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# CONTENTS

06.18

## NEWS, VIEWS & INSIGHTS

- 04 Industry news & events
- 11 **Site Lines:** Taking a circular route to emergency care efficiency
- 14 **Practice Profile:** Saunders Architects
- 16 **View Point:** Nigel Ostime, delivery director at architects Hawkins\Brown
- 18 International Focus
- 20 New Arrivals
- 22 CPD Focus
- 24 Appointments & news
- 39 Vision 2018 Show Preview

## PRODUCTS

- 41 Planning & design
- 41 Groundworks
- 42 Structural elements
- 43 External envelope
- 59 Insulation
- 60 Heating, ventilation & services
- 61 Interiors
- 75 Safety & security
- 75 Landscaping & external works
- 83 Classified & directory

## PROJECT REPORTS

- 27 **A small victory**  
A project in Finchley, north London saw an architect delivering an unconventional compact home that provided a first-time buyer the way to combat London's housing shortage
- 34 **Village vanguard**  
A new retirement village offers a refreshingly social approach to long-term living, combined with sympathy for the local vernacular. Sébastien Reed reports

## FEATURES

### 45 EXTERNAL ENVELOPE: CLADDING & FACADES

#### Stay on top of new Regs

Hugh Harkin of Kytun Dry Roofing Products discusses the new British Standard for roofing and why these regulations matter

### 53 EXTERNAL ENVELOPE: DOORS & WINDOWS

#### Against the elements

Carl Farrow of ID Systems discusses the underestimated issue of weatherproofing when specifying doors, and why it is so important

### 63 INTERIORS: BATHROOMS & WASHROOMS

#### Bathrooms for all

Mark Bowman of Marmox offers some advice on ensuring the design and installation of bathrooms both large and small is a success

### 79 LANDSCAPING & EXTERNAL WORKS: SUDS & PERMEABLE SOLUTIONS

#### The future of water management

Ian Geeson of Charcon considers how integrating Sustainable Urban Drainage systems (SuDS) into every future urban design project would make a step change in ensuring effective water management



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# FROM THE EDITOR



I had the pleasure of meeting Will Alsop for the first and only time late last year. This great British architect, who died last month, was the designer of one of the few modern UK buildings to really catch my attention back in 2000, namely the Stirling Prize-winning Peckham Library. It was exceptionally playful, with a sheer exuberance of structural achievement, and a red 'beret' placed on the roof, purely for fun. Although I would normally fear gimmickry at hearing of such an idea, there's something about his buildings which combines joy with a strong sense of integrity. For example, in the case of Peckham the spectacular geometry was chiefly there to serve the end of freeing up public space below the building.

It was a privilege to work with aLL Design on our coverage of his last completed project, two contrasting subway stations in Toronto, one clad in corten and bright red enamelled steel, plus a dramatic cantilevering bus terminal, and the other a colourful pair of stacked boxes with a full-width viewing window – and why not? He was the kind of architect who tended to be employed by clients wanting an uncompromising design vision, and then perhaps wondering what they had let themselves in for. Arguably we are in a more timid, risk-averse age now where such visions are less likely to be allowed to flourish in major projects – one of the first signs of which being his Fourth Grace project in Liverpool having been sidelined in 2004.

One of the many laughs I shared with Will during our conversation (he had a wicked sense of humour) was around the gestation of possibly his most famous project, the Sharp Centre for Design, also in Toronto, which showed just how prepared he was to tell clients what they needed to hear. After having wrestled with a “really, really boring,” overly detailed brief, Alsop then arrived at the client meeting, and told them that “it was useful, but it put me to sleep on the plane,” and asked if anyone had actually read it, “because you’d only be able to write it if you had already designed the building”. Besides the person who wrote it, no-one put their hand up, and he proceeded to methodically tear it up in front of them.

While in some architects' hands this might be regarded as somewhat prima donna-like, it was driven by a genuine desire to avoid dry corporate approaches, and to work with end users to tailor a responsive, lively design. Alsop told me, “you don't want a building that has no effect – London is full of that.” While not all of his answers to questions may be transferable to future projects, I hope his approach of prioritising the joy for users above all will be a lasting legacy across the profession.

**James Parker**  
Editor



## ON THE COVER...

Hush House by Ashton Porter Architects is a striking piece of contemporary architecture which is “hidden in plain view” in the heart of suburban north London. For the full report go to page 27.  
Cover Image © Andy Staggs





## PARIS AT LEISURE

# Eight buildings proposed for BIG's EuropaCity

The developers of the new leisure district EuropaCity in Paris' suburbs have provided a first glimpse at the eight key buildings that will be constructed for the £2.7bn project, masterplanned by Bjarke Ingels Group (BIG).

Following a competitive six-month competition process, UNStudio, Atelier COS and Hérault Arnod Architectes are among the European firms that have been selected to design buildings for the sprawling new development, which is planned for an 80-hectare site in the north east of the capital, near Charles de Gaulle Airport.

When completed, EuropaCity will form a new district combining hotels, restaurants, theme parks, cultural sites, urban farmland, shopping centres and sports facilities on the Triangle de Gonesse. BIG envisioned a complex themed around the concept of "rolling hills," set amidst grassy parkland.

In 2017, designers were invited to propose "innovative, sustainable, diverse and creative" proposals that could be

integrated into BIG's design concept. The selection of the winning designs was finalised earlier this year.

"This was the largest private initiative architectural competition ever launched in France, and we really wanted to explore and discover the different ways to see and imagine EuropaCity," said Matteo Perino, director of operations for the development at EuropaCity.

General manager Benoît Chang added: "We'd like to thank all the teams who participated in this competition, because all the projects received were of excellent quality. The teams worked not only on the architecture but also on different areas, such as material recycling, the circular economy, innovation and disruption."

"EuropaCity is proud of the selected projects and pleased to continue working with these practices. They will bring their talent, perspective, creative capacity and innovation to this pioneering project – a unique leisure destination in the Greater Paris of tomorrow."

## SCOTCH

# RSHP distillery and visitor centre completes

Architects Rogers Stirk Harbour + Partners have completed the Macallan Distillery and visitor experience in Speyside, Scotland.

Internally, a series of production cells are arranged in a linear format with an open-plan layout revealing all stages of the production process at once. These cells are reflected above the building in the form of a gently undulating timber roof. Grass-covered peaks rise and fall from the Macallan estate grounds, signalling to approaching visitors the activities housed beneath. Set into the naturally sloping contours of the site, the design makes direct references to ancient Scottish earthworks.

The visitor experience starts with an exhibition and gallery area, before progressing through a sequence of spaces that follow the production story of the whisky. Natural materials – local stone, timber and the "living meadow" green roof – as well as the landscaping design "not only evoke the environment and ingredients of whisky production but also serve to provide an atmospheric journey for the visitor," said the architects.

The visitor enters the new building via a below-ground link that "compresses the experience before releasing and emerging into the cathedral-like volume within," said Toby Jeavons, project architect.



## IN MEMORIAM

# Will Alsop 1947-2018

Will Alsop was born in Northampton in December 1947, and decided he wanted to be an architect at the age of six. His mentor at Northampton College of Art Henry Bird helped develop his ambition after he left school at 16.

Alsop attended the Architectural Association between 1968 and 1973, when the school was moving from a “strong commitment to post-war modernism with a social conscience to a more heady mix of radical architectural theories and discourse,” commented Alsop’s practice, aLL Design. His fellow students included Rem Koolhaas, Zaha Hadid, Charles Jencks, Bernard Tschumi and Leon Krier amongst others. Alsop’s achievement was to “take the ideas of Buckminster Fuller and especially Archigram on the adoption of new technologies, new patterns of living and more radical form making, from paper

into real constructions”.

Alsop’s architecture was “inextricably bound up with his work as an artist,” said aLL Design; he painted and sketched every day until he died. “His most fulfilling activities were in one of the studios he set up within his various practices or in his Norfolk back garden.” He tutored in sculpture at St Martin’s School of Art from 1973 to 1981.

His key works of architecture included Tottenham Hale Station (1991); Hamburg Ferry Terminal, (1993, with Jan Störmer); Le Grand Bleu (Hotel du Department des Bouches-du-Rhone, 1994), North Greenwich Jubilee Line Station (1998), Peckham Library (1999, Stirling Prize winner 2000), Ontario College of Art & Design (Sharp Centre – Toronto, 2005).

Marcos Rosello, Alsop’s co-founder at aLL Design, told staff: “Will has inspired generations and impacted many lives



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through his work. It is a comfort to know that due to the nature of Will’s work and character, he will continue to inspire and bring great joy.”

Rosello continued: “He had an exceptional ability to recognise particular strengths in individuals which he would draw out and nurture. His design ethos, essentially to ‘make life better’, is evident in the architecture of his buildings and their surrounding communities.”

Will is survived by his wife Sheila, and three children Ollie, Piers and Nancy.

## EVENTS

### SEMINAR

Ethics in Architecture  
21 June, Birmingham  
[www.architecture.com/WhatsOn](http://www.architecture.com/WhatsOn)

### FESTIVAL

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

### WORKSHOP

RIBA Future Leaders 2018  
12 July, London  
[www.architecture.com/WhatsOn](http://www.architecture.com/WhatsOn)

### EXHIBITION

Disappear Here  
2 May - 7 October, London  
[www.architecture.com/WhatsOn](http://www.architecture.com/WhatsOn)

### TRADE SHOW

Vision  
21 - 22 June, London  
[www.visionlondon.com](http://www.visionlondon.com)

### BOOK

## Grafton Architects by Robert McCarter



A book published this month by Phaidon reviews the work of Irish firm Grafton Architects, whose partners Yvonne Farrell and Shelley McNamara curated this year’s Venice Biennale.

The study presents 50 of Grafton’s defining buildings and forthcoming projects – including a new faculty building for the London School of Economics and Political Science; the School of Economics, Toulouse, France; and the Parnell Square Cultural Quarter project in Dublin – highlighting the practice’s “principled and moral” approach.

The book features more than 350 images, compiling photographs and “never seen before” sketches, models and final drawings from the studio archives. The “first and only monograph to shed light on their acclaimed portfolio,” according to the publishers, it reflects McNamara and Farrell’s “thoughtful forensic responses to

people, landscapes and nature through architecture. A timely overview, this book will appeal to every architect, academic, student and those eager for a more comprehensive glimpse into this very talented, but incredibly understated, duo.”

Founded by Farrell and McNamara in 1978, the firm is one of the few internationally recognised practices which is led by female partners.

Farrell and McNamara have lived, taught and practiced in Dublin for 40 years, the city where they were both born and raised. This city forms the context, ground and foundation for their work, exhibited most explicitly by naming their practice after its first location on Dublin’s Grafton Street. Since then, the practice has built up a respected and dedicated following in the 30 years of working exclusively in their native land.



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## CHINA

## ‘Eye’ opens in Tianjin

Dutch architect MVRDV and Tianjin Urban Planning and Design Institute (TUPDI) have completed Tianjin Binhai Library as part of a larger masterplan to provide a cultural district for the city.

The 33,700 m<sup>2</sup> cultural centre, featuring a luminous spherical auditorium around

which floor-to-ceiling bookcases frame the space and create stairs, seating, the layered ceiling and even louvres on the facade. The atrium of the Tianjin Binhai Public Library is designed to look like a three-dimensional eyeball, staring out through the building’s glazed facade.

The five level building also contains extensive educational facilities, arranged along the edges of the interior and accessible through the main atrium space. The Public programme is supported by subterranean service spaces, book storage, and a large archive. From the ground floor visitors can easily access reading areas for children and the elderly, the auditorium, the main entrance, terraced access to the floors above and connection to the cultural complex. The first and second floors consist primarily of reading rooms, books and lounge areas while the upper floors also include meeting rooms, offices, computer and audio rooms and two roof top patios.

“The Tianjin Binhai Library interior is almost cave-like, a continuous bookshelf,” said Winy Maas, co-founder of MVRDV. “Not being able to touch the building’s volume, we ‘rolled’ the ball shaped auditorium demanded by the brief into the building and the building simply made space for it, as a ‘hug’ between media and knowledge”. He continued: “We opened the building by creating a beautiful public space inside; a new urban living room is its centre. The bookshelves are great spaces to sit and at the same time allow for access to the upper floors. The angles and curves are meant to stimulate different uses of the space, such as reading, walking, meeting and discussing. Together they form the ‘eye’ of the building: to see and be seen.”

## INDIA

## Norman Foster visits Amaravati

Lord Foster met Chief Minister N. Chandrababu Naidu and his team on his visit to Andhra Pradesh in eastern India to oversee the next stage of design development of the governmental complex of the new state capital, Amaravati. Foster + Partners are designing the central focus of the 217 km<sup>2</sup> city, including the design of two key buildings: Legislature Assembly and High Court Complex, along with several secretariat buildings.

Norman Foster, founder and executive chairman, Foster + Partners, said: “We are delighted to be working with the Chief Minister and the Government of Andhra

Pradesh to help them realise their vision of the People’s Capital and team to build a clear and inspiring vision for the governmental complex at Amaravati. The design brings together our decades-long research into sustainable cities, incorporating the latest technologies that are currently being developed in India.”

The new administrative capital of the Indian state of Andhra Pradesh, Amaravati was born following the redefinition of state boundaries between Andhra Pradesh and the newly created state of Telangana. Situated on the banks of the River Krishna, the new city is strategically positioned to benefit from an abundant supply of fresh water, and will be one of the most sustainable in the world.

Measuring 5.5 km x 1 km, the governmental complex occupies the heart of the city, defined by the strong urban grid that dictates its structure. A green



spine runs through its length, providing the foundation of the masterplan’s environmental strategy, where at least 60 per cent of the area is occupied by greenery or water. The city has been designed to “the highest standards of sustainability,” including the widespread use of solar energy. The transportation strategy includes electric vehicles, water taxis, and dedicated cycle routes, along with shaded streets and squares that will encourage people to walk through the city.



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## SITE LINES

# Taking a circular route to emergency care efficiency

A new hospital in Cramlington, Northumberland, is the first in the NHS to be purpose-designed for emergency cases. Neil Harvey of Ramboll explains how the building simplifies the route from admission to specialists using a ‘panopticon’ ward design



**T**he Northumbria Specialist Emergency Care Hospital (NSECH) project was initiated by Northumbria Healthcare NHS Trust with the aim of creating a specialist emergency care facility that would optimise emergency care by centralising all its expertise in one location. Due to the geography of the trust this was only possible by building a new facility, which would be the first specialist emergency care hospital in the UK.

Statistics show that mortality rates can be significantly improved if patients are seen by specialists as soon as possible in the ‘treatment journey’, therefore the vision for the hospital was to maximise survival and good recovery. By improving recovery rates patients’ stay would also be minimised, which has multiple advantages.

The brief was for a hospital that provided eight wards (316 beds), an intensive care unit providing specialist critical care for up to 18 patients, clinical diagnostic (MRI and CT scanners), five operating theatres, and a children’s emergency assessment unit.

### DESIGN OBSERVATION

A&E is at the centre of the building, surrounded by clusters of circular hub-and-spoke wards housing diagnostics, X-ray and paediatrics

Also included are a maternity and special care baby unit, a helipad and ambulance deck, service yard and energy centre, and on-site parking for 729 cars.

The design process involved representatives from the clinical consultants, senior nurses, facilities management staff and patient groups. They were involved in all areas, with a three round user group review process. To complete the process in the required time three groups were run in parallel, each lead by an architect and two CAD support staff. 3D model layouts were used, which were fully modelled with equipment in order that the users could make informed decisions.



### CIRCLES

The wards are designed so that from a single point within each hub a nurse can see into each of the seven rooms on the perimeter

### Panopticon

The key focus was to keep travel distances short, achieve key adjacencies and to ensure that staff could easily see patients. The unusual shape of the building emerged from this thought process with the form developing as a series of curves and circles. Although these were not directly taken from previous examples of panopticon design, the process led to a form that is well understood and tested as an architectural concept. The wards are a strong example of this, designed so that from a single point within each hub a nurse can see into each of the seven rooms.

The main departments also drew on this concept, with A+E at the centre of the building surrounded by diagnostics, X-ray and paediatrics, close to the ambulance drop off. This minimises time from arrival to treatment and is intended to provide immediate access to specialists.

The staff experience was also key – with large departments the distance the staff had to walk between rooms could have become significant, but by designing the wards and departments as circular, not only were travel times reduced but it also gave the staff the sense of being able to see patients and colleagues. This allowed the large departments to maintain a closeness and efficiency that couldn't have been achieved in a traditional hospital layout.

By focusing on important clinical adjacencies and with early stage input from clinicians on how rooms were used the architect could ensure the best possible environment for patients and clinicians.

### Vertical layout

Although only three stories tall, the footprint of the building is significant, with large floorplates to achieve the required adjacencies. The split between floors is typically arranged so that consultants' offices, 'back of house' and services including dedicated delivery yard are located on the ground floor; A&E, diagnostics and paediatrics, main entrances, helipad and ambulance deck on the first floor; and theatres, maternity and the special care baby unit are found on the second floor.

This creates a main A&E Hub in the centre of the building at first floor, surrounded vertically and horizontally by all the required medical and services support. The next layer around the perimeter at each floor level contain the wards. The patient journey is from A&E at the centre, progressively outwards towards the wards at the perimeter.

The entrances for patients and visitors are both at ground floor, with a separate service access at the lower ground floor. Patient and visitor entrances are completely segregated at separate sides of the building, with only one single entrance for each. This improves security and reduces confusion for visitors.

### Structural considerations

As structural engineer Ramboll had to work hard to match the column grid to the irregular and highly specific room layouts. There is often a balance between optimum architectural column grid and a cost-efficient structural grid.

In this instance we looked at many iterations to find some degree of regularity but the resulting solution was to move away from a regular grid and to slot the columns into the architectural grid where they would align as a best fit between all floor levels. Since the use of each floor is different there was little commonality of layout between floors, therefore there were limited locations where this was possible.

The final arrangement required many of the columns to be offset or rotated by a small amount between floor levels to achieve the optimum architectural layout, without any compromises.

Keppie Architects and Ramboll developed full 3D models that were critical in ensuring the coordination of complex column positions, and also the highly irregular slab edge. Despite the bespoke layout the contractor was able to position all the columns and the slab edge without any errors and with a limited number of queries.

The layout of the building gave rise to a large floor plate which is also circular rather than orthogonal. Typically the movement joints can be placed across the narrowest part of the floor plate to minimise their impact. These can also compromise effective infection control therefore they should be positioned to avoid critical areas such as theatres. Ramboll carried out extensive analysis which enabled us to avoid a movement joint across the main central hub, with only minimal joints in the corridors between the main hub and the wards.

