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# FROM THE EDITOR



The news that Foster + Partners has had its \$13bn airport project in Mexico City cancelled – following a public referendum, and after millions had already been spent on foundations – has possibly taken the shine off the practice's joy at winning the Stirling Prize for Bloomberg.

The bigger question here is whether the decision on something as complex and important to the local and national economy as an airport should have been left in public hands. While there are some important issues to do with engagement that mean real public consultation needs to be a top priority, whether you leave decision-making to be driven and coordinated by current political whims has to be under question.

There are obvious parallels with Brexit. Presumably even the most pessimistic Remainers have been shocked as to just how thorny and tortuous the negotiations have turned out to be, meaning it's arguable that no-one really knew what was coming, back in 2016. In the era of populist politics, we probably need to brace ourselves for more 'black and white' choices in the form of further referenda. Will future generations look back and wonder how we could allow such complex matters to be left to what are, essentially, opinion polls?

In the case of Mexico, there are a very different set of factors. While the EU may arguably be one of the bastions promoting and enforcing environmentally-friendly policies, the airport which was under construction on a former lake bed has been criticised on environmental grounds, including its impact on migrating birds. However there were planned mitigating landscaping projects to address this – was this communicated and understood in the referendum?

There is another big difference, disregarding whether or not the EU Referendum should have been staged, over 17 million people voted to leave. In Mexico, just 1 million did – not much over 1 per cent of the electorate. As commentators have said, this does not seem to be a mandate for change.

An advisor to incoming Mexican president Andres Manuel Lopez Obrador said the cost of cancelling the construction the new airport will be around 0.7 percent of the country's gross domestic product. Beyond the resulting losses to contractors and wasted effort on the architects' part, this is going to be a major blow to the economy.

The real cost of Brexit won't be known for some time, all we know currently from anecdotal evidence from practices is that investment decisions are being delayed, while things still hang precariously in the balance. In terms of actual data however, ARB has reported there was a 42 per cent fall in architects from the EU registering to work in the UK in September. If that trend continues, it won't take long before there is a noticeable impact on the profession's capacity to deliver.

**James Parker**  
Editor

**ON THE COVER...**

Cranleigh Prep School's new 'Safari Lodge'-inspired timber building for science, art and DT engages as much as possible with the natural environment to provide healthy teaching spaces.

For the full report on this project, go to page 30  
Cover image © Kilian O'Sullivan



## AIRPORT

# Referendum forces Fosters' Mexico airport cancellation



Following a referendum in Mexico, the country's president elect Andres Musel Lopez Obrador has promised to cancel the \$13bn airport project under construction in Mexico City, which has been designed by Foster + Partners.

After 70 per cent of the turnout voted against the plan, Obrador commented: "The decision taken by the citizens is democratic, rational and efficient." The project had already begun in earnest, with substantial foundations having been dug on

the site, the former Texcoco lake bed.

Just over 1 million people voted, only around one out of every 90 registered Mexican voters. Obrador had pledged to cancel the project during his election campaign, "claiming it was marred by overspending and corruption," reported Associated Press. The president-elect said Mexicans will save \$5bn by abandoning the project.

The Texcoco project was initiated by current Mexican president Pena Nieto as his signature infrastructure project, however critics said it was initiated with "little real environmental study." Obrador called the decision "a triumph for the environmental movement".

However there have been objections to making such a decision by using a referendum. The Mexican Confederation of Chambers of Commerce said: "It should be a technical and financial decision, not a politician one based on a popular vote."

According to reports, local architects have reacted angrily to the decision to cancel the project based on a public vote. Dezeen quoted one, Fernanda Canales, who accused the referendum, of being "fake" and "against the law," adding that "it was not a transparent process."

## AWARDS

## Cranfield's AIRC Centre stays on top

CPMG Architects' multi-award-winning project – the Aerospace Integration Research Centre (AIRC) at Cranfield University – has scooped another award – this time at the LABC (Local Authority Building Control) Grand Finals.

The design team was recognised in the Best Large Commercial Project award category for its work in delivering the £35m centre, which "successfully supports the building's commercial purpose and is sensitive to the local environment," said the judges.

This recognition comes after the project team for CPMG picked up a regional RICS Design Through Innovation Award for the scheme.



Nick Gregory, director for CPMG said: "The Aerospace Integration Research Centre is a flagship scheme that we are incredibly proud of. It has had a positive impact on the future of aircraft design and we are delighted to have been a part of the team that has made it so successful."

"The success of the AIRC Centre has led to us working further with Cranfield

University as they make plans to expand their estate with a new Agri-informatics building and a Water Sciences building."

The project team included main contractor RG Carter, Couch Perry Wilkes (M&E consultants), Stewart Morris Partnership (structural engineers), Currie & Brown (project managers) and Gardiner & Theobald (QS).

## MUNICIPAL

# Make restores modernist town hall

Hong Kong-based developer Far East Consortium (FEC) has teamed up with Make Architects to transform Hornsey Town Hall in central London. The iconic Grade II\* Listed former civic headquarters in the heart of Crouch End is being restored to create a new residential destination that “combines history, culture and modern living,” said the architects.

The restoration will turn the town hall into a community arts and work space, plus a new hotel, along with 135 new homes in the grounds. Make Architects “have ensured the historic buildings are being brought back to their former glory, and the new build element of the scheme captures the spirit and style of Hornsey Town Hall”.

A collection of studio, one, two and three bedroom apartments are spread across two newly built blocks, a mews building and the carefully restored ‘Broadway annex’ in the grounds. Make

Architects commented that the style of Hornsey Town Hall will be evident in the facades, where “layered brickwork and carefully crafted geometric metal balustrades come together to reflect the Town Hall’s original Art Deco features and modernist aesthetic along with the distinctive concrete pattern from the Hornsey Library”.

Original features in the Town Hall Square such as the fountain and the period street lighting will be restored, and the central green space enhanced. Lining the square will be a selection of cafes and restaurants and local traders and stall owners will set up shop on market day, creating a “vibrant, inclusive space for generations to come”.

Katy Ghahremani, partner at Make Architects, said, “We were delighted to be appointed to work on such an important part of London’s heritage. Hornsey Town Hall is one of the earliest examples of



modernist architecture in Britain. We studied archived photographs and drawings to create a design that is in keeping with Reginald Uren’s originals.”

Ghahremani continued: “Our plans focus on all elements of the build internally and externally, with carefully thought out architectural influences and detail incorporated in both the transformation of the historic part and the exterior design and internal specification of the new build apartments.”

## EDUCATION

## FaulknerBrowns' student building gets green light

Middlesbrough Council has approved plans for a new Student Life Building designed by FaulknerBrowns Architects for Teesside University. The proposals will consolidate all student-facing support, wellbeing and information services within a central location at the heart of the Middlesbrough campus to improve accessibility and the overall student experience. The project forms part of Teesside University’s 10 year masterplan and estates strategy, developed in conjunction with FaulknerBrowns.

The building, to be constructed by Willmott Dixon, will house a range of student-centred and student-led spaces in a “technology-enabled environment, supporting a variety of learning styles, activities and attendance patterns,” said FaulknerBrowns. It will offer a range

of flexible spaces, enabling social and collaborative learning, as well as an information zone, consulting rooms, ‘syndicate rooms’, accommodation for student welfare, disability services and a cafe.

The proposed site occupies a pivotal location within the university – facing onto the campus heart adjacent to the existing student centre which has been recently refurbished to provide the new home for the university’s business school.

The predominantly open plan student-focused spaces are accommodated within a simple ‘glass box’ that wraps around the west side of the building. The more private spaces are contained within a solid element to the east side of the building.

This conceptual diagram is “overlaid with a layered approach to privacy,” said the architects, which focuses the active spaces to the ground floor of the building and locates the more sensitive areas on the levels above. This ensures that facilities and services are visible and easily accessible whilst retaining appropriate privacy levels.

The student-focused area is articulated



by a number of double height spaces created by a series of alternating floorplates and voids between the meeting rooms on the levels above. Meeting pods have been designed to allow for future flexibility, doors and windows carefully positioned to provide the required levels of privacy and daylight, whilst being coordinated with the internal partitions when subdivided.

Paul Crowther, project leader at FaulknerBrowns, said: “The scheme offers a unique opportunity to help the university realise the aspirations of their strategic estates masterplan, while delivering a student-focused space that puts wellbeing and support at the heart of the both the campus and the student experience.”



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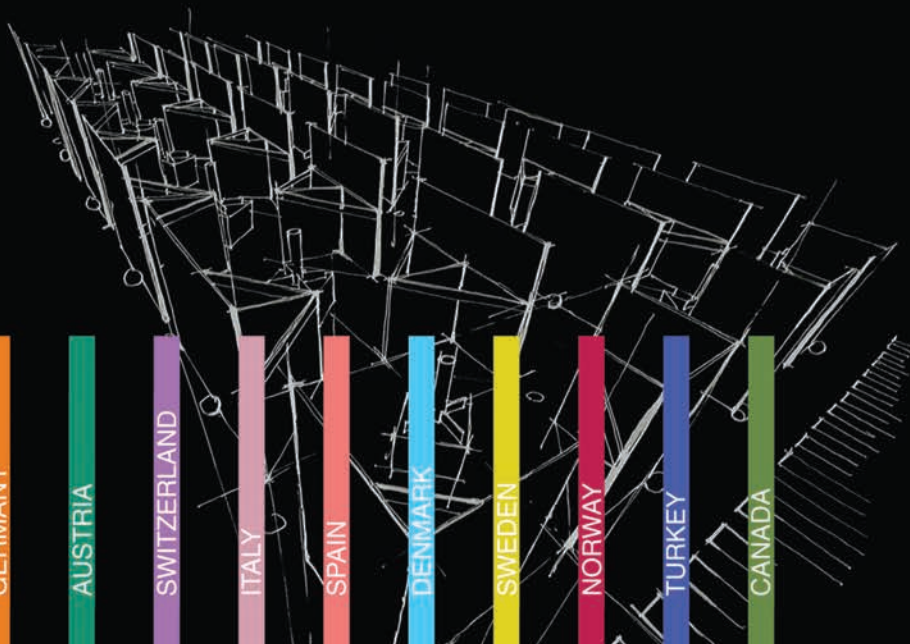
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## AWARDS

## Surface Design Awards finalists announced

The shortlist for the Surface Design Awards contains several leading studios, including Zaha Hadid Architects, Steven Holl Architects, Studio Egret West, Chris Dyson Architects, Rockwell Group and Kengo Kuma & Associates.

Consisting of 43 projects across seven categories, each entry is “an exemplary example of creative and innovative use of materials and lighting,” said the organisers. Some projects won nominations across several categories, resulting in 48 finalists.

Entries came from established architects, as well as rising stars, and the growing international reach saw entries from Canada, China, Korea, Australia, and four from the US.

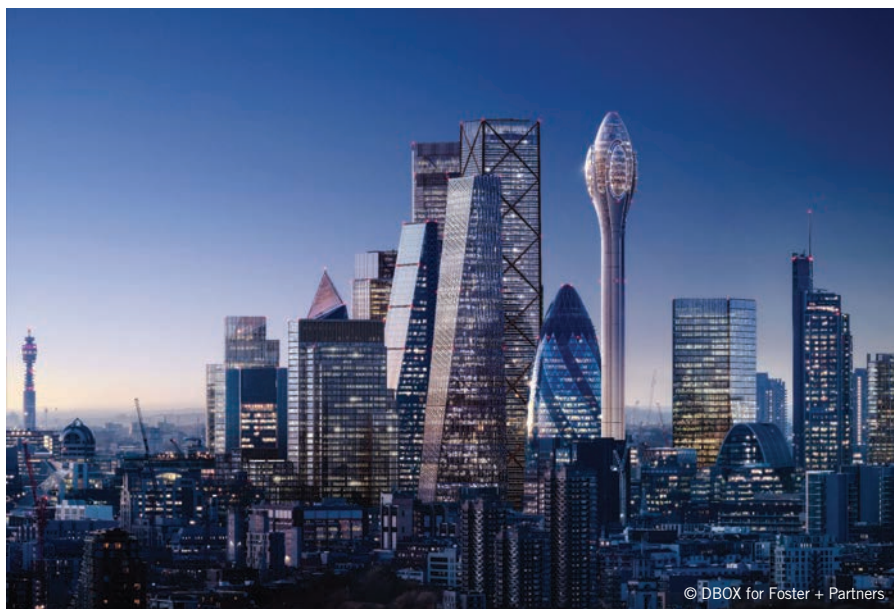
The Morpheus Hotel in Macau by Zaha Hadid Architects is a finalist in three categories, the judges saying “it illustrates the ability of ZHA to create astonishing spaces, enhanced by brilliant use of material and light”.

A cedar-clad B&B by Blee Halligan Architects, Five Acre Barn, is a finalist across two categories, as is the new Royal Academy of Music by Ian Ritchie Architects. This “simultaneously intimate and grand” concert hall prompted judge Paul Edwards to comment: “I imagine when the lights go down, there would be something quite magical here”.

Maggie’s Barts, in the grounds of historic St Barts Hospital in London and designed by Steven Holl Architects, is shortlisted in the Public Building Exterior category.

Another finalist was The Diner, a temporary restaurant created under railway arches for Milan Design Week by Rockwell Group, which used printed aluminium and integrated LED lighting to transform the space.

The Surface Design Awards take place at the annual Surface Design Show, at the Business Design Centre, London from 5-7 February.



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## LONDON

## Fosters plant Tulip plans

A planning application has been submitted to City of London Corporation for The Tulip, a new viewing tower which would be sited next to 30 St Mary Axe (‘The Gherkin’).

This project has been proposed by J. Safra Group with Foster + Partners, owners and architects respectively of 30 St Mary Axe. Inspired by nature, the 305.3 metre Tulip “would enhance The Gherkin, and offer a new state-of-the-art cultural and educational resource for Londoners and tourists,” said the architects.

The proposal “reflects a desire to build public engagement within the City and enhance The Gherkin’s public offering,” said Foster + Partners. It would also “promise wide cultural and economic benefits with a diverse programme of events”.

An education facility within the building’s top section would offer 20,000 free places per year for London’s state school children, under the proposal, resourced by the J. Safra Group. This “will deliver national curriculum topics using innovative tools to bring to life the city’s history and dynamism, inspiring the creative young minds of tomorrow”.

The viewing galleries include sky bridges, internal glass slides and “gondola pod rides” on the facade, catering for all age groups, and there will be “interactive materials” as well as

expert guides to London. A sky bar and restaurants will have 360-degree views of the city.

The Gherkin “made a positive contribution at ground level by breathing life into its surroundings. The Tulip seeks to extend the site’s public realm further,” said the architects. A new pocket park is proposed, alongside a two-storey pavilion offering a publicly accessible rooftop garden. Together with green walls this increases the site’s green surface area by 8.5 times, supporting the Mayor’s goal for London to be the world’s first National Park City. Public access will also be considerably improved with the removal of over half of the existing perimeter walls around The Gherkin.

Foster + Partners added: “The Tulip’s soft bud-like form and minimal building footprint reflects its reduced resource use”; high performance glass and optimised building systems will reduce energy consumption. Heating and cooling will be provided by zero combustion technology while integrated photovoltaic cells generate energy on site.

Operating 24 hours, seven days a week, the building will “bring real economic and social benefits for the local community and for London”. Construction could begin in 2020, with completion projected for 2025.




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## BOOK

## Desire Lines – an argument for “human-centred” design

New from RIBA Publishing and author Lesley Malone, ‘Desire Lines’ argues for “human-centred design” and seeks to “motivate place-makers to design spaces that people really want and need”.

A practical guide covering evidence-based approaches that architects, urban designers and landscape architects can use to achieve design that aligns with people’s desire lines, this book “will be useful and insightful to anyone in the business of designing public space, and an indispensable guide for those studying,” said RIBA.

Working under the philosophy that community engagement should be a worthwhile and positive experience for all involved, ‘Desire Lines’ centres the needs of the end user, and the value of community collaboration throughout the design process. It covers public consultations and how to run them, “bringing social research principles to a wide range of engagement processes to help practitioners make the most of local knowledge and community experience for the benefit of design”.

Providing direction for managing community participation, the book “encourages designers to think like social researchers,” an area in which the author specialises. It includes methodologies for gathering, analysing and interpreting information, examines different approaches for different projects and groups, effectively explains when and how to use surveys and quantitative methods, and discusses how to gather and analyse qualitative data.

‘Desire Lines’, said RIBA, “equips readers with essential practice guidance in an area that is rarely taught and is not covered in existing literature”.



## TRANSPORT

## Designs revealed for Liverpool’s new cruise liner terminal

The project team behind the design of the new cruise liner terminal in Liverpool have revealed the latest designs for scheme, which received outline planning permission in April.

The new cruise terminal is being built within the Liverpool Waters area and includes a “state of the art” passenger and baggage facility, complete with security checking and customs areas, lounge, cafe, toilets, taxi rank, vehicle pick up point, car park and four-star hotel.

The project team includes Ramboll as lead consultant, and architects Stride Treglown as “architect sub-consultants, and JLL and Turner & Townsend as “major sub-consultants”. Joyce Brady, project director at Ramboll said, “This is a major regeneration project for Liverpool City Council and their partners, which will play an important role in growing Liverpool’s tourist numbers. Our team are looking forward to seeing the scheme through its construction stage and into operation and accepting ships.”

The ‘reveal’ of the latest designs for the

cruise terminal follows consultation events to support the pre-planning application for the new four-star hotel on the new cruise terminal site, which Wates have been appointed to construct.

Steve Rotheram, Metro Mayor of the Liverpool City Region, said: “The new cruise liner terminal is a key element in plans to further boost our flourishing visitor economy, which is now worth more than £4.5bn a year to the city region’s economy and provides more than 53,000 jobs. Attracting more visitors, in bigger ships, will give a boost not just to businesses in the city centre, but around the city region, indirectly creating additional jobs for local people across the supply chain.”

Site preparation works for the new facilities are expected to start in the new year, subject to approval of the Harbour Revision Order.

The city council has applied through Mersey Docks and Harbour Company for a Harbour Revision Order for the construction of the jetty in the Mersey.

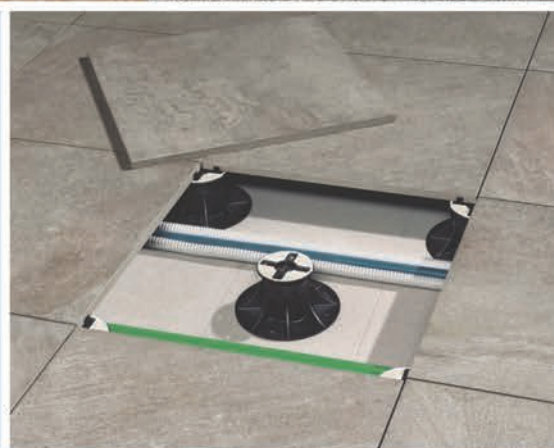




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## NEWCASTLE

## Sir Terry Farrell donates £1m to archive project

Architect Sir Terry Farrell is donating £1m for the renovation of the Farrell Centre at Newcastle University, which will house a new architectural exhibition centre featuring his work.

The facility, at the university's city centre campus, will also include an 'urban room', where "anyone can come to learn and discuss the city of Newcastle, its past as well as proposals for its future", and a start-up space for recent graduates.

The Centre will house thousands of items spanning six decades of Farrell's career, including models, drawings, papers and diaries referencing designs such as the MI6 Building in London in London, Beijing South Station in China and the Embankment Place development around Charing Cross station. It also includes pieces from his schooldays in Newcastle and from his time as a student studying architecture at Newcastle University.

Farrell said, "I'm delighted that my archive will find a permanent home here, and that the Centre will be a focus for exhibition and debate about city making in my home town."

Farrell played a large part in shaping the way his home city looks, including developing the Newcastle Quayside masterplan, designing the International Centre for Life, and refurbishing and extending the Great North Museum – Hancock.



