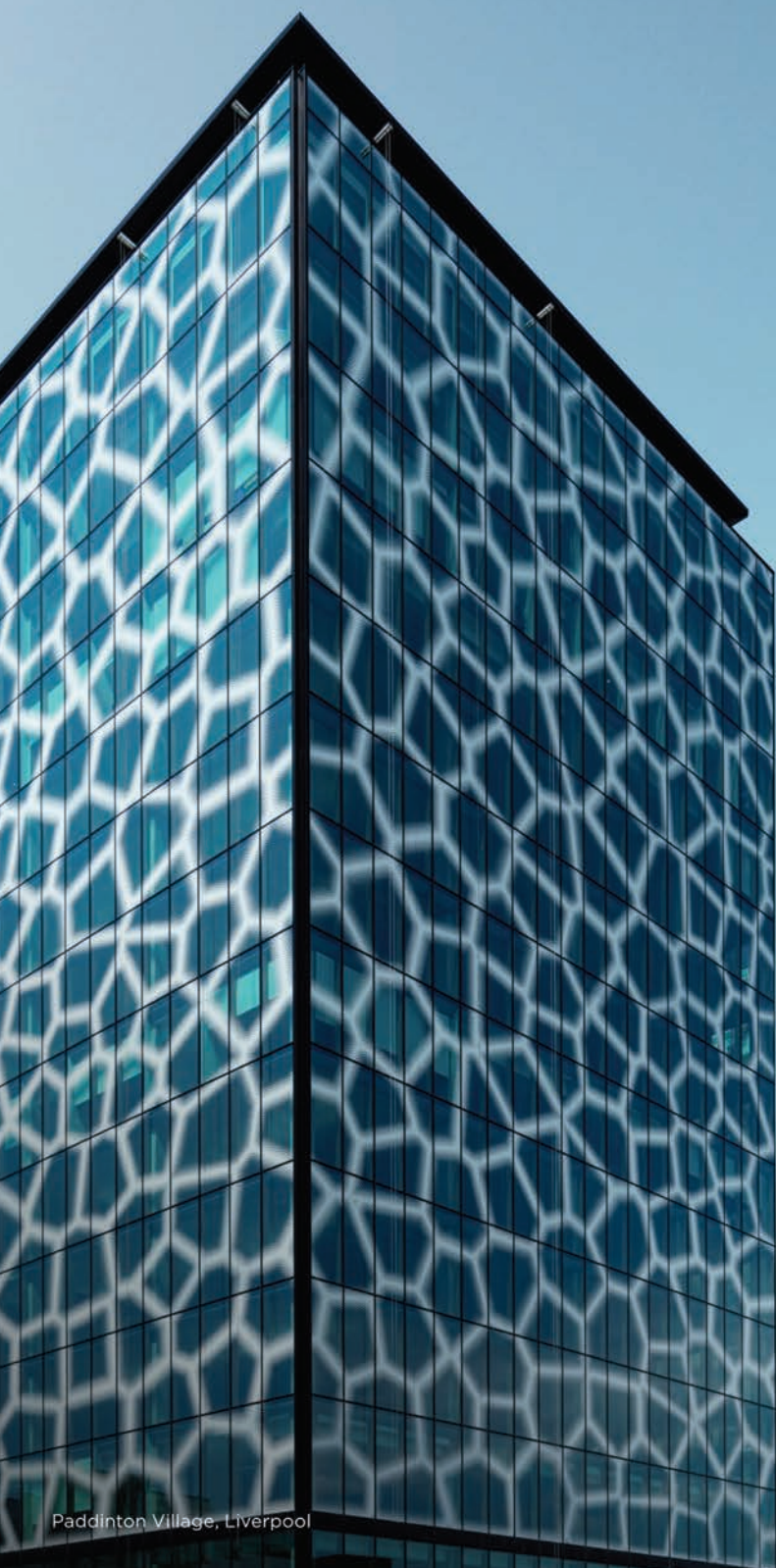
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