### Outcome

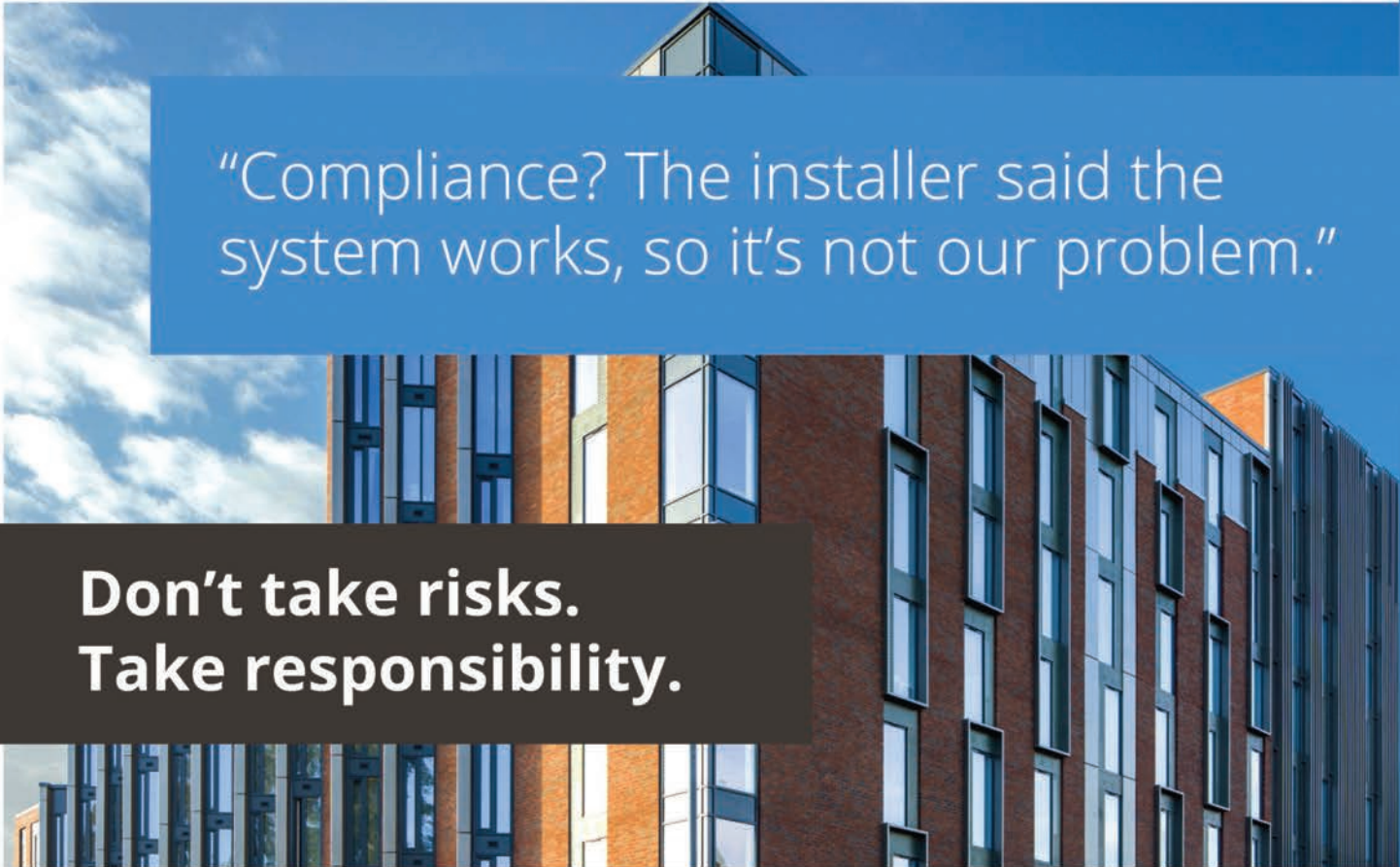
The success of the design has been recognised by the staff; Lauraine Gibson, NSECH matron commented: "With slightly shorter stay times than predicted, and patients having their speciality care started a lot quicker, many more people are being discharged straight home from here than we anticipated, which is excellent.

"In addition, nine out of 10 patients using the emergency department at the hospital rated their care as good, very good or excellent, and 97 per cent of inpatients at The Northumbria would recommend their care to friends and family."

The hospital has had very positive results in terms of empirical data. It is one of only a handful of trusts nationally to meet the target for patients to be seen within four hours during the whole of 2015/16. A 14 per cent reduction in emergency admissions to hospital, with almost 7,500 less people being admitted, has resulted in a £6m saving for the local health economy.

*Neil Harvey is a director at structural engineers Ramboll*





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## PRACTICE PROFILE

# Saunders

With a pragmatic approach and a retail pedigree Saunders Architects is broadening its horizons, with a newfound focus on the residential sector. Sébastien Reed spoke to the firm's Martin Williams to find out more

Saunders Architects was established 30 years ago by founder Cliff Saunders who set up the first studio in Welwyn, Hampshire. Recognising the need for a national presence, the mid-2000s saw the then well-established practice grow into what is now an 80-strong operation with studios throughout the UK, spanning Manchester, Bristol and London.

Initially putting its focus on the retail sector – with a large portion of its work coming from designing new and transforming existing Tesco stores – the practice has diversified, broadening its reach across numerous typologies.

Martin Williams, managing director, tells *ADF* that retail remains at the core of the firm's strengths: "Despite moving our attention to other areas of business," says Williams, "we still are at the top of our game when it comes to retail and frequently lend our knowledge on the future of the sector to our clients."

### Retail: from boom to crunch

"Back in the mid-2000s, we anticipated the demand for environmentally friendly retail buildings," explains Williams. "We worked closely with the main contractor to deliver the world's first zero-carbon store in Cambridgeshire for Tesco." The store, which was completed in 2010, proposed a model for a cleaner type of large-scale retail building, with a number of eco-friendly features such as a timber-frame, skylights and sun pipes to cut lighting costs, and a combined heat and power plant powered by biofuels. Such features are now used by a wide range of retailers around the country.

Saunders' business landscape has changed considerably in the past decade due to the recession and technology causing "a seismic shift in people's shopping habits." As a result, Saunders saw a huge reduction in demand from food retailers. In 2012, Saunders was at the number two spot among UK firms based on contracts awarded within the food retail sector. However as the demand for new stores took a nosedive, Saunders had to adapt and evolve.

Redeploying staff skills in another field entirely, Saunders has successfully repositioned itself as a player in the residential sector, with clients including Barratt Homes, Cala Homes and Crest Nicholson, as well as making moves in sectors such as education, industrial, office and retirement. In addition, the firm continues to develop its marketing and PR, investing in training,



and employing new staff with the skills needed to deliver on this new, wider agenda.

Earlier this year, Saunders joined The 5 per cent Club, an industry-led initiative promoting 'earn-and-learn' opportunities. Williams comments: "The goal is that 5 per cent of our total workforce will be made up of apprentices, graduates and sponsored students – this is a public commitment that consolidates a practice that we've employed for a number of years now."

### Organisation & approach

While some architects are happy to work within the confines of a brief, Saunders feel that challenging a brief, especially where there are evident opportunities, can unearth the best solution. "This could mean identifying opportunities to reduce cost or add value, to create a better building, to improve or simplify the construction, or to improve chances of planning approval," Williams elaborates.

"Pragmatism" is a watchword for Saunders' approach to any project, believing that while good design makes great buildings, they can only be great if they work for the people who are going to use them. "There is no point drawing an amazing roof line if it's going to leak or if it's not going to give the client the optimum space for their needs," says Williams. He adds: "This ethos embodies how Saunders approaches projects and it's exemplified by our considered planning and delivery services."

Saunders' five directors, and 14 associate and senior associate directors leading their respective teams, include architects who have worked at the practice since its inception. "We believe that promoting from within allows senior staff to be better managers," explains Williams. Three members have been with the firm since



1989, nearly a quarter of employees have worked there for over 10 years, and 8 per cent for over 20 years – “our youngest team member wasn’t even born until 12 years after our longest-serving employee started!”

### Illustrating creativity

Williams illustrates Saunders’ adeptness in “using creativity to inspire and realise opportunities from challenges” with the example of a recent project – Brandon House in Southwark, London (see photo opposite). The site was bought by Crest Nicholson with full planning permission, gained after a lengthy process due to the sensitive nature of the site. The client felt that the internal arrangement could be improved but was not keen to resubmit a planning application, so wanted to ensure the external appearance remained largely as the consented scheme.

Williams continues: “We maintained the high quality facade facing Borough tube station while improving internal residential layouts, rationalising distribution of tenures and increasing the size of dwellings, and rationalising and reducing the number of access cores using latest ventilation and fire standards.” He adds: “This redesign resulted in reduced costs to the client as on one block two access cores were reduced to one, including the elimination of a lift core.”

More flexible retail space with an increased floor area on the ground floor, and redesigning 15 per cent of the dwellings on upper floors from studios to one bed flats, all contributed to increased sales revenue for the client. In addition, rationalised and reduced basement sizes lowered costs and eliminated complex issues surrounding local archaeology.

### BIM pragmatism

Harnessing its strengths of collaboration and coordination, Saunders have invested in BIM since 2009. Williams observes an increase in the number of clients who make BIM a prerequisite for tendering for work, particularly since BIM Level 2 became mandatory on Government-procured schemes in 2016. The pragmatism is evident here, as Williams notes: “We evaluate each project that comes into the office to decide if it would be more efficiently created with BIM, regardless whether the client requires it.”

Williams sums up Saunders’ outlook for the future: “To continue to grow our business while offering excellent designs and pragmatic solutions.” Retail still forms 17 per cent of turnover (in figures from the last financial year) – as is residential work. However, targeting other sectors such as industrial, education and commercial projects and focusing its efforts in these sectors has seen such work increase from 2.6 per cent to 5 per cent in 12 months.

As the firm blows out the candles on its 30th birthday cake, the retirement living sector is firmly in Saunders’ sights, in the context of the current demographic climate where the UK’s aging population is demanding ways to live independently for as long as possible. Williams says it is “very keen” to get involved in the extra care sector which provides owner-occupied, self-contained housing, often with additional facilities such as nursing assistance within units or nearby.

As in other areas, this go-getting practice is “continuing to develop the necessary skills to meet the challenges; employing architects with the relevant experience to understand the market and ultimately, win more work.” ■



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# VIEW POINT

Nigel Ostime, delivery director at architects Hawkins\Brown and chair of the RIBA Client Liaison Group, looks at how a 'chain of custody' approach is fundamental to a new toolkit created to ensure a focus on quality in projects

Last December I wrote in *ADF* about how the RIBA's Client Liaison Group is developing a toolkit to help clients and designers understand risk better and acknowledge the consequences of passing it down the line. This issue is prevalent where the site is sold after planning consent has been achieved (and a new design team brought in) and where single stage Design & Build procurement is adopted, particularly where there is no provision for novation.

This work has developed further and we are now in a consultation phase. The presidents of the RIBA, CIOB and RICS signed a joint memorandum of understanding (JMU) at Ecobuild in March, agreeing to develop the initiative together, so it has real cross-institute support and, we hope, the ability to foster better collaboration between client, design team and constructor. Project team members in the UK construction industry are committed to high standards of quality in the built environment. We all want well-constructed, healthy, safe, inclusive, sustainable places to live and work, which enhance the built environment and quality of life. As an industry we have long acknowledged the structural and cultural barriers that make it difficult to achieve

consistently good project outcomes, particularly in D&B procurement. Recent tragic and high-profile building failures have hardened our resolve to tackle them.

As representatives of three major professional institutes in the industry, the presidents were acknowledging a joint responsibility to overcome these barriers. They committed to work together in order to achieve the following:

- Overcome cultural bias in the construction industry for better collaboration and greater transparency between members of the project team, including clients, designers, investors, stakeholders, constructors, and the supply chain
- Give due prominence to the outcomes stated in the project brief by establishing a documented 'chain of custody' for quality indicators as the project progresses
- Establish a way to identify and track risks to quality, cost and programme aligned to the RIBA Plan of Work
- Encourage the involvement of end-users, purchasers and asset managers in the conception, design and specification of projects
- Promote progressive, long-term, integrated delivery and ownership structures.

The initiative – which we are calling 'Building in Quality' – and the consultation encourage participation from all parties, including architects, surveyors, engineers, contractors, consultants, agents, developers, investors, insurers, lawyers, representatives from industry institutions and organisations, and others with an interest in the quality of the built environment.

A core tenet of this JMU is to establish a 'chain of custody' for quality – a Quality

Tracker – that links commissioning clients to end-users. In doing so we propose to dispel biases in the industry, encourage better collaboration, force change in how we procure built assets, and improve the quality of the built environment. It aims to introduce a simple, straightforward system for documenting and tracking risks to quality through the life of a construction project.

## So how will it work?

The notion of a chain of custody is well known in the construction industry in relation to sustainably sourced materials such as timber and natural stone. Clients, particularly corporate clients, want to be reassured that they can say with confidence that their claims for running sustainable businesses in sustainable buildings stand up to scrutiny.

The notion of a chain of custody was developed partly to raise awareness of the issues facing our planet, but also to enable designers and contractors to provide documented evidence of the source of not only the materials used but also the working conditions of those people extracting and processing them. It is usually in the form of a certificate or certificates, these forming an unbroken chain that tracks the journey of the material from its source to its final place in the building. (In the case of the Quality Tracker, for 'materials' read 'quality'.)

The issue we have with quality is in relation to the ubiquitous short-termism many projects face. When the building is procured through a series of owners whose only concern is to be able to pass it on to the next set of hands and maximise their return on investment, the long-term value of the building in use is not considered

**We all want well constructed, healthy, safe, inclusive, sustainable places to live and work, which enhance the built environment and quality of life**



## The Quality Tracker does not attempt to improve quality, which in the face of strong commercial interests would be naïve; it does however hope to shine a light on it

with enough gravity. As a result, we get designs that are progressively watered down with poor quality being the result. There are strong commercial reasons it happens in this way and these are unlikely to change in the short to medium term. So we must find a way of mitigating the issues.

The Quality Tracker is a means to do just that. It does not attempt to improve quality, which in the face of strong commercial interests would be naïve. It does however hope to shine a light on it. It provides a means for the next client or designer down the line, or the constructor, to understand what level of detail has gone into the design. For example, has a consideration of regulations been built

### RIBA CLIENT LIAISON GROUP TOOLKIT: KEY POINTS

The Building in Quality toolkit will provide the means to monitor a project as it develops, particularly when it passes from one owner to another, or from one design team to another and then to the constructor. Quality is often degraded at these handover points and the tracker will help identify where this has happened – or might happen further down the line – and allow the next custodian of the project to do something about it. It will act as a chain of custody, much as sustainable materials are tracked, to provide the means to monitor quality as the project progresses from inception through to completion.

into the planning stage design? If not, this might lead to cost pressures further down the line in correcting the design to make it comply. Following the well-

understood parameters of cost/time/quality, these cost pressures will inevitably reduce quality.

Set out as an overlay to the RIBA Plan of Work, it will follow each work stage, from zero to seven and note characteristics that will impact on the likely outcome. These characteristics include matters such as the degree of speculation in the development, the likelihood of obtaining competitive tenders, the attitude to cost certainty, the attitude to maintenance and longevity, and the attitude to early involvement of the design team and constructor and to collaboration.

The Client Liaison Group has always striven to deliver knowledge and tools that can be used to improve the service architects provide to their clients, and thereby to strengthen the profession. This current initiative has a wider remit – to bring the construction institutes together to improve collaboration and transparency, and through that to improve the quality of our built environment.

*Nigel Ostime is delivery director at architects Hawkins\Brown and chair of the RIBA Client Liaison Group*

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# INTERNATIONAL FOCUS

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## LG SCIENCE PARK, SEOUL HOK

HOK's London studio designed LG Science Park as a "next-generation corporate research campus" intended to foster collaboration and innovation among scientists and staff from multiple disciplines. The 18-building campus will serve as the world research headquarters for the global consumer electronics brand LG Group and a hub for science and talent in South Korea. "We designed LG Science Park in close collaboration with LG," said Larry Malcic, design principal at HOK's London office. "It was important that the individual buildings feature the same elegance of form as LG's products. While buildings are tailored to specific scientific activities, they are also highly flexible and can easily adapt to the changing requirements of science." The campus's buildings feature a highly sustainable design that is expected to achieve LEED Platinum rating.



## FIRE STATION 32, SEATTLE BOHLIN CYWINSKI JACKSON

Seattle's newest firehouse, designed by architects Bohlin Cywinski Jackson, is now complete. The 18,000 ft<sup>2</sup> station is home to Engine Company 32, Ladder Company 11, Medic Unit 32, and Battalion Chief 7. The compact site allowed enough space for a four-storey building – plus a basement. The lower floors are used for operational and administrative functions, while the third floor houses firefighter living quarters. The building incorporates a variety of sustainable design strategies, including green roofs to reduce heat island effect, a solar hot water system, high-efficiency HVAC, and photovoltaic systems. The station also delivers natural daylight and exterior views throughout, "enhancing occupants' overall wellbeing".



## GENERALI TOWER, MILAN ZAHA HADID ARCHITECTS

Generali Tower designed by Zaha Hadid Architects is located within the CityLife masterplan that has redeveloped Milan's abandoned trade fair grounds. The tower's double-facade of sun-deflecting louvers flanked by glazing provides extremely efficient environmental control and ensures excellent energy performance, contributing to Generali Tower's LEED Platinum certification. Inclined perimeter columns follow the twisting geometry of the tower to mirror the inclined alignment of its external facade units. These columns also maximise usable office space within the tower's coherent formal envelope.





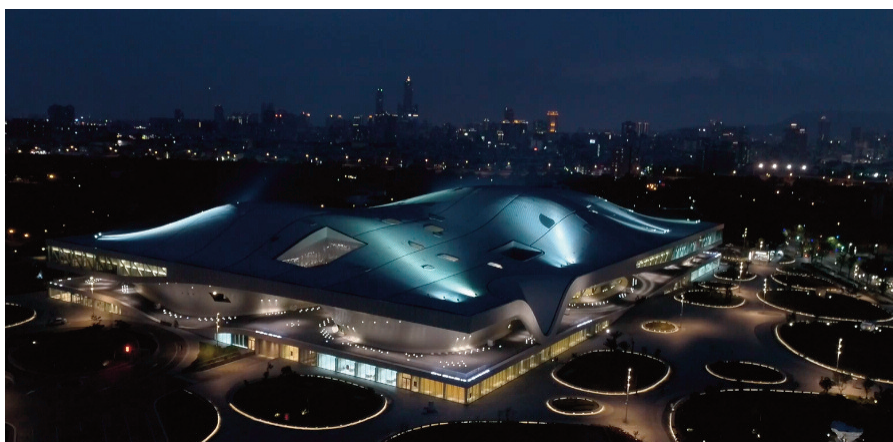
### **LUSHAN PRIMARY SCHOOL, CHINA ZAHA HADID ARCHITECTS**

Lushan Primary School is a proposed educational institute from Zaha Hadid Architects, located 160 km north-west of Nanchang, the capital of Jiangxi Province. The campus includes the school, dormitory and utility buildings within vaulted spaces that “connect directly with their rural surroundings”. The classrooms have flexible learning arrangements and outdoor teaching areas. Composed as a network of barrel and parabolic vaults that open towards the river, the vaults stretch and intersect to accommodate the school’s varied programme. The barrel and parabolic vaults act as the school’s primary structure and enclosure, with each vault performing as an individual structural element.



### **DNA SHOPPING MALL, CHINA LEIGH & ORANGE**

The new DNA Shopping Mall is Leigh & Orange's (L&O) latest retail project. Located in the Chancheng District, the six-storey development is set to become “a new shopping destination in the city”. L&O was appointed by Sun Fook Kong Group to provide interior design for the complex. Ricky Hung, L&O's director of interior design said: “The unique selling point of this shopping mall is the marine-themed interiors where our designers were given free rein to explore their creativity and let their imagination go wild.” The design captured the essence of sea travelling through a number of key features. “This uniqueness will help differentiate the DNA Shopping Mall from others and is set to provide a spectacular, must-visit attraction in the city.”



### **WEIWUYING NATIONAL KAOHSIUNG CENTER FOR THE ARTS, TAIWAN MECANOO**

In a single “sweeping building” designed by Dutch architects Mecanoo, WeiWuying incorporates five separate state of the art performance spaces, covering a surface area of 35 acres. The building is set in the spectacular 116-acre subtropical park in the heart of Kaohsiung, making it the world's largest performing arts centre under one roof. Francine Houben, founding architect of Mecanoo Architects, said, “WeiWuying is one of Mecanoo's most ambitious buildings and embodies all the key elements of our philosophy. Inspired by the beauty of the local Banyan trees with their iconic canopies of leaves, the vast, undulating structure is composed of a unique skin and roof under which generous free spaces can flow. We have aimed to deliver a flagship cultural destination for Taiwan, a beacon to attract performers and audiences from around the world.”



### **NATIONAL MUSEUM, QATAR JEAN NOUVEL**

Designed by French architect Jean Nouvel, the National Museum of Qatar is inspired by the ‘desert rose’ and will combine historic objects and contemporary influences, opening up a “dialogue around the impact of rapid change”. The National Museum of Qatar is built around Sheikh Abdullah bin Jassim Al Thani's original palace, one of Qatar's most recognisable landmarks and a “monument to its historic way of life”. The palace has a unique historical significance for the State of Qatar and has been recently fully restored. The palace will be a central exhibit within the National Museum when it opens.

# NEW ARRIVALS

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



## FOUR NEW DIRECTORS LESLIE JONES ARCHITECTURE

Leslie Jones Architecture has reinforced its expansion and diversification with the promotion of four new directors, Cos Constantinou, Lee Pope, Simon Scott and Nick Strachan. Each of the new directors has played a crucial role in the growth and development of Leslie Jones over recent years and will continue to shape the future of the business. The four directors are also responsible for their own teams as the firm looks to further diversification over the coming months. James Cons, managing director at Leslie Jones said: "This team has delivered consistently for the business and we have no doubt they will continue to do so as we look towards new opportunities for growth."