Proposed scheme for the Farrell Centre in Eldon Place, Newcastle



## CULTURAL

## LTS Architects' Science Gallery London completes

LTS Architects has completed work on Science Gallery London, near London Bridge, a "groundbreaking new public space where art and science collide".

Housed within a wing of the original Guy's Hospital, the space provides exhibition galleries, a lecture and performance theatre, events facilities, plus a cafe, shop, and newly restored Georgian courtyard.

LTS Architects was appointed by King's College London to create what the architects said is a "flexible, adaptable space, with clear navigation". The architectural response "opens up the building, positioning the main entrance within the streetscape, rather than inside the courtyard, and carving out a large glazed opening from the masonry facade to act as a 'shop front' revealing the exhibitions and activities within".

The architects continued: "The interventions are sympathetic to the original building, using the same palette of materials as the listed facade, yet stretching and moulding them into an entrance sequence formed of contemporary architectural elements". A long cast stone

seat wall draws visitors into the gallery from the north and completes the Portland Stone plinth of the building. The goods lift tower is placed within the street, "cloaked with dynamically edge-lit lasered glass panels".

Inside, the volumes are open and continuous, with spaces that can be lit, closed off or opened up at the whim of a curator. This "enables ultimate flexibility so that the galleries can change their aspect completely from one exhibition to the next". The ground floor, which is used as a cafe space and shop by day can be reconfigured easily into an events space at night. The courtyard, previously a car park, is now a fully restored and accessible public square.

Greg Shannon, director, LTS Architects, said: "Our sensitive refurbishment is a key part of the redevelopment of the vibrant and rapidly changing London Bridge area, providing a major new addition to the cultural landscape of the city."

LTS Architects worked closely with Arup Lighting and LDA Design to deliver the project.





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## MUSEUM

# BDP reveals Leighton House Museum designs

BDP has revealed designs for the Phase III restoration and refurbishment of the Grade II listed Leighton House Museum in London. The “transformational” £7.8m project ‘Hidden Gem to National Treasure’ recently received Round 2 Heritage Lottery Funding of £1.6m and will complete the restoration of the museum and create “much needed accessible new facilities for the whole community,” the firm said.

Originally a studio house built for Victorian painter Frederic, Lord Leighton, the property has undergone gradual expansion over its 150 year history. While earlier phases were directed by Leighton himself, several less satisfactory interventions were made after his death including the house

transitioning from a private home to public museum. BDP are “reappropriating these secondary components as a physical and environmental buffer to the original house, removing unnecessary fabric to clarify and recover the original architecture”.

The designs expand the museum to provide more space for core visitor functions, collection care, as well as a dedicated gallery for over 700 Leighton drawings, a new entrance and shop, and a consolidated staff suite. Most of the new development is within the existing building envelope or below ground, though a modest and compact ground extension for a new stair and lift is provided to accommodate accessibility needs. These new interventions will improve sustainability and support the



work that the museum delivers to the community, providing “a place of engagement for all ages”.

Project director Alasdair Travers said, “With its incredible interiors, Leighton House is one of the most inspiring houses you can visit. To be involved here is an architect’s dream job and we are thrilled that after 10 years working with the museum, the latest phase of work will open it up to new audiences as well as providing existing devotees with new insights and an improved visitor experience.”

The project is scheduled to begin in 2019 with completion in 2021.

## RIBA

## ASFP welcomes launch of RIBA ‘Plan of Work for Fire Safety’

The Association for Specialist Fire Protection (ASFP) has welcomed the announcement by the Royal Institute of British Architects that it has launched a consultation on a new RIBA ‘Plan of Work for Fire Safety’.

The document represents the culmination of work, which was initiated in 2016 when the ASFP convened a panel of stakeholders from across the built environment to investigate how fire protection could be improved throughout the construction cycle. They identified a number of issues with the construction process, including “fragmentations within the construction design and build process, multiple sub-contracting and inadequate inspections of works during construction and on completion”.

Working with AHMM Architects, the stakeholder group recognised that developing a ‘Plan of Work for Fire

Safety’, which complemented the existing RIBA work plan methodology, “would provide a recognisable route for improvement”.

The ASFP commented: “The work took on greater urgency following the devastating fire at Grenfell Tower in June 2017 and the ASFP commends RIBA for taking the initiative forward to develop this vital resource for design and construction teams and building owners.

The new ‘Plan of Work’ ensures there are a detailed specification for fire protection at the design stage and a schedule for fire throughout the construction process. The Plan includes sign offs as construction progresses, with all information reaching the end-user to support adequate fire risk management.

The new document also reflects the recommendations of the Hackitt review, which called for a greater focus on the

roles and responsibilities and a ‘Golden thread’ throughout a building’s lifecycle. The review also recommended the introduction of mandatory sign off procedures at the key ‘Gateway Points’ of planning permission, permission to build and permission to occupy.

ASFP, CEO Niall Rowan stated, “The ASFP welcomes the launch of this important consultation which represents a vital step forward in improving the safety of our built environment. We have long called for fire to be considered much earlier in the construction process, and this new document clearly sets out the requirements and responsibilities at each stage of the process, from original design and throughout the life of the building, including changes and refurbishments later in the building’s life.”

“The document represents the successful conclusion of many months of work involving a wide range of stakeholders from across the construction industry, and as such we hope it will gain strong support and recognition.”





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# EVENTS

## EXHIBITIONS

**The Data and Life of Great Future Cities**  
15 September - 26 January, London  
[www.rocalondongallery.com/en/activities](http://www.rocalondongallery.com/en/activities)

**Factory-made Housing: A Solution for London?**

10 October - 18 January, London  
[www.newlondonarchitecture.org/whats-on](http://www.newlondonarchitecture.org/whats-on)

**RIBA Stirling Prize Exhibition 2018**  
16 November - 23 February, Liverpool  
[www.architecture.com/whats-on](http://www.architecture.com/whats-on)

## TOURS

**Architecture Walking Tour: South Kensington**  
27 January, London  
[www.architecture.com/whats-on](http://www.architecture.com/whats-on)

**Architecture Walking Tour: Victoria & Pimlico**  
17 February, London  
[www.architecture.com/whats-on](http://www.architecture.com/whats-on)

## TRADE SHOWS

**Architects@Work**  
23 - 24 January, London  
[www.architect-at-work.co.uk](http://www.architect-at-work.co.uk)

**Surface Design Show**  
5 - 7 February, London  
[www surfacedesignshow.com](http://www surfacedesignshow.com)

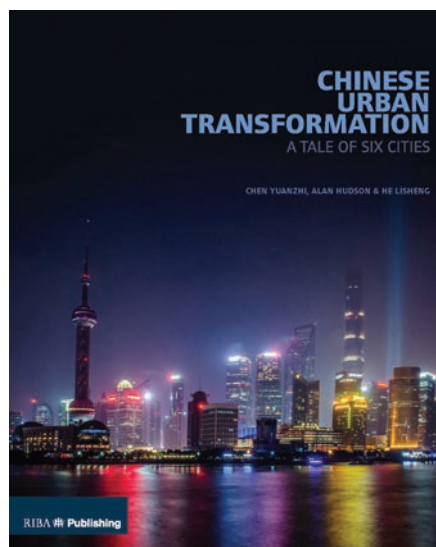
## BOOK

# A tale of six Chinese cities

"As late as 2008, the Chinese government was projecting an urbanisation rate of 50 per cent by 2040 but by the end of 2017 the National Bureau of Statistics of China reported that the rate had already hit 59 per cent." As the authors of a new book acknowledge in their preface, it's easy to be overwhelmed by these numbers, but they only tell a fragment of the story.

'Chinese Urban Transformation: A Tale of Six Cities', by RIBA Publishing and authors Alan Hudson, Dr. Chen Yuanzhi and Dr. He Lisheng, explores the dramatic development of China through six strikingly individual city case studies.

The book covers the urbanisation process from the planned economy to the reform and its ripple effects, land property rights and the evolution of community governance, to finally investigating the new environmental agenda of China's 'Eco Cities.' The six case studies encompass Shanghai, Nanchang, Qingdao, Hangzhou,



Chengdu and Hefei, as the complex dynamic between policy, outlook and the role that urban development plays in China's view of itself is unravelled, including tensions resulting from rapid social and economic change.

With the Chinese central government's recent encouragement of its cities to achieve more balance between economic efficiency, social justice and environmental protection, priorities are again shifting alignment, making this book "the exciting and insightful first volume in a still transforming history of the world's fastest transforming urban state".

## BOOK

# Quiet architecture

Ranging from London townhouses to escapist farmhouses, 'Quiet Architecture' provides a comprehensive survey of Rabih Hage's work. Illustrated throughout with photographs, drawings and sketches, Hage discusses his process and the development of each of the projects with author Dominic Bradbury.

Rabih Hage defines his work in terms of a 'quiet architecture', a philosophy that focuses upon the creative re-use and adaptation of existing buildings, recognising the importance of both sustainability and character within this ethos. His thoughtful and considered approach has brought a wide range of period houses and structures into the

21st Century and carefully adapted them for modern living, as well as drawing deeply on the surrounding context for new build projects.

Hage draws on a rich range of architectural influences, from classicism to modernism, drawing out the individuality and personality of each and every space. Key to the success of Hage's houses, apartments and hotels is the way his atelier combines architecture, interiors and furniture design within one holistic approach. The eye of a curator – informed by a rich personal heritage in the Lebanon, France and England – adds additional layers, with original and bespoke elements such as furniture, furnishings and art designed specifically and specially for the project in hand.







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## AWARDS

# Structural Awards 2018 showcase unrivalled global engineering excellence

The Institution of Structural Engineers has announced the winners of The Structural Awards 2018, at an awards ceremony in London.

The winners were chosen from a shortlist of 53 pioneering global projects, “celebrating the ingenuity and expertise of the engineers behind them,” said organisers.

A diverse range of structures, from beautifully crafted sports stadia to sparkling glass staircases, were recognised across 14 categories. This year’s entries “perfectly underlined the creativity of structural engineers, with the winning projects showcasing cutting edge examples of innovative engineering solutions”.

Tamina Canyon Crossing in Bad Ragaz, Canton St. Gallen, Switzerland (pictured right) received the Supreme Award for Structural Engineering Excellence. The award is presented to the year’s “finest example of structural engineering design” according to ISE judges.

The judging panel, made up of a distinguished group of industry experts, were unanimous in their view that this bridge, which crosses the Tamina Canyon

200 metres above a deep gorge, was an “outstanding engineering solution” and a worthy recipient of the top award.

The judges were “impressed by the elegance, clarity and economy of the design, noting the efficiency of the structural system, as well as the beautiful way that the design integrates with its spectacular surroundings”.

They said: “This is a concrete arch design in the best traditions of Christian Menn and Robert Maillart, and the engineers [Leonhardt, Andrä und Partner] have produced a world class, graceful design.”

Chair of the judges, Professor Tim Ibell, comments: “Congratulations to our award winners and thanks to all those that entered. As always the quality was high and the competition fierce. I’m sure I speak on behalf of all the judges when I say that it was hard to choose an overall winner, as there were many deserving candidates. Tamina Canyon Crossing’s Supreme Award win recognises the very best in bridge design and engineering, setting an example of best practice to the global construction industry.”



He continues, “In this, The Year of Engineering, The Structural Awards perfectly encapsulate the skill and creativity of structural engineers as problem-solving design professionals, making a positive impact to society on a global scale.”

Now in their 51st year, these prestigious awards celebrate the world’s most outstanding achievements and demonstrate the diversity of structural engineering, recognising excellence, creativity and innovation, as well as sustainability, economic viability and value for money.

## MATERIALS

## Cafe in Melbourne is a tulipwood first

A cafe which recently opened in Melbourne is the first project in Australia to use thermally-modified American tulipwood in exterior cladding. The Hungry Fox (by LaManna), located at Autocentro at Essendon Fields, has been designed using a range of natural materials from around the world.

Selected for its rich colour and uniform texture, American tulipwood provided not only the aesthetic impact sought by Bruce Henderson Architects, but also the stability. The thermal modification process heats the tulipwood almost to the point of

combustion. This changes the molecular structure of the timber and results in a material that provides the necessary durability for outdoor use. According to the American Hardwood Export Council (AHEC), it “requires minimal attention once outside which makes it a perfect choice for a project such as this”.

Interior architects Lukas Partners created an interior mood inspired by earthy Australian fauna. Their focus was on natural materials, inspired by gum nut and eucalyptus tones. The vaulted ceiling, taking its lead from the exterior design, is also of thermally-modified American tulipwood. The interior also features a stone counter and exposed concrete floor.

American ash tables, are accompanied by chairs created from the same timber



with perforated leather seating, and wool which has retained its natural colour variation. This perforation forms a motif throughout the space, the screens in the waiting area and the laser cut American walnut veneer panels that mask an acoustic board. The playground adjacent to the cafe has been created in Australian white cypress, treated with a tint to match the American tulipwood cladding.



# ASK THE ARCHITECT

El Salvador-born Rodrigo Moreno Masey is founder of residential and commercial specialist studio MorenoMasey. Here he offers some illuminating thoughts on the role of the architect – both now and in the future



Rodrigo Moreno Masey

## WHY DID YOU BECOME AN ARCHITECT?

I suppose the honest answer is that I come from a long line of architects. In El Salvador in the 1970s, you only got to choose between doctor, lawyer or if you could draw, architect. So a lot of my extended family ended up there. I grew up surrounded by the idea of creating buildings, and became more and more interested in how the spaces we inhabit can affect the way people interact with them and with each other. I have been fascinated by the transition of space between two and three dimensions and how that translates at a human scale, and I guess architecture opens the door to those conversations.

## WHAT DO YOU LIKE ABOUT IT MOST?

I am, at heart, a problem solver. I am constantly trying to solve puzzles, in life, at home, at work. The interaction of the moving parts of people and complexity inherent in every day life is both intriguing and constantly challenging. Every project, on its journey from idea to occupation,



An industrial-styled residential commission in Barnes

poses an infinite number of puzzles – from the interpretation of the client vision, through our response as architects and into the complexity of design and the detail needed to realise that vision. Each piece is a puzzle linked to the next.

## WHAT IS THE HARDEST PART OF RUNNING A PRACTICE?

I am extremely fortunate to have a very talented and dedicated team of architects and designers who share my passion for both the product and the process. Not everyone is so lucky and I think one of the biggest challenges the industry faces as a whole is ensuring that the architects of tomorrow are properly prepared for the real world challenges of architecture. Running a busy practice and maintaining the highest quality in everything you do relies entirely on the people in your team and you have to trust them to infect each project with a little piece of the practice DNA at every stage.

## WHAT IS YOUR PROUDEST ACHIEVEMENT AND WHY?

I could tell you that it's a building somewhere we built, I'm sorry, but it's not. Really I think my greatest achievement is ahead of me. Without the unending support of my wife, both her humour and her honesty, throughout this process, none of what we have achieved would have been possible. And if together we can raise our three daughters as strong, happy, self

confident and independent women I think that will count as my greatest achievement.

## DO YOU ENJOY HELPING CLIENTS TO CHALLENGE THEMSELVES WITH WHAT'S POSSIBLE?

We help brave people, who understand the value of good design to create exceptional spaces. I like to think that challenging our clients is what we are being asked to do, at every step of the process. We don't work with clients who want an architect to churn out information. The challenge has to be a dialogue. We don't claim to have all the answers, but we do understand that we can present an alternative way of thinking about complex problems and ultimately translate that way of thinking into physical space. That, surely, is what good architecture is?

## WHAT IS MORE IMPORTANT, DIPLOMACY OR TRYING TO AVOID COMPROMISES?

I'm not sure I have ever seen the two as opposing parts of the design process. I think that the greatest tacticians avoid compromise through diplomacy. Diplomacy is a tool, one of the many tools that we sharpen and use as necessary to achieve our goals and realise the greater vision. Good architecture is a collaboration of many skills and people and it is blind arrogance to assume that we have all the answers. Compromise does not have to dilute, it is a great force for good.



Open-plan kitchen/living space at country house, Berkshire

## ARE YOU WORRIED ABOUT BREXIT OR OPTIMISTIC?

I think it is not healthy or even possible to worry about something that as yet is so undefined, both in terms of outcome and in terms of impact. Some of the biggest challenges from Brexit have come to pass in the uncertainty that the process has created, and the ripples of this uncertainty will stay with us for some time. What the industry needs is clarity – and for better or worse, bringing the process to a close is more important than outcome. The inevitable, ‘post-apocalyptic’ future that awaits us will be our new reality, and our challenge is to make sure that what we do and how we do it remains relevant and engaging long into the future.

## WHAT'S YOUR CURRENT FAVOURITE MATERIAL FOR USE IN DESIGNS?

I think time and time again we come back to timber. It is hugely flexible as a structural material as much as it is as a finish. With so many species in so many cuts and grains and the possibility to apply techniques and processes that can re-invent the surface completely, the opportunities are endless. At a conceptual level, I also love the way that a tree is infinitely divisible, from log to plank, to block, to veneer and then down to dust – each stage of the division process has a part to play in the building process. If managed

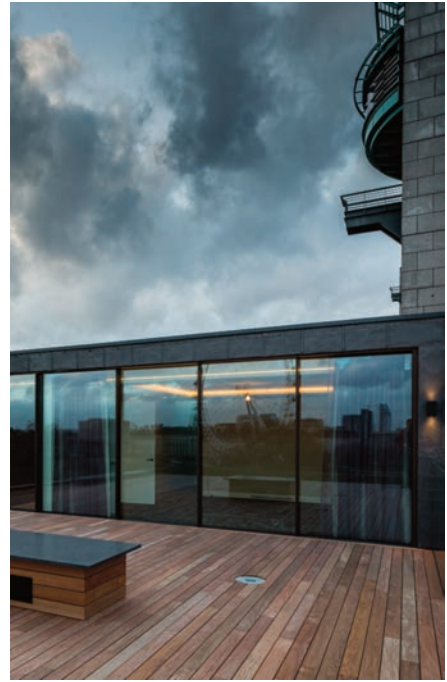
correctly and grown sustainably along with intelligent re-use and reclamation in situ, there is very little waste and that is good sense for everyone.

## WHAT CAN DESIGNERS WORKING ON PROJECTS IN LONDON LEARN FROM OTHER CITIES & URBAN DESIGN?

The most important lesson we can all learn from other cities is a conscious awareness that what happens in London is not normal; there is no normal. It is easy to fall into the reality trap that our approach to life, or our understanding of space is somehow universal or correct. That simply isn't true and the only way to truly engage with the lessons afforded by other cities is to immerse yourself in alternative realities – a reality without cars, or without glass or without water. If we ask ourselves how we might solve the puzzles we encounter here, through the eyes of multiple cultural frameworks, the answers are invariably richer and surprising.

## HOW CAN YOU SEE AN ARCHITECT'S ROLE CHANGING IN THE NEAR FUTURE?

The erosion of the role of master architect of the past has been dramatic and severe. More and more, we see architects now engaged in the process of delivery and technical compliance, divorced almost



Riverside penthouse, London

entirely from the creative process. A shift in focus away from big vision architecture and towards the interior veneer at one end – and delivery at the other – has left architecture without a seat at the table. If we are to solve some of the biggest questions facing the country around housing and how our cities function, we must find a way to re-frame our work, at every scale, to address more than just image or commercial value. Good architecture can provide an answer to both these problems, but the best architecture can provide so much more.

## DO YOU HAVE ANY BIG SPECIFIC GOALS THIS YEAR?

As a team we are going through a process of re-imagining, as a direct response to what we see is the shift in the perceived value architects add to the construction process. As a practice we promote excellence at every stage of the project and in everything we do. So, turning our skills inwards to design not only beautiful buildings, but also elegant processes to create those buildings, has been an exceptionally rewarding process. This year I hope to see the impact of that work to learn from the implementation process and create a direct feedback loop for learning and design, constantly redefining not only what we do, but also how we do it. ■





## PRACTICE PROFILE

# Sarah Wigglesworth Architects

James Parker spoke to Sarah Wigglesworth about life running a successful practice from a pioneering, sustainable HQ which comprises two conjoined buildings – her office and her own home – and is an embodiment of her ethical approach

Sarah Wigglesworth is an award-winning architect who has been celebrated for a variety of community-focused projects that push sustainability as well as joyfulness to the foreground. Founding Sarah Wigglesworth Architects (SWA) in 1994, her strong ethical approach remains the fulcrum around which the practice's work revolves, and her presence as its driving force is hard to overplay.