## SEVEN NEW PARTNERS SCHMIDT HAMMER LASSEN ARCHITECTS

Schmidt Hammer Lassen Architects strengthened its leadership group with the appointment of seven new partners. Trine Berthold, Bente Damgaard, Kasper Frandsen, Mads Kaltoft, Rasmus Kierkegaard, Tiago Pereira, and Nathan Smith join founding partners Bjarne Hammer, John Lassen, and Morten Schmidt. "When Morten, John, and I established the firm 32 years ago, our vision was to create an internationally-recognised architectural studio known for high design with a strong Scandinavian ideology", says Bjarne Hammer. "We realised that vision with the help of an extraordinary group of architects and professionals, many of whom are now poised to lead the firm into the next generation."

## HELEN GOWLAND PERKINS+WILL

Helen Gowland has been appointed as associate principal and workplace consulting and change management leader in the London office of global architecture and design firm Perkins+Will, as it continues to strengthen its workplace consultancy team. With over 10 years' experience in consultancy roles Helen will focus on the interaction between people and space and the organisational context in which these sit. Steven Charlton, managing director at Perkins+Will, said: "Helen's specialist expertise, experience and knowledge will strengthen our workplace consultancy team, while also allowing us to maximise our service offer to clients."



## MATT JACKSON BDG ARCHITECTURE + DESIGN

Matt Jackson has joined the BDG architecture + design team as associate director. Matt's work draws on an "extraordinary portfolio," says the firm, which "includes numerous milestone projects in the industry and revolutionary designs for large retailers, top legal firms and financial service providers". With a firm belief in the strength of workplace strategy and the science that can influence a stronger result, Matt enjoys every opportunity that can further develop a better solution for the users. Matt said, "I am delighted to be joining BDG architecture + design after almost 23 years of evolution. It is a highly creative team of people."



## BRANDON BUCK PERKINS+WILL

Architecture and design firm Perkins+Will has appointed Brandon Buck as a new design principal based in its London studio. Buck brings significant experience working on complex projects from concept through to completion. His diverse portfolio of work includes the Which? Headquarters for the Which? Consumers' Association, Sixty London at 60 Holborn Viaduct for AXA Real Estate, and Aykon London One for Damac Properties. Steven Charlton, managing director of Perkins+Will's London studio, said: "Brandon's portfolio of work is a natural fit for the studio and strengthens our ability to deliver high-quality design to clients."



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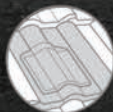
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# CPD FOCUS

The latest CPD courses, seminars and documents for architects

## SPECIFYING HARDWOOD TIMBER EXTERNAL DOORSETS



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

01494778787

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

## TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR

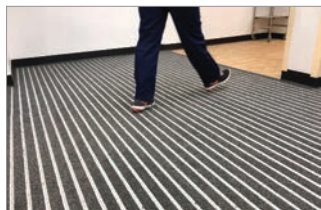


In two RIBA assessed seminars, **Comar** outlines: *Stand & Deliver: a Study of curtain Walling* – the design of curtain walling, its properties and how it is used by specifiers. This seminar aims to offer an understanding of the points of HLL in the NBS specification system, and how best to make use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

020 685 9685

[www.comar-alu.co.uk](http://www.comar-alu.co.uk)

## 'STEP ON IT!' SPECIFICATION OF ENTRANCE MATTING



**Quantum Flooring Solutions** – RIBA approved CPD seminar *STEP ON IT!* is a presentation and discussion dealing with the subject of specifying safe and effective entrance matting. The CPD presentation includes: What entrance matting is designed to achieve and how to select the right one; How recent BRE guidelines affect the choices for specifiers; Environmental and health and safety considerations applicable to the manufacture, installation and maintenance of entrance matting.

0161 627 4222

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

## THE IMPORTANCE OF SPECIFYING THE CORRECT PERFORMANCE FLOOR



As part of **Harlequin's** commitment to protecting the health and wellbeing of dancers and performers, its RIBA approved CPD explains why specifying the correct floor for dance and performing arts is critical to the longevity of a performers career. Using comprehensive data and case studies, **Harlequin** outlines the key considerations when specifying a performance floor and look at the important contribution the floor makes to performer health and safety. It explores how to ensure you specify the right performance surface.

01892 514888

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

## THE UK'S ONLY RIBA-ACCREDITED CPD FOR BATHROOM PODS



**Offsite Solutions**, one of the UK's leading bathroom pod manufacturer, has launched the only RIBA-accredited CPD training programme for bathroom pods. Entitled *'Modular bathroom pods – what, why and where?'*, the seminar examines all aspects of bathroom pod specification to help architects, contractors and developers design and procure factory-built bathrooms, ensuite shower rooms and wet rooms more effectively. The programme looks at how to get the best out of this type of offsite construction and the latest innovations.

01278 780807

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

## NO SMOKE WITHOUT FIRE: UNDERSTANDING FIRE DAMPERS



This seminar from **Swegon Air Management** outlines the need to understand and comply with tested methods when selecting, installing and using fire and fire/smoke dampers. Attendees are educated in damper design, selection, installation, testing, analysis and performance. It aims to highlight and clarify the differences between fire and fire/smoke dampers. The seminar stresses the critical responsibility of all parties involved in the overall sequence from system specification through to compliant installation.

01746 761921

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

## A JOURNEY TO FIRE RESISTANT GLAZING



The new CPD seminar from architectural glazing specialists **OAG** explores the prospects and capabilities of fire rated glazing. Attendees will learn to understand fire ratings and the types of glass used in fire resistant glazing. They will also be introduced to the relevant British Standards (BS), European Standards (EN) and CE Markings, a prerequisite on all glazed fire rated systems from 2019. In addition, an overview of fire testing criteria and assessments is included.

01494 492 700

[www.oag.uk.com](http://www.oag.uk.com)

## RENOLIT LAUNCHES NEW RIBA APPROVED SURFACE DESIGN CPD



**RENOLIT** has launched a new CPD seminar on the flexibility and uses of thermoformable PVC as a decorative surface which illustrates the benefits of PVC films over other decorative surface materials. The seminar provides architects with an understanding about PVC and its common uses within interior construction projects. It informs how to recognize different types of surface films, their applications and raises awareness of some specialist applications.

01670 718222

[www.renolit.com/design](http://www.renolit.com/design)



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## Luceco wins Best Innovation in Lighting



The fourth Annual RetrofitTech Summit & Awards were recently held in Dubai. The well attended event addressed the project opportunities across Dubai including strategies to achieve increased energy efficiencies. Discussions also included future financing model. Luceco won Best Innovation in Lighting at RetrofitTech Dubai Summit & Awards with the LuxFrame, a minimalist LED luminaire designed for suspended ceiling grid applications. Installed around the ceiling tile, LuxFrame provides an interesting lighting effect whilst maintaining the integrity of the ceiling, enabling the creation of imaginative lighting with cost effectiveness and energy efficiency in mind. As with other LuxPanel products from Luceco, LuxFrame offers over 50,000 hours of operational life with no maintenance, available with DALI dimmable drivers and with emergency back-up variants. The Summit & Awards also gave an insight on the progress of the retrofitting strategy across Dubai, particularly in relation to buildings within the commercial, retail, hospitality, healthcare, education, and industrial sectors.

01952 238 100 [www.luceco.com](http://www.luceco.com)

## Rockfon aims for growth in Ireland with new Specification Manager



We are excited to announce that we've strengthened our team in Ireland with the appointment of Gerard Clarke in the new role of Specification Sales Manager. Gerard has extensive experience in sales and marketing, gained from working with key specifiers and contractors within the construction industry for the past 20 years. Gerard has been involved in many high profile projects throughout his career, and joins us from his previous role at Eurobond Laminates. He is now looking forward to the challenges that await him at Rockfon. "I'm really excited to be joining such a versatile, dynamic business, offering a comprehensive range of sustainable, acoustic ceiling and wall solutions to its customers," commented Gerard. "I'm looking forward to the challenge of increasing the awareness and specification of these innovative stone wool solutions which includes the recently launched Rockfon Blanka® dB ceiling tiles – a unique range that can provide both sound absorption and sound insulation performance." Working closely with Sales Manager, Kevin Clancy, Gerard is seen to see Rockfon become the preferred choice in the demanding Republic and Northern Ireland markets, strengthening its position as a leading provider of sustainable acoustic products.

+353 (0)86 0302730 [Gerard.Clarke@rockfon.com](mailto:Gerard.Clarke@rockfon.com)

## Metal Technology gains BES 6001 accreditation



Leading aluminium systems manufacturer, Metal Technology, has been accredited to the BES 6001 Framework Standard for Responsible Sourcing of construction products. This standard enables construction product manufacturers to ensure and prove that their products have been made with materials that have been responsibly sourced. BES 6001 accreditation affirms Metal Technology's sustainability credentials and, taken with product quality, comprehensive testing of systems and existing accreditation to quality standard ISO 9001 and environmental standard ISO 14001, reassures customers that they can specify Metal Technology architectural aluminium systems with confidence in their performance on all levels, structurally, aesthetically and ethically. Metal Technology's Managing Director, Calvin Wilson (pictured right) who received the certificate from Leo Tinnelly of the British Standards Institute, commented: "We are delighted to have achieved BES 6001 as a further endorsement of our commitment to sustainability throughout every part of our business." For more information visit Metal Technology's website.

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

## Materially Show Stopping



Sensitivity in designing offices in materials akin to their localities clinched Piercy & Company the BD Office Architect of the Year Award 2018, sponsored by GEZE UK. Kaz Spiewakowski, managing director of GEZE UK, said: "We were delighted to again sponsor the Office

Architect of the Year at the 15<sup>th</sup> BD Awards at its new venue. The winner, Piercy & Company epitomises the quality of design and creativity needed to produce standout developments that blend material elements with their surroundings."

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


## Torfloor RdB chosen for 1820's house



A recent renovation project carried out on an early 19<sup>th</sup> century town house in London's fashionable Holland Park area, has made use of the innovative new TorFloor RdB system, manufactured by underfloor heating specialist, OMNIE. TorFloor RdB is a dry install where the panel doubles as the structural decking. It also now forms part of OMNIE's LayFast product offering: speeding up installation time and offering the potential for overall project cost reductions. Combining the structural deck and heating system into a single panel can save precious head height where floor-to-floor dimensions are restricted.

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





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Principal - Zaha Hadid  
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HADDONSTONE

## Bakerhicks' building services team



BakerHicks, the multidisciplinary design and engineering company, has appointed two senior executives to its Building Services team. James Chorley and Graham Furness take on the newly created roles of Head of Mechanical and Head of Electrical respectively.

Commenting on his appointment James said: "The Building Services team at BakerHicks are one of the industry leaders in using 3D modelling technologies to create low energy systems that deliver real value to clients. I'm excited to join the team and looking forward to working on projects that will continue to push best practice design."

01926 567800 [www.bakerhicks.com](http://www.bakerhicks.com)

## BLM British Lead technical support



BLM British Lead is pleased to announce the launch of its own in-house technical support service with David Pounds joining the company as Technical Advisor. David comes with a wealth of knowledge and experience in the industry, having spent 13 years as Technical Advisor at the Lead Sheet

Association. The service aims to fulfil the requirements of architects, specifiers, surveyors, contractors and property owners working at design, construction or post installation stages.

0330 333 3535 [technical@britishlead.co.uk](mailto:technical@britishlead.co.uk)

## Kingspan retains superbrands status



Kingspan Group's status has been reaffirmed as the company became a Business Superbrand for the sixth consecutive year. Kingspan Group is globally recognised as an innovator and front-runner in the development of advanced technologies for energy efficient buildings. The

company offers a comprehensive product portfolio through its five operational divisions: Insulated Panels, Insulation, Environmental, Access Floors, and the recently formed Light & Air division. For further information on the Kingspan Group and its success visit [www.superbrands.uk.com/content/2018/kingspan-group](http://www.superbrands.uk.com/content/2018/kingspan-group)

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## Visit helps to fire enthusiasm



Jennifer MacDonald, a Norbord employee who is based at the company's Inverness plant, swapped the cold and rain of the Scottish Highlands for the sun and heat of eastern Africa when she spent five days teaching pupils in a remote girls school in Kenya. The Quality Assurance Technician

had volunteered to help at the WISER Girls School in Muhuru, on the eastern shore of Lake Victoria. As the school puts great emphasis on science, technology, engineering and maths, Jennifer was keen to use her knowledge and experience to contribute to its curriculum.

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





**BUILDING  
PROJECTS**

## **HUSH HOUSE FINCHLEY**

# A small victory

Discreetly hidden in a quiet cul-de-sac in Finchley, north London is an unconventional compact home, designed for a young client who was looking for a way to combat London's housing shortage. James Parker reports

According to its architect Nick Pocock of Ashton Porter Architects, Hush House was given its enigmatic name because although it's a striking piece of contemporary architecture, it's "hidden in plain view," in the heart of London suburbia. The architectural practice behind the project specialise in distinctive residential commissions large and small, as well as having a strong foothold in the commercial and cultural sectors, but this project was a very particular solution to a common problem.

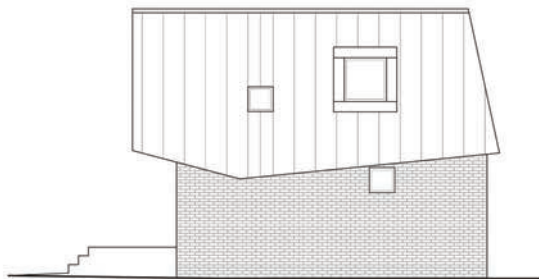
The client was a young first-time buyer in their late 20s, and a victim of the

London house price bubble caused by the yawning gap between supply and demand. Despite earning a decent salary, finding a home within a short distance of work in north London, and one which they could envisage living in long term, had proved impossible given the state of the market. For the architects, the opportunity to help offer one solution to this endemic problem was a key factors which made this project an compelling proposition.

The client had scoured local properties before coming to the conclusion that with a new one-bed apartment in Finchley starting at around the £400K mark, a more creative



EAST ELEVATION



WEST ELEVATION

**ABOVE RIGHT**

The cladding is smooth blue brick at ground floor, with dark 'anthracite' zinc wrapping the first floor

solution was needed. After discussing the predicament with his parents, who live in a fairly substantial home in east Finchley, they agreed to let him demolish their garage and build a house in its place.

The client then came to Ashron Porter with his "vision", and the practice, which has been trading for around 20 years, "were very pleased to take it on," says Pocock. He continues: "It takes firms quite a bit of time to find a project which has all the sorts of key challenges which architects like to sink their teeth into, and it was certainly one of those".

Although the architect was proposing a new home which would have a curtilage not much wider than the detached garage it was replacing, the tight site meant that planning constraints would be a chief concern of the architects, in terms of issues such as overlooking and right to light. While the client would be living cheek by jowl with his parents (there's a 1 metre gap between the two properties at ground level), the benefits of this were balanced with the need to ensure that both properties were offered the necessary privacy.

**Design development**

Pocock explains how the planning constraints together with the wider context in fact helped the architects to arrive at an unusual solution, which made a virtue of its compactness: "We were bound to quite tight conditions in terms of how we could occupy the site, so we decided to design it as a sort of sculptural object, effectively as a counterpoint to the typical typologies".

Finchley is an archetypal north London suburb, with a varied range of building types "generally developed quickly between the 1930s and 1970s," says Pocock. He adds: "There is a broad range of vernacular in north London suburbs – they are very diverse, with buildings extended over time – some quite lumpy and ad hoc additions."

This lack of a fixed aesthetic context actually gave the architects more confidence in proposing a design which would unashamedly defy excessively polite suburban housing design. However the discreet site, at the end of a cul de sac and set back from the road, further enabled the designers to do something a little different from the norm. Pocock comments further





on the design intent: “Often in suburbs people expect quiet, unassuming houses, but places can be fairly boring. One thing that interests us is stopping thinking of the suburbs as the status quo”.

Somewhat counter-intuitively, a feature which the architects thought might please Barnet council planners, that of angling a parapet as a nod to a nearby church in Friern Barnet, was in fact rejected, and the project now has a flat roof, minimising the two-storey addition’s impact on the skyline and providing for the possibility of future additions of a green roof or PVs. The architects were able to “develop a detailed discussion” with planning officers however, which was critical in ensuring its smooth passage through planning.

With the new house so close to neighbours as well as the owner’s parents, the design proposals were shared with neighbours throughout, helping to “foster a proactive relationship” as Pocock describes it. In addition the architects successfully persuaded the parents to block out the windows facing directly onto the plot, which was a planning requirement.

Ashton Porter then progressed a tried and tested approach of creating physical models to begin to find the right form for this particular site. “There’s never really a simple solution – we developed the design in a series of stages, and it meant we had to work through a series of physical models”.

### Built form & materials

The eye-catching box-like form which was eventually arrived at is a consequence of playing with form and paying close attention to complementary materials. The house is clad in a Staffordshire slate smooth blue brick at ground floor, with dark “anthracite” zinc wrapping the first floor diagonally across a series of unevenly placed windows. “It was essentially plotted as a quite sculptural sort of ribbon,” explains Pocock.

He continues: “Both materials were chosen not as a nod to local characteristics, but from the idea that they were complementary to each other”. The contractor PVR had to be closely engaged through the development of the models – as the architects explored ways of artfully

### LIVING SPACE

The quadruple-bifold door enhances the sense of space given by the open-plan ground floor



blending the two materials. “Nothing could have been more dull than just having a uniform split between the first floor in zinc and the ground floor in brick”.

In a similar way, brick was chosen not in deference to the local vernacular, or because it’s currently in vogue, but because the architects “were keen to explore brick as a contemporary material”. Three-way conversations with client and builder resulted in the decision to also use flush pointing in a grey pigmented mortar, giving the effect of an almost continuous purple-grey surface to the ground floor, which is “highly contemporary,” Pocock asserts.

A key brickwork detail which signals the non-standard nature of the house, is special pigeonhole corner junctions. Rather than specifying a custom-made brick, the architect and client preferred the idea of “leaving a mark of craft” to show the attention to detail applied by the contractor.

Due to the unconventional design, bringing the contractor on board was key to success. As Pocock puts it, “One thing that’s tricky to do with domestic small-scale projects when using contemporary materials is finding a local builder who can work on that scale and do something that’s highly different to a normal project.” The fact the architect had worked with the contractor previously on projects and the fact “they were fully appreciative and understanding of the dexterity needed” was key to the achievement of the very precise result.

One practical aspect which greatly benefitted the construction was that the pre-existing garage had a shallow concrete foundation, which could not be known until work had begun to demolish it. “It’s always a nice surprise when things are less bad than anticipated,” laughs Pocock.

### Timber truss

Another unusual aspect of the project is not just its C24 engineered timber frame, but that it has a Vierendeel truss running across the first floor, eliminating the need to have any loadbearing walls at ground floor. It is a Kerto glulam beam the thickness of the entire floor, enabling the entire ground floor to be an open space, “one of the key priorities for the client,” says Pocock. The perimeter walls effectively act as a load-bearing secondary structure, with all first floor joints and roof bearing on the truss.

However establishing the buildability of this, particularly within the tight £220,000 budget, was crucial, and a “quite

ambitious” structural engineer was engaged to help ensure its viability. The fact the house has a timber cantilever of around a metre to the rear of the master bedroom, which juts out towards the trees ringing the garden giving a discreet feel, is another structural achievement.

“Timber is very adaptable, and easy to work,” says Pocock. “This greatly benefited the project, rather than doing something like a complicated steel package which would have added a fair amount of cost.”

### Layout

While the Vierendeel truss solution delivered the open downstairs - another deceptive differentiator in a small (108 m<sup>2</sup>) house such as this - Pocock admits the open space created for the ground floor created its own challenges. “With no load-bearing partitions, it certainly made us think about how best to come up with a solution in terms of how the layout worked”.

Entered through a space-saving sliding door, the open-plan living, dining and kitchen area has an engineered timber floor and services ranged along the south wall, with a staircase fitted in along the front (east) elevation. Its window’s rhomboid shape follows the line of the stairs, contributing to the abstract composition, and is frosted for privacy from the four-car shared driveway outside. The living area has a quadruple-bifold door facing north onto the garden.

The architect managed to extract a full double-height space in the entrance way, with a glass-balustraded-landing passing overhead, gaining views of the garden through a full height narrow window. Says Pocock: “The ability to have a conversation with somebody downstairs is a good thing to have - we were trying not to close off the living space from the private areas upstairs”.

The first floor has two carpeted bedrooms and two bathrooms - the master bedroom which cantilevers over the bifold doors having an ensuite. Pocock says the bedroom jutting into the garden “is very surprising for a north London suburban typology, it’s satisfying”.

The timber frame has not been exposed, due to reasons of fireproofing and keeping costs down, says Pocock, however this also assisted the client’s desire for a simple interior in what is a very compact house. “We didn’t want to go overboard with too many facing materials - we kept a monochrome palette”.





The architect notes that part of maintaining that clean look internally was the benefit of using windows, made by Velfac, with very discreet trickle vents to offset the highly air-tight construction. “They have a really minimal slot on the side of the frame – one of our pet hates is windows with things that can appear like a long block at the top”.

### A long-term home

The client’s father was “incredibly surprised” that the designers were able to get permission for something so apparently out of keeping with suburban north London, but Nick Pocock happily reports both parents are “incredibly proud that their son managed to put something like this together”.

The client is “not interested in moving any time soon,” says the architect, clearly very gratified to have achieved a long-term solution in what is a very problematic

## The house has a timber cantilever of around a metre to the rear of the master bedroom

market for young prospective homeowners. “Often because of the housing shortage, people are often moving far away from their relatives. To be part of something that’s not just about making a piece of contemporary architecture, but also about doing something socially responsive, was something you don’t always get to do”.

Following being shortlisted for national awards including the Structural Timber Awards, including a presentation at Ecobuild, this small, unconventionally formed, and discreetly hidden house is attracting the limelight. ■

### PROJECT FACTFILE

**Architect:** Ashton Porter Architects  
**Structural engineer:** Constant Structural Design  
**Building Control:** The Building Inspectors  
**Contractor:** PVR Builders  
**Photographer:** Andy Stagg  
**Zinc cladding:** VM Zinc  
**Timber suppliers:** ABC Depot / Travis Perkins  
**Windows:** Velfac  
**Bricks:** Ibstock

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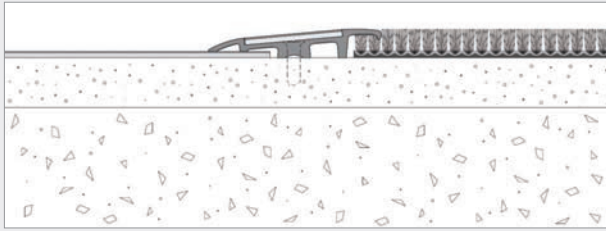


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## Dementia friendly flooring transition

Part of the research undertaken by the Dementia Services Development Centre at Stirling University has identified that people living with dementia benefit from a calming and safe environment around them. This has included colour design considerations for the floor, wall and ceiling decor. They require some locations to show a contrast, such as steps on stairs or skirtings between walls and floors. Light Reflectance Values (LRVs) of flooring materials are used to measure the contrast differences between different products. DSDC and BS8300:2009 recommend a LRV difference of 30 between critical surfaces where a contrast is needed. However, when highlighting a junction is not safe, the LRV difference should be between zero and 10 at most (less is better) – and shiny aluminium or brass strips that glare are definitely out! **Quantum Flooring Solutions** has developed a new UPVC transition profile (QTP38T) which comes in a choice of 14 different calming colours. These give specifiers and flooring contractors the options they need to select a safe and through coloured transition profile between floorcovering joints – and achieve very low LRV differences at the same time.

0161 627 4222 [info@quantumflooring.co.uk](mailto:info@quantumflooring.co.uk)

## Excellent indoor air quality for Avery



Indoor air quality is such an important feature in any home and for Avery Healthcare, it was important that their newest 78 bed retirement village had the very best ventilation installed. They appointed Harniss Ltd to install a selection of ventilation fans by Burton upon

Trent-based Vortice, whose expertise in the area is second to none. Vortice Specification Manager Tony Green-Hurst said: "The CBZ and Hexamotion products we used for the project were selected as a bespoke solution. Our technical team carefully considered all the requirements before coming up with recommendations."

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## Danfloor's new CPD seminar



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**BUILDING  
PROJECTS**

**AUDLEY REDWOOD RETIREMENT VILLAGE  
BRISTOL**

# Village vanguard

Overlaying the former site of a piecemeal-built country club just west of Bristol, a new retirement village offers a refreshingly social approach to long-term living, combined with sympathy for the local vernacular. Sébastien Reed reports





Ascending to Clifton Village to cross Brunel's suspension bridge was an impressive preamble to visiting high-end retirement village specialist developer Audley's latest creation. Nestled among green pastures, golf clubs and a local amateur rugby club, and 15 minutes drive from Bristol's city centre, Audley Redwood boasts an enviable array of nearby amenities combined with the perks of countryside living – in short, a great location for the newly-completed retirement village.

This is London and Cardiff-based Gaunt Francis Architects' sixth collaboration with Audley. The key to the success of their partnership is a deep understanding of the Audley brand, together with an appreciation for quality, and, in Audley

managing director Kevin Shaw's words, an aptitude for "foreseeing the future needs of the [apartment] owners."

Designing for accommodation of a hybrid nature, bringing in aspects of high-end residential, care-living, and hospitality, as well as the master planning imperative, the project's typology is something of an enigma. Of the numerous ways to approach the overarching aim of the brief – to provide a care community while maintaining the green surroundings – Gaunt Francis attribute introspection as a primary means.

### Rope lines & scale

The previous building had fallen into disrepair and was not listed, so the architects decided to start from scratch.

### FOCAL POINT

The new focal point as well as 'community hub' for the purpose-built village is Redwood Hall



#### MASTERPLAN

The masterplan aimed to develop a “village along a street that was never there”

“Redwood Hotel and Country Club comprised a little lodge with disparate facilities. It was a sprawling mass – rambling and ugly with lots of tarmac, which we wanted to break up, softening the ground more,” says lead architect and Gaunt Francis Cardiff director Gavin Birt.

Located on Bristol’s green belt, the architects had to fulfil stringent criteria to enable the project to progress. They were fortunate to have a highly co-operative as well as assiduous planning officer, who met regularly with the architects. As Birt explains: “He wanted quality design – I think we ticked that box. Footprint was also a factor – everything had to be designed within a strict ‘rope line’ justified by the planning need to conserve the local green environment.”

He continues: “What was interesting was that the existing building was a series of accretions, which had just grown over the years. The planners wanted more permeability, and more gaps and views from north to south.” Splitting the project’s mass into small fragments produced a more comfortable domestic scale, favoured by the planners. The master plan aimed to develop “a village along a street that was never there.”

As a result, segmented volumes of 124 housing units and common accommodation sprout neatly at the sides of the village street carved into the site, which follow a slight double curve and incorporate a range of scales. Multiple visitor car parks, green landscaping, and a drainage pond separate the street from the main road to the north which allows vehicles to access the complex.

The new focal point and community hub for the village is Redwood Hall. Located at the centre of the road plan, offering optimal accessibility to residents, who start at 55 years old. Previous mock-ups done by the architects placed the main communal hub at the ends of the road, making it more distant from some of the housing units and probably less desirable to Audley’s user demographic. A decorative central tree feature and lodges square the space off as the primary node to the site, while southerly views obstructed by the hub building are balanced by more visual permeability to the green grounds at the north of the site.

Redwood Hall’s internal layout is distributed across three floors. The ground floor entrance presents an airy reception area rising into a three-floor atrium, the left wing of the building houses leisure facilities





including a gym, swimming pool, and library, while the right contains dining facilities and a kitchen. Flats occupy the upper floors of the hall and plant room extending from its eastern elevation houses the combined heat and power system which provides electricity for the entire village.

### Setting the scene

“What we’ve done as architects is to create an efficient product for our client,” says Gaunt Francis’ Birt. “We’ve been looking at standardising apartment and cottage types and we’ve looked to create a central building that works efficiently, that we can use and adapt”. The idea of having a main house is pivotal to harbouring a sense of community for the owners across Audley’s villages.

Dovetailing the scheme into its historical context, the architects gave more than a nod to the rich architectural heritage of nearby Clifton, Long Ashton and other areas of north Somerset. This produced a range of neoclassical and Georgian forms that the architects sought for the client and presented successfully to the planners.

Redwood Hall’s exterior is dressed with grand columns, chimneys and an entrance portico which combine to provide

an elegant backdrop to the feature landscaping. Formally, it is quite regular, made up of one large primary volume and three secondary volumes which protrude at ground level; one from its easterly elevation housing the plant room, and two from either side of the north-facing entrance portico, which seem to embrace the user into the building while giving a distinct sense of arrival.

The ground floor of the hall houses and reception area – lit by natural light which pours in through a rooflight at the top of the triple-height atrium – and lounge which splits off into kitchen and dining to one side, and further lounge areas, the pool and gym to the other. Keeping common facilities at ground level maintains easy access for village owners while the upper floors contain apartments.

Birt likens the interior feel of the main building to that of a boutique hotel. In keeping with the scheme’s external language, the main hall’s interiors are Georgian-inspired; with a calm and sober colour palette of blacks, greys, white and bronze. The architects took particular care in making the interiors not appear too flamboyant or challenging – with the aim instead to provide a statement of

**The design of the buildings went beyond referencing historic architectural language – the architects imbued each building with their own narrative**



## It's all about creating ways for people to interact

Gavin Birt, Gaunt Francis Architects



quality and ease which befits the intended experience of life on site.

The design of the buildings went beyond referencing historic architectural language – the architects imbued each building with their own narrative. For Birt, who undertook the feasibility and original concept of the project, “the idea was to create the apartment buildings as big Georgian villas, each set within a hedge and a gate so it’s as if you’re actually seeing a large villa that’s been converted into apartments.” He continues: “For the cottages, as well, we tried to create a storyline for how the buildings developed.”

The street is characterised by repetition of simple forms and roofs articulated with classical features such as parapets – making a sequence of villas and terraces with elegant metalwork and feature bay windows. With authentic traditional motifs repeated throughout the scheme, it may come as a surprise to some visitors that Redwood Lodge is an entirely new-build project. This sets it in contrast to other Audley developments which tend to emerge from the rejuvenation of a listed building acting as the centrepiece of the site.

While the palette of materials is simple – soft off-white renders, red bricks, and artificial slate for the pitched roofs – no quarter was given in terms of quality. Local Limply Stoke Bath stone is used extensively for the facades of the main building, along with quality interior furnishings which altogether instil a high-calibre feel.

While stock finishes are applied to each of the units’ interiors, they can also be customised upon request by owners, in partnership with the architects and interior designers. Further flexibility is offered to create a bespoke layout as some units are fitted with knock-out panels between kitchen and living area to cater for a more open-plan preference. Units are also unfurnished as occupants “tend to prefer kitting out their new apartments with their own furniture and appliances,” says the architect, confirming that it helps to foster a sense of ownership and transform their new apartment into a home.

### PROJECT FACTFILE

**Architect:** Gaunt Francis Architects

**Soft landscaping:** Soltys Brewster

**Interior design:** Inside Design Co

**Structural engineers:** CSP

**M&E:** SVM

### Community of care

Given that some owners of Audley Redwood are physically less able, the site has no kerbs – reducing the potential of trips significantly. In addition, the street’s surfacing has been engineered to encourage optimal water percolation into the soil below, reducing the likelihood of slipping on wet surfaces.

With future flexibility to apartment owners’ needs in mind, the units have been designed to high structural specifications. Walls and ceilings are ready to bear the load of hoists, and other heavy medical equipment which may need to be brought in and fitted. Also, most residences are designed as two bedroom units, providing extra space, if necessary, to accommodate a full-time carer, or to host family and friends for the night – further elevating that crucial sense of ownership among occupants.

On cultivating a sense of community, Birt comments: “What we felt was really important was the space between the buildings and those connective corridor spaces”. Audley’s original brief stipulated a library for the scheme. Instead of confining it to its own room, Redwood Hall’s library is situated in an extended part of the main balcony, a location which will attract more owners and increase circulation.

Outside, balconies and terraces promote social interaction and facilitate different ways of experiencing of the space, all the while enhancing the village feel – “it’s all about creating ways for people to interact.”

Gaunt Francis’ empathic approach to the brief is summed up by Birt: “We had to design this as a place for our parents to go and as a place that I’d like to go. It’s a quality country club – somewhere I’d be happy to stay for two weeks in May.”

### A new standard

Birt’s introspection-oriented view was layered with a more extrovert, international design outlook, as driving Gaunt Francis’ design was the ethos of a care community that “does not replicate the standard institutional product that we’ve had in the past in the UK,” explains Birt. He notes also how care provision in the UK lags behind that in other countries such as in New Zealand, South Africa, and the US, where such villages are more commonplace.

There is however an increasing desire for high quality, aspirational retirement housing options in the UK, which allow older homeowners to downsize without having to compromise their quality of life. Although Audley are at the top-end of this drive, Gaunt Francis have contributed a model that raises the national bar for this typology. Birt adds: “this model could eventually permeate through so that you can have these sorts of communities at different pricing levels for everyone.” ■



# Vision 2018

Vision 2018, the two-day conference and exhibition aimed at architects, designers, specifiers and clients, takes place on 21 - 22 June at the Business Design Centre in London

Vision showcases the latest developments in materials, products and technology alongside a rolling programme of lectures, seminars and debates examining the key issues facing architecture and construction today.

Vision 2018 has joined forces with *Architecture Today* to produce a high-profile conference programme where some of the biggest names in the industry discuss the challenges facing architecture and construction, and suggest solutions and set out their thoughts as to how to “adapt and thrive”.

Leading names in urbanism will be discussing contemporary theory and practice. Ben Rogers, director of think tank Centre for London, will be asking whether London can be “both prosperous and fair”. Architect Sunand Prasad will present Penoyre & Prasad’s proposals for Himley Village, a highly sustainable scheme of 1,700 new homes, which will form part of the 6,000 home NW Bicester eco-town. And Max Farrell will be talking about the principles of city making in a presentation ranging from international case studies to Farrells’ own designs for the Northern Gateway, a landmark scheme which will unlock the development potential of more than 300 acres of land to provide more than 10,000 new homes in a series of “distinct yet clearly connected communities” across northern Manchester.

The architects behind some of the most celebrated recent sustainable housing projects will be reflecting on their most famous projects and their legacy and on subsequent developments in their work. Sarah Wigglesworth will discuss her seminal project Stock Orchard Street. Described by *The Architect’s Journal* as “the most influential house in a generation” the building incorporates office space for Sarah Wigglesworth Architects and a private home with sustainable features including straw bales, sandbags and loadbearing

gabions, plus a composting toilet, green roof and rainwater storage. Pioneering eco-architect Bill Dunster will reflect on the legacy of BedZED, the UK’s first large-scale mixed use sustainable community, and the practice’s subsequent work including the ZEDlife plan, a toolkit to deliver a safer, more equitable society with reduced dependence on fossil fuels.

Experts will be looking at the impact of new technologies on contemporary life. Architect Harbinder Singh Birdi of Hawkins\Brown will ask how technology will transform the way we travel, Paul Foulkes from WAGO will be looking at how building automation can contribute to health and well-being while smart building specialists Mapiq will present their data-driven behavioural approach to flexible, user-focused workplace design.

Other speakers include Maria Smith, head of transdisciplinary architecture and engineering practice Interrobang, who will be discussing the practice’s conversion of the Hoover building, a Grade II\* listed art deco office building in Ealing, into 66 residential units. Also speaking are Patrick Schumacher, principal of Zaha Hadid Architects, who sparked controversy by calling for social housing to be scrapped and public space to be abolished, and a roster of Stirling Prize-winning architects including Paul Monaghan, Chris Wilkinson and Alex de Rijke.

Vision director Matt Underhill said, “Brexit and the threat of recession make it a particularly uncertain time for architecture and construction. There has never been a better time to take stock of ourselves as an industry and the challenges we face.”

Now in its fourth year, Vision 2018 has changed venue to be closer to the heart of the design community and is bigger and better than ever. A wide range of exhibitors – including the best-known major brands along with a range of



**TENSION PAVILION**

Exhibited by Structure Mode at Vision 2016  
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#### FUTURE TECHNOLOGIES

Exhibitors will be showcasing and demonstrating new products, materials, systems and technologies  
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dynamic SMEs and innovative start-ups – will be showcasing and demonstrating new products, materials, systems and technologies designed for the built environment. Vision 2018 has teamed up with partners from Belgium, France, Italy, the Netherlands, and Luxembourg to offer visitors a chance to meet companies and view products, many of which would not otherwise be accessible in the UK.

There will also be a rolling programme of practical CPD-certified learning sessions on technology, products and materials and changes in legislation.

Underhill commented: “Vision was conceived as a forum for the exchange of information and ideas and a practical working resource. We wanted to capture the right balance between being inspirational, entertaining and a really useful day out.”

The exhibition continues into the evening on 21 June with Vision Late Night. Visitors

can view the exhibition and join a range of evening events including a drinks & networking reception and New London Architecture’s annual PechaKucha, a series of punchy fast-paced talks designed to inspire, entertain and provoke.

This year sees the launch of 100@Vision, an initiative designed to bring expert suppliers and architects together to explore solutions for the built environment. The networking event, which is being held on 21 June, will give a maximum of 30 suppliers the opportunity to showcase their products and services to 100 leading architects during an exclusive face-to-face meeting followed by a drinks reception. The evening will round off with dinner at Frederick’s, a much-loved Islington restaurant.

Vision 2018 is being delivered in partnership with RIBA, CIAT, BRE, NLA, the London Festival of Architecture and *Architecture Today*.

**For information about attending 100@Vision call 020 3409 0623. Visit [www.visionlondon.com](http://www.visionlondon.com) to register for your free ticket to the event**



# Comprehensive Schöck software and BIM support

The range of online and downloadable software available free from Schöck is among the most comprehensive in this market sector. It offers wide-ranging support to the design process for product selection, thermal analysis, structural analysis and BIM services. One recent development is calculation software for the Isokorb in steel-to-concrete connectivity solutions. This complements the company's existing calculation software for concrete-to-concrete and steel-to-steel connectivity; and offers a quick and easy method of identifying the optimum product solution. The recommendations provided are verified safe and reliable, all complying with BBA product approval.

A particular benefit of the steel-to-concrete program is the ability to calculate natural frequency. Free cantilevered steel balconies are becoming larger and more lightweight, imposing an increasingly demanding specification. The software calculates the natural frequency of thermally broken steel

balconies by using numerous geometric and material variables and enables a check on the vibration serviceability of the whole balcony system. The recommendation from Schöck is to limit the natural frequency to a minimum of 7.5 Hz.

## Thermal Bridging Calculator...

There is an online thermal bridging calculator available too, which enables planners to produce substantiated thermal bridge analysis in a few simple steps. The calculator computes two-dimensional heat flows, isothermals, temperature factors, surface temperatures and psi values ( $\Psi$  values).

## BIM libraries...

To support the continuing move towards BIM, special object libraries and plug-ins have been developed which meet BIM maturity level two compliance. Currently these libraries are available for the standard Schöck Isokorb product portfolio (concrete-



to-concrete, steel-to-concrete and steel-to-steel) for Allplan, ArchiCAD and Revit CAD systems – with Tekla to follow. The plug-ins provide two levels of detail. One for preliminary planning (objects can be converted into more detailed objects at a later stage, without having to manually recreate them) and one for execution planning. The libraries in the native BIM software formats focus on performance and are parametric to allow for easy adaptations during the project stages. The 3D objects allow for clash detection and detailed reinforcement design, ensuring completely effective project procedure during design and execution.

0845 241 3390 [www.schoeck.co.uk](http://www.schoeck.co.uk)

## Architects Datafile website



The Architects Datafile (ADF) website is an online provider of past and present products and news items for the architect or specifier. [architectsdatafile.co.uk](http://architectsdatafile.co.uk) is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they may require. From the website, you can find links to digital

issues that have live links to advertisers' sites, as well as daily email alerts to keep you as informed as possible.

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

## Calculations at the press of a button



A time-saving tool to help professionals tackle complex calculations for the design of window systems is being launched by GEZE UK. WinCalc 2.0 is an online specification platform that allows users to

populate design and specification data to identify and plan suitable window configurations. WinCalc 2.0 can be used on computers or tablet devices and has a new user interface with advanced calculation options and a shortened calculation methodology. It provides a range of information that can be downloaded including calculation reports, bill of materials and diagrams which can be saved in pdf format.