Wigglesworth long had one foot in academia, beginning teaching before she started her own practice in 1985. She and partner, architect Jeremy Till, were the first architects to be awarded the Fulbright Arts Fellowship, a bursary to study in the US in 1991, and she was given an MBE in 2003. In 2012 she was the first woman to receive the Royal Designer for Industry award for architecture from the Royal Society of Arts.

The very fabric of her firm's premises is intimately woven into Wigglesworth's life. She and Jeremy designed an ultra-sustainable straw bale building, completed in 2001 on a site next to the railway line in Islington, north London, which is occupied by the practice office and is also her home. *ADF* chats to the architect at what doubles as her dining and conference table, the designer having playfully created an impressive double-height meeting space that keeps its dual role close to its chest. There's a crocheted bull's head on the wall, mannequins sitting on a mezzanine, and pictures on the walls, but little else; the rest of the dwelling is located behind a sliding plywood screen.

The artworks and materials hint at the values which drive her and SWA: she exemplifies having the courage of your convictions, sustainability, and craft. However the space negotiates between her domestic role and her position in the practice; it's part of a long-standing conversation and commitment around addressing gender issues. "There is an acknowledgment there are other sides of your life and other duties you have to fulfil, she tells *ADF*. "I thought that's a really important issue to try and talk about."

Wigglesworth is unafraid to tackle head-on several of the more awkward issues which continue to beset the profession and the wider construction industry. These range from what she sees as clients taking advantage of a "buyer's market", to how women can still be treated in client meetings. She asserts: "As a female, your ability is always called into question."



**STOCK ORCHARD STREET**

The combined practice HQ and home was completed in 2001

Sarah has retained a strong interest in research, originating from her 12 years teaching at the architectural department at Kingston University to latterly, at the University of Sheffield. She says of Kingston, "it was an opportunity to experiment and work with really great people, and explore and test ideas. I got exposed to all kinds of ways of thinking." This helped formulate her then innovative ethos as an architect, of combining "an interest in both the everyday and in sustainability – neither were very big on anyone's horizons."

### Keeping it small

Wigglesworth admits she wasn't comfortable in commercially-oriented practices, where she found "a lack of intellectual debate," and a "hostile response to academia and ideas." She left her first job when she was offered a part-time teaching position, which she combined with working at RMJM.

She founded her first firm in the late 80s, working out of her north London attic with an architect friend. "If I hadn't set up at that point I'd probably never have done it." She says she built the practice



#### MELLOR PRIMARY SCHOOL

The award-winning project “uses the building as a teaching tool”

“very slowly and modestly, for eight years,” and that going the DIY route proved ideal, despite the risks.

She now heads a still small, but growing firm with 12 staff including two associates. After three decades of “learning on the job” in terms of running a practice, she appointed an operations manager early this year, and the practice now has its first staff member on maternity leave.

#### Sustainability & Stock Orchard Street

Wigglesworth is committed to sustainability, and fond of working with natural materials, yet when being taught by eco design pioneers at Cambridge University such as Alex Pike, she admits the concepts “went totally over my head – I wasn’t interested at all. Something about the agenda had completely failed to resonate.”

The Fulbright Fellowship in the US in 1991 changed everything. “It brought the issues home to me, because the States is so wasteful, so energy-hungry – we both decided we should commit to being sustainable architects.”

A key architectural inspiration was Alan Short and his way of “combining an interest in English vernacular arts and crafts, and responding to climate in way that it’s all there for you to see.” She cites examples such as Queen’s Building in Leicester as “an exact expression of that kind of thinking.”

The creation of a co-located sustainable home and workplace in Islington was something of a happy accident; after the site’s auction, Sarah and Jeremy discovered it included an additional strip of land along the railway. Sarah realised they could negate the need to rent an additional workspace, and “explore the relationship of living and working on the same site.”

Of course, with the commute reduced to zero, the premises is already highly sustainable for Wigglesworth herself, but its

construction brings together a range of techniques in an innovative whole. She called a friend’s bluff – after remarking she “might be building out of straw bales next,” the architect did just that.

Insulation is recycled newspaper within the timber frame and one facade reuses railway sleepers found on site. In order to mitigate noise from the railway, the wall facing the railway is made of sandbags, and natural ventilation by stack effect is provided to the house through grilles on the tower that houses a library and work room.

With influences ranging from Le Corbusier to Rem Koolhaas and Walter Segal, the building’s eclectic mix proved too rich for some. Wigglesworth reports that many architects were befuddled by the project on its completion. “We were condemned for having too many ideas, which I thought was extraordinary.” Despite this, the public – and Kevin McCloud (the project was featured on *Grand Designs*) – were, she says, “very responsive”.

#### Commissions

Wigglesworth says architects “have an ethical duty to make the world a more interesting, more pleasant, more stimulating place, and to make it work better for everybody”. The practice has an array of projects demonstrating this in practice, chiefly outside London, with perhaps its most celebrated being the timber-built Mellor Primary School in the Peak District, designed by associate Eleanor Brough.

Sarah “likes working with schools, as they tend to have a clear educational agenda that we can respond to”. Aside from having an “amazing site,” Mellor was also a forest school, with a “limited” budget but “very ambitious” client. There was very close community engagement, including children and parents taking part in construction of the large ‘habitat wall’, populated by materials donated by parents.

Other stand out education projects include Sandal Magna Primary, another timber-built school with ultra-high sustainability credentials, this time in Wakefield. Both projects follow Wigglesworth’s credo of





## Architects have an ethical duty to make the world a more interesting, more pleasant, more stimulating place

Sarah Wigglesworth

“using the building as a teaching tool”. As well as being aesthetically playful, she says they are also “tactile, intellectually interesting, and stimulating for the kids, getting them thinking about and understanding things they may not have realised before”.

A different approach to an education and cultural sector commission, Siobhan Davies Dance Studios in Southwark saw the practice transforming a disused Victorian building with a few spatial alterations that include a sinuous new timber roof inspired by dancers’ movements. The award-winning 2005 result “still gets a lot of positive comments,” says Sarah.

The practice has found it more challenging to work in housing, in one case leading Sarah to put her head over the parapet writing a candid piece titled ‘The Battle for Quality in Design’. However

having recently won a place on the GLA framework, the practice is looking forward to creating more housing in its own city. Responding to the ageing population, she is keen to promulgate ideas on multigenerational housing – developed during the three-year DWELL research project (Designing for Well-being in Environments for Later Life) she led at the University of Sheffield.

To this end, the practice is working on minimising health impacts of the environment at Ebbsfleet Healthy Garden City, but Wigglesworth counsels that the whole environmental system needs to be considered as the end-goal: “there are too many casualties of a siloed approach where it’s assumed that a single building is the answer.”

### Motivations

Sarah Wigglesworth has some forthright views on what can get in the way of quality, but as part of the practice’s rigorous approach, she says that success in architecture is all about teasing out people’s motivations. “A building is fulfilling a deep-rooted desire, and as an architect you have to get under the skin of that, what is this person really trying to achieve?”

“Even a developer is ultimately trying to sell an emotional connection with place, which is what you’re trying to work on when you’re working with people”. She reminds us that a client/architect relationship is also “one of trust, and you construct that by building an emotional relationship with the people you are working with.”

Wigglesworth concludes: “Ultimately architecture is a people business and we don’t talk enough about that, we tend to think of it as a technical thing. Often the worst buildings are divorced from the people that will inhabit them”. ■

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## RUBLYOVO-ARKHANGELSKOYE SMART CITY, RUSSIA ZAHA HADID ARCHITECTS

Zaha Hadid Architects working with TPO Pride Architects (Russia) have been selected as one of the consortiums to build the new Rublyovo-Arkhangelskoye neighbourhood. It will include new homes for 66,500 residents in addition to new schools, medical clinics, transport infrastructure and shopping districts, as well as new civic and cultural institutions. The neighbourhood will also accommodate 800,000 square metres of office space for Moscow's growing financial, consulting, legal and auditing sectors. Christos Passas, project director at Zaha Hadid Architects, explained: "Working with specialist teams in Russia and Europe, we developed a people-centric design for a smart interconnected city that brings people together not only through innovative technology but also through organising the public realm; building a community that integrates the natural aspects of the site with principles of openness and inclusivity in high quality architecture suited for the 21st century."



## KAI TAK, HONG KONG LWK

LWK & Partners (HK) Ltd has won a design competition held by Sun Hung Kai Properties for their new site in the Kai Tak area. LWK will be the design and project architect for the new development. Located in Kai Tak, Southeast Kowloon, the project has a site area of approximately 16,556 m<sup>2</sup>. The current scheme comprises residential towers, a retail podium, and other auxiliary welfare amenities. The retail podium will be connected to the future Kai Tak MTR Station on the Shatin to Central Link and its adjacent sites, providing easy access for residents and visitors alike. Its premium location foretells the project's tremendous potential to become one of the most successful developments in the area.



## MÉTROPOLE CENTER, NANTES THIBAUD BABLED ARCHITECTES

Thibaud Babled Architectes Urbanistes has delivered the headquarters of the Nantes Métropole center. The project's varied programme of architectural and environmental design creates a link between the inner city of Nantes and its periphery. Thibaud Babled Architectes Urbanistes chose to use glass and aluminum to create a cube with high quality, homogeneous facades. The use of glass forms a "hollowed out and luminous" structure whose limits are determined by a ring of prefabricated concrete columns organised around a central atrium covered with a glass roof.





## ALIBABA JIANGSU HEADQUARTERS, NANJING, CHINA BENOY

Benoy are proud to announce they have won the international conceptual design competition to deliver the future Alibaba Jiangsu Headquarters in Nanjing, China. The major industrial project was announced as it broke ground with an official ceremony on 12 October overseen by Alibaba Group. The Alibaba Jiangsu Headquarters is a major mixed-used development with a total investment value of over eight billion yuan. Covering a construction area of 850,000 m<sup>2</sup>, the scheme will accommodate approximately 30,000 people once complete. The first phase of the development is due to complete in 2023. The development is set to become an “interactive gathering destination” for the e-commerce giant and a “showcase of the offline experience Alibaba’s businesses can offer”.



## THE VILLE RESORT-CASINO, NORTH QUEENSLAND WOODS BAGOT

The Ville Resort-Casino Australia, is open for business after a two-year renovation costing \$31m. Woods Bagot was tasked with upgrading a 1980s building in Townsville, a small North Queensland township on the edge of the Great Barrier Reef. The existing hotel was simply built, but had little connection to the surrounding landscape. Woods Bagot’s redesign takes advantage of the scenery, tropical climate, abundant water, and views across the Coral Sea. “Our design was inspired by the natural and historic qualities of Townsville,” says Wade Little, lead designer. “Echoing the architectural vernacular, the resort encourages natural cooling through broad verandas, abundant fanlights, brise-soleil walls and aligned doors and windows.”



## CREMATORIUM SIESEGEM, BELGIUM KAAN ARCHITECTEN

KAAN Architecten has designed the new Crematorium Siesegem on the outskirts of Aalst, Belgium. Located in the countryside bordering the Belgian city, the building, which has a 74 x 74 metre footprint, merges with trees and shrubs that line the perimeter of the surrounding park. Crematorium Siesegem encompasses two ceremonial assembly halls. The largest has generous dimensions, with seating for 600 people. Next to the ceremony spaces, the technical aspects of the building are also a fundamental part of the design. The architects endeavoured to disclose, rather than hide, the cremation process, creating an “unusual yet effective polarity between the mechanics and the serenity”. The architects commented: “The choice of materials and the detailing are paramount to achieving a placid mood.” For the exterior, they chose “the rhythm of béton brut”. The interior walls are matt and have a textured render, while the ceiling has a rough sprayed finish to ensure muted acoustics – “a fundamental feature of such a building”.

# NEW ARRIVALS

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



## DAVID SHAW PICK EVERARD

Independent property, construction and infrastructure consultancy Pick Everard has promoted a raft of employees across its architecture discipline to support the firm's "ambitious expansion plans". David Shaw has been promoted to director, and will be heading up the architecture department. David, who joined Pick Everard as an associate in 2016, said: "I'm really pleased to have had my hard work and dedication recognised, and I'm excited to tackle the challenges which lie ahead. My top priorities going forward are to continue to strengthen and develop the architectural discipline for Pick Everard, while maintaining a high-quality service to ensure sustained client satisfaction."



## SEVEN NEW ASSOCIATES TODD ARCHITECTS

TODD Architects has announced a "posse" of promotions, creating seven new associates with specialisms across a range of sectors, including office, residential, healthcare, education, retail and aviation. Paul Crowe, MD, said: "These well-deserved promotions are part of our continued succession and business development plan, rewarding talent and experience and creating career opportunities to keep those skills within the practice. These promotions will help us deliver our collective aim to empower future leadership by investing in our team. By developing and applying our united skills and efforts, we will continue to nurture our existing client relationships while also reaching out and building new networks."

## UMESH MISTRY STEPHEN GEORGE + PARTNERS

Stephen George + Partners has appointed Umesh Mistry to focus on client relationship and project management, particularly in the sports and leisure sector. Mistry said: "I'm looking forward to bringing my extensive experience in the sports and leisure sector to SGP, to spearhead a new focus and develop new clients in the sector." With over 30 years of experience in the architectural profession, he has developed his expertise at various practices. With a prominent track record in design, development and delivery of a range of projects, both in the UK and overseas, Umesh's primary role is working alongside managing partner James Nicholls.



(L-R) Euan Revell, Hamish Jack

## EUAN REVELL/HAMISH JACK BARTON WILLMORE

UK planning and design consultancy Barton Willmore has announced several promotions for its team operating in Scotland. Euan Revell, who is based at the company's Edinburgh office on George Street, has been promoted from senior architect to associate architect. Revell has worked for the company for two and a half years, and handles a range of commercial projects with a focus on affordable housing in Fife and Edinburgh. Hamish Jack, who joined Barton Willmore in 2016, has been promoted from urban design assistant to urban designer. Barton Willmore recently opened an office located in the centre of Glasgow.



## PHILIP BREESE WESTON WILLIAMSON + PARTNERS

International architects and urban designers Weston Williamson + Partners (WW+P) has appointed existing partner Philip Breese to the role of managing partner. Philip will be responsible for the day to day running of the practice in the UK. Philip joined WW+P in 2005 and has worked across all areas of the practice, being influential in the development of the business over this period. WW+P has also appointed six new partners to build on the firms continued growth in the UK and internationally. Alex Kirkwood, Beatrix Young, Chie Shimizu, Daniel Moor, Simon Catton and Thomas Griffin will bring specific skills to the leadership team.



# CPD FOCUS

The latest CPD courses, seminars and documents for architects

## 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 surfaces films, their applications and raises awareness of some specialist applications.

01670 718222

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

## KEIM MINERAL PAINTS HAS LAUNCHED NEW MODULE



Keim Mineral Paints has launched its newest Continuous Personal Development (CPD) module on *COLOURS FOR EVER*, which aims to provide an understanding of how colours can appear different on various substrates. The 60-minute CPD seminar is visual and hands on by offering opportunities to handle samples and materials. Other CPDs can be found on the website, mentioned below, these include a Generic Mineral Paint Seminar and Brickwork and Concrete Substrate Presentations.

01952 231250

[www.keim.com/en-gb](http://www.keim.com/en-gb)

## LANGLEY STRUCTURES LAUNCHES NEW RIBA APPROVED CPD



Langley Structures Limited has launched a new RIBA approved CPD course on Flat to Pitched (FTP) roof conversion. The session is designed to introduce specifiers to the features of the systems, the benefits, and considerations with regard to the design and installation. The one hour session entitled *Lightweight Structural Frames, Design and Installation Over Existing Flat Roofs* is delivered by a member of Langley Structures' technical team and with the RIBA accreditation qualifying CPD points are doubled.

01327 704778

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

## 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)

## UNCOVER THE UNIQUE VERSATILITY OF WEDI'S PRODUCTS AND SYSTEMS



Book a RIBA approved CPD today to learn about the 30+ years proven, 100 per cent waterproof German engineered CE marked shower system that is mould resistant, low emission, eco-friendly, ISO9001 certified and BBA approved. Learn the full scope of applications wedi is suitable for such as flooring, cladding, shower enclosures, partitioning, sealing and decoupling, construction of unique washstands and shelving. Get to know wedi's wellness and designer elements, the bespoke services wedi has to offer and wellness & spa applications that it is suitable for.

0161 864 2336

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

## NO SMOKE WITHOUT FIRE: UNDERSTANDING FIRE DAMPERS



This CIBSE accredited 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)

## TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



In two RIBA assessed seminars, Comar outlines: *Stand & Deliver: a Study of Curtain Walling* – the design of curtain walling, it's properties and how it is used by specifiers. This seminar aims to offer an understanding of the points of Hill 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)

## NEW CPD: 10 MINUTES OF RESIN BOUND



SureSet UK Ltd offer two types of accredited CPD's, in person at a location of your choice or from the comfort of your own desk via a fully detailed, 10 minute video. The CPD, accredited by CPDUK will explain the differences between resin bound and resin bonded products and their differing characteristics. Permeable build ups including SuDS (sustainable urban drainage system) is mentioned as well as the different SureSet aggregates and SureSet's own naturally sourced two part UV stable polyurethane resin and the applications it's suitable for.

01985 841180

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

# Sika Sarnafil and Partners scoop NFRC Awards

Single ply roofing manufacturer, Sika Sarnafil, and two of its Registered Contractors, have triumphed at the National Federation of Roofing Contractors (NFRC) Scottish Roofing Contractor of the Year Awards. The awards, which recognise outstanding standards of workmanship and technical expertise in the roofing industry, saw Sika Sarnafil win Supply Chain Partner of the Year and Perth-based roofing contractor, Aim Developments, come out top in the Single Ply Roofing category.

The NFRC announced the winners at a ceremony presented by TV broadcaster Jackie Bird, on Friday 26<sup>th</sup> October at The Grand Central Hotel, Glasgow. Judged by an independent expert panel, finalists were chosen for their exceptional work on Scottish roofing projects across 13 categories.

Sika Sarnafil received the award for Supply Chain Partner of the Year alongside one of its Registered Contractors, Q9 Cladding Solutions, SFS Group Fastening Technology



Ltd and Kingspan Insulated Panels UK, for the prestigious Victoria & Albert Museum in Dundee.

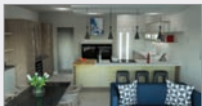
The £80 million project, designed by Kengo Kuma to reconnect the city with its river and house an incredible array of exhibits, is an example of world-class architecture. Contracted by BAM Construction, Sarnafil worked closely with Q9, SFS and Kingspan to ensure the innovative roof design could be

delivered sustainably and to a superior build quality for maximum longevity. The skillful collaboration saw this impressive project completed well in advance of its September opening – all thanks to close project management and expert teamwork from all involved.

Aim Developments, another of Sika Sarnafil's Registered Contractors, won the Single Ply Roofing award for the roof of the An Crùbh (The Hub) community centre situated on the beautifully rugged Isle of Sky. Aim Developments was recognised for its ability to deliver an outstanding finish on schedule when faced with the challenge of an incredibly exposed site. Despite the difficult windy conditions, Sarnafil and Aim Developments' expertise meant the roof was completed to an impeccable standard, creating a new epicentre for the community that would last the test of time.

01707 394444 [www.sarnafil.co.uk](http://www.sarnafil.co.uk)

## BLANCO support young kitchen designer



BLANCO UK has, once again, sponsored an aspiring young kitchen designer, Beth Elson, so that she can progress her career by taking a course with The Kitchen Education Trust (TKET) in Bucks University. Beth

completed her first year of the course in June, having been on three trips where she was able to interact with speakers from the industry and visit various kitchen locations, including the Roundhouse factory, Miele Experience Centre and the Weald and Downland Museum. Beth commented: "The whole experience has been very exciting and I cannot wait to find out what is in store for my second year."