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



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# Celebrating 170 Years of UK Waterproofing

Established in June 1848, Newton Waterproofing Systems are the oldest suppliers of waterproofing and damp proofing products to the UK construction industry, and 2018 sees them celebrate an incredible 170<sup>th</sup> year of trading.

The company is still family owned and family run, and it is this family ethos and independence, coupled with their expertise and willingness to innovate that has allowed them to continually compete and grow.

## Humble Beginnings

In 1848 the original John Newton recognised an opportunity to supply plasterers hair and ancillary products to the construction industry, collecting his raw materials from the tanneries in Bermondsey, South London.

Such was his success that he supplied high profile projects including the rebuilding of the Houses of Parliament in the 1850s, and John Newton and Company Ltd went from strength to strength.

## Inventing Damp Proofing

With the introduction of plasterboard in the 20<sup>th</sup> century rapidly eroding demand for plasterers hair, Newton was forced to diversify.

Consequently, in 1937 the company designed and introduced the UK's first physical damp proof membrane, 'Newtonite'. An immensely popular product, Newton sold over five million square metres of the innovative membrane between 1945 and 1983.

## The New Generation

It was during this time that Christopher Newton, great-grandson of the original John Newton, began his tenure at the family firm. From stoking the boiler in 1963, Christopher rapidly rose to Chairman in the 1970s, where he remains to this day.

With Christopher at the helm, the company recognised the need to exploit new technologies and move with the times, resulting in two major developments:

- 1) Inventing 'Newlath', the first meshed damp proofing membrane that could be directly plastered onto, launched in 1984.
- 2) Utilising protective membranes below ground, resulting in the first Newton System 500 basement waterproofing solution in 1986, consequently installed in thousands of UK properties.

Both of these introductions were so



Image 1: Over five million square metres of the revolutionary Newtonite membrane was installed in the UK.

significant that, although the component products are constantly upgraded, the concepts have remained at the heart of damp proofing and waterproofing best practice for the past 40 years.

## Innovation and Expansion

The turn of the millennium saw more innovation, and in 2003 Newton introduced the industry's first approved contractor network of 'Newton Specialist Basement Contractors'. The network's strict entry criteria maintains the high standards and guarantees required for Newton products, and now includes 40 of the best specialist waterproofing contractors across the UK and Ireland.

The rapid growth that this generated also meant that Newton finally outgrew its original premises, and after 164 years in South Bermondsey the company relocated to Tonbridge, Kent in 2012.

## Complete Solutions

The 21<sup>st</sup> century Newton Waterproofing Systems continues to grow, with 33



Image 2: Introduced in 1986, Newton System 500 was the basis for modern-day internal basement waterproofing.

employees providing solutions for architects, developers, contractors and homeowners on projects from the smallest domestic basement, to high-end properties, commercial developments and extensive civil infrastructure projects.

However, the company has not lost sight of the values of its family beginnings or its independence, and as Christopher Newton observes, it is this autonomy that allows the company to continually stand out from its competitors:

"I have always been proud to say that Newton is a family-run company, with a strong ethos that provides the foundation for the 21<sup>st</sup> century company. Alongside our independence this grants us complete impartiality and a valuable freedom, allowing us to grow and improve whilst consistently offering the highest levels of service and sourcing new and innovative solutions."

01732 806 963

tech@newtonwaterproofing.co.uk  
www.newtonwaterproofing.co.uk



## Charcon Construction Solutions introduces innovative product range



Charcon Construction Solutions, part of the Aggregate Industries group, has introduced an innovative lightweight stairs product to its pre-cast concrete portfolio after combining the lightweight secondary aggregate – Lytag – with its concrete. The lightweight nature of the stairs make them ideal for multi-storey residential or commercial projects. Despite its lightweight nature, the new stairs provide the same level of structural performance as normal weight concrete. These stairs are unique to Charcon Construction Solutions, and not available from anywhere else in the UK. Richard Baldry, general manager at Charcon Construction Solutions, said: “Innovation is an important part of the work we do at Charcon Construction Solutions and Aggregate Industries. We are always developing products with the customer in mind; in this case creating a solution that will increase the efficiency of the build, saving time and money. By combining Lytag into our pre-cast concrete stairs, we have created a unique product – one that is not available from any other manufacturer in the UK.”

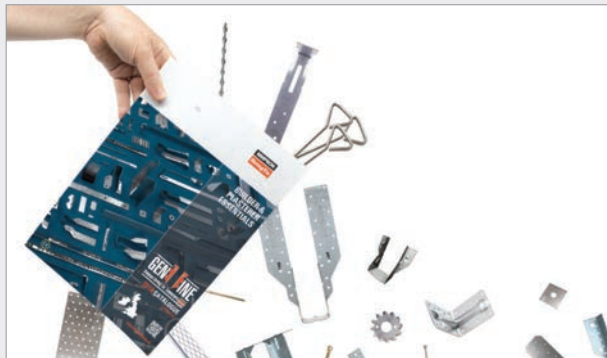
01332 208548 [www.charconcs.com](http://www.charconcs.com)

## Save time – no need to prime! Sika Sarnafil launches new Self Adhered Membrane



Sika Sarnafil has launched its latest flat roofing innovation, a completely unique ‘peel and stick’ self-adhered single ply membrane that does not require a primer. Quick and easy to install, it also mitigates the potential risks associated with adhesives and primers, making it a trusted choice for contractors and specifiers alike. The G410-15 EL SA membrane combines Sika Sarnafil’s tried and tested BBA certified single ply membrane with new self-adhesive technology, researched and developed in Switzerland. The adhesive is factory installed, removing the need for on-site application. Thanks to this new technology, the membrane does not require a primer and is free from volatile organic compounds (VOCs). Not only does this significantly speed up the installation process, it is also beneficial from a health and safety and environmental perspective, alleviating the risks for the specifier, contractor and client. The absence of VOCs means that the new system is especially well suited to sensitive environments such as hospitals, schools and other public buildings that could be in use during roofing works.

01707 394444 [gbr.sarnafil.sika.com](http://gbr.sarnafil.sika.com)



## Builder and Plasterers Essentials

One of the world’s largest construction manufacturers, Simpson Strong-Tie, has released a new catalogue of structural connectors, beads and meshes aimed squarely at the repair, maintenance and improvement sector. The 2018 ‘Builder and Plasterers Essentials’ brochure includes all of the core products that the professional builder or plasterer reaches for when renovating or extending homes. Simpson’s Sarah Greenway explains: “We wanted to provide something more accessible to the builders’ merchant. We spoke to our customers and they told us what they really like to see in the catalogue (and what they don’t particularly need), and this is the result – a brochure focussed entirely on the things that matter to the RMI sector.” The lighter and easier to navigate brochure is now online and hard copies are available on request.

01827 255600 [www.strongtie.co.uk](http://www.strongtie.co.uk)

## Scheme is a success for Firestone



Firestone Building Products’ RubberGard™ EPDM roofing membrane has been used to finish the roofs of Three Capital Quarter; a seven storey landmark commercial scheme in the centre of Cardiff’s Commercial Enterprise Zone. Gary Foster from JR Smart commented: “The service life of the roof is very important for these high calibre office schemes as it will reduce maintenance requirements and ensure the building retains its Grade A performance. We’re confident the strength and durability of RubberGard EPDM will give us a fit and forget solution.”

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

## Burning a hole in pockets of consumers



Norbord’s Use Wood Wisely tells you all you need to know about the responsible and sustainable use of wood; and how Government strategy is affecting the world of timber supply and use. Rather than burning virgin timber as fuel for energy generation, Norbord argues for the ‘cascade of use’ philosophy. It is much more efficient to process virgin timber into added-value products, such as wood panels, that are used in the housing and construction industry. In the wood panels industry, among others, wood is made into panels that lock up carbon for many decades.

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

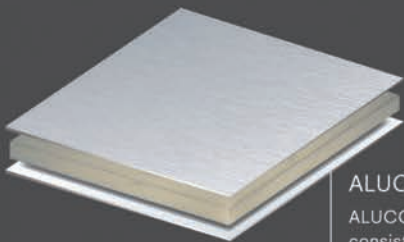
# ALUCOBOND® PLUS | A2

Certified fire characteristics – class B-s1 d0 | class A2-s1 d0

- ALUCOBOND® is the original German quality ACM with full BBA approval and highest fire standards for cladding materials.
- On-going commitment to provide the safest, highest quality, innovation façade solutions to the architectural façades market.
- 3A Composites proved with four BS8414 Large Scale Fire Tests carried out by BRE in late 2016 and early 2017 that the general requirements of the Building Regulation, Approved Document B, provide sufficient fire safety when adopting the European fire classifications: Rainscreen systems with limited combustible mineral insulation (min. EN-class A2) and ALUCOBOND® PLUS (EN-class B-s1, d0) shows no spread of flame or critical temperature rise.
- These systems exceed the requirement of BR135. The tests commissioned by the DCLG later in 2017 confirmed the following results: Rainscreen systems with polymeric insulation show a much higher risk for internal and external spread of flame to the façade system when compared to systems with mineral insulation. Only in combination with limited combustible cladding, particular fixing systems and cavity barriers, rainscreen systems with polymeric insulation might meet the requirement of BR135.

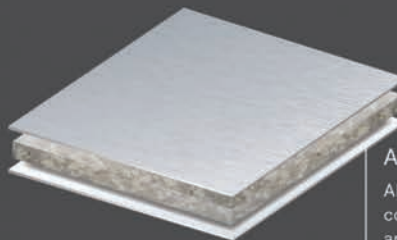


University of York – Piazza Learning Centre | ALUCOBOND® PLUS terra Pyrite | Interserve Construction Ltd | AKV Architectural Facades Ltd | Chemplas Ltd



#### ALUCOBOND® PLUS

ALUCOBOND® PLUS is a composite panel consisting of two aluminium cover sheets and a fire-retardant mineral-filled core (>70%).



#### ALUCOBOND® A2

ALUCOBOND® A2 is a composite panel consisting of two aluminium cover sheets and a core with a high content of non-combustible minerals (>90%).



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# Stay on top of new Regs

Hugh Harkin of Kytun Dry Roofing Products discusses the new British Standard for roofing and why these regulations matter

**D**ry fix systems have sparked plenty of debate since the 1980s when they were first introduced onto the market. Driven by the perceived benefits brought about by dry fix systems, their use has significantly increased over the past few years. Their popularity has led to an influx in equivalent products entering the market typically offered at lower price points. Market research has revealed difficulties among specifiers in distinguishing the difference between these fittings and systems. Construction experts highlight that although these products may look similar in design, their quality can vary significantly, making it incredibly difficult for contractors to choose suitable dry fix systems.

As a result of the significant increases in warranty claims in the construction sector and growing concerns surrounding severe weather, investigations were triggered to identify the cause. The findings revealed the attributable causes were product failures and inconsistencies in the component quality. Furthermore, it highlighted the lack of awareness about the quality and performance differences between products. This concern was recognised by the BSI roofing committee, which includes representatives from the NHBC. To address concerns they have developed a new British Standard specifically for dry fix ridge and hip systems which are connected to timber ridge, hip battens, ridge boards or hip rafters and installed with slating and tiling. This is a significant step for the construction industry, introducing a statutory instrument beyond BS 5534 to govern these products.

The introduction of the new standard BS 8612 which comes into immediate effect, will ensure consistency of quality across products. Although it is not law, it will help to ensure an improvement in the standard of products used in roof specifications. It will define the standards that are expected from these materials, such as performance, durability, mechanical fixing and weather-tightness to name but a few. It is proposed



that these standards will apply to products including verges, ridges and hips, but will exclude valleys and eaves. It will therefore be essential that specifiers state their compliance to the British Standard, or this may present a risk to contractors utilising a sub-standard product.

To achieve and ensure compliance with the new standard, manufacturers need to take necessary steps to protect their quality standards and reputation. This will require products to be rigorously tested to exacting standards with confidence that the products are durable, even during rare and extreme weather events. This requires manufacturers, and those within the supply chain, to work together to achieve an engineering system which is compliant with the new standard.

Although the installation process is outside of the remit of BS 8612, it is vital that contractors source dry fix systems from reputable and established roofing manufacturers and that they adhere to the guidance specific to each system they are

**To achieve and ensure compliance with the new standard, manufacturers need to take necessary steps to protect their quality standards and reputation**



installing. This can also help contractors to achieve maximum customer satisfaction, reduce call backs, retain their reputation and protect their liabilities for a project in the event of any future claims. BS 8612 also introduces new guidance on dry verge fixing. In particular, dry verge products can no longer be installed using a single nail fixing into the end grain of a batten. Instead, a mechanical engagement must be

made to the faces of the batten. Manufacturers can further foster relationships with contractors, while also helping to support the installation process, through the provision of technical support and product-specific training. Taking these steps can help close skills gaps within the construction industry, reduce inaccurate product installations and increase product knowledge and awareness.

At Kytun, we welcome the introduction of BS 8612, as like BS 5534, it will help further to make pitched roofing in the UK and Ireland more secure. We believe that it should improve consistency and quality of products, while helping to reduce the wide range of inferior systems on the market. We appreciate that BS 8612 is not a legal requirement, but we would openly encourage all specifiers to ensure their supply chain is using compliant products within their projects. A more collaborative approach to addressing quality concerns can seek to reduce the increased scrutiny that the pitched roofing industry currently faces.

*Hugh Harkin is the technical & innovation manager at Kytun Dry Roofing Products*



## Working with nature

Sioo:x are leaders in wood protection using silicate technology.

We provide a highly effective proven system to protect wood of all types. It gives long life and a beautiful natural surface with even colouration and is friendly to people and the environment. An example of a Sioo:x project is the Water House in Ängelholm, Sweden. The wooden panels are made of spruce that has been treated with Sioo:x light grey pigment.

Sioo Wood Protection AB  
[www.sioox.org.uk](http://www.sioox.org.uk)







# Windows that make an impact

**C**ool and cosy. At first glance these current design trends seem contrary to each other. But behind the words the two senses, touch and sight, are currents which move slowly and steadily closer. Convincing window profiles not only to look like wood, but also feel like it too.

RENOLIT developed the three-dimensional

The dynamic deep grain structure displays brushed and sandblasted surface.



VLF emboss to realize desire for greater authenticity. The dynamic deep grain structure displays a brushed and sandblasted surface. The surface finish is linear and uniform, and despite its contoured structure it is also very robust.

VLF has a very natural appearance and is therefore in keeping with current hardwood trends. Since the popularity for oak designs is unwavering, the company presented the new emboss in four different oak designs at the Fensterbau Frontale exhibition in March. The light "Ginger Oak" decor embodies the natural wood concept, whilst the dark "Amaranth Oak" occupies the other end of the colour scale. Somewhere in the middle lies "Honey Oak", a decor that radiates a special warmth, whereas the light grey sheen of the bleached "Weissbach Oak" appears more distant and restrained.

Common to all designs however is their authentic appearance and a subtle silver shimmer that varies with perspective, which sheds a noble kind of light.

When combined with solid colours, VLF is a stylish accompaniment to modern



In conjunction with plain colours, the new VLF emboss is reminiscent of freshly painted solid wood.

architecture and reminiscent of freshly painted solid wood. Six popular plain colours are available with this emboss; White, Cream White, Dark Green, Grey, Anthracite Grey and Black.

01670 718222  
marketing.rcl@renolit.com

## Metro system takes shape with SFS



High performance fasteners and rivets supplied by the UK division of SFS are being used in the construction of the Riyadh Metro. Scheduled to open in 2019, the Riyadh Metro system will consist of six metro lines, complete

with 85 new stations and maintenance sheds for each line. SFS UK has been commissioned to supply construction fasteners for three of the six maintenance buildings in a contract totalling over £1 million in direct sales. Over 550,000 SFS AP14 painted rivets were specified by the architects for fixing the internal decking and 100,000 TDB-S fasteners were used to fix the decking into the 25mm thick steel.

0113 2085 500 [www.sfsintec.co.uk](http://www.sfsintec.co.uk)

## Fire door foam fills gap in the market



Installers or specifiers seeking a fire rated foam for sealing linear joints, that meets the practical challenges as well as all current European regulatory requirements can rely on the performance of Nullifire FF197 Gun Grade Fire Rated PU Foam, one of the range

of high performance Nullifire products, manufactured by **tremco illbruck**. Nullifire FF197 has been developed to speed the installation of fire doors in situations from shops and schools to high rise residential properties. FF197 actually passed the onerous fire testing at an independent laboratory – achieving 60 minutes resistance.

01942 251400 [www.tremco-illbruck.com](http://www.tremco-illbruck.com)



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# EQUITONE Architectural Facades

**EQUITONE**  
Fibre cement facade materials



**E**QUITONE materials provide architects with the ability to bring inspirational designs to life, for both new buildings and refurbishment projects. A durable fibre cement material, EQUITONE meets the reaction to fire classification A2-s1, d0 and has a minimum life expectancy of at least 50 years.

Available in an extensive palette of subtle and inspiring shades in a variety of textures and finishes, EQUITONE offers outstanding physical and aesthetic properties.

## EQUITONE in practice

EQUITONE gives £2m Lincoln Medical Centre striking new contemporary look.

A doctors' surgery near Lincoln has been rebuilt using EQUITONE fibre cement facade material, giving the new premises a natural, contemporary look.

Richmond Medical Centre, in North Hykeham, has been developed to replace the outdated surgery with a modern, user-friendly facility for GPs, staff and patients.

As part of the £2 million design and build project, Lincoln-based Core Architects specified EQUITONE [natura], in a range of colours using a rivet fixing system.

Rod Davison, architectural technologist at Core Architects, said: "We worked with the planning authority to establish their requirements for a fibre cement facade material for this project and we specified



EQUITONE to the developer.

"It's durable and robust, with an aesthetically pleasing colour scheme, giving a strong contemporary appearance in line with the design requirements for new NHS premises.

"We've used EQUITONE before on several buildings and think it is a fantastic material to work with due to its outstanding physical properties and aesthetics. It also has a life expectancy of at least 50 years, which is great for NHS buildings, which need long term investment due to capital spending continuing to fall. The nine-month project

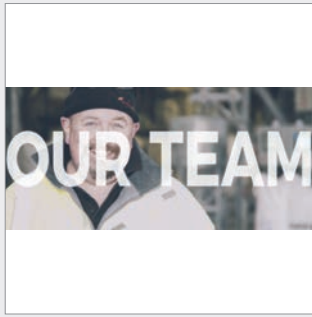
presented the architects and builders with a number of challenges, primarily because of the medical centre's location; it was a tight site, with trees, car parks and road junctions to contend with, but it all worked out well in the end.

"The building, which is now completed, looks good from the outside and is light and airy inside. Staff and patients have commented how pleased they are with the results."

01283 722588  
[www.equitone.com](http://www.equitone.com)



## The people behind the product



Freefoam are delighted to announce the launch of three new short videos to promote the business online and through social media. Showcasing the faces behind the product, and the production and distribution facilities located in Northampton all three give a real insight into how pvc building products are made and distributed from start to finish. With social media becoming an essential part of any companies marketing strategy Freefoam are committed to producing high quality, interesting, up to the minute content – and video is the perfect medium to achieve this. The production facility video features Freefoam's 21 metre high 'mixing' plant, and 3,840m<sup>2</sup> manufacturing plant illustrating how the virgin powder is mixed and blended to produce the raw material and then skilfully heated and processed on extrusion lines to produce a range of products including fascia, soffit and guttering. Processing over half a million product lines throughout the year involves careful coordination and accuracy between Distribution and Customer teams. This video highlights how products are stored, picked, packaged and despatched to customers throughout the UK.

01604 591110 [freefoam.com/professional/about-freefoam](http://freefoam.com/professional/about-freefoam)

## Cupa Pizarras brings old world charm



CUPA PIZARRAS' Heavy three slate has been specified by housebuilder ZeroC to bring a traditional look to houses being built in the new town of Tornagrain, near Inverness. ZeroC selected CUPA

PIZARRAS' Heavy three slate as a suitable alternative for the Ballachulish Scottish slate that was widely used until the quarries closed in the mid 1950s. The dark-grey, 7-8mm Heavy 3 convincingly replicates the characteristically thick, Ballachulish slate. The advantage of a heavy slate is the additional weather resistance that was vital for this project due to the proximity to the North Sea coast.

01312 253111 [www.cupapizarras.com/uk](http://www.cupapizarras.com/uk)

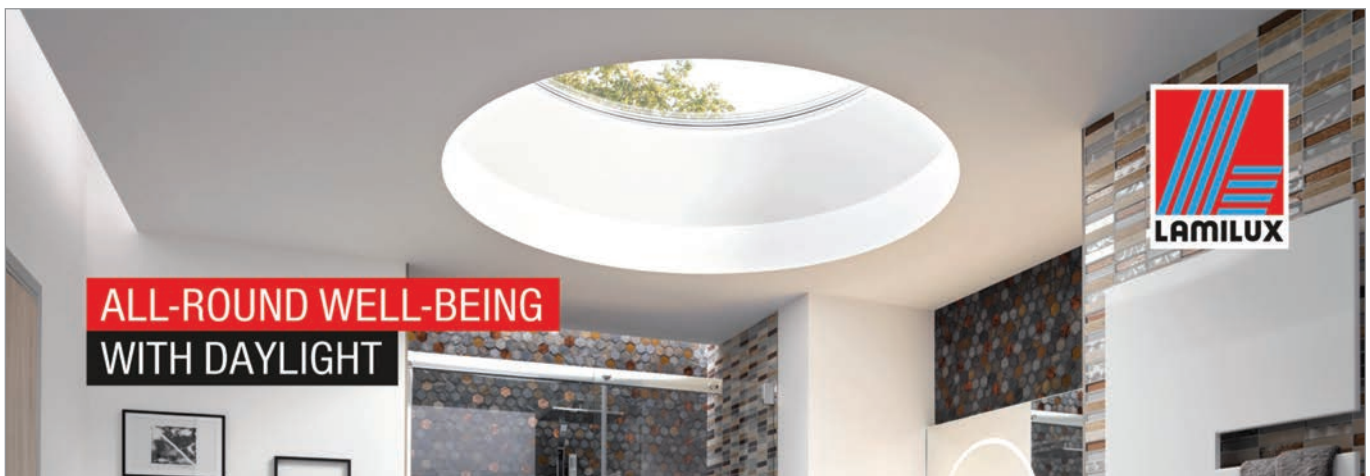
## Opens the door to contemporary colour



A new approach to creating beautiful designer doors with an original colour aesthetic is now possible thanks to the new W-Tec 3D+ hinge by SFS. W-Tec 3D+ is a highly engineered premium quality hinge which offers unparalleled levels of stability and three-dimensional mechanical

adjustability to enable precise installation and long-term reliability. SFS manufactures W-Tec 3D+ hinges in any RAL colour to deliver a visually stunning result in contrast or for colour match.

0113 2085 500 [www.sfsintec.co.uk](http://www.sfsintec.co.uk)



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## Sound Investment



As the exclusive UK distributor of Moralt high performance door blanks, **James Latham** has just announced that the Moralt FireSound 59mm has been successfully acoustically tested as an operational interconnecting door to an acoustic value of dB68.

Interconnecting doors are now extremely popular within the specification market for all kinds of applications. For example; between hotel bedrooms, in night clubs or music studios where sound needs to be blocked out or in commercial offices and administration buildings which have meeting rooms where greater confidentiality is required.

In addition, a single leaf Moralt FireSound 59mm door on a pivot hinge with a floor spring, also exclusively available through James Latham has been successfully tested to dB42. Again, these doors which work in both swing directions, allowing it to revolve up to 180° are proving to be extremely popular among architects and designers as they can create a true design statement.

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



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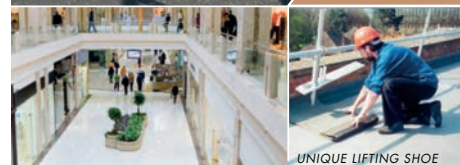
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SG3

SG4

PERMANENT

TEMPORARY

## SHORGUARD EDGE PROTECTION SYSTEMS





# Ubbink announces the end of dry verge installation problems

Ubbink has launched an all-new BS8612 compliant Ambi Dry Verge System designed to provide a clear and simple installation procedure. Prior to the launch of the system, the Company undertook consultations with contractors nationwide, to fully understand widely reported issues regarding the installation of other currently available products.

Ubbink's new system now overcomes the common problems which have resulted from poor design, over-complexity and a lack of clarity regarding the installation procedure



and the fixing of individual components.

A key feature to this system is the mechanically fixed starter and eaves closure unit! This unit was designed to mechanically fix to the barge board, and can be fitted either before or after the gutter has been installed, overcoming a common problem reported with other systems.

The Ubbink batten bracket is fitted to the face of the batten, allowing the verge unit to be fixed without screwing into the end of the batten giving a more secure reliable fixing. This bracket can also be used at the eaves starter where no barge board is fitted, or to the front of the fascia board if additional fixings are required at eaves for areas where extreme weather conditions may prevail. To allow a quick, simple install and gain a straight line, the bracket also has a built-in depth gauge, removing the need to extend the battens past the barge board so all can be cut flush.

The ambidextrous unit's suit most metric



tiles and the thin leading edge tile, allowing easy purchasing and stocking – and ridge end caps are available to suit all common concrete ridge tiles. The unit's also include a water channel which prevent unsightly water staining, another well-known issue which needed addressing.

Ubbink's Technical Manager Keith Plummer, said "Trials of the new system have been extremely positive, with contractors praising the design for at last providing a simple and clear-cut method of installation for a dry verge system."

Ubbink's new Universal Dry Verge System is available in grey, brown and terracotta now, from Roofing and Builders' Merchants throughout the UK.

01604 433000 [www.ubbink.co.uk](http://www.ubbink.co.uk)



## Fenestration fit for purpose

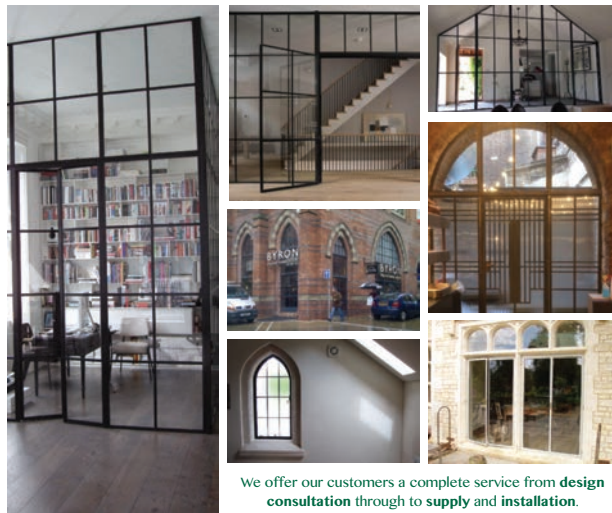
A new sports centre situated within the Royal Borough of Greenwich's Sutcliffe Park Nature Reserve is making the most of the natural beauty of its surroundings with a high performance aluminium fenestration package from Senior Architectural Systems. The building features Senior's slim profile SF52 aluminium curtain wall, alongside Senior's thermally-efficient SPW600e aluminium windows and SPW501 commercial aluminium doors which together help to contribute to the centre's light and modern interior. The use of Senior's Ali FOLD aluminium bi-folding doors to the rear of the building also provides a comfortable viewing area and easy access to the centre's newly refurbished athletics track. The new Sutcliffe Park Sports Centre has been designed by HTP Architecture to complement the local environment, with the low profile of the building helping to reduce the visual impact of the scheme. The slim sightlines offered by the narrow yet robust aluminium frames of Senior's glazing systems have also helped to create a sleek facade design for the new centre that is both stylish and sympathetic to its parkland location.

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



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# Whither weathertightness?

Carl Farrow of ID Systems discusses the underestimated question of weathertightness when specifying doors, and why it is so important

We get asked three questions about our products by every one of our customers, whether they be end users or specifiers: how much is it, what are the sightlines, and what are the U-values?

While each question is valid, there is a fourth that is hardly ever asked that is hugely relevant – how weathertight are your doors?

The dream of bifold doors and sliding doors is to connect your home and garden, 'bringing the outside in'. The imagery we use as manufacturers and suppliers revolves around blue skies and sunny days as that is the concept that homeowners fall in love with.

The realities of the British weather are that we may only get 20-30 days of warm sunny weather, so clearly any door system that is specified needs to work for the other 48 weeks.

To this end the question of weather tightness comes into play; just how well will the doors stand up to the elements and keep drafts, wind and rain outside when they are closed.

Whereas U-values are theoretical calculations, for weather ratings each set of our doors undergoes a physical test, and unlike thermal calculations it is not just based on a panel of the door – the system is tested in its entirety including outer frames and tracks. In fact, the doors undergo three independent tests for air permeability, water tightness and wind load.

The tests measure the amount of air or water that can penetrate through a window or door system when closed. This examines the quality of the seals, design and manufacture, and the ability of each element of the door to come together as an entire system to prevent as much air or water – or in real world settings drafts and rain – from travelling through the system as possible.

Because the tests are carried out on a complete system including track and frame, they offer an indication to the quality of the overall product, particularly with regards to



how well the doors are manufactured and how well they seal together and to the outer frame. With thermal performance it is theoretically possible to have a door system that has outstanding U-values but is still draughty, because the calculation heat loss includes only the frame and glass and not the seals and interlocks.

The tests are undertaken by a licenced testing facility in a controlled environment, and are carried out to European Standard EN 12207 for air permeability and EN 12208 for water tightness.

For the air permeability test an example of each door system is fixed to a testing rig and both positive and negative air pressures are exerted on the doors, increasing in 100 Pa increments.

The classes for EN12207 range from class 0 (the lowest) to class 4 (the highest). The highest class indicates that the door system has been tested under pressures up to 600 Pa, without the air permeability through the joints or overlaps in panels, outer frames or tracks exceeding the permitted limits.

For water tightness testing, again a sample set of doors are fixed to a testing rig and water is forced through a nozzle at the doors to replicate driving rain at increasing pressures for longer time periods.

The classes for EN 12208 range from class 0 (the lowest) to class 9 (the highest)



**BELOW**

Categories of air permeability according to EN 12207

**BOTTOM**

Categories of water tightness according to EN 12208

**MAX AIR PERMEABILITY PERMITTED LIMITS**

CLASS	TEST PRESSURE PA	SEALING M <sup>3</sup> /H/M	WINDOW/DOOR AREA M <sup>3</sup> /H/M <sup>2</sup>
1	150	12.5	50
2	300	6.75	27
3	600	2.25	9
4	600	0.75	3

CLASS	TEST PRESSURE - PA	SPRAYING TIME - MINUTES
1	0	15
2	50	20
3	100	25
4	150	30
5	200	35
6	250	40
7	300	45
8	450	50
9	600	55

with the highest class indicating that the door system withstood 600 Pa of water pressure for 55 minutes.

While Building Regulations Document L sets the minimum standard for thermal performance, there is no minimum requirement for weather performance. For consumers and specifiers this lack of a minimum standard can mean that finding doors that are suitable for a project is more challenging, particularly where the property is located in a rural or exposed location more susceptible to prevailing winds and rain.

The other challenge is that not every manufacturer and supplier of glazing will advertise the test results of their products clearly, with some using generic statements such as “independently weather tested” without stating to which class or rating the doors performed to. The only way to be sure of the quality of the door system and the protection offered is to ask for the certificates for each European Standard test, which will clearly state the pressure and class achieved by the product.

*Carl Farrow is technical development manager at ID Systems*



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VISION | INNOVATION | SOLUTIONS

# Former Jacobean School morphs through the centuries

The Jacobean House in Burton Latimer, Northamptonshire is a stunning seventeenth century Grade II\* Listed building. Above the main entrance, to this day, is a panel with the following inscription: “this house was built 1622 the freeschoole was founded by Thomas Burbanke and Margaret his wife 1587 memoria. Ivsti. Benedicta. Pro”

The inscription alludes to the building’s former purpose as a school house, teaching Latin and Greek to church school infants. In 1970, described as a ‘derelict shell’, the property was bought and comprehensively renovated by architects Gotch Saunders and Surridge and became a private dwelling.

Fast-forward to 2017, when present owner Stuart Welch contacted Selectaglaze, one of the leading designers of secondary glazing, to enhance the thermal and acoustic properties of the Listed building on the ground and first floor.

The primary windows on both floors were draughty and unable to retain heat efficiently. Some of the original ovolo-moulded stone mullions and leaded light casements remained; so providing a bespoke and sympathetic solution, in keeping with the period features, was paramount.

The secondary glazing was fixed into plasterwork reveals, surrounding the historic windows so as to have no impact on the stone mullion windows. Sightlines were extremely minimal, thus ensuring units were as unobtrusive as possible.

A total of 13 secondary units were installed using a combination of the two-pane and three-pane horizontal sliders from Selectaglaze’s Series 10 range, which is a discreet solution ideal for heritage properties.

This, along with high performance seals, successfully eradicated unwanted draughts and gave a U-value of around 1.9, thus delivering a more comfortable living space and lower heating bills for the Welch family.



“The secondary glazing units have been a great solution to acoustic and thermal lapses in our home. We have been delighted with the work of the Selectaglaze team throughout the whole process. I recommend Selectaglaze to anyone looking for a personal and professional secondary glazing solution” comments Stuart Welch.

01727 837271 [www.selectaglaze.co.uk](http://www.selectaglaze.co.uk)



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Carla Corras, Carl F Groupco's Sales Office Manager

## Carl F Groupco confirms growth

Carl F Groupco endorses the findings of the 'Door and Window Fittings Market Report – UK 2018-2022' produced by AMA Research Ltd. The established fittings supplier confirms demand for both high specification products and mainstay lines. Affirming growth in electronic multipoint door locks, Carl F Groupco reports that SmartSecure – the company's electronic locking and access control brand, has seen a seven fold increase in year on year sales to end March 2018. Early adopters include Housing Associations and fabricators who recognise the benefits of added value opportunities, the access control options for domestic use and wide range of applications supported. AMA research findings also showed that multipoint locks comprise 62 per cent of the market.

01733 393330 [www.carlfgroupco.co.uk](http://www.carlfgroupco.co.uk)



## Garador offers the complete package

When it comes to garage doors and matching front doors, Garador offer the complete package. Garador is the only manufacturer offering matching designs for its front doors and garage doors, with many of the styles in Garador's most popular Up & Over and Sectional garage door ranges designed to complement its FrontGuard front door range. The number of styles and colours available is huge. Garador's ultra-modern front door designs with sleek steel bar handles are the perfect choice for modern homes with cutting-edge design. Garador's Classic range of front doors are an ideal match to their Georgian range of steel up & over garage doors. With front entrance doors, security is critical and FrontGuard front doors have five point security locking system as standard plus they are RC2 Security Equipment certified indicating that these doors feature multi-point locking for extra security. They also offer high levels of thermal efficiency – the U-values on FrontGuard door models like the 015 and 515 are as low as 1.1 W/m².

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



## AluFoldDirect launches Infinium



Infinium is now available from AluFoldDirect, so installation companies can make the most of the premium domestic market for minimal frame glazing. "Infinium is the product that takes framing a view to dizzying new heights," explains Craig Miller, Managing Director at

AluFoldDirect. "Concealed frames, motorised opening and a sightline of just 21mm – what's not to love?" The perfect system for architects who need wall-to-wall glazing for impressive modernist home designs, Infinium has minimal interruption with its super-slim sightline and fully concealed outer frame.

01706 260700 [alufolddirect.co.uk](http://alufolddirect.co.uk)

## A visibly different folding door



Centor is launching a folding door that removes visual distractions to views beyond. With all interior hardware concealed, the new 345 Folding Door features the same panels as the 405 Integrated Folding Door but with a smaller frame. The Access AutoLatch™ is a key

differentiator for 345 Folding Doors. This cleverly concealed lever replaces the traditional interior door handle and is hidden from view in the door stile. Centor 345 Folding Doors are manufactured to individual specifications.

0121 701 2500 [www.centor.com](http://www.centor.com)

## Keeping the burglars out



Difficult to force because of the inherent strength of their frames, steel windows are not liked by burglars. One of the best deterrents to a prospective thief is the traditional 'cottage' style steel window, divided into small frames, with interlocked steel glazing bars. When manufacturing new windows, Steel Window Association members provide locking devices, locking handles, concealed bolts and mortice deadlocks. Locking handles are also supplied for existing installations to provide the highest levels of security. Locking handles are also supplied for existing installations to provide the highest levels of security.

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

## Dulux Trade Plus range cuts heat loss



Dulux Trade has launched a range of innovative coatings designed to help improve the energy efficiency of existing older buildings. The products in the range have been specially developed to help cut heat loss through solid wall construction.

Dulux Trade Plus Thermacoat+ is a revolutionary three-part coating system, independently proven to reduce heat loss through solid walls by up to 18 per cent. The second product in the range, designed specifically for undecorated external brickwork, is Dulux Trade Plus Smartshield+.

0333 222 70 70 [www.duluxtradepaintexpert.co.uk](http://www.duluxtradepaintexpert.co.uk)

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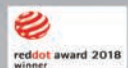
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## Exceptional acoustics

Armourcoat surface finishes have played a central role in the comprehensive refurbishment of the iconic Minster Building in the heart of London's business district. The impressive entrance boulevard has a polished floor of terrazzo with bronze inlays, edged by dark oak. Throughout the entrance and reception spaces, the walls are hand-finished in nearly 2,000m<sup>2</sup> of Armourcoat polished plaster together with over 600m<sup>2</sup> of the company's Acoustic Plaster System applied to the ceilings. Designed to optimize the acoustics of interior spaces, the Acoustic Plaster system offers a clean and smooth mineral surface that can be applied seamlessly over large expanses to both flat and curved surfaces. The Armourcoat Acoustic Plaster System offers an elegant marble based plaster finish while allowing sound energy to pass through the surface.

01732 460668 [www.armourcoat.com](http://www.armourcoat.com)

## Smart solutions for grand redevelopment



As part of a hotel conversion project in Eastbourne, East Sussex Home Glow Plumbing & Heating has installed a mixture of Alpha InTec C combination boilers and FlowSmart systems. The new development consists of 15 luxury apartments and separate townhouse. The Alpha InTec 34C was selected and installed in 13 of the new homes to ensure the heating and hot water demands could be easily met. In addition, Home Glow Plumbing & Heating also specified Alpha's FlowSmart for the townhouse. FlowSmart was selected as a more energy efficient alternative to the conventional system boiler and unvented cylinder.

0344 871 8760 [www.alpha-innovation.co.uk](http://www.alpha-innovation.co.uk)

## Underfloor Air Conditioning Fit-out



AET Flexible Space, underfloor air conditioning specialists have just completed a Cat-B Fit-out of the first floor at 11-12 Hanover Street for incoming tenant, Canadian property investor, Quadreal. The system at Hanover Street is the CAM-C

system with underfloor supply air and underfloor return air. Each floor is effectively one zone, with a single CAM downflow unit supplying conditioned air to the underfloor plenum. This conditioned air is supplied into the workspace via fan terminal units, known as Fantiles which are recessed into the floor plenum.

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

## Kingspan TEK is light on its feet



The Kingspan TEK Building System has been erected at West Midland Safari Park to provide research and educational space, with minimal impact on the site, due to the lightweight system. The 250-acre landscaped park in Bewdley has continued to increase its purpose-built space to meet the growing interest in animal conservation and study. 500 m<sup>2</sup> of the Kingspan TEK Building System in a 142 mm thickness were pre-cut to specification. Richard Painter, Director of Painter Architects Ltd: "The Kingspan TEK Building System was an obvious choice as it is low maintenance and lightweight."

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

## Innovation with Kingspan Optim-R



Kingspan has developed the Kingspan OPTIM-R E Roofing System, featuring its innovative encapsulated vacuum insulated panel. The market launch of Kingspan OPTIM-R in 2012 marked the advent for next generation insulation.

However, Kingspan OPTIM-R E takes this innovation one step further by completely encapsulating a vacuum insulated panel (VIP) in a high performance PIR insulation board. This layer protects the gas-tight membrane of the VIP during installation.

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

## Panasonic RAC gets smarter



The new Heat & Cool App from Panasonic offers complete control of your property's air-conditioning from anywhere in the world and at any time. Supported with the Panasonic RAC WIFI kit (CZ-TACG1) for internet control, the app allows you to operate air-conditioning across multiple rooms and manage energy consumption – all from an Android or iOS smart device. Now available, the app offers energy saving options, an easy-to-use interface and weekly timer functions among other benefits.