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

## Minimise the impact of Brexit



Offsite Solutions, a leading UK bathroom pod manufacturer, has announced how it can help construction clients and contractors mitigate some of the economic uncertainty around Brexit. Many main contractors and developers are concerned about potential

cost inflation and project overruns as a result of Brexit, particularly on projects spanning the end of the first quarter of 2019. By placing an order for bathroom pods with Offsite Solutions before 31<sup>st</sup> March 2019, the price agreed will be fixed for the duration of the project, regardless of the effects of the UK leaving the EU.

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

## A brand new offering for 2019 from Simpson Strong-Tie



Leading construction connector manufacturer Simpson Strong-Tie has upgraded its CPD accredited seminars with a brand new offering for 2019. The culmination of decades of product development, and shaped by feedback received by their technical support team, builders and building designers alike, the course covers their latest structural connector solutions to meet the changing demands of the building industry. Technical Specification Manager Laurence Parker explains: "Our new CPD highlights our variety of unique and innovative metalwork solutions to common construction and design challenges, not to mention the more unusual and unexpected. We discuss all forms of construction including: timber frame, brick and block, cross laminated timber, glulam, light gauge steel, plus our chemical and mechanical anchors for masonry and concrete. As well as the appropriate CPD certificate, all professionals attending the seminars will be given instant access to our vast library of 3D models, ready to drop into architectural plans." To request a seminar at a time and location to suit you, or to find out more, visit the CPD Training page

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



## New business development director



**BakerHicks**, the multidisciplinary design and engineering company, has appointed John Lawton as Business Development Director to support the continued success and growth of the business across its key sectors. John will specifically support the company's business development and management teams in implementing their respective sales and marketing strategies within the Aviation, Defence, Life Sciences & Manufacturing, Nuclear, Power, Public Sector and Rail industries across the UK and the D-A-CH (Germany, Austria and Switzerland) region.

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

## Opening doors for GEZE UK



**GEZE UK** has strengthened its Automatic Door Systems team with the recent appointment of John Clark, who joins the renowned manufacturer of door and window systems as area sales manager, covering Scotland. John will focus on developing first-class customer relationships, analysing and proposing technical solutions from the company's extensive automatic door range and providing first-level contact for incoming enquiries. In his own words, he hopes to: "strengthen existing relationships and nurture new company friendships to form longstanding reciprocal business opportunities."

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

## Panasonic Hybrid VRF wins HVR Award



**Panasonic** is delighted to be titled the Commercial/Industrial Heating Product of the Year winners at the recent HVR Awards with its Hybrid VRF solution. The 2018 HVR Awards Judging Panel remarked: "The Panasonic Hybrid VRF is a great new solution, bringing together

two established low carbon products with a controls package that increases performance and efficiency over the whole system makes it truly unique. The exclusive capabilities of the Panasonic Hybrid VRF allows it to truly stand out, a deserving winner."

[uk-aircon@eu.panasonic.com](mailto:uk-aircon@eu.panasonic.com)

## New Saniflo Specification Sales Manager



**Saniflo** is pleased to announce the appointment of Fahim Karim as Specification Sales Manager for the South. This new role will focus predominantly on the Kinedo range of cubicles, enclosure and trays. Having graduated from Brunel University in Uxbridge with Masters in Molecular Medicine and Cancer Research, Fahim was subsequently attracted to a career in sales and has since spent over seven years in Specifications. With experience in selling furniture, bespoke flooring and windows for new build and refurbishment projects he has excellent experience in dealing with architects, designers, developers, contractors and house builders.

020 8842 0033 [www.saniflo.co.uk](http://www.saniflo.co.uk)

## Signbox launches new eshop



Offering intelligently designed, off-the-shelf sign and display solutions, from Fire Exit signs, to NFC Smart Stickers to LED-illuminated restroom signs and everything in between, **Signbox's** new

eshop is easy to browse and offers rapid delivery on a huge range of stocked products. Managing Director Mark Bartlett commented: "Our new eshop is SEO friendly, easy to navigate and we're confident that the significant investment we've made in getting it up and running will be well worth it." To view the Signbox eshop and take advantage of opening month special offers, please visit their website.

01784 438688 [www.shop.signbox.co.uk](http://www.shop.signbox.co.uk)

## Impactful signage by Signbox at IAG



**Signbox** has successfully tendered to fulfil a creative brief that would roll-out a high quality rebranded signage scheme across International Airlines Group's workspaces in London Heathrow and hubs in Dublin and Madrid. Its solution was devised to transform tired, lacklustre spaces into calm, professional settings and to restyle exterior areas while rationalising an intelligent new brand. Signbox did just that through exciting external signage, wayfinding, environmental graphics, manifestation, safety signs and finishing touches – all reflecting a seminal brand evolution that would turn heads and fire productivity.

01784 438688 [www.signbox.co.uk](http://www.signbox.co.uk)

## NVHR® Wins at HVR Awards



**Breathing Buildings**, a leading UK provider of controlled hybrid ventilation systems, is celebrating winning 'Commercial/Industrial Ventilation Product of the Year' category at the HVR Awards 2018. The company's new energy efficient NVHR® (Natural Ventilation with Heat Recycling) scooped the award at

a glittering awards ceremony on Thursday 25<sup>th</sup> October at London's Chelsea Harbour Hotel. Breathing Buildings' new NVHR® is the next generation of energy efficient hybrid ventilation, offering almost 50 per cent reduction in energy savings and so operating costs.

01223 450060 [www.breathingbuildings.com](http://www.breathingbuildings.com)

## Vent-Axia welcomes White Paper



A leading British ventilation manufacturer, **Vent-Axia** is delighted to welcome the All Party Parliamentary Group (APPG) for Healthy Homes and Buildings' White Paper Building our Future: Laying the Foundations for Healthy Homes and Buildings, published on 24 October 2018. The White Paper makes clear recommendations to the Government on how it can improve standards in housing to benefit occupants' health and wellbeing. This follows on from the APPG's green paper published last year which set out the political, economic and business case for healthy homes and buildings.

0844 856 0590 [www.vent-axia.com/healthyhomes](http://www.vent-axia.com/healthyhomes)



**BUILDING  
PROJECTS**

**CRANLEIGH PREPARATORY SCHOOL  
SURREY**

# Making the connections

James Parker visited Tate Harmer's new timber building which enables a Surrey school to connect with the landscape, while opening up circulation and giving it a new 'heart'





According to Jerry Tate, Partner at Tate Harmer Architects, the key word that most characterises the approach of Cranleigh School in the leafy Surrey Hills is ‘outdoorsy’. The key success of the new building his practice has created at the school is how it engages as much as possible with the natural environment while providing healthy teaching spaces.

Cranleigh is divided – by a small road – into a Preparatory school for 5-11 year olds, and a boarding co-ed school for 13-18 year olds, and benefits from a beautiful semi-rural site, surrounded by fields and hills. The school’s ethos is fuelled by its

connection with this landscape, including a strong focus on sport. The new arts, science and design & technology (DT) building for the ‘Prep’ school embodies that connection.

Although facing onto a raised cricket pitch along its northern flank, the school’s buildings were previously somewhat disconnected. The provision for art and science was not ideal, with the former located in a mediocre 1970s single-storey building, and the latter dispersed across the site.

With all this in mind, Tate Harmer, who specialise in sustainable timber buildings for education with a pedigree including the

**ABOVE**

The building has a set of five gable ends to both south (pictured) and north elevations

**ABOVE RIGHT**

The cloister colonnade provides a new connection to the existing building, adjacent to the refurbished Parent/Teacher Hub



Education Centre at the Eden Project, won the competition in collaboration with Blue Forest, Design & Build contractors, who originally specialised in treehouses. The design aimed to solve several problems as well as uniting art and science in greatly improved accommodation, it would also resolve other issues on the site such as circulation, as part of a wider masterplan.

**No internal corridors**

At the project's initiation in January 2016, the hope of the school's then headmaster, Michael Wilson, was to avoid internal circulation as part of his drive to create a building which embraced its surroundings.

Jerry Tate tells *ADF* that having been raised in Africa, the headmaster "couldn't stand internal corridors." His upbringing had given him a love of being able to quickly access the outside environment, and his inspiration was African 'Safari Lodges' – straightforward timber buildings often with pitched roofs, terraces, and exposed structural elements.

**Form**

The new arts and science building is located in the middle of the school, forming its new 'heart', as the missing link in the plan. Circulation is entirely external – at ground level there is a path to the north, and a new cloister-style colonnade created to the south

– at first floor, a deep timber terrace overlooks the cricket pitch.

The colonnade connects to existing circulation, enabling pupils to walk to lessons under cover but without disappearing into internal corridors as was the case in the former 'temporary' building on the site. The building also has a full height void giving permeability and access through from north to south.

The new building's 20 metre-deep, 30 metre-long form is in some senses a very simple construction, a two storey, glulam-framed and Siberian larch-clad building which greatly improves the school's built presence in its context. Its volume has been broken down by being folded into five gable ends – seen as more child-friendly by the architects than one monolithic form, as well as being appropriate for the local vernacular.

The roof is formed of exposed glulam trusses "leaning into each other," says project architect Andrew Baker-Falkner – they are diagonally oriented and attached to the beams via grey-coated steel plates, creating large triangles. A sense of lightness is given by the fact that the plates hold the whitewashed trusses a few centimetres clear of the beams.

Jerry Tate comments: "We really wanted a simple building which would work hard for the school, doing lots of different jobs."



It's not a true timber building – the upstairs floor needed to be of concrete due to compliance with BB98 acoustics standards for learning environments. Reverberation times in the capacious 5 metre first floor ceiling have been reduced using acoustic panels around the trusses, and there are suspended baffles downstairs.

The building's key external design statement comes from the way the roof cantilevers over the terrace to provide five triangular overhangs, their trusses pointing outwards towards the cricket pitch. Naturally continuing the rhythm from inside but with soffits of larch, they protect a good part of the terrace – enabling decent numbers to gather for cricket matches and other events. The architects and client hope that thanks to the overhanging roof, future art classes could also potentially take place outside.

All classrooms lead out on to either the front terrace or the external ground floor circulation. During the design process, a flight of stairs was added to the terrace leading down to the toilets in the existing building. This was requested by the headmaster, reportedly telling the architects: "When kids need to go, they really need to go."

While the timber frame had to be covered up to a large extent internally due to acoustics and fire issues, externally the building is pretty much exclusively faced in timber. The Siberian larch's warm orange will silver over time which will help the facades blend harmoniously with the surrounding buildings.

## Classrooms

Eight classrooms are provided in total – three science labs and a design and technology (DT) room have been located on the ground floor due to their more highly serviced nature. On the first floor, a looser-fit set of classrooms is provided – three for art and one for home economics – the latter sitting above DT. The art rooms are separated by partitions which can be removed, creating a huge space for events such as art exhibitions and end of term presentations. Leading onto the terrace, home economics has already been used to provide food for gatherings on the terrace.

The rooms are exceptionally airy and spacious, with a floor to soffit height of 3.2 metres thanks to all surfaces being exposed. With the absence of a corridor, daylight comes in from large windows on both north and south elevations, also providing natural ventilation and excellent



views. Andrew Baker-Falkner comments that in the case of the DT room, the headmaster wanted ample surface space – not only for the various machines used, but also for pupil design work to take place: "the client was as focused on the design as the making." The benches have been created by pupils themselves, as a demonstration of their skills. The science labs are equally impressive, with reconfigurable desk 'islands' for pupils to sit in small groups.

Andrew Baker-Falkner comments: "The spaces cater for new ways of teaching – previously shoehorned into old buildings – they never really had a building that was designed from the outset to do what they wanted to do." He adds: "They wanted to have a very flexible building as they didn't know how they were going to be teaching science in five or 10 years' time."

"The art rooms upstairs also provide a great amount of flexibility due to the removable partitions, and like the science rooms, also have storage areas along the south elevation – one containing a kiln. However it's the combination of natural light from dual aspect floor-to-ceiling windows, and the dynamic forms of the roof trusses that makes these rooms great places for pupils to learn, and also be fully aware of how their building is constructed."





#### WELCOME APPROACH

The refurbished Parent/Teacher Hub to the south will allow parents to meet teachers informally, and punctuates the new approach to the site. All images © Kilian O'Sullivan

#### PROJECT FACTFILE

**Client:** Cranleigh Preparatory School  
**Architect:** Tate Harmer  
**D&B contractor:** Blue Forest  
**QS:** Frank Gainsbury  
**Structural engineer:** Engenuiti  
**M&E engineer:** Skelly & Couch/The Design Collective/REED M&E  
**Landscape architect:** Barton Willmore  
**Gross internal area:** 583 m<sup>2</sup>  
**Planning approval:** June 2016  
**Completion:** Autumn 2018

### Simple sustainability

The building has been designed with a simple, no-frills approach to sustainability, centred around natural materials, natural ventilation and avoiding a reliance on M&E which can cause maintenance issues down the line for education clients. This was also because mechanical ventilation was simply not needed thanks to the corridor-free design (heating is via standard radiators linked to the school's system), and was inappropriate here given the likely pattern of use, confirms Jerry Tate. "There's no point making a super air-tight building with mechanical ventilation, because staff and pupils are going in and out all the time – that's the point of the institution."

The double aspect enables natural cross-ventilation, but despite the simplicity of the approach, the architects still energy modelled the classrooms to ensure ventilation levels were acceptable. The only space that has any form of M&E cooling is home economics, but this will "only be needed on very hot summer days," says Andrew.

Jerry Tate comments, "The headmaster was clear from the start – questioning why have corridors as kids don't melt, they are eventually going to have to live in a world with weather." He adds that the way the building explicitly connects with its environment as far as possible ties into the practice's ethos of giving users of its buildings easy access their surroundings: "There is an inclusivity issue with a lot of the work we do, which is about access."

### Hub & new entrance

The final piece of the masterplan to date was the decision to turn the former art building, a small 1970s-built single-storey anomaly – previously isolated in the middle of the site, into a real asset. This was completely refurbished and reclad in larch, providing a purpose-designed 'Parent/Teacher Hub' which will allow parents to have a far more informal way of meeting teachers. This included generous windows enabling parents to see a large amount of the school itself including the new building. A green roof was the ultimate goal, particularly as the hub's overlooked by the art rooms, but was not possible due to budget constraints.

It will now be the "front door to the school" says Andrew, enhanced by landscaping to come which will provide a much more welcoming approach than the current tarmac. Says Jerry Tate: "The hub idea is currently in vogue among private schools – you can meet the teacher without

having to go back into an office, which is very confrontational. It's a soft 'interstitial' space that's not the school and not outside." He adds: "It was eked out of nothing in terms of the budget."

### Budget

Jerry Tate says that despite this being a prestigious private school, there was a demanding budget to stick to, and some compromises were necessary such as not having a brick base as originally intended. Repeatable elements such as in the roof construction helped keep the costs down, but this does not feel like a 'value engineered' project.

Tate says that the project being design and build helped the project stick to budget, but didn't mean compromises – "the advantage of D&B was that what we said we were going to do, we did." There was a further benefit in that Tate Harmer has often worked with contractor Blue Forest. Says Tate: "They're quite a sensitive design and build contractor, with a lot of timber-framed sustainable buildings in sensitive landscapes. We have a natural affinity with them".

Tate reports that the school's bursar "is thrilled because the project stuck to time and cost," crucially, it needed to finish before the start of the academic year. But moreover, he says, "it represents a sustainable future for them, that's really important."

### Conclusion

Through thinking around the brief, Tate Harmer has produced a 'Swiss Army Knife', solving a range of problems for the client, says Jerry Tate: "We were really keen to show how we could exceed the brief, just through design, not spending more money; the building does all these extra things".

Tate admits it somewhat refutes the idea of "tight, sculptural forms" that architects love, with its set of overhanging gables, although he's right that these have their own somewhat sculptural presence in the landscape. It will be interesting to see how Allies and Morrison's new building over the road at the main school compares, once it's finished.

Crucially, as well as providing an outdoor function space alongside fantastic education spaces that will inspire young pupils, this project also managed to unpick this school client's circulation problems, and create a future entrance sequence. And, as Jerry Tate stresses, it demonstrates how education buildings can be not only practical solutions for the client, but also open up to their surroundings in a brilliantly simple way. ■



# Funding Options for Flat Roof Solar PV

A school's flat roof offers the ideal space for a PV array as the unobstructed area enables maximum exposure to sunlight, optimising energy generation. Solar panels on a flat roof are out of sight, simple to install and maintain and thoroughly cost effective particularly as there are various funding and investment streams available for solar PV projects. This means your school can benefit from the advantages of a PV array, with no capital outlay.

Photovoltaic panels provide educational buildings with renewable energy, financial savings and practical learning opportunities to support the curriculum as well as generating a potential income and reducing carbon footprint. There are three main schemes that can be accessed to fund solar projects.

## Power Purchase Agreements (PPA's)

Private funders offering a PPA solution enable property owners to take advantage of a fully installed PV system for zero capital outlay. The school enters into a long-term



contract to purchase the electricity generated by the solar array from the private funder at a rate that is lower than their current purchase price and guaranteed for 20 years. As the array is owned and maintained by the funder there is no maintenance requirement for the building owner.

## Community Funded PPA's

Similar to a PPA, but capital is raised to provide funds for the installation of the solar array through a community share offer. The school benefits from reduced energy costs, but the PV array is owned by the cooperative

or community benefit society from whom the building owner purchases the electricity.

## Salix Finance

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## An oasis for NI Civil Service Department



The signature headquarters in Ballykelly brings together a suite of architectural aluminium systems' company Metal Technology. The impressive project circa 5175m<sup>2</sup> comprises of 470 workstations,

and a ministerial suite. Metal Technology's System 17 curtain walling featured on all facades in combination with System 5-35Hi+ tilt-and-turn and 4-35Hi+ casement windows, the south, east and west elevations also utilised two variants of System 22 Brise Soliel providing solar control. The 300mm continuous blade to the atrium area was designed specifically to meet the design requirements for this project.

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

## Shade sails installed at Woburn Forest



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

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

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

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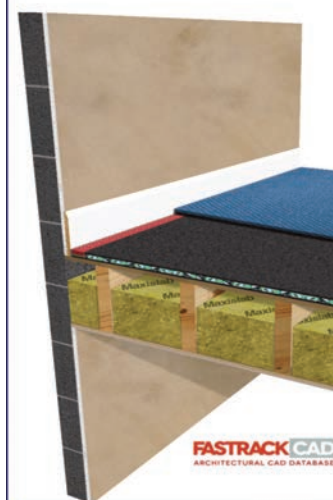
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# Schöck's steel frame challenge at university

**R**ecent significant investment in Oxford Brookes University has already resulted in multi award-winning facilities and this development is continuing with a ten-year, £220 million estate investment plan. One recently completed facility has seen the former Main Hall demolished and replaced with the Sir Kenneth Wheare Hall, an elegant building, designed by BGS Architects. It is a tribute to one of the most influential figures in the University's history; and creates a multi-use space for teaching and other key university events, including graduation ceremonies, where it can accommodate over 600 guests.

## Steel frame and cladding mean high thermal conductivity

Steel has a high thermal conductivity compared with many other construction materials and this means that both the structural steel frame and steel cladding system must be designed to minimise any unwanted heat flows. Steel elements must not be continuous through the cladding



system. With the Sir Kenneth Wheare Hall, support for the external cladding was provided by cantilever connections to the universal columns and it was critical to provide a structural thermal break at strategic connectivity points. The Schöck Isokorb for steel-to-steel connectivity was the ideal solution. By thermally separating the exterior steel structure from the interior steel structure, these modular thermal insulation elements with their stainless steel components and Neopor® insulation, reliably mitigate the risk of condensation, mould formation and corrosion. The units are also able to withstand extremely demanding loads and are effective against both bending moment and shear force.