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

## Gaia's UFH can benefit everyone



Steven Rooney, Sales Director of Gaia Climate Solutions

When specifying heating in domestic properties, underfloor heating (UFH) is increasingly seen as the system that offers the levels of energy efficiency and comfort required. In design terms, UFH provides the added benefit that, unlike radiators, it does not have an impact on interior aesthetics and layouts. This leaves just one perplexing issue; whether to opt for a wet (hydronic) system or an electric system. Both offer advantages and disadvantages. Whether wet or electric, UFH systems offer extraordinary levels of comfort to users and perform equally well. For further information on Gaia Climate Solutions, please call or visit their website.

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



## Pressalit Care's arm support wins award



Pressalit Care's popular Hinged Arm Support has received a Red Dot Award 2018, for its product design. Part of the acclaimed Pressalit Care Plus range, the Hinged Arm Support offers a number of practical benefits for users, including being ergonomically designed to aid performance; robust for a sense of security; and flexible for manoeuvrability in the bathroom. Its range of colours caught the eye of the judges as well as its sleek, attractive – and relevant design. Available in bright, contemporary colours to coordinate with other elements in the bathroom.

0844 8806950 [www.pressalit.com](http://www.pressalit.com)

## Ceiling adds panache to activity centre



Hunter Douglas Architectural's latest innovation, Heartfelt® was the ideal choice when architect John Piercy Holroyd was looking for a suitable ceiling to complement a new Girlguiding activity centre. Walker Simpson Architects was commissioned by Girlguiding Cheshire Forest to develop the design for Pettypool is a new activity centre in a woodland area in Sandiway, Cheshire. The feature timber finish echoes the dramatic woodland setting and the architect wanted to install a cost-effective ceiling in the activity hall and dining room that would complement the striking facade.

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

## New RIBA approved CPD



One of the UK's largest manufacturer of ceramic and glass tiles, British Ceramic Tile, has launched a new RIBA accredited CPD course within its specification channel. Head of sales for housebuild and specification at British Ceramic Tile, Paul Fincken, comments: "There's much more to tiles than

meets the eye. This new programme will support those in the A&C community in specifying our products and will reap benefits for all who undertake it, saving time and budget during the specification process."

[enquiry@britishceramictile.com](mailto:enquiry@britishceramictile.com)

## Seamless design



Designed to make wetrooms even sleeker and cleaner, the Infinity single-fall shower tray by Abacus Elements is the only product of its kind on the market today where the slopes of the tray former and drain are fully integrated and sealed.

This allows for straightforward installation and provides a truly unified, leak free and secure wetroom. The cleverly conceived tray eliminates the need for fiddly floor tile cuts and grout lines, with their potential to look unsightly and trap dirt, while also avoiding the problem of damaging leaks.

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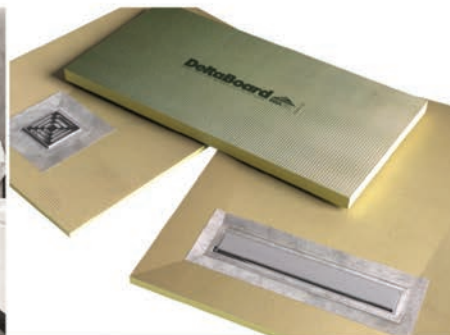
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# Bathrooms for all

Mark Bowman of Marmox offers some advice on ensuring that design and installation of bathrooms both large and small is a success

From the Supreme Court of America to the smaller council chambers across rural England, the issues regarding the creation of shared or 'gender neutral' washroom facilities for public use have proved to be a legal as well as a political 'hot potato'; and the debate is certain to carry on for the foreseeable future. For architects and interior designers, however, there are many other technical considerations, which must be respected if their work is to be regarded as a success for all potential users.

For instance, it is essential that the background structure and substrates to the room are fit for purpose and able to offer such attributes as strength, durability and resistance to moisture. Other requirements including thermal or acoustic performance and the need to provide access for the less able-bodied – all addressed by Approved Documents to the Building Regulations.

Ever since the emergence of the Egan Report, offsite construction, or prefabrication, has been gathering momentum across most of the sectors, with fully fitted bathroom pods playing a pivotal role in the delivery of different developments from student accommodation to hospitals, hotels and commercial buildings. Whatever the scale, from an individual ensuite to a large washroom with multiple facilities, they enable a major part of the building services work to be completed offsite, speeding progress and improving quality.

Though some pods feature reinforced concrete bases, the weight penalty sees the majority assembled using a light gauge steel or engineered timber frame, with a variety of board products providing the substrate for fittings and finishes.

Despite using concealed steel frames with sizeable securing bolts, the 'wall hung' toilet bowls and urinals normally transmit a proportion of their load to the wall itself. So, whether the specifier selects a decorative laminate or a tile-backer board, they will have to be fixed over a 15 mm or thicker layer of plywood to prevent flexing.

These tile-backer boards do, however, offer very good compressive strength, as well as a number of other positive physical characteristics, making them a popular choice for building either in-situ or offsite.

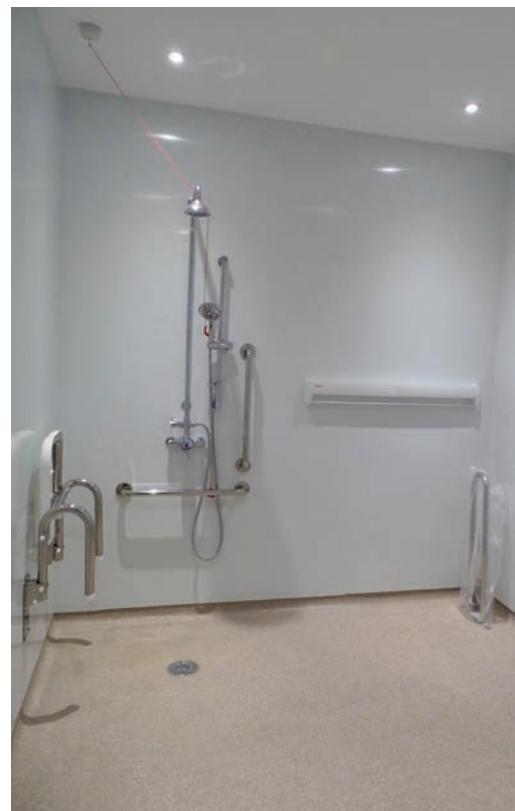
Employed in wall or floor build-ups, they can sustain a distributed load of 40 tonnes per square metre, making them fully able to support the weight of pedestrians, wheelchairs and even mobility scooters when covered by appropriate floor tiles. This performance stems from their extruded polystyrene core, bonded between two layers of glass-fibre reinforced polymer concrete. This combination of a rigid outer shell and XPS core will allow it to serve as an effective decoupling layer.

Importantly, this structure not only earns and ODP score of Zero and a Class O rating for flammability under BS EN 476, but the XPS also delivers excellent thermal characteristics. The insulation offers a thermal conductivity of 0.034 W/mK, and with the tile-backer board being available in thicknesses of up to 60 mm, they can make a significant contribution to achieving Part L requirements, reducing heat loss and combating condensation.

In fact, high performance tile-backer boards are regularly employed on social housing sector contracts, where kitchen and bathroom renovations have to be completed to a very tight timescale, with the residents still in occupation. They can be screw-fixed over block and brickwork, or bonded using a cement based adhesive across uneven substrates; including existing ceramic tiles.

Given the UK's humid temperate climate and the increasingly exacting design aspirations of developers and specifiers, choosing the right materials for the construction of bathrooms or other washroom facilities is paramount. With the endorsement of the Energy Saving Trust, CE marking and all other necessary accreditations XPS based tile-backer boards make a powerful argument for inclusion.

*Mark Bowman is technical manager at Marmox*



**Choosing the right materials for the construction of bathrooms or other washroom facilities is paramount**



# Evaporating energy costs in the washroom

Imagine a brand new, “green” building. It’s been designed with sustainability in mind every step of the way, from the cladding materials on the wall panels to its energy-efficient lighting system. However, the washroom also provides opportunities to support the architect’s green intent, facilitate long-term savings through sustainable operation and thus, support your original aesthetic vision.

In recent years, evolving consumer preferences have driven demand for hand dryers with faster dry times. Thus, high-speed dryers (or jet dryers) that hasten traffic flow have increased in popularity, especially in high-traffic washrooms. However, facilities that employ jet dryers should take special care when it comes to product selection. Specifically, many jet dryers with fast dry times are primary culprits of high energy usage and long-term operating costs in the washroom. Further, costly operation often prompts facility managers to replace products such as hand dryers early in the washroom’s lifetime – compromising the designer’s aesthetic intent.



For exceptional energy savings and enduring design, Bobrick has introduced the industry’s lowest wattage jet dryer for sustainability and economy. The new B-7125 InstaDry™ surface-mounted high-speed hand dryer supports the high-speed hand-drying experience that today’s patrons expect, without the high operating costs typically associated with competitive units.

Functioning at only 200 watts, InstaDry

is ideal for high-traffic facilities such as airports and other transportation hubs, stadiums, restaurants and retail spaces. Even in the busiest environments, InstaDry has a life expectancy of approximately 7,500 hours, which can equate to approximately 10 years in some facilities. Its annual operating costs can be up to 80 per cent less than other leading dryer brands and its low power consumption allows multiple units to be installed on one circuit breaker.

In the 1940s and 1950s, hand dryers took between 30 and 40 seconds to dry hands thoroughly and operated at about 2300 watts – roughly equivalent to the energy requirements of two dishwashers in 2018. Today, InstaDry makes it easier for facility operators and managers to achieve their goals and operate washrooms with built-in economic and environmental value. For architects, that sustainable operation enables design decisions that endure and products that aren’t replaced by less aesthetic products early in the washroom’s lifetime.

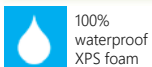
020 8366 1771 [www.bobrick.co.uk](http://www.bobrick.co.uk)

## ENDLESS POSSIBILITIES WITH TOTAL ASSURANCE



Why take the risk of specifying products which can’t offer the same assurances for the whole floor to wall system?

With over 30 years’ experience, wedi provides precision engineered complete system solutions for wet environments. Thanks to their modular design, the perfectly coordinated wedi components allow for a particularly safe, time-saving installation and unlimited freedom in design.



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Leading solution for  
accessible bathrooms



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designs functions  
and sizes



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and technical  
assistance is available

The core of the wedi system is its base material: the wedi building board. Its use extends far beyond just cladding walls or laying floors. Partition walls, unique storage solutions or tailor made furniture can be constructed quickly and securely with either its standard or flexible versions.

*Possibilities are truly endless with wedi’s unique and versatile system solutions.*



wedi Systems (UK) Ltd  
Unit 4 Mercury Park, Mercury Way  
Trafford Park, M41 7LY

Tel: 0161 864 2336  
Fax: 0161 864 1323  
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# SANIFLO®

PLUMBING THE POSSIBILITIES

# Form meets function in new TEMPOMATIC 4 urinal flush valve

Public washrooms must be able to withstand intensive and often heavy-handed use. However, this is often at the expense of aesthetics, with function taking precedence over form. DELABIE's TEMPOMATIC 4 recessed urinal seeks to redress this balance. Specifically developed for the commercial sector, this new electronic urinal combines design and functionality. Fully WRAS approved, it also promotes good washroom hygiene.

## Design

Attractive products and well-maintained fixtures with clean, bright surfaces are more likely to elicit respect and care from users. The engineers at DELABIE made design a key priority for the TEMPOMATIC 4 urinal. The wall plate is compact and discreet with a timeless design. Its smooth surface limits the build-up of dirt and facilitates cleaning, maintaining an attractive appearance.

## Function

In the non-domestic sector urinals subject to intensive use must be fit for purpose. TEMPOMATIC 4 is fully recessed with all the sensitive elements completely concealed from the user behind the shock-resistant wall plate. A sensor detects the user and rinses the urinal bowl automatically when the user leaves, with no manual contact required. This also has a hygienic benefit, reducing the spread of germs by hand. A duty flush every 24 hours after the last use also ensures that the pipework is flushed to prevent urine crystallisation, blockages or vacuums.



## Sustainability

Reducing water consumption in commercial washrooms is an ongoing concern and the TEMPOMATIC 4 features an "intelligent" urinal valve able to detect high-frequency periods and adapt its rinsing accordingly. During peak periods, only the bowl is rinsed between two users, reducing water consumption. At the end of the busy period, a complementary rinse takes place to rinse the bowl completely.

## Easy to install

Design should not come at the expense of practical issues such as installation. The TEMPOMATIC 4 is available in two kits which facilitate installation. A pre-assembled first fix kit means that the housing can be installed and water connections made, system

purged and wall finish completed during the first fix. The second kit includes the sensitive elements (solenoid valve, filter and electronic unit) which are replaced by a temporary casing during commissioning. Once the system has been purged and the wall finish completed, the flush valve can be installed during the second fix.

## Versatile

There are multiple installation options for the waterproof housing: fixing via the sides onto plasterboard rails, from the front onto a solid wall, or from the rear onto panels e.g. IPS panels. The housing can be cut to size to fit wall finishes up to 120mm such as bricks or breeze blocks, for commercial installations subject to high levels of vandalism. A waterproof seal is integrated into the collar and the housing for the TEMPOMATIC 4 urinal is cut to size in front of the collar, ensuring a perfect seal.

DELABIE's new electronic, recessed urinal provides the perfect solution for commercial washrooms that accommodate high user turn-over. TEMPOMATIC 4 will withstand intensive use, while optimising water consumption and maintaining hygiene standards. Available in four stylish finishes, its design also facilitates its installation and regular upkeep.

01491 824449  
[www.delabie.co.uk](http://www.delabie.co.uk)



TEMPOMATIC 4 urinal combines style and function



Easy to install



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Cistermiser Ltd & Keraflo Ltd, Unit 1, Woodley Park Estate, 59-69 Reading Road, Woodley, Berkshire RG5 3AN.  
**Tel: 0118 969 1611 | Email: sales@cistermiser.co.uk**

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[www.horne.co.uk/optitherm](http://www.horne.co.uk/optitherm)



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# Waterproofing a West Country Vision



Copyright of Mark Ashbee

In looking for a full tanking solution for the ensuite bathrooms of renowned chef Michael Caines' dream project, stone specialists Devon Stone elected to use various forms of the multi-functional tile backer-board Schlüter®-KERDI-BOARD.

## Project Overview

The project took a Grade II listed Georgian Manor house and converted it into a striking contemporary country house hotel with 21 guestrooms. As well as gourmet cuisine and luxurious yet subtle interiors, Lympstone Manor has pride of place overlooking the Exe estuary, a Site of Special Scientific Interest (SSSI) due to the wildlife it supports.

## Insight AREA: Bathrooms (Floors and Walls)

### ACTION: Providing a smooth and waterproof substrate for marble

The beautifully furnished ensembles accompanying each guestroom not only required complete waterproofing, but also a not-inconsiderable degree of levelling and smoothing due to the age of the building.

"Given the nature of the project, if water had managed to cause an issue, it would have cost a considerable amount to put right", says Simon Willmott, Sales Director at Devon Stone, "We needed a reliable solution and in our eyes there was no other option

better for the job than Schlüter; their product knowledge and expertise is unrivalled in the UK".

"In converting a Grade II listed house built in 1760 into a luxury hotel, the main challenges were in straightening and strengthening the walls and floor without changing levels", continues Simon, "Schlüter®-KERDI-BOARD was a great help in allowing us to achieve this".

The walls and floors within the project were constructed of 18mm plywood, with the former being lined with 12.5 mm KERDI-BOARD and the latter with a mix of 5 mm and 12.5 mm KERDI-BOARD, depending upon floor heights. The boards were then sealed with KERDI-KEBA and KERDI-COLL-L to form a fully waterproof base for the high calibre materials that were being installed, which included Crema Marfil, Estromoz and Nero Marquina marble, as well as Peruvian travertine, all in 600 x 600 x 20 mm sizings.

Devon Stone also made use of specialist KERDI-BOARD variant, Schlüter®-KERDI-BOARD-V, to waterproof the curved shower walls that were a feature in some of the bathrooms. This product features pre-cut grooves that allow for the quick creation of a smooth curved surface that is ready for tile or stone to be installed upon.

5 mm and 12.5mm are just two of the seven thicknesses that KERDI-BOARD is



Copyright of Devon Stone

available in; the range carries boards of 9, 19, 28, 38 and 50 mm thickness besides. Whilst the boards at the thinner end of the spectrum are designed for use over existing substrates, latter thicknesses can be used as construction panels to create features such as shelves, partition walls and seats, allowing for unbridled freedom of design.

In the case of Lympstone Manor, KERDI-BOARD aided the creation of bathrooms that will support and protect an exquisite and highly personal accomplishment.

01530 813396 [www.schluter.co.uk](http://www.schluter.co.uk)



## Remmers Exhibits at Hayward Gallery



Remmers restoration products were selected to complete extensive concrete repair and renovation works to the internal architectural concrete elements of the Hayward Gallery contemporary art gallery. Remmers 'Arte Mundit' was applied to remove the decades

of superficial dirt that had built up on the concrete walls and ceilings. Arte Mundit is a self-vulcanising cleaning paste that dries into a peelable natural latex. It provides thorough water-free removal of residues to varied substrates and there is no development of dust making it the ideal product for specialised restoration projects.

01293 594010 [www.remmers.co.uk](http://www.remmers.co.uk)

## Salice provide the ideal ingredients



Salice UK are delighted to be working in partnership with Mereway Kitchens, supplying their Eclipse pocket door system and Wind lift system for installation within their ranges. Eclipse offers movement that features soft opening and closing, cam-assisted opening action, cushion door

insertion and a simple installation and adjustment. Salice are also providing Mereway with their Wind lift system which is suitable for both small and large wall mounted cabinets, offering easy access and complete utilisation of the cabinet storage space.

[info.salice@saliceuk.co.uk](mailto:info.salice@saliceuk.co.uk)

## Concord puts the spotlight on gallery



The newly refurbished Leeds Art Gallery is benefitting from a high quality and high performing lighting scheme thanks to Concord and its innovative Beacon Muse spotlights. A variety of Concord Beacon XL Muse and Beacon Muse II spotlights have been installed in the majority of the galleries. The Concord Beacon XL Muse features

intelligent LED technology and ancient lens principles to create a fully adjustable spotlight making it an ideal solution for museum and gallery lighting. It provides Leeds Art Gallery with a flexible, high quality solution that can be easily adjusted.

[www.concord-lighting.com](http://www.concord-lighting.com)

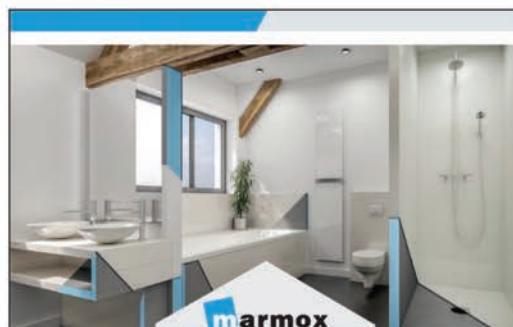
## Way-finding just got easy



Modern flooring means a myriad of choice and finishes are now available with some beautiful results. However without an encyclopedic knowledge of installation methods it can be difficult to accommodate multi-flooring types into one design. With the new Paragon Carpets Duera luxury Vinyl Flooring the 5 mm

thickness allows the product to be installed alongside over 300 Paragon Carpet tile ranges. When installed next to the new multi-level Inspiration Collection of 24 colourways, products inspired by the natural world, no additional sub floor preparation is required.

01709 763 800 [www.paragon-carpets.co.uk](http://www.paragon-carpets.co.uk)



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## Fire protection for contemporary steel framed glazing with SYSTEMGLAS® Ferro



The steel framing system that was introduced in the UK to provide EI fire protection in butt jointed glazing is now available as a complete, safety-assured glazing system with the launch of the SYSTEMGLAS® Ferro range from Promat UK. SYSTEMGLAS® Ferro is a complete glazing system suited to contemporary interiors with the fire glass, steel framing, beading and setting blocks supplied directly by Promat UK for maximum traceability. As a butt jointed system successfully tested to facilitate large uninterrupted spans of glazing in a vertical or horizontal formation, SYSTEMGLAS® Ferro allows buildings to benefit from maximum natural lighting within rooms, without compromising on integrity and insulation (EI) fire protection of between 30 minutes up to 120 minutes (CERTIFIRE CF5452). SYSTEMGLAS® Ferro joins the two recently launched SYSTEMGLAS® options – Celare and Advenerat – which utilise the highly respected and established fire resistant PROMATECT® H. These provide architects with the ability to create ‘invisible’, painted or aluminium clad framing for internal glazing.

0800 588 4444 [www.promat-glass.co.uk](http://www.promat-glass.co.uk)

## Simplified accessibility CDM

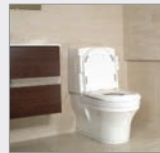


The potential complexity of creating a compliant, accessible facility is simplified with the latest service from Closomat. Britain's leading provider of accessible intimate hygiene solutions is fully Construction (Design & Management) 2015 compliant. The compliance compliments

Closomat's already proven ability to deliver a comprehensive project management service. The combination means that architects, construction companies etc can contract Closomat to execute a project, secure in the knowledge it will be done in a timely and safe fashion, and be fully in accordance with all relevant Regulations.

0161 969 1199 [www.clos-o-mat.com](http://www.clos-o-mat.com)

## Helping build for last time buyers



Closomat, one of Britain's leading manufacturers of bathroom assistive technology for elderly and disabled people – has developed a package that enables developers, from one source, to create a stylish cloakroom, wetroom or bathroom – that enables the occupant to execute their intimate care to high levels of cleanliness, without

help now or in the future. Closomat's range of shower toilets is complimented by a contemporary range of fixed and height adjustable shower seats, and washbasins, plus hoists, and support systems, grab rails.

0161 969 1199 [www.clos-o-mat.com](http://www.clos-o-mat.com)

british ceramic tile

# MORE THAN JUST A TILE

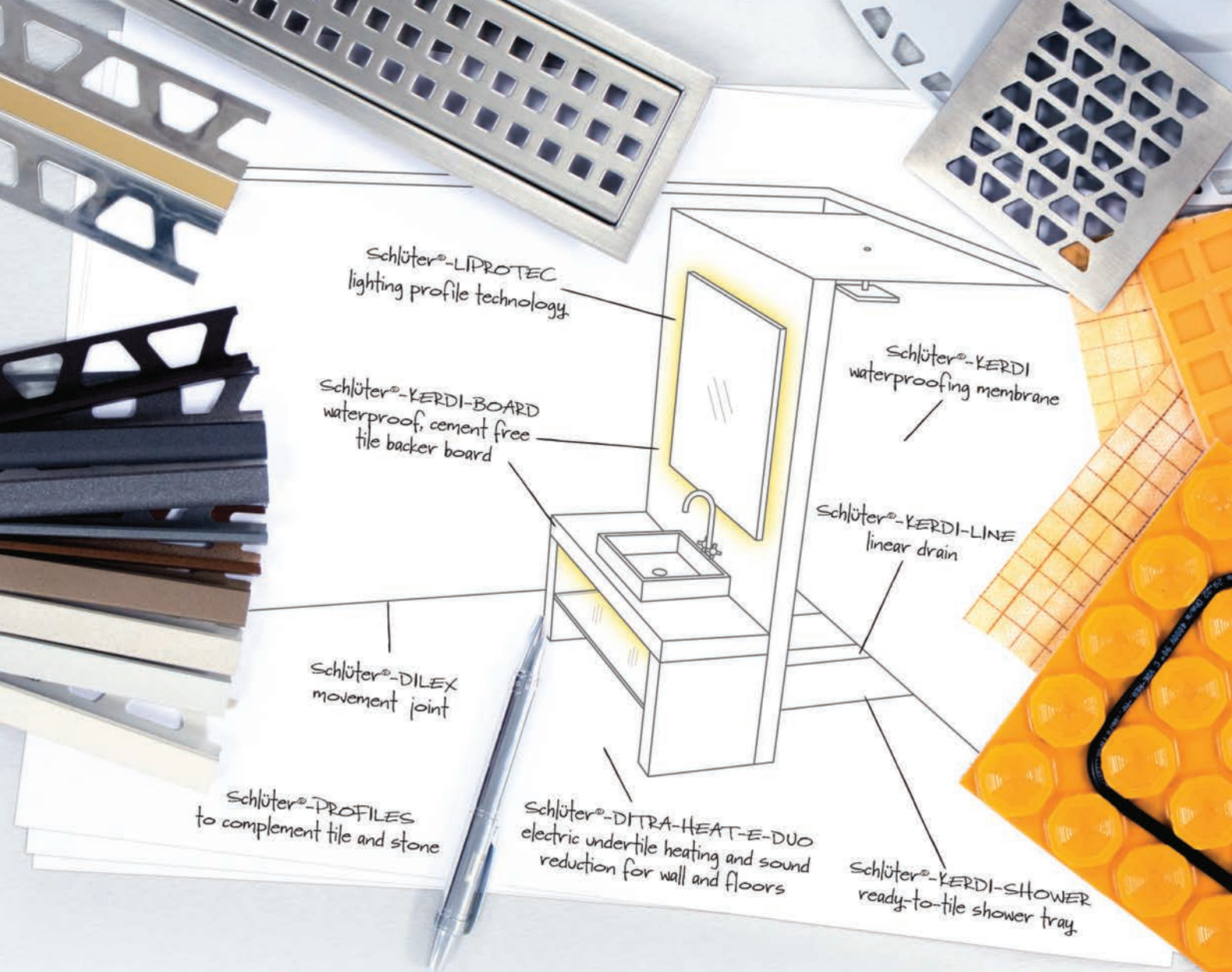
TO DISCUSS YOUR PROJECT

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When specifying a wetroom, you need a system you can trust.



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The complete system offers all the required products for waterproofing and drainage to create showers and wetrooms.

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To find out more call 01530 813396 or visit [www.schluterspecifier.co.uk](http://www.schluterspecifier.co.uk)



## Discover a new world of colour



Polyflor is delighted to announce the launch of their spectacularly colourful new homogeneous flooring collection, Palettone PUR. The premium Palettone range offers a full spectrum of colour, with 50 shades to

choose from including classic neutrals, soothing pastels and daring brights. Designed for contemporary interior design schemes in commercial, leisure, retail, education, healthcare and office projects, durable Palettone sheet vinyl flooring features a high quality, cross-linked, UV cured polyurethane reinforcement that protects the floor covering by resisting soiling and scuffing.

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

## Chevron design adds style to hotel

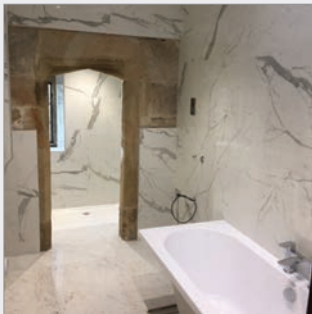


Expona Commercial luxury vinyl tiles from flooring specialists Polyflor were used to create a stunning entrance and bar area for The Falcon Hotel in Bridgnorth, Shropshire. Approximately 150 m<sup>2</sup> of Expona Commercial PUR luxury vinyl tiles in the Tanned Chevron

Parquet design was installed by Graham Flooring as part of the boutique hotel's ground floor refurbishment project. The Expona Commercial range features 80 inspiring wood, stone and abstract effect designs, 55 of which are brand new additions to the collection.

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

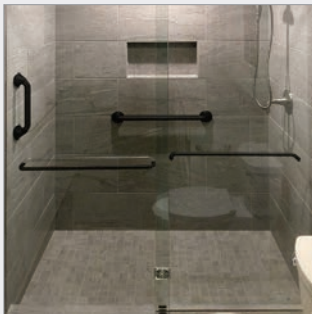
## Stunning tiling at 16<sup>th</sup> Century "Robin Hood" gatehouse



BAL have worked in partnership with CJ Ceramics (est. 1985) and English Heritage for the stunning renovation of a Grade-1 listed 16th Century gatehouse on the site of "Robin Hood's" Grave. Located on the historic Kirklees Estate in Calderdale, West Yorkshire, the Gatehouse is a now located on private land and used as a luxury rental residence. According to local legend Kirklees Hall is said to be the final resting place of Robin Hood who was allegedly "murdered" on the site and buried nearby. Craig Sellars from CJ Ceramics was commissioned to tile the interior of the gatehouse in Modena marble-effect porcelain supplied by Yorkshire Tile Company. Because of the historic nature of the building including fragile lime render, Craig called on the expertise of BAL Product Support Manager Lewis Lupton to provide a technical specification for fixing materials. Recently launched, BAL Board is a lightweight tile backer board that is 15-35 per cent lighter than traditional cement-based boards. Because no specialist cutting tools are required and the product produces minimal dust when cut, it is a perfect product for sensitive heritage backgrounds and environments.

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

## Modern, stylish and on-point: Matte Black hardware makes an impression



With alternative finishes being a growing trend in interior design, CRL has introduced an array of Matte Black hardware, a stylishly sophisticated option for modern environments. Giving specifiers more choice when selecting door hardware, the Matte Black finish from CRL creates a minimal look, blending seamlessly into the overall design of any space. The lean towards alternative finishes is particularly prevalent in bathroom design, with CRL now offering a full range of shower hardware in this latest striking Matte Black finish. The finish is available on many of the brand's best-selling ranges including Geneva and Pinnacle hinges, door knobs, support bars and U-channels for a co-ordinated look throughout the bathroom. The Matte Black series also includes the popular Deluxe Serenity sliding shower door system for one sliding panel and the new Cambridge and Contempo bypass sliding shower door systems. This is suitable for two sliding panels, giving access from both sides of the shower and offers greater flexibility in design. Sleek and modern, this latest finish to join the CRL line-up is a natural partner to many of the most popular material choices for the bathroom.

01706 863600 [www.crlaurence.co.uk](http://www.crlaurence.co.uk)

## New Linear Screed Line Drain



CCL Wetrooms, one of the UK's leading wetroom specialists, has launched a new drainage solution for use on solid floors – the new Linear Screed Line – a linear drain with a 50 mm waterseal trap that offers an alternative

to a waterless trap. The new drain is available with a single, double or triple trap to cope with high flow rates, and has a horizontal or vertical outlet option to suit the floor configuration of the wetroom. The drain has been designed to be used with the full range of linear grills from CCL Wetrooms, including the Stone-Infill Grill and the new Frameless Grill. Available in a floor or wall option.

0844 327 6002 [www.ccl-wetrooms.co.uk](http://www.ccl-wetrooms.co.uk)

## Maxwood upgrade its drawing software



In construction, we all know that some of the most intricate and problematic interfacing details occur in the washrooms, where there can be up to five different trades working alongside each other. This challenge has led Maxwood to upgrade its drawing software from 2D

to 3D. 3-dimensional drawings will both significantly improve our capacity to pre-empt design conflicts before they really occur and will further enhance our ability to develop architects' design concepts, on their journey from the drawing board to installation on site.

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



# magrini baby changing units

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

The contemporary style incorporates extra-deep sides providing an intrinsic safety barrier and the units have a unique hinge system preventing small fingers from being trapped.

Magrini baby changing units are available in a choice of colours to suit modern commercial washrooms.



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



## FDS Consult provides expertise to capital towers development



FDS Consult has provided its expert fire strategy services to the landmark Capital Towers development in East London. The fire engineering specialist was appointed to develop a strategy for its two interconnected, high rise buildings that would ensure the safety of residents while maximising space and reducing costs. By specifying a 0.5 m<sup>2</sup> mechanical smoke shaft per tower as part of the strategy, FDS Consult's team of experts were able to provide significant space saving within the building while providing the necessary levels of smoke-clearance required along the single staircase approach for each tower. After a careful analysis of each area of the building, FDS Consult recommended extending the mechanical smoke shaft from the levels above to provide the required levels of smoke ventilation for the ancillary areas – the residents' gym, crèche and private lounge. While it is required under Approved Document B for buildings measuring over 30 metres in height to include sprinklers throughout, FDS Consult was able to provide a safe and cost effective solution that only included the sprinklers within the residential apartments.

01322 387411 [www.fdsconsult.com](http://www.fdsconsult.com)

## SiOO:X® extensively used in DIY market



SiOO:X® is a patented silicon-based two-part wood surface treatment process that was developed in Sweden over 15 years ago, where it finds extensive use in the DIY market. The surface protector acts to prevent the wood protector from leaching out until it has cured. The wood protector undergoes a chemical reaction with

atmospheric carbon dioxide to deposit insoluble silica particles in the wood. The silica envelope that forms is completely stable to ultra-violet light, unlike oil and varnishes, which are based on carbon chemistry. Please contact Sioo Wood Protection for more information.

[www.sioox.org.uk](http://www.sioox.org.uk)

## New Aico 3000 series fire & co alarms



Aico, one of the UK's market leaders in domestic mains powered Fire and Carbon Monoxide (CO) detection, has launched the new 3000 Series.

This technologically advanced series detects both Fire and CO and includes, for the very first time, a Multi-Sensor Heat & CO Alarm, providing whole property coverage from one Series. Unique to the 3000 Series, the Ei3028 Multi-Sensor Heat & CO Alarm has been much anticipated as a convenient, cost-effective, efficient solution to protecting residents from both Fire and CO. All alarms in the 3000 Series are backwards compatible with existing Aico products.

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

## Resiblock Seal Solihull Hat-Trick



Resiblock has completed a Hat-Trick of Sealing Sites in Solihull following the recent completion of Station Approach. The Station Approach site consisted of 2,500 m<sup>2</sup> of Tobermore Fusion CBP and was sealed with Resiblock Resiecco. Protection from joint erosion caused by mechanical cleaning regimes was the key element for Kelbec Civil

Engineers, and Resiblock Resiecco was selected due to its performance against similar challenges at the O2 Arena, London. It is the third site in Solihull that has been sealed using Resiblock Commercial Sealers.

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

## New Brochure Launch



Long Rake Spar is pleased to announce the launch of its new Natural Selection Brochure for 2018. The brochure showcases over 20 new products for 2018, alongside Long Rake

Spar's exclusive Platinum. Featuring high resolution wet and dry product photos, inspiring lifestyle images and helpful information icons; the brochure can be used in-store or on-site to guide product choice. The new brochure is part of a programme of retail support products that Long Rake Spar is introducing for UK stockists. The Brochure is available to view on the company's website and copies can be requested via the Sales Office.

01629 636 210

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# Hauraton high capacity channel system drains extensive car park at Skypark, Exeter

The Skypark Business Park is located just North of Exeter International Airport, Devon and East of the M5 off Junction 29. The Park is a Joint Venture Partnership between St. Moden, the UK's leading regeneration specialist and Devon County Council.

The development, when complete, will cover 130,200 m<sup>2</sup> (1.4 million ft<sup>2</sup>) and comprise of office, industrial and manufacturing premises. Ancillary retail development and a hotel are also planned as part of the scheme. Set in landscaped grounds, it includes numerous car parks requiring effective surface water drainage.

In this phased development, three sizes of the Hauraton RECYFIX® MONOTEC high capacity surface drainage system have so far been installed in the extensive asphalt car parks servicing Skypark Units 10 and 20. 145 metres of MONOTEC 100/230 mm, 136 metres of 100/280 and 45 metre of 100/380. 100 mm is the channel



grating width and the internal dimension. The 230 mm (overall height) channel model has a cross-section of 190.5 cm<sup>2</sup>, the 280 mm, 245.5 cm<sup>2</sup>, and the 380 mm, 355.5 cm<sup>2</sup>. The 326 metres of channel supplied provide a total hydraulic capacity of just over 7717 litres.

Hauraton Limited introduced the

MONOTEC system just over two years ago. Skypark joins the numerous installations successfully completed in the United Kingdom.

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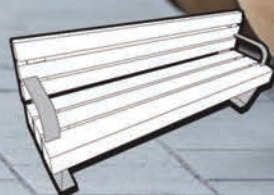
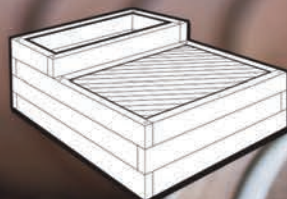
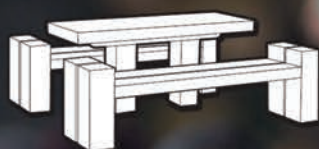
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# The future of water management

Ian Geeson of Charcon considers how integrating Sustainable Urban Drainage systems (SuDS) into every future urban design project would make a step change in ensuring effective water management

In winter 2015/16, we saw widespread flooding, with 16,000 homes in north England and parts of central and north east Scotland affected. Damage to roads, bridges, public rights of way and drainage systems totalled £250m and the insurance bill topped £1.3bn. But the problem did not just arise from rivers breaking their banks.

In the natural environment, a high proportion of rainfall soaks into the ground and filters its way into rivers. But in urban environments with the extensive use of hard surfaces, water percolation is impeded and results in high volumes of surface water run-off. This water enters drainage systems that were never designed to cope with such high volumes of water.

There are a number of high performance and cost effective SuDS solutions readily available to manage the issue of surface water runoff. However, too often during the design process, the role SuDS can play in urban design and effective water management is misunderstood.

## Urban design & effective water management

There is a common misconception that SuDS can only be used in certain applications. But in fact, they can be applied to any residential, commercial or urban project, in towns or built-up city centres. And while they can't prevent flooding, by introducing permeable surfaces coupled with water storage and infiltration systems, surface water run-off will decrease, relieving pressure on drainage and sewer networks and reducing flooding potential.

While SuDS technology is not a new concept in the UK, architects, designers and engineers often forget that there is much more to SuDS than water storage. It can help remove pollutants and offer wider societal and biodiversity benefits. This means that water run-off that is treated within the SuDS installation can then be harvested for irrigation, biodiversity or amenity use within a development – or can simply be recycled.

The Government's change in approach to implementing SuDS through the planning system is a very clear call for designers to lead the way, developing multi-functional SuDS as part of the design process. With a holistic, design-led approach, drainage issues should become an integral part of the process – and not an end in itself.

However, to achieve this effectively, surface water management needs to be linked to development planning from the very start of a project. This will allow space to be used more effectively and in a multi-functional way, enabling water storage and conveyance zones to form part of the development's character.

It will also maximise the drainage system's capacity for delivering multiple planning and environmental benefits. Wherever possible, the 2013 Code of Practice BS 8582 suggests incorporating permeable surfaces and surface-based conveyance. This could be porous concrete and asphalt – or for alternative aesthetics, concrete block permeable paving.

While traditional drainage systems are constrained by capacity, SuDS solutions are not. Incorporating permeable paving allows water to soak naturally into the pavement below. Such systems can be designed to address a number of key issues such as water volume and quality, trafficking and biodiversity.

## Designing and planning for SuDS

The Code of Practice advises that permeable surfaces and surface-based conveyance and storage systems should be used in concept designs wherever practical. It also highlights the importance of linking multi-functional SuDS design to other development infrastructure, such as car parking and public open space.

A recent SuDS paper presented at the Building Centre in London looked at innovative designs that leading architects are proposing, which seek to live with water, rather than defend against it. One example was 'Permeable pavements' which



## The industry needs to grab the opportunities that SuDS present with both hands

can be designed to treat the water as it passes through the system, removing water-borne pollution. This also supports the ethos of 'living with water, rather than defending against it'. The 'Designing for Flood Risk' presentation at the Building Centre outlined the reality of flooding for home owners and the importance of designing for flooding.

Concrete block paving can be used in almost all circumstances – full infiltration to the ground, partial infiltration with excess water directed to the next SuDS stage, or full containment and controlled release to the next SuDS stage.

Concrete block permeable paving is ideally placed to meet the Code of Practice requirements and is a good choice for architects looking for a truly holistic, design-led solution. There's an extensive range of permeable paving options now available and the styles, finishes and colours available mean architects have real freedom when making design choices. Also, the performance of these products is comparable to standard pre-cast concrete paving products. Permeable paving not only provides a level, firm and slip-resistant surface, it removes the needs for cross-falls,

channels and gulleys.

Furthermore, correctly designed, concrete block permeable paving can support heavy trafficking and loads, making it ideal for all shared surfaces and residential roads, as well as car parks and hard landscaping. A real benefit to the client, of course, is that very little maintenance of a permeable paving system is required – and as there's no need to install below-ground drainage, ongoing cost and maintenance is kept to a minimum, if SuDS is designed in from the start of the project.

The industry needs to grab the opportunities that SuDS present with both hands. Earlier engagement with landscape architects and SuDS manufacturers will help ensure the right SuDS solution is identified for the project – whether that's permeable hard landscaping systems of soft SuDS, such as ponds, filter drains, or artificial concrete streams. In doing so, designers will be able to effective delivery a visually appealing and sustainable solution for the future.

*Ian Geeson is technical manager at Charcon, the commercial hard landscaping division of Aggregate Industries*

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