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## JDP delivers savings on drainage



The combination of JDP's product innovation and local stock availability has resulted in a 20 per cent cost saving for one of the biggest school construction projects in Scotland. The new Inverurie Community Campus, due to open in 2020, will provide space for 1,600 pupils. To kick-start the project, JDP was able to provide David Smith Contractors – one of the project's contractors – with a complete range of underground drainage systems. Having the opportunity to supply the entire site meant further cost savings could be made, and JDP also helped to overcome on-site challenges at the same time.

0800 195 1212 [www.jdpipes.co.uk](http://www.jdpipes.co.uk)

## Cembrit gets a first at university



Cembrit is delighted that its Moorland fibre cement slates have been specified and installed at the new campus development at the University of Northampton. Situated on the River Nene the new Waterside Campus features a mixture of academic buildings and student accommodation. Specified by

Stride Treglown and installed by Russell Roofing, the Moorland slates dressed edge provides an aesthetically pleasing natural looking roof covering, for the new prestigious student accommodation blocks at the university, at a lower installed cost than natural slate.

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

## Kingspan installed on pioneering building



The University of Nottingham is developing the manufacturing solutions of tomorrow at its new, RIBA award winning research facility featuring pipe and duct insulation from Kingspan Industrial Insulation. To optimise the performance of building services, over 7,000 metres of Kingspan Kooltherm

FM Pipe Insulation was installed on pipework across the building. The product has an aged thermal conductivity as low as 0.025 W/m-K (at 10°C mean), making it the most thermally efficient pipe insulation in common use within the UK construction industry today.

01544 388 601 [www.kingspaninsulation.co.uk](http://www.kingspaninsulation.co.uk)

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# Unique Window Systems secure two major contracts at the University of Leicester

Leicester-based fabricator Unique Window Systems have secured two major contracts to design, supply and install fenestration building products for significant redevelopments at the University of Leicester.

The Brookfield Campus and the Percy Gee Building will both undergo a dramatic transformation as part of the University's new estate master plan that will deliver a 21st century urban campus as the centrepiece of Leicester's Educational Quarter. Unique will design, supply and install windows, doors and curtain walling across the two projects, teaming up with trusted system suppliers Senior Architectural Systems for both contracts.

The Brookfield Campus redevelopment will include a full suite of aluminium fenestration products from UWS, including windows, doors and curtain walling. Currently split across a series of buildings, the new proposals will enable their School of Business to be based on one site; creating an outstanding environment for students, staff and visitors. The university says up to 750 students will use the new business school, as well as 210 members of staff.

The proposals will bring the Brookfield campus back to former glory through its approved extension and refurbishment, consisting of the renovation of the whole site and bringing Brookfield House back into use. The works also include the replacement of the extension to Brookfield House and upgrading existing office space and facilities.

Work is already underway at the Percy Gee Building, with the redevelopment centring on extending and enhancing the East Wing of the building – a contract worth over one million pounds to Unique Window Systems. Between 2008 and 2011, the building underwent an award-winning redevelopment and now Unique will play a significant role in its second stage of refurbishment.

Unique will design, supply and install curtain walling and commercial doors for the redevelopment from Senior Architectural Systems, as well as Boon Edam revolving doors. The new façade and entrance to the East Wing of the building is set to dramatically improve accessibility to visitors of the Percy Gee Building. Unique will be supplying SSG for the project, providing



The Brookfield Campus



The Percy Gee Building

enhanced thermal and acoustic performance, combined with the project design including curved glazing and eye-catching perforated panels to create a stunning aesthetic to the refurbishment.

The redevelopment scheme will also improve the connection to Fielding Johnson Square; a public realm space for staff,

students and visitors at the heart of the University of Leicester campus. The development will also see the amount of social learning space doubled for students and the addition of a brand-new spacious food court.

0116 236 4656 [www.uws.co.uk](http://www.uws.co.uk)



# Luceco lights new education facilities in Dubai

Amity Group have chosen Luceco to provide an energy efficient LED lighting solution for a new educational establishment in Al Quasis, Dubai. Luceco delivered a complete lighting solution for both the interior and exterior of the school's facilities. Amity School Dubai is designed to meet the highest standard of education, offering learning that is interdisciplinary, engaging, and challenging.

With an ideal location, situated in the Al Qusais School Zone, the facility covers a 14-acre area featuring light filled, modern buildings and state-of-the-art facilities. Dedicated spaces within the education facility are used for learning enrichment programs such as ICT, Art, and Music. The Library provides a range of learning opportunities where students can have access to various resources, as well as information technology.

LuxPanel luminaires and Platinum Downlights were installed in classrooms and assembly rooms and IP65 rated LuxPanels were used in laboratories. Supplied with remote 'plug and play' drivers, available in standard fixed output, dimmable and



emergency options, high efficiency LuxPanels boasts a market leading efficacy of 152 Lm/cW and are quick and easy to install with no maintenance requirements.

Externally, recreation areas, the swimming pool and sports courts were lit with commercial floodlights and Atlas bulkheads, bollard fittings and buried up lighters, provided the amenity lighting around building.

Atlas provides an alternative to traditional 28 and 38-watt 2D compact fluorescent fittings. Atlas luminaires can be installed with an integral microwave sensor to further reduce energy consumption. With the corridor function selected, the sensor adjusts the light level to 10 per cent of the normal level when the outdoor space is unoccupied.

Finally, commercial grade floodlights from Luceco were used at Amity School Dubai. Die-cast aluminium housing, asymmetric polycarbonate lenses with toughened glass and pre-wired with H05RN-F rubber cable all contribute to the benefits of this exterior luminaire. Available in 50-220W, 5200 to 23,000 Lumens achieving 105Llm/W, these commercial grade floodlights provide illumination for many external applications, commonly replacing HID fittings.

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

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# Hauraton channels installed at Oldham Academy North

The new Oldham Academy North, designed by architectural practice Aedas Architects, is a spacious and colourful three storey building set in sensitively landscaped grounds. With the site being quite flat, and the building surrounded by paved and asphalted surfaces, it was essential rainwater is drained effectively.

A Hauraton RECYFIX® PRO 100 channel system, fitted with FIBRETEC® C250, 9mm slot gratings, was used by groundwork sub-contractor Westoak Construction to drain the paved playgrounds and asphalted car parks. The channels were also installed along parts the building's facade and across entrance doors to facilitate drainage.

The FIBRETEC® C250 HEELSAFE slot grating was specifically designed by Hauraton R & D engineers to enhance the flow of water into the channel. The slots are super smooth, elliptical openings with the moulded bars having slightly raised triangular bosses along their outside edges. As well as providing an



elegant appearance, the feature ensures surface water is directed into the slots. This configuration also helps eliminate any cross-flow over the grating.

The RECYFIX® channel component is made from 100 per cent recycled PE-PP. The six sizes offered are 160mm wide and range in height from 75mm to 201mm with the FIBRETEC® grating factory fitted on all models. As the largest unit is only 4.6kg, RECYFIX PRO channelling is easily handle and quickly installed on site.

Ian Burton, Hauraton's Project Engineer comments; "Light and dark grey granite paving blocks were used extensively to achieve a pleasing aesthetic appearance to the hard landscaping immediately surrounding the Academy buildings. Being particularly suitable for school yards and play grounds, our RECYFIX® PRO channels' with their black FIBRETEC® gratings' were chosen for this project as the grating's smooth appearance blended in well with the desired design effect."

01582 501380  
www.drainage-projects.co.uk

## Howe Green creates "specials" for centre of collaboration and creativity



Credit – James Billingham  
Tata Motors European Technical Centre

Howe Green has supplied products to the £150 million National Automotive Innovation Centre (NAIC) being built on the University of Warwick campus. The distinctive 33,000m<sup>2</sup> building, with state of the art equipment and world class facilities, will provide a centre for research, innovation and technology development in the UK automotive sector. Howe Green supplied around 400 floor access covers for use throughout the centre to provide safe and easy access to building services concealed under the raised flooring. The Howe Green bespoke 7500 Series Medium Duty Stainless Steel covers were specified by award-winning architects Cullinan Studio. The specification required that the covers were manufactured with a reduced depth, instead of the standard overall frame depth of 75mm. The reduction in depth enabled the access covers to be infilled with the same flooring used elsewhere in the raised floor system – calcium sulphate floor panels, with the stone pre-bonded. The floor access covers were installed by Lindner, a market leader in raised flooring systems. Calcium sulphate floor panels are ideal for sustainability as they are manufactured almost exclusively from recycled materials.

01920 463 230 www.bilcok.co.uk

## Rockfon answer acoustic challenges with intelligent solutions

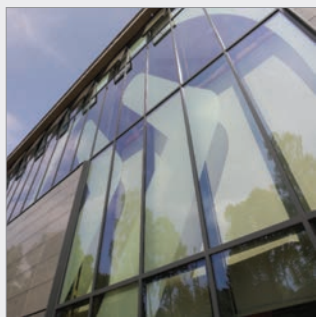


The new Caldicot School building in Monmouthshire offer the innovative and flexible learning facilities demanded by a contemporary secondary school. There are spacious classrooms, a multi-use hall, theatre-style learning areas and studio spaces for students to study informally. The building is designed to be energy efficient and natural light has been optimised throughout. Monmouth Comprehensive costing £47M is a brand-new school equipped with state of the art facilities. Rockfon acoustic products play a pivotal role in both schools by creating stimulating learning environments that are at the heart of the architect's vision. BDP Lead Architect on Caldicot School and Monmouth Comprehensive Tim Humphries chose to work with Rockfon on both projects: "We've worked with Rockfon before on several projects and can specify their products with confidence. They're aesthetically appropriate and there is an assurance of performance too, which is very important to us." Rockfon Eclipse® islands and Rockfon Contour® baffles let the air flow freely around the school and control the level of reverberation to help improve speech intelligibility.

info@rockfon.co.uk www.rockfon.co.uk



## Senior's Fenestration systems welcome students into Stirling



International students at the University of Stirling are enjoying world-class facilities thanks to the creation of the new landmark INTO Centre which benefits from a stylish and sustainable fenestration package from **Senior Architectural Systems**. The new three-storey building has been designed by architects Page & Park and provides dedicated teaching and learning space to support students from overseas on their learning journey in the UK. To create a light and inspirational environment that maximises the use of daylighting, Senior's thermally-efficient SF52 aluminium curtain walling and low U-value PURE® aluminium windows have been fabricated and installed by specialist Linn-Tech for main contractor Morrison Construction. The slim sightlines offered by Senior's high performance aluminium glazing solutions perfectly complement the dark grey granite cladding of building, with the SF52 curtain wall system providing a welcoming and highly-visible facade. Senior's PURE® aluminium windows have been specified throughout and the large window openings not only create visual interest externally but also help to flood the interior spaces with natural light.

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

## Convenient automatic access for convenience store



Working with Smart Aluminium Ltd, **TORMAX** has installed an automatic sliding door system to a new Co-op store in Dudley. The new Co-op is the result of a £500,000 investment, with main contractor for the project being Thomas Roy Ltd, working with national architects, Corstorphine + Wright. The development brings much needed local shopping convenience to the community. TORMAX UK Ltd is a whole owned subsidiary of the Swiss firm, Landert Group AG, which has specialised in the design and manufacture of cutting-edge door automation solutions for over 90yrs. The in-house designed Windrive 2201 has proven its reliability and performance in busy locations worldwide. A cost-effective solution, the Windrive 2201 operator is not only easy to install but also quick to programme for everyday use. Measuring just 142mm x 100mm the drive is surprisingly slim, often allowing automatic sliding door access in tight locations. However, it is still a powerful operator capable of powering either a single-leaf door of up to 120kg or a double set of doors weighing 100kg per leaf and providing an impressive pass-through space of up to 2000mm.

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# A custom-built experience

An award-winning, multi-million pound new car retail showroom and service centre south of Dublin offers customers a different kind of environment. Phillip Mac Dermott of EMD Architects explains to Jack Wooler how the practice focused on user experience, as well as sustainability, to produce Ireland's biggest, greenest dealership



Audi's largest retail and after-sales service centre in Ireland has been constructed, in Sandymount, south of Dublin. Winning the 2018 Irish Construction Industry 'Retail Project of the Year,' the project's designers have utilised glass and a chromatic colour scheme to create a striking building with dynamic geometry.

The new state-of-the-art facility has been custom built as a multi-storey terminal, replacing the former facility on the 20,000 m<sup>2</sup> site on Bracken Road.

A €20m project for Audi Centre, Ireland's leading Audi dealer, the project was designed by EMD Architects, a long established, Dublin practice. A close knit group of six, all the practice's projects so far have been in Ireland. Appointed as Master Architects for Audi Ireland, they have designed recent Terminal projects (Terminal is the car maker's international facility design concept) for Audi Athlone, Cork, Galway, Naas and Wexford.

The client for the Sandymount site was Charles Hurst Dublin, a subsidiary of Lookers PLC, a group which sells vehicles through the UK and Ireland. EMD worked closely with Audi Centre Staff and the Lookers Property Team on all aspects of site selection, concept, building design and local authority consent, as well as the delivery of the project.

Collen Construction, established in 1810, undertook the build as the main contractor. According to Mac Dermott of EMD architects, "they are one of Ireland's leading building contractors," with offices in Dublin, Cork, Germany and Sweden. The company has worked closely with the team at Lookers to deliver the project in 11 months.

### The brief

EMD is no stranger to this kind of project, specialising in the delivery of automotive solutions, and having previously worked with Audi, Fiat, Ford, Mazda, Mercedes-Benz, Nissan, Peugeot, Renault, SEAT, Skoda, Toyota and Volkswagen.

In 2009, Charles Hurst Dublin was appointed by Audi Ireland as its long-term franchise dealership partner in south Dublin, following a review of the retailer network nationally. As a result, operations commenced from temporary premises in Ballsbridge, Dublin.

The new scheme proposed the demolition of an existing commercial building and the construction of the new facility. The building itself comprises both a two-storey motor showroom, as well as a three-storey



building to facilitate other elements such as parking, service and storage.

Phillip Mac Dermott explains further: "To continue to operate in the longer term, a new facility was required to meet the brand requirements of Audi Ireland and Audi AG in Germany.

"The long-term requirements were developed as a result of a study by Audi AG, setting standards for brand exclusive facilities, as well as sales and services."

The intention of Audi Ireland was for a single operator to represent the brand in both north and south Dublin, with the latter being located on the site in Sandymount. The south Dublin location had to be of sufficient capacity to display 22 new passenger cars internally, along with 18 service work-bays, and ancillary areas for customer parking, used car display, car storage and valet areas.

Audi is a premium brand, and so the building needed to reflect this. The facility had to be relevant to its audience, and a

### FOLLOWING THE CONCEPT

EMD Architects have designed Audi Terminal projects in Ireland at Athlone, Cork, Galway, Naas and Wexford



**EMD architects have succeeded instead in making the building comfortable and welcoming, so on each visit, the customer can feel much more at home**

luxury brand required a luxury home. EMD have achieved this through meticulous attention to detail in the design, including a porous, detailed facade. In order to encourage customers to completely engage with the Audi experience however, EMD have designed a facility that impresses not just aesthetically, but in its function and sense of being.

### **Designed to belong**

Dún Laoghaire-Rathdown County Council issued a Notification of Grant of Permission for the scheme on 16 November 2016. Now finished, after opening its doors in November last year, the building takes form as a 'vertical structure', with a dynamic, curved geometry, incorporating a significant portion of glazed elements which allow for strong daylighting.

The site comprises 0.52 hectares, located off Junction 14 of the M50. The surrounding buildings are of varying uses, including hotel, medical, commercial and office, with established heights from two to six stories, allowing the new building to blend seamlessly into the area. Within the Sandyford Business District, the area is equipped with 'leading edge' infrastructure and facilities, being 10 km south of Dublin, which in part inspired the choice of site.

Philip Mac Dermott explains how the

site affects the project: "The building's location and orientation is very much dictated by the proposed Dublin Eastern Bypass and Bracken Road extension, however the building was designed to maximise the relationship to the Drummartin Link Road and the proposed Bracken Road extension, while addressing the existing Bracken Road."

A concept used worldwide, the showroom element is based on the Audi Terminal design. It is a three storey element 16.5 metres high, clad in semi-transparent anodised aluminium cladding in front of pre-finished wall cladding. The glazed elements are formed in curtain walling, full height to showroom spaces, either 4.5 metres or 6 metres in height.

"The secondary glazing elements and doors are overlaid in the anodised aluminium cladding, thereby maximising the visual impact of the curtain walling to display spaces," adds the architect.

### **A building of three functions**

There are many important factors that separate car dealerships from other retail projects. Beyond simply focusing on aesthetics, an effective motor sales facility must help dealers to put infrequent visitors at ease. The customer, whether existing or prospective, must feel comfortable and





made to feel they are part of the brand. The new building's cafe, shop and lounge allow for such comfort, and help customers to relax, which, in theory, generates sales.

The project consists of three functional elements: new car display, used car display, and a workshop. These functions are set out in two blocks, their different natures signalled visually through the use of varying building heights and the materials used. Overall the building covers 7,000 m<sup>2</sup>, along with roof top parking space of 1,400 m<sup>2</sup>.

Internally, at ground floor level, the showroom block consists of a reception, as well as the cafe, shop, lounge, and a service reception, all of which combine to create the comforting experience which sums up the client's customer service goals. There is a direct link to the customer elements of after-sales and service at this level with the back of house service functions.

The first floor level of the showroom block is accessible to customers via escalators, and contains the main body of new car display, Audi Sport, sales areas, and the customer lounge areas. There is a direct link on this floor to the used car presentation areas.

The third floor of this block is set back to form a mezzanine overlooking the double height showroom, which, according to Mac Dermott, "offers views to the Dublin

Mountains and across Dublin Bay."

The workshop/used car block is housed in a rectangular block, interlinked with the showroom block. Mac Dermott explains further how this works in practice: "Along the west elevation, the service workshop element is conceived as the base to the oversailing element of used car floors." These are clad in flat architectural wall panels, with horizontal aluminium louvers to the vehicle display area.

The east side of this block is dominated by vehicular ramps, overlaid in vertically jointed cladding panels. This cladding conceals the ramps, which are set at varying gradients, and hides their structure. On the ground level of this section is an 18-bay service workshop, with ancillary parts storage and offices. There is direct access at this level to the ground floor showroom building.

Above this level are two floors for Audi Approved Plus used car presentation, and above that, rooftop parking.

### Sustainability

The new Audi Centre showroom is reportedly Ireland's greenest, with several low-energy solutions included its envelope, as well as a wide range of enhanced service systems aimed at reducing energy consumption.





#### POROUS

The building has a porous, detailed facade, as well as glazing that reduces solar gain  
All images © Donal Murphy Photography



#### PROJECT SUPPLIERS

**Cladding:** Kingspan  
**Aluminium honeycomb facade:** AWF Vertriebs GMBH  
**Curtain walling:** Schueco UK, Mealey Architectural Facades  
**Specialised doors:** Butzbach  
**Metal ceilings:** Durlum  
**Floor tiles:** Mazzari  
**Specialist lighting:** Siteco  
**Furniture:** Isaria  
**Workshop equipment:** Maha  
**Escalator & lift:** Kone

The showroom also hosts a fast-charging vehicle facility for both dual fuel and electric models. “The site is future proofed for the roll out of fully electric E-Tron cars,” says Mac Dermott, “with a dedicated electrical sub-station plus AC and DC charging stations in place.”

A sustainable urban drainage system for managing storm-water has been implemented across the project, with elements such as a green roof, rainwater harvesting, permeable paving and bio-retention pond implements.

As for the project’s exterior, Mac Dermott tells *ADF*: “The building envelope was designed to take maximum account of solar aspects to achieve low energy requirements for summer cooling.”

He continues: “The enhanced glazing solution actively reduces solar gain, while maximising light transmission and reducing solar glare.” This system further benefits the internal environment and the building energy consumption by reducing heat loss with enhanced u-value.

#### Award winning

According to project architect Mac Dermott, the building was “very well received” by the client and customers, with the project winning the 2018 Irish Construction Industry ‘Retail Project of the Year.’

The judges were reportedly impressed with the approach taken towards the initial planning stages, as well as the

building’s environmental credentials, and the fact that the facility produces a retail experience closer to that of a high street shop, as opposed to the ‘out of town business park’ ambience common among car dealerships.

Donal Duggan, general manager at the Audi Centre, has commented on the award, including on the reasons why he believes it was made: “When we started the planning phase of this magnificent building, our aim was to make it a modern retail space that customers could feel comfortable in, so to have won this award in a category that included names that you would traditionally find on the high street is a real achievement for us.

“With features such as our own electricity supply providing power to our EV charging stations, we have future proofed the site for years to come. We are really proud to receive this award, which is a real testament to the hard work of everyone involved.”

For the large majority of its customers, a visit to the car dealership is a once-in-a-few-years event, whether to purchase their car, or to possibly have a costly repair. Because of this, it inherently constitutes an unfamiliar, somewhat daunting place. While some similar projects perhaps don’t do a lot to alleviate this, EMD architects have succeeded instead in making the building comfortable and welcoming, so that on each visit, the customer can feel much more at home. ■



# PRODUCTS OF THE YEAR SUPPLEMENT

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Image courtesy of Danfloor  
For more information please see page 50

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Specialist door manufacturer, **Ahmarra** has launched a new collection of doors designed specifically for the luxury hotel sector. All doors are made individually to order, allowing complete design freedom and ensuring that every project is truly unique. Ahmarra's high performance timber doorsets and glazed screens are particularly suited to areas of high footfall such as hotels, that often have specific fire, acoustic and safety requirements.



The new Cripps Health Centre is the largest single practice health centre in the country. **Fordingbridge** were approached by the principle contractor to design and install a 26m long by 3.2m span mono pitch timber walkway to link two buildings through a landscaped courtyard. The walkway will provide rain and UV protection for staff and patients traversing through the courtyard. Fordingbridge delivered on time and to budget.



The installation of what will be the world's most modern I-Joist manufacturing facility when commissioned later in 2019 at **James Jones & Sons Ltd's** Forres site is now well underway. The new line will see James Jones more than double the production capacity of its market-leading JJI-Joist to 20 Million linear metres a year. The new I-Joist line will also have the ability to manufacture JJI-Joists up to 13.5 metres in length.



**Premier Loft Ladders'** growing range of fire rated loft ladders offer the benefits of increased warmth retention and safe access, whilst offering up to 120 minutes of fire protection. High strength and durable components also make access to loft space, plant rooms or a flat roof terrace safe and easy.

Furthermore, Premier Loft Ladders even offer a fire rated loft ladder certified for use in passive buildings.

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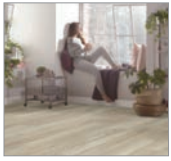
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## Polyflor launches Colonia Collection



Building on the continued success of its Luxury Vinyl Tile offering, Polyflor is delighted to reveal an exciting new Colonia range. The collection features all 18 original shades with the introduction of eight brand new on trend designs. Each shade is developed to complement a variety of residential interiors and reflect the current interior design trends, identified by its in-house design teams. Colonia has been constructed to withstand the demands of busy lifestyles and engineered specifically for the residential sector including private housing, social housing, housebuilders and housing association.

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

## Increased demand prompts deal for SDS



Growing Local Authority planning requirements for water quality treatment in compliant Sustainable Drainage Systems (SuDS) have prompted supplier SDS Limited to establish a UK manufacturing base to service its growing order book. Increasing sales of SDS's high-performance water quality treatment devices, used to remove polluting silts and sediments from surface water, have led to a new partnership with Asset International. SDS's Aqua-Swirl™ and Aqua-Filter™ stormwater treatment products will be made using Weholite HDPE components at Asset's state-of-the-art Newport fabrication plant.

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

## Burnham Environmental Services Ltd



The Biodigester 'T' range from Burnham Environmental Services caters for 6-42 people and larger Biodigesters are available for up to 2,000 people. All Biodigesters are suitable for variable loading. The 'T' range Biodigester has been tested to EN12566 Pt 3 and has a

CE Mark. Owners are impressed by the limited maintenance required, infrequent emptying intervals and the 'Odour Free' totally aerobic process. The Biodigester range is backed over 45 years experience.

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

## Danfloor's new CPD seminar



Specifying materials for a therapeutic environment, such as a care home or mental health facility, requires great consideration. Appreciating the vulnerability of the occupants and their health needs means that finishing products can have an impact on their day to day living. Danfloor UK's RIBA accredited CPD seminar explains how

carpet can help to create a therapeutic environment within care and mental health settings. Call 0333 014 3132 to book your session.

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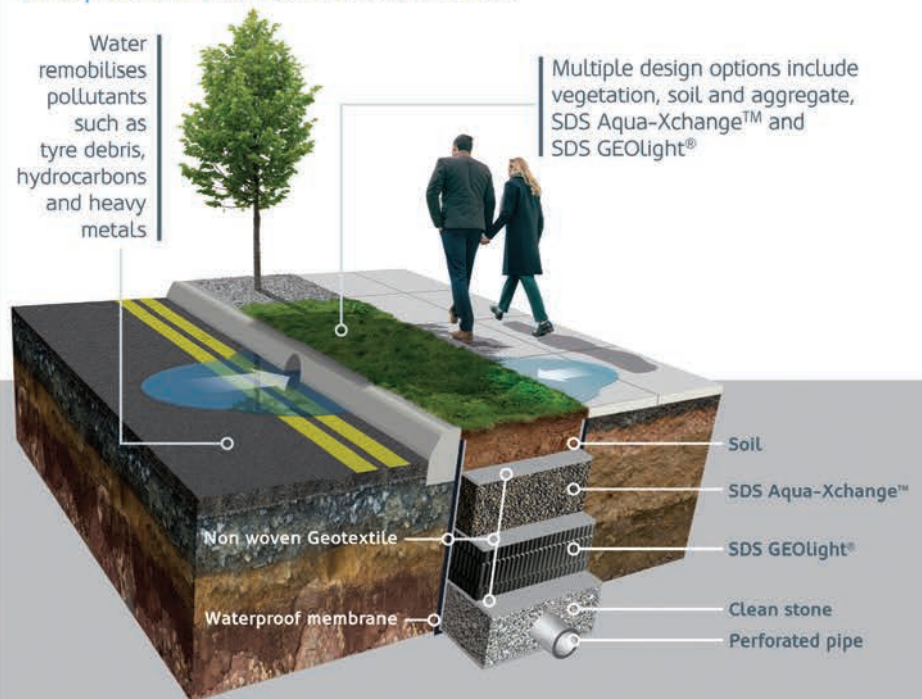
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## DrainMinor 30 is the solution



In recently fitted out cosmetic concessions areas within leading chain stores, the installer, Face Edge Ltd., found that gravity discharge for the sinks was not an option, so a different solution was required. The Pump Technology Ltd DrainMinor 30 is a well proven unit, which comprises of a compact GRP tank.

This houses a reliable, float arm activated submersible Jung Pumpen pump which starts pumping as soon as the water draining into the tank reaches the pre-set level. The pump is fitted with a unique low-level float, reducing to the minimum any static water within the tank.

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

## New Packaged Sewage Macerator



JTPumps has released a new Packaged Sewage Macerator pumping stations for the domestic and commercial markets to complement other packaged pumping station. If you don't have gravity flow you will need a pumping station; they can come in all sorts of sizes from very small for an out building/garden room to very large houses and office's. If you are not

sure of the size, that's not a problem. Just call up JTPumps and the company will be happy to help you get the right station for the job.

0161 871 7498 [www.jtpumps.co.uk](http://www.jtpumps.co.uk)



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## Over 290,000 roof slates for new town



Inspired by the aesthetics of the historic towns of northeast Scotland and the performance of traditional Scottish slate roofing, CUPA PIZARRAS' Heavy three slate has been specified and installed by three housebuilders for the roofing at Chapelton – a new £1 billion town being built from scratch near Aberdeen. The houses are built with timber kit and blockwork construction, featuring a light, off-white render finish and timber windows; all have CUPA PIZARRAS' Heavy three slate installed to the roof.

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

## Roofshield to the rescue of village hall



When the residents of Ecclesmachan in West Lothian had all but lost hope of restoring the roof of the historic local village hall due to a lack of funding, a solution was found in the form of Roofshield. The A. Proctor Group's "Roofshield to the Rescue" promotion offered community halls and centres up and down the country the chance of up to £10,000 of support towards the restoration of a community roofing project. Roofshield has long been recognised as one of the highest performing roofing membrane solutions, providing a pitched roof underlay, which is both air and vapour permeable.

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

## Firestone adds a fourth in Cardiff



A fourth building has been completed using Firestone Building Products' RubberGard™ EPDM waterproofing system for flat roofs at the prestigious Capital Quarter development, in the heart of Cardiff's Commercial Enterprise Zone. The RubberGard™ EPDM roofing system has

become part of a proven formula for success for developer, JR Smart, with four office buildings using the system as part of a warm roof build up. A further two office buildings are planned for the scheme and these are also anticipated to follow the same, proven specification.

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

## Sweep your problems under the mat



BAL's new Flexbone 2Easy unbonded uncoupling mat is a unique system in the UK where NO adhesive is needed underneath the mat. Preparation of the substrate is reduced to a quick sweep of the floor. No removal or residue, no removal of laitance and no priming of the surface is needed. This means that contaminated and stained floors, wooden floors, cracked screeds and mixed substrates can be tiled immediately. It can also be used direct onto difficult substrates such as bitumen, fresh sand:cement screeds or new anhydrite screeds that are not fully cured – avoiding lengthy waiting times on new screeds.

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

## Glendyne restores historic chapel



Cembrit Glendyne natural slates have been specified and installed on a unique renovation project for the Historic Hampshire landmark, Netley Chapel, which saw the local community contributing financially to the restoration project. Before slating began, the public were invited to site to mark the occasion and "sponsor a slate". For a small donation, visitors wrote a message and signed the reverse of a roof slate. More than 900 Glendyne slates were decorated, raising £6,600 for the friends of the Royal Victoria Country Park. These slates were then installed on the roof of the chapel.

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

## Marmox soundboard supplied



A development of 55 luxury apartments is making full use of the acoustic and other performance benefits offered by Marmox SoundBoard in completing the floor construction. Canbury Construction has been kept supplied with thousands of square metres of both board types through one of Marmox's many stockists in the south-east. Marmox SoundBoard, like its sister product, Multiboard, features a totally waterproof core of extruded polystyrene (XPS) sandwiched between layers of glass-fibre reinforced polymer concrete, offering both thermal insulation with a conductivity of 0.035 W/mK and high compressive strength.

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

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# Design Flexibility & Performance from Scotframe



Val-U-Therm PLUS® wall panels achieve  $0.08 \text{ W/m}^2\text{K}$  – probably the best U-value wall in the world. Couple this with Scotframe's expertise & track record and the sky really is the limit when it comes to design of buildings that tick all the boxes on your clients' wish lists.

Key to achieving this extraordinary performance is that the insulation is injected in off-site, quality-controlled factory conditions. The foam expands into every nook and cranny, providing a best-in-class BR443 U-value correction factor of zero. As well as excellent thermal insulation performance, details are available to minimise thermal bridging and give excellent airtight fabric levels.

The Scotframe Val-U-Therm® building system was originally launched in 2011 and has been used in over 8,500 homes with an excellent track record. A UK market leader in full timber frame packages for new housing and commercial projects, Scotframe exclusively offers the Val-U-Therm PLUS® closed panel building system. This is accepted by financial institutions, NHBC, Premier Guarantee and Checkmate – the panels have a 60-year minimum service life.

Because it's a hybrid of the best aspects of SIPS and timber frame technology, coupled with the latest advances in material science, it offers much flexibility and innovation in the design and build process. The unique combination of design opportunities includes:

- Can be used for walls, roofs and floors
- All types of design and architecture, even curved walls and roofs
- Can be thermally engineered to perform as an optimum combination
- Unrestricted elevational treatments – brick, stone, render, cladding, tile, timber, etc.
- All interior finishes and treatments
- Large-span roofs with vaulted ceilings, if required
- Dramatic open-plan layouts offering lifestyle flexibility
- Extensive glazed features and uninterrupted roof-space living areas
- BBA accredited building system, including in-fill panels in other building systems

Couple this with its exceptional thermal performance and sustainability, Val-U-Therm PLUS® provides a straightforward and



cost-effective way for architects to hit energy efficiency, air permeability and other environmental targets. It offers a fit-and-forget, future-proof solution, whatever level of environmental specifications are required – for example, 'A' rated Energy Performance Certificates, PassivHaus or the highest levels of energy saving and carbon neutrality.

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

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

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

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

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

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

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

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

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

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



# Get in the frame

Steve Griffiths of Taylor Lane Timber Frame discusses why working closely with timber frame manufacturers is going to be of benefit to any architect

If I had to give just one tip for architects considering timber frame construction, it would be to get on board with your timber frame supplier as early as possible. Capitalise on their expertise and experience; by working together an economic solution can be achieved, without compromising on structural integrity. Your timber frame supplier should be aware of everything – the design details, building materials etc. It all affects the structure and price.

The design stage is critical for fully realising the benefits of working with timber frame, determining the U-values, and setting the SAP calculation. By not embracing timber frame in the early stages, the impact can be felt throughout the supply chain.

## Timber frame explained

A timber frame is a panellised system where large wall and floor panels are made in a factory and delivered to site, ready for erection. The roof is assembled onsite, from pre-formed timber trusses. The ground and first floor wall panels, floor joists and trussed roof are typically offered as a kit – either ‘supply only’ or ‘supply and erect’. The frame can be erected onsite by the manufacturer or a qualified contractor.

It’s renowned for being a fast build method as many of the build components are fabricated in the factory, with only final assembly required onsite. The pre-fabricated panels are precision engineered in a controlled environment, ensuring accuracy and consistency. A timber frame build allows for a more predictable construction schedule.

## Embrace standardisation

Setting standard room sizes on similar sized plots is an easy win when designing and building with timber frame. Standardisation generates speed throughout the process, from estimation to design; manufacture to delivery; erection right through to fit-out. This doesn’t mean that all the houses must appear the same. The timber frame

structure can be ‘wrapped’ in a variety of external finishes including traditional brickwork, cladding and render. It’s the size of each structure that matters, particularly on low volume developments.

## Structural Integrity

When considering the exterior of the timber frame build, it’s vital that any high-level brickwork is designed out on builds with a step-in level or stepped roof. This is particularly common on semi-detached houses or when there is a single storey adjacent to a dwelling with more storeys. The timber frame cannot bear the load of the high-level brickwork, due to differential movement between the frame and masonry, so a steel frame would be required. This is a costly addition and can cause a thermal bridging issue if not designed in correctly. A lightweight cladding, slip or render system is often chosen as an alternative.

Also, it’s worth remembering that larger spans demand a bigger structure, often with additional steel supports and this again, is where the price can start to creep up. Big rooms mean bigger spans and more complex roof structures. We work with the architect to realise their design, and ensure that the timber frame solution is practical, economic and structurally sound. Factors such as this are considered during the estimating and design phase.

The other question to ask is: can you get it all in – the building height is set by planning so increased structural support can have a negative impact on the ceiling height. It’s worth checking with your timber frame supplier that they seek advice from structural engineers when required.

## Thermal efficiency & air tightness

Cavity widths are generally different in traditional builds compared with timber frame. Nowhere is this more apparent than when pursuing the desired U-value. A standard wall constructed using timber frame can achieve a U-value of



**Your timber frame supplier should be aware of everything – the design details, building materials etc – it all affects the structure and price**



0.19 W/m<sup>2</sup>K. A traditional build would usually need a wider wall construction to achieve 0.19 W/m<sup>2</sup>K; a bigger cavity with more insulation which would impact on room size. Furthermore, a timber frame building is more economic to run due to its ability to heat up quickly and retain that heat for longer.

To comply with Building Regulations, a Standard Assessment Procedure (SAP) rating must be submitted, alongside the predicted Energy Performance Certificate (EPC) for new dwellings prior to work commencing. Thermal bridging and air tightness are key indicators in achieving an SAP rating. Timber frame construction can exceed the national standards in both instances; for example, some manufacturers can achieve an average Y-value of 5 per cent, a 3 per cent improvement on the national standard. The lower the Y-value, the less heat is lost from the structure. Airtightness can be designed into the building fabric helping to save energy and reduce household bills across the lifetime of the property.

*Steve Griffiths is senior design manager at Taylor Lane Timber Frame*

## Norbord's new SterlingOSB Zero range



Norbord is one of the world's largest manufacturers of OSB and has recently invested £95m in a new plant in Inverness, Scotland. A new family of products is a development of the most popular OSB brand in the building and interior design arena and

comprises SterlingOSB Zero 3, SterlingOSB Zero Tongue and Groove, SterlingOSB Zero SiteCoat, SterlingOSB Zero Fire Solutions and SterlingOSB Zero StrongFix. It is a precision-engineered OSB3 board for structural use in load-bearing and challenging conditions; as well as being hugely popular in the aesthetics-led interior design industry.

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

## Helifix helps preserve Titanic pump house



Helifix non-disruptive and concealed masonry repair systems have been installed on the large pump house adjacent to the historic 850 feet long Thompson Graving Dock in Belfast, where Titanic and its sister ship Olympia were both

fitted out. Over 500 metres of stainless steel HeliBars were bonded into channelled-out mortar beds to stitch cracks in the masonry, which after re-pointing, were completely hidden from view. This major repair programme was undertaken by a Helifix-trained Approved Installer and covered by a Helifix 10 year insurance-backed warranty.

020 8735 5200 [www.helifix.co.uk](http://www.helifix.co.uk)

## Stormdry gets EST 'verified status'



Stormdry Masonry Protection Cream from Safeguard Europe has been granted 'verified' status by the Energy Saving Trust (EST) in respect of its contribution to improving the energy performance of buildings. The Energy Saving Trust's

verification scheme provides independent evaluation of performance for energy-efficient products. After considering peer-reviewed scientific papers and the results of extensive long-term testing, the EST awarded the prestigious recognition to Stormdry for its claims to enhance thermal performance of masonry walls.

01403 210 204 [www.safeguardeurope.com](http://www.safeguardeurope.com)

## Densostrip™ used on refurbished fountain



As part of a recently completed £1.5 million project to refurbish the historic Ross Fountain in Edinburgh, Winn Coales (Denso) Ltd supplied Densostrip™ and Densostrip Primer™ to provide a permanently watertight seal between precast concrete units. These precast units form the trenches which house the underground supply of services to the fountain.

The year-long restoration project on the new foundations and waterworks now enables the fountain to operate for the first time in years.

020 8670 7511 [www.denso.net](http://www.denso.net)



# New weatherproof waterbar addresses key challenge for ICF installers

**T**riton has introduced Cemflex VB Steel Waterbar, a fully weatherproof BBA certified waterbar that doesn't need to be protected from rain prior to the concrete pour. It addresses a key challenge in below ground basement construction for installers of quality ICF systems and pre-cast concrete twin wall systems, who need to form a good watertight seal between the ICF blocks or the twin wall panels and the basement slab.

Traditional hydrophilic waterstops have been around for many years and can be used successfully in most applications. However when the blocks forming the structure are not in-filled with concrete for some time, and the waterstop is exposed to rain within the open blocks, this will cause it to start swelling prematurely and result in subsequent underperformance in a very critical location. Attempting to remedy this by the removal of the waterstop is usually impossible due to its location inside the ICF blocks or twin

wall panels.

BBA certified Cemflex VB Steel Waterbar is a galvanised steel plate encapsulated in a special patented coating that reacts only with the water within the concrete to provide a watertight joint. It's designed for use in all non-movement construction joints in reinforced concrete – and is especially suited to ICF or twin wall installations.

Quick and easy to install with no sticky tape to remove prior to use, it can be installed before the concrete is poured by positioning to steelwork, or directly into the fresh concrete after pouring. Cemflex VB Steel Waterbar is 1.25mm thick and supplied in two metre lengths in a choice of 100mm or 150mm widths. Find out more by visiting Triton's website or speak to your local Triton technical manager.

01322 318830

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



## LAMILUX part of landmark development



Kimpton Fitzroy London, located in Bloomsbury, is the first UK property for the luxury, boutique Kimpton hotel brand. LAMILUX was contracted to design, supply and install the 3.5 metre wide by 14 metre long PR60 mono-pitch rooflight to complement the hotel's Winter Garden providing the ideal area for guests to relax and take in the beautiful surroundings. The glazing division of the rooflight was carefully designed to perfectly align with the faux beams, concealing the mullions and providing maximum daylight. Each of the nine glass panels are an impressive 5m<sup>2</sup> and weigh a substantial 214kg.

[mail@lamilux.co.uk](mailto:mail@lamilux.co.uk) [www.lamilux.com](http://www.lamilux.com)

## A view to thrill



When housebuilders Ryce Ltd were looking for a high-quality glazing solution for Salisbury View, East Edinburgh, REHAU's Tritec profile was its trusted choice for large span windows and a modern finish to connect the building with the surrounding natural beauty. REHAU recommended its Tritec system for the Salisbury View scheme with a grey foil finish. The 60mm profile would deliver slimmer sightlines and depth for a modern aesthetic, while REHAU's bestselling Anthracite Grey laminate would transform the white PVC-U into an edgy, aluminium-inspired glazing solution.

01989 762600 [www.rehau.uk/windows](http://www.rehau.uk/windows)



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# Why specify Zenon rooflights?



Rooflights play a vital role in the modern building but are often overlooked. They are the common link to many aspects of building design and can help the designer, the building owner and the occupier to achieve a more sustainable, energy efficient and enjoyable place to work and to live in. Well considered rooflight design at the outset of the building concept can have dramatic effects on all aspects of the building from the owner's potential asset value to the well-being and productivity of the occupants.

Buildings that provide high levels of natural light are more positive working environments than those which are dependent upon artificial light. It is known that people respond better to working in natural light conditions, as the eye and brain functions work better, resulting in improved concentration and overall performance. Plus, of course, less dependency on artificial light significantly reduces energy consumption and running costs as well as impacting positively on the buildings overall carbon footprint.

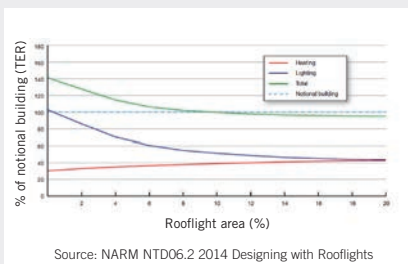
In new buildings where high levels of insulation are now being installed, the most significant savings in energy can be realised through the utilisation of the free resource that is natural daylight. The energy consumed by artificial lighting far exceeds the relatively small amounts of heat energy that are lost through increasing the rooflight area, which is a small part of the whole building fabric. The amount of energy required to light a well-insulated building is far greater than the amount of energy required to heat it and can be the greatest single energy use in the operating the building.

Of course, artificial lighting will always be essential in occupied buildings subject to occupational requirements, particularly in the winter months or in areas where localised specific or constant lighting levels are required, but even low energy lighting systems can create relatively high energy demands. More so when the lighting is turned on and left on throughout the daylight hours irrespective of need where automated lighting controls have not been incorporated into the design.

Thermally efficient insulated rooflights can further reduce heat loss and energy consumption. The effectiveness of rooflights as a contributor to energy efficiency are acknowledged in the Building Regulations Approved Document Part L. It recommends



that industrial and commercial building structures should have a rooflight area of 10 per cent to 20 per cent, subject to limiting solar gains. Research by De Montfort University and published by the National Association of Rooflight Manufacturers (NARM) demonstrates the savings that can be made by increasing rooflight areas.



This graph demonstrates the reduction in CO<sub>2</sub> emissions of a typical notional building as the rooflight area is increased to the optimum 16 per cent to 18 per cent and used in conjunction with a fully automated lighting control system.

Rooflights are a simple and cost-effective choice to introduce a more even and useable distribution of natural light, particularly in large structures where light is required deep into the building or in enclosed areas that cannot be lit through an external wall. Increased areas of light-diffusing rooflights, often with lower light transmission or improved thermal performance, can optimise the energy performance of the building, and there are many permutations of performance to choose from. Reduced areas of rooflights with high light transmission levels and poor diffusion that create glare and hotspots, while still leaving areas of shadow and gloom that must be overcome with localised artificial

lighting, only demonstrate poor consideration to the daylight design.

Another element to consider is a BREEAM assessment. Many local authorities now insist on this before they will give planning permission, therefore it is vital to optimise the rooflight design, distribution and product type. Using rooflights with low or reduced embodied carbon is a further example of good product selection that can have a significant effect on the BREEAM assessment.

Ultimately;

- Clients need to have buildings to meet the stringent regulatory requirements that will continue to tighten, or even exceed them.
- Achieving a BREEAM rating of 'Excellent' as opposed to 'Very Good' can make a significant difference to the developer who is looking to let a large industrial or warehouse building to a prospective client.
- Having a building that is lit by natural daylight will improve the efficiency, productivity, mental alertness and the general health of the occupants that work in the building.
- In combination with good air-tightness and low fabric U-values, a reduction in the use of artificial lighting is the best way the building occupier can lower the energy cost of running the building.

When considering the design of a building it is now vital that rooflights, rather than being an afterthought, are treated as an essential design element right from the start.

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## Garador offer full range of door sizes



There are lots of reasons why people today are requiring larger garages. Vehicles can be bigger; and garages are often used to keep fitness equipment or for general storage. Larger garages can be built without problem thanks to the range of extra wide garage doors available from **Garador**. British garage door manufacturer Garador offers a selection of its popular Up & Over garage doors in especially large sizes all the way up to 5000mm wide and sectional garage doors up to 5500mm wide. "Larger garages are becoming especially popular in new builds and in conversions," said Neil Discombe, Managing Director of Garador. "We offer a range of door sizes, with both sectional and up & over garage doors in sizes over 10 feet wide, all produced within our own manufacturing group to maintain product quality." Garador's expertly engineered double Up & Over doors are quick and easy to install and come in a wide range of materials and a great choice of styles and colours. The larger doors can easily be fitted with a GaraMatic electric door operator for a quiet, smooth and fast automatic opening.

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

## Stertil fast-action doors provide sweet access solution



One of the UK's leading food and confectionery manufacturers relies upon a pair of **Stertil** FlexiEdge fast-action doors to provide access to a fork truck drivers training facility and a stores area within its manufacturing and distribution complex in York. Stertil's FlexiEdge range comprises 16 models of many different types and styles including internal and external doors, all-weather doors, cleanroom and freezer/coldroom doors plus emergency exit doors incorporating breakthrough curtains. Standard models are available in widths up to 11 metres and heights of 5.5 metres whilst bespoke and special sizes may be specified. Also, the range provides standard travel speeds up to 2.7 metres per second (opening) and 1.2 metres per second (closing) to shorten work cycles and increase productivity. A wide range of activation systems allows maximum versatility of FlexiEdge doors in many different applications. Alternatives to the standard push button pads include wired and wireless pull cords, key switches, induction loops, photocells, radar, radio or infra-red transmitters, presence detectors and touchless hand-wave detectors.

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# Don't compromise on commercial glazing

Jeff Pearson of Jack Aluminium Systems discusses the importance of considering energy efficiency, security and safety when specifying glazing systems – and why it's so important not to compromise

Compromise can be a wonderful thing. It's great for building working relationships, sticking to project budgets and meeting tight deadlines, but there's one thing I always say to architects and specifiers looking for glazing systems for commercial and public sector buildings – don't compromise!

Glazing specification has never been more important. More and more architects are swapping bricks and mortar for metal and glass for their building fabric. Not only does this speed up project builds, it also makes it easier to do more of the construction offsite. It's a great way to bring maximum daylight into commercial buildings, offices and shops as well as healthcare, education and leisure facilities. It also means that getting the glazing right is absolutely paramount – and it needs to perform.

There are three top specifications for commercial glazing that you shouldn't be compromising on.

## Energy efficiency

It's been done to death, but there's no denying the importance of energy efficiency when creating walls of glass with curtain walling and shopfront systems. Look for thermally broken aluminium frames and low U-values, where entire products have been tested – not just the components.

Really think about your application too – if it's an office, the last thing you need is inefficient glazing that will make workers uncomfortable and especially as it's now been proven to reduce productivity. If it's an external wall of a shopping complex or for internal partitions though, you might get away with a non-thermal system, saving costs that can be used elsewhere in the project.



## Security

Security is always high on the agenda, no matter what the development. For shops it's about protecting the merchandise. For schools, hospitals and medical facilities, it's about restricting access to buildings and making sure that pupils and patients are safe. For other buildings, it's just about making sure that the right people are inside, and the wrong people are kept out. Always check for PAS24 and Secured by Design accreditations and make sure that testing has been done on complete doorsets.

Often, high-traffic entrance doors that need to be secured at all times can be vulnerable to attack. If you need something with an anti-panic opening that's still super-secure, look for design features such as rebated low threshold and lock strike plates that help to prevent tampering. This keeps doors secure, even if it's an emergency exit – which brings me on to the next point.

**Glazing specification has never been more important – more and more architects are swapping bricks and mortar for metal and glass as their choice of building fabric**



### Safety

Safety on commercial buildings is absolutely crucial. Nowadays, there is advanced door technology to help ensure that in an emergency, everyone can leave the building quickly and safely, without compromising on security.

Remote-access doors, which use electromagnetic doors, can be specified with back-up features so that occupants can escape, even during the event of a power cut. For double doors, clever mechanisms have been designed so that in the event of an emergency, either the master door leaf or slave door leaf can be pushed and both doors will open. These not only increase safety, but also eliminate the need for 'managed security solutions' where doors need to be bolted 'out of hours'.

### The best glazing combination

Some aluminium commercial glazing systems use clever engineering to create cost-effective products that incorporate these three features, so specifiers can deliver safe, warm and secure commercial projects.

On your next project, make sure that these three points are really considered. Not only will end-users thank you, but it'll also mean that your build exceeds standards and is future-proof. Future glazed buildings need great, futuristic performance levels, without compromise.

*Jeff Pearson is sales and marketing director at Jack Aluminium Systems*

## Housing development oozes charm



A multi-million pound project to create an exclusive development of 12 houses has fitted specialist aluminium glazing from award-winning fabricator **AluFoldDirect**.

More than 200 products produced by

AluFoldDirect feature in the stunning five-and-six bedroom homes. In every property, a dozen AluK 58BW slimline flat sash window systems in anthracite grey were installed. To complement this, two or in some cases three aluminium BSF bi-fold door systems also featured and stunning sets of bespoke aluminium French doors complement the exclusive, high-end property specification.

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

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ADF magazine always endeavours to bring its readers the most relevant, interesting content that informs, inspires and helps you solve challenges within your projects. So that we can improve our understanding of your professional needs and wants, we'd appreciate it if you could complete a quick online survey. The personal information

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[www.architectsdatafile.co.uk/adf-ereader-survey](http://www.architectsdatafile.co.uk/adf-ereader-survey)

## Aspex wins contract for Cambridge office



Aspex has recently secured a contract to supply its Novista system to 50/60 Station Road in Cambridge City Centre. Aspex will be supplying its Novista Riser Steel System and Novista Timber Doorsets in a walnut veneer finish to the scheme, which will include a new state-of-the-art

office accommodation, just 150m from the train station and transport hub. Working alongside architects Nicholas Grimshaw, and contractors Galliford Try, the £87 million office space required a modern, sleek, and minimalist finish that would complement the existing surroundings, and the Novista system provided the ideal solution.

0116 278 3506 [www.aspex-uk.co.uk](http://www.aspex-uk.co.uk)

## Schueco concealed vent facade system



The importance of visual aesthetics to architects is demonstrated by the popularity of the FWS 60 CV concealed vent facade from **Schueco UK**. The unique feature of this state-of-the-art aluminium system for floor-to-ceiling ribbon windows is that from the outside it is impossible to see which vents

open and which vents are fixed. With burglar resistance up to RC 2, the Schueco FWS 60 CV facade is the ideal system for enhancing the thermal performance and visual appearance of new-builds and existing commercial properties.

[mkinfobox@schueco.com](mailto:mkinfobox@schueco.com) [www.schueco.co.uk](http://www.schueco.co.uk)



# Barking Town Hall – old meets new in a spectacular refurbishment

**B**arking Town Hall, an iconic building and landmark in Barking has been lovingly refurbished. Externally, all visual aspects of the original architecture have been maintained whilst creating a bright new spacious contemporary workplace within.

A major part of retaining the original character of the building was the meticulous visual 'like for like' replacement of the original sash windows. Masterframe Windows, having 30 years' experience, in the manufacture of authentic sash windows was approached by Barnes Construction, the main contractor.

Carol Slade, Sales and Operations Director elaborates: "When we were first approached, our main challenge was to present a credible case for sash windows manufactured using composite materials instead of timber.

We invited representatives from Barnes Construction, London Borough of Barking & Dagenham and LAP Architects & Interior Designers to visit our premises and factory to



get to know our windows in more detail and to witness the manufacturing process from start to finish.

Suitably impressed, the specification chosen was the Masterframe Vintage Conservation sash window complete with slender 39mm sash rail, deep bottom rails, patented Timberweld® butt joints, lower sash bar handles to assist with opening the extra-large windows and dual foil, cream externally and white internally. The client could also have peace of mind knowing that the town hall is secure with Secured by Design approved windows and energy



efficient with special solar controlled glass. Over 220 enormous sash windows were manufactured and were so large and heavy that the sashes had to be delivered separately from the frames.

At all stages of the project we worked closely with the project team, including the professional installers, Asset Fineline, to ensure that the client was completely delighted with their sash windows looking every bit like the original wooden windows, even up close."

07739 506838 [www.masterframe.co.uk](http://www.masterframe.co.uk)

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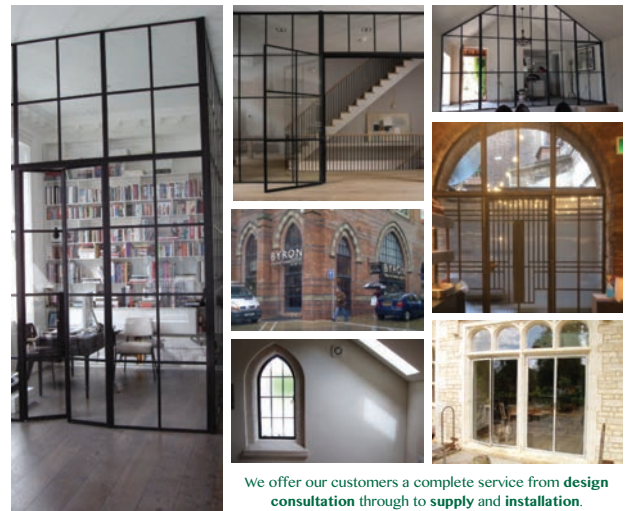
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# Improving thermal performance with secondary glazing

Being more thermally efficient and wasting less energy has become very important, not only on an environmental level, but also economically. Secondary glazing is a well-established method of greatly improving insulation within existing buildings.

As the leading specialist in secondary glazing, Selectaglaze has a range of tested products that can reduce the U-value of a building to around 1.8 when coated in low emissivity glass. With the Pilkington Spaica glass in the S25 unit, it can be reduced down even further to around 0.8.

All units are designed and expertly installed with brush seals, or compression seals for hinged panels, to ensure the tightest fit, dramatically reducing air infiltration to help eliminate uncomfortable drafts.

Built at the start of the 19<sup>th</sup> Century, a striking Grade II Listed entrance lodge located in Beaconsfield, Buckinghamshire, has morphed into a comfortable living



space with the assistance of Selectaglaze secondary glazing.

All of the original leaded light windows offered poor insulation and were unable to retain heat efficiently. To improve the insulation, a bespoke and sympathetic solution was required which would not detract from the historic features, so the Estate Manager contacted Selectaglaze, the UK's leading designer of secondary glazing, to provide a solution for the thermal inefficiencies.

Selectaglaze installed six units from its

Series 10 range and one Series 45 single side hung casement. Both ranges are slimline solutions ideal for heritage projects, as they introduce minimal sightlines and are designed to be as unobtrusive as possible. This, along with high performance seals, helped to virtually eliminate unwanted draughts and provide a more comfortable living space for the tenants. The inclusion of a low emissivity hard coating on the laminate glass reduces the U-value of the window combination to between 1.7 to 1.9 W/m<sup>2</sup>K.

The new tenants of the lodge are pleased with the general look of the secondary glazing, the heat retention in the property and also remarked that they generally use less energy, which has led to lower bills.

Established in 1966 and a Royal Warrant holder since 2004, Selectaglaze has vast experience in working with all types of buildings throughout the UK.

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

## Half hour test success for SWA



A painstaking programme of development and testing, conducted by the Steel Window Association's technical committee, has led to the UK's top-rated fire testing centre granting a half-hour test certificate for both single and double W20 doorsets. Ongoing work by SWA member companies has culminated in the full fire test, resulting in a 30-0 rating. This now means that installations of single or double

doorsets as part of full internal steel screens can be carried out in full compliance with building regulations; but will only be available through companies belonging to the SWA.

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

## Fit for purpose?



A specification validation service has been developed to help ensure the practical and aesthetic longevity of screening louvres. Gilberts Blackpool has developed the service to enable specifiers to be assured, from the outset, that the material, finish and format of the louvres will deliver, within budget. Gilberts has developed its own louvre product range over the years to provide a comprehensive package to keep pace

with the evolution of building design and structural interfaces, initially and as/if the building structure is altered.

01253 766911 [info@gilbertsblackpool.com](mailto:info@gilbertsblackpool.com)

## It's a wrap for Bostik at museum



Bostik's self-adhesive thermal acoustic wrap, W110, has been used to provide acoustic insulation on the plastic rainwater and soil pipe system at the newly refurbished Brecknock Museum in Brecon, Wales. The main contractor for the HVAC work on the museum project, selected Bostik W110 as it's up to 20 per cent quicker to install than traditional acoustic insulation products, allowing them to

save valuable time during the restoration. Supplied on a compact and lightweight roll, Bostik W110 forms an instant bond around pipework with no need for the extra banding or clips.

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

## OPTIM-R supports growth of museum



The Kingspan OPTIM-R Roofing System has provided a slim, lightweight and highly thermally efficient solution for the Phase II extension of the prestigious Garden Museum in London. Alun Jones, Partner at Dow Jones Architects, explained: "We normally use Kingspan Insulation and we

were particularly interested in the super thin OPTIM-R vacuum insulation panels (VIPs) as they would allow us to keep the overall thickness and weight of the roof as low as possible without having to reduce the thermal performance of the layer."

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



## Sto provides perfect acoustic solution



The need for a proven acoustic solution, and a high ambition for the aesthetics, has led to an acoustic system from **Sto** being specified for a £7.5 million museum redevelopment project in London. The StoSilent Distance system has been installed in the Garden Museum, which is

Britain's only museum covering the art, history and design of gardens, located at the Church of St Mary-at-Lambeth. The StoSilent Distance system provides a modern, clean, monolithic alternative to the standard but limited design options associated with exposed grid and tile systems, or boards with multi-faceted holes or slots.

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

## Cheese factory cheddar a few pounds



Work on the GRH Food Company facility, including the creation of a Cheese Innovation Centre, includes the installation of The **Kingspan KoolDuct System** which provides a lightweight solution for the facility's ventilation and cooling

requirements. Ductwork fabricated from the Kingspan KoolDuct System can help to reduce operational costs as it is capable of reducing air-leakage rates to a fraction of those typical of rectangular sheet metal ductwork, in addition to limiting heat transfer, which will help to maintain a controlled temperature for the cold rooms.

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

## Website celebrates "Our World Is Water"



Cistermiser Ltd and sister company Keraflo Ltd are jointly presented in a brand new corporate website [www.ourworldiswater.co.uk](http://www.ourworldiswater.co.uk) which reinforces a shared commitment to producing smart, efficient water management solutions that optimise control, deliver savings and help

to ensure the safety and preservation of the earth's most precious resource. Ourworldiswater.co.uk includes a Downloads resources section where the very latest Cistermiser and Keraflo-branded specification catalogues can be accessed, alongside thought leadership documents that serve to underpin the shared business focus.

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

## Coloured rads – new options!



Radiator manufacturer **Stelrad** is leading the trend for coloured radiators here in the UK and Ireland. For decades you could have radiators in 'any colour so long as they were white!'. Now Stelrad has a number of radiators available in colours from stock but also most of its radiators are available in up to 36 different colours

with a reasonable order timeframe. Ideal for selfbuilders looking for radiators that match or contrast with other decor in the home – take a closer look at all of the Stelrad products by visiting their website.


0844 543 6200 [www.stelrad.com](http://www.stelrad.com)



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# Why UFH is still a hot topic

The UK's underfloor heating (UFH) market continues to warm up – Nigel Sanger of JG Speedfit explores what architects and specifiers need to consider when specifying UFH systems

UFH is no longer just the prerogative of the wealthy. Its increasing affordability, plus general concerns over rising fuel bills, mean this technology is now more attractive to homeowners. They are driving UFH specification.

However, consumers are still wary about installation costs, and confused about the fuel efficiency benefits on offer. For architects and specifiers though, this is a clear opportunity to educate and 'upsell' the values of a UFH system. While reducing fuel bills is the stand-out message that homeowners can latch onto, there are also a range of intangible benefits, which contribute to a healthier home, overall.

## When a house becomes a home

Without home comforts, a home is merely a building. UFH supports the idea of a creating a comfortable home by heating rooms to more ambient temperatures than those generated by conventional radiators.

A traditional radiator distributes heat through convection, where it heats the air around it, with the radiators' temperatures reaching above 75°C. This creates an imbalance of temperature, as radiators tend to warm the air immediately around them more than the points furthest away from them.

By contrast, UFH has a much lower operating temperature of between 25-27°C. It uses the basic principle that warm air rises to create a more even and comfortable temperature across the whole room.

In addition, UFH systems tend to create minimal noise, if any at all. Traditional heating systems however often produce stress-inducing creaks and clicks.

## Blow the cover

Once dubbed by *The Guardian* as 'rabbit-hutch Britain', we are thought to be facing a period of ever-shrinking property sizes as Government Ministers seek to find solutions to make better use of land for housing. As space sizes decrease, architects and specifiers are having to do more with less.



UFH is a relatively simple space-saving solution, because removing the need for bulky radiators and pipework can actually give rise to more aesthetically pleasing design ideas and storage space. As well as using up unnecessary space, radiators can often become an eyesore as paint peels and rust sets in. UFH removes the need for homeowners to replace radiators, or disguise them using intrusive radiator covers!

## Convection to infection

Safety and general health advantages can often be overlooked when considering the installation of heating systems, yet they can contribute greatly to occupant wellbeing.

Convection from common radiators works by moving air around a room, but with it moves dust allergens and other particles that can cause respiratory irritation.

In addition, warm convection currents absorb moisture more readily and dry out everything within their path, including skin, lips and eyes. By switching from convection-based systems to those that operate via radiant heat, moisture and air movement is reduced.

UFH is also physically much safer, particularly for children. No radiators means there are no sharp edges to bump into, nor are there any hot pipes or surfaces to accidentally touch – a constant danger and worry for parents.



**When designing buildings with UFH, it's essential to nail down the three key phases – planning, installing and commissioning**



### In total control

Traditional radiators and single thermostats create inevitable heat loss. Understandably, most homeowners are reluctant to walk around every room turning radiators on and off so unoccupied rooms are often warmed up unnecessarily.

With UFH, this lack of efficiency can be combatted by integrating smart controls to create zonal heating with individual or multi-room temperature control. Using smart thermostats, multi-zone heating can be achieved simply and easily through wireless controls.

With lower water operating temperatures and more efficient heating control, homeowners and occupiers can make significant savings on fuel bills.

### Things to keep in mind

When designing buildings with UFH, it's essential to nail down the three key phases – planning, installing and commissioning. Without having these at the foundation of your project, it's easy for systems to become inefficient and ineffective.

Whether you are installing a screed floor or suspended wooden joists system, it is also essential to ensure the best method of installation is chosen. Architects, project managers and installers must effectively communicate with each other at the specification stage, and if any party is new to UFH, best practices should be put in place first.

The most common mistakes made with UFH include not correctly pressure testing the system, and not setting flow rates and blended temperatures. These can all be easily avoided.

*Nigel Sanger is divisional director, technical support at JG Speedfit*

## Vent-Axia delivers ventilation solution



British fan manufacturer Vent-Axia has supplied two Sentinel Multivent H central extract units to a refurbished tenement property in Edinburgh New Town. The 7-month build included installation of Vent-Axia's Sentinel Multivent H

continuous mechanical extract ventilation (MEV) units which provided ventilation to the kitchen, bathroom and three en-suite areas. Sentinel Multivent has been designed to meet the exacting demands of developers, installers and users offering advanced control options and easier installation and commissioning.

0844 856 0590 [www.vent-axia.com](http://www.vent-axia.com)

## Achieving design freedom



AET Flexible Space have recently launched a new ebook titled "UfAC Design Freedom", an information booklet for architects focused on the application of underfloor air conditioning systems and how the adoption of such systems can help achieve design freedom, particularly in London

refurbishment projects which may have challenging structural and height restrictions to overcome as part of redevelopment and refurbishment works. The booklet demonstrates that, in practice, incumbent building services can help architects and designers overcome planning and structural constraints. Please send an email to request a copy.

[lucy@flexiblespace.com](mailto:lucy@flexiblespace.com) [www.flexiblespace.com](http://www.flexiblespace.com)

## A wash with Beauty



Traditionally a functional space, the role of the bathroom has extended to include personal sanctuary, encouraging relaxation and tranquillity. Neolith®, a market-leading brand of Sintered Stone, achieves a balance between the varied purposes of the washroom, offering residential designers

and fabricators the creative scope to deliver utility that engages the senses. Waterproof and resistant to wear, the material comes in an array of patterns, so any look is possible, whether relaxing or energising, minimalist or extravagant.

[www.neolith.com/en/applications/bathrooms/](http://www.neolith.com/en/applications/bathrooms/)

## Puro S: An elegant stand-alone



Puro S designer Anke Salomon has created an elegant, rectangular washbasin for Kaldewei. The clean lines and timeless shape of the counter top washbasin are unique: designed to stand alone, the Puro S's narrow, precise rims and roomy interior allow it to be placed at will on a console, creating a beautiful focal point in the bathroom. Available in selected matt shades from Kaldewei's Coordinated Colours Collection. All Kaldewei

superior steel enamel bathroom solutions are 100 per cent recyclable and come with a 30 year guarantee.

01480 498053 [www.kaldewei.co.uk](http://www.kaldewei.co.uk)



# Your Key to Reducing Height in a Heated Floor Assembly

Once upon a time, the specification of a complete heated floor assembly meant numerous products, layers and processes. Then came Schlüter®-DITRA-HEAT-E-DUO...

When the original DITRA-HEAT-E system was released in 2013, it was the first electric underfloor heating system of its kind. Taking its lead from the market leading uncoupling membrane, Schlüter®-DITRA 25, it combined protection and heating into one easy-to-use solution.

The debut of DITRA-HEAT-E allowed specifiers to achieve considerable reductions in the height of heated floor assemblies, by negating the need for encapsulation layers and a separate uncoupling layer. Fast-forward to today and with the latest iteration, you can also eliminate the requirement for a separate soundproofing layer, as well as achieving enhanced efficiency.

Schlüter®-DITRA-HEAT-E-DUO has set the new standard to surpass in electric underfloor



heating. To all the great features of DITRA-HEAT-E are added two more: thermal breaking and impact sound reduction. These innovative features are achieved courtesy of a unique 2mm fleece laminated to the underside of the DITRA-HEAT-DUO matting. The thermal break allows the system to push 80 per

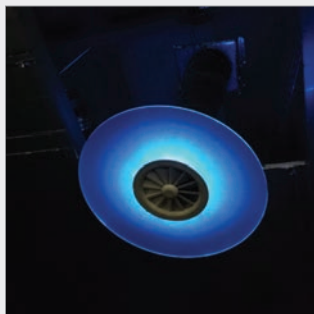
cent of its input to the surface during the heat-up phase, whereas alternative systems can lose up to half of the heat into the screed or subfloor. The confirmed impact sound reduction of up to 13dB is perceived as a 50 per cent reduction by the human ear, resulting in increased privacy and peace.

Like DITRA-HEAT-E, the DITRA-HEAT-E-DUO system provides bonded waterproofing, uncoupling, crack bridging and vapour pressure equalisation, to ensure that installations go the distance. As well as floors, it can be used in the creation of heated features, such as walls, shelves and seating, to further enhance the routines of building occupants.

Each layer that can be eliminated from an assembly not only saves height, but also reduces the time and processes needed for installation. This means that Schlüter®-DITRA-HEAT-E-DUO offers benefits for parties across the construction chain.

01530 813396 [www.ditra-heat.co.uk](http://www.ditra-heat.co.uk)

## Gilberts throws light on exposed ceiling design



New light is being shed on exposed ceiling design – literally – through innovations by leading air movement specialist **Gilberts Blackpool**. The company is already one of the leaders in solutions enabling designers to optimise the trend towards open ceilings and exposed building services in commercial interiors. Now it has pioneered an acrylic version of its coanda plate, inset with LED lighting, for use with its range of GS swirl diffusers. Specifiers can choose either a single colour for the LEDs, or an option whereby the colour changes through a preset range. “In exposed ceiling ductwork, the coanda plate is key to ensure efficient horizontal dispersal of fresh, incoming air, without ‘dumping’.” As the exposed ductwork is an architectural feature, we decided to give designers optimum opportunity to add a new dimension to their plans,” explains Gilberts Sales Director Ian Rogers. The backlit coanda can be specified with Gilberts’ range of GSF and GSJ swirl diffusers for exposed ceilings. Both versions feature a patented design of radial vanes to optimise omnidirectional discharge airflow with natural or mechanical air distribution strategies.

01253 766911 [info@gilbertsblackpool.com](mailto:info@gilbertsblackpool.com)

## Still at its best, Johnson & Starley Warm Air Heating



Johnson & Starley’s WarmCair condensing warm air heating range is suitable for a wide range of applications including private residential and social housing as well as smaller commercial applications such as schools, sports facilities, nursing homes and community centres. With rapid warm up times and low noise levels, models are suitable for new builds and the direct replacement of existing warm air systems. Designed for simple and quick installation, the WarmCair warm air heating system offers many space saving and room layout advantages over wet heating systems. There is a choice of upflow or downflow models available with or without hot water and incorporating a stainless steel heat exchanger and other first class component to ensure long life and low maintenance costs. Compliant with Building Regulations Part L, WarmCair heaters produce up to 36kW heat output and are up to 98 per cent thermally efficient. Savings in gas consumption can be as much as 28 per cent. An optional ‘Cleanflow’ electronic air filtration system provides the added benefit of filtered air with the ability to filter 95 per cent of airborne pollutants as small as one micron including pollen, dust and cigarette smoke.

01604 762881 [www.johnsonandstarley.co.uk](http://www.johnsonandstarley.co.uk)

## New 'Premium' path for Gerflor's range



The Premium range from Gerflor is truly unique in delivering a mass coloured design flooring which offers outstanding performance for extremely high pedestrian traffic areas including education, healthcare, hospitality, offices, retail and a host of contract environments where high footfall is expected. Taralay Premium from Gerflor is an incredibly hardwearing and colourful flooring collection for a host of creative spaces with a palette of 80 trendy colours and designs to choose from.

01926 622600 [www.gerflor.co.uk](http://www.gerflor.co.uk)

## Diving into the Palettone Collection



Opening just off the A6 in Preston, The Flower Bowl, a large, single storey building (4,200m), with a grass roof which undulates to give a natural appearance, is a new mixed leisure destination at Barton Grange. Part of the build was the addition of the Ocean Fish and Chips

Restaurant featuring a maritime inspired decor. Designed by Nigel Phillips Design, six designs from the Palettone PUR range from Polyflor were selected to create the bespoke floor in the dining area of the restaurant. Ideally suited for heavy traffic areas, Palettone PUR is 100 per cent recyclable and contains 25 per cent recycled material.

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

## A healthy installation



MoorEnergy Fitness Club was seeking a replacement for its existing shower that improved the appearance of the communal changing areas and was simple and quick to install. Aqualisa's Siren™ Exposed mixer shower provided the ideal solution. When Nigel Moore, Owner and Personal Trainer, was looking to refurbish the changing rooms and showering areas, he installed the Aqualisa Siren™ Exposed mixer shower as it met all of his specified requirements. The Siren™ Exposed shower is a single lever thermostatic shower ideal for commercial applications.

01959 560010 [www.aqualisa.co.uk](http://www.aqualisa.co.uk)

## Perfect panelling from Abacus



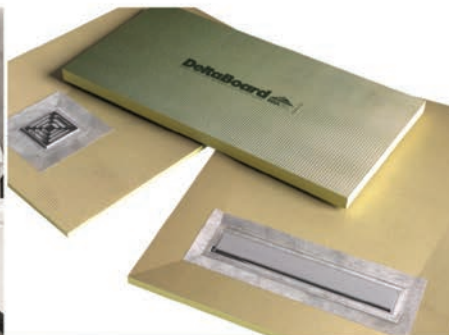
Abacus Bathrooms has launched a portfolio of fantastic panelling products to answer today's demand for design-led, innovative kitchens and bathrooms. Launched as the perfect alternative to tiles, the inspirational ranges are equally at home in modern and classic schemes and offer the retailer and designer the edge in a competitive world. All panelling solutions are 100 per cent waterproof and come with a 10-year guarantee. Super easy to clean and hygienic, and quick to install, the surfaces eliminate the need for grouting and are scratch resistant. They are suitable for both domestic and commercial applications.

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

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PCS manufacture a diverse range of high performance construction products including pre finished pipe covers, tile backer boards, shower tray formers, flexi panels, tapered panels, tileable seating profiles & more. For more information visit [www.pcsboard.com](http://www.pcsboard.com).

All PCS products are available through our national network of distributors and stockists.

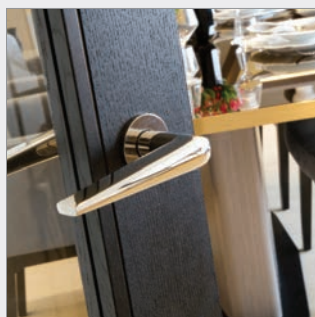
### What's Under Your Tiles?

01942 820131  
[www.pcsboard.com](http://www.pcsboard.com)  
[sales@pcsboard.com](mailto:sales@pcsboard.com)





## Bespoke hardware lifts iconic tower



Samuel Heath has designed and manufactured a suite of bespoke door fittings for the redevelopment of the iconic Centre Point Tower in London.

Working closely with architects Conran and Partners, Samuel Heath created a collection of co-ordinating hardware for use throughout the building's 82 luxury apartments. Fittings included handles for main entrance and interior doors, escutcheons, thumb turns and releases, pull handles, flush pulls, wardrobe pulls and shower door handles.

Tim Bowder-Ridger, Senior Partner at Conran and Partners, comments: "The proprietary ironmongery products used in the scheme draw their inspiration from the original spirit of Centre Point Tower, enhancing the sense of place, and are of an exceptionally high standard."

0121 766 4200 [www.samuel-heath.co.uk](http://www.samuel-heath.co.uk)

## P C Henderson Set to Exhibit at Leading International Tradeshow – BAU 2019



P C Henderson will be exhibiting at leading international trade fair – BAU – in January 2019 where it will be showcasing a selection of its high quality sliding door hardware. P C Henderson will be on stand 428 in hall B4, demonstrating some of its most popular and renowned sliding and folding door hardware products including; Securefold, Evolve, Roomflex and Flexirol Multidirectional. The company will also be launching three new hardware solutions to the market – presenting visitors with a first time opportunity to see, touch and use full working displays of the new products. Products to be launched at the event include Pocket Door Pro – a professional pocket door hardware system specifically designed for rapid installation in commercial applications. The system has been developed using advanced 'push fit' technology allowing for easy and rapid installation. Available in either manual or automatic operation, the hardware is also available as a fully certified fire rated system – to FD30 and FD60 standards. Visitors to the stand will also have the chance to view the company's new Husky Soft Close system – a straight sliding hardware system with integrated soft close and open.

[sales@pchenderson.com](mailto:sales@pchenderson.com)

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Slide Systems manufacture beautiful pocket door solutions here in the UK for ALL standard UK door sizes, with custom pocket sizes also possible. Our kits are supplied with everything but the door – galvanised steel pocket frame, door hanging/running gear and wooden jambs with dust brushes and rubber seals alongside a comprehensive installation guide and UK telephone support – to provide a completely finished product. A range of accessories are also available. We believe that our pocket door kits are not only the best value for money, but also the best quality for a space saving and stylish solution!

**01392 581 081**  
[sales@slidesystems.co.uk](mailto:sales@slidesystems.co.uk)  
[www.slidesystems.co.uk](http://www.slidesystems.co.uk)





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✓ **STRONG.** Our pocket door system comes with a 'full pocket', constructed from specially formed strong horizontal and vertical profiles.

✓ **PEACE OF MIND.** Our comprehensively tested pocket door systems come with an extractable track, maintenance free runners, a galvanised steel frame and are guaranteed for 15 years but tested to 25!

\* Classic singles and doubles

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product experts on:  
0845 4811977  
[info@eclisse.co.uk](mailto:info@eclisse.co.uk)  
[www.eclisse.co.uk](http://www.eclisse.co.uk)



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# Pocketing space efficiencies

Stephanie Lee of P C Henderson takes a look at how increasingly space-constrained builds are driving the trend in pocket doors, and discusses their key benefits and what to look for when specifying such systems

As the number of first time buyers hits the highest levels in over a decade – combined with a major decrease in the size of the average new build home – it's no wonder specifiers are looking for inventive and innovative ways to save space in the home.

A recent report by LABC Warranty shows that living rooms of new builds in Britain are 32 per cent smaller than they were in the 1970s. To coincide with this, a report from UK Finance shows that the number of first time buyers is at its highest point in over a decade – a total of over 365,000 individuals bought their first home in 2017, the highest it's been since 2006.

These recent statistics help to explain the ever-growing trend in pocket door systems as buyers look to find ways to save space in the home.

## Space saving

A traditional swing door can use up to 10 or more feet of valuable floor space. A pocket door system can free up this space by allowing doors to glide along a track and disappear into a cavity wall, out of the way.

Single pocket doors used in smaller rooms hold the most space saving benefits. Spaces such as ensembles, bathrooms, storage areas, walk-in wardrobes, utility rooms and pantries – can all reap benefits from a sliding pocket door. Swing doors can often be inconvenient in spaces such as this, causing difficulties when attempting to open a door inwards.

Swing doors can also be inconvenient in areas where they open onto a narrow corridor or hallway, often causing an obstruction. Pocket doors can solve this by sliding away into the cavity – leaving the corridor completely clear.

## Flexible living

Double pocket doors are also a great way to add a little grandeur and 'wow factor' to a room, or to help divide off rooms in an



open plan design when used between a kitchen and living room. Previously, pocket doors were often used in this way – remaining open during the day and for the serving of meals, then being closed for privacy on an evening for dinner parties.

Ease of access is another notable benefit of pocket doors – an individual living with mobility issues may find a swing door difficult to manoeuvre through, particularly when using a wheelchair. Pocket doors create a completely clear opening allowing for easy movement from room to room.

## Aesthetics

Pocket doors are a great way to add some architectural charm to a room, particularly when combined with the correct type of door. Hardware can be combined with wooden or glass panelled doors enabling specifiers to create a traditional or contemporary appearance, depending on the decor.

## Choosing the right hardware

There are a number of factors which must be taken into consideration when specifying a pocket door. It's important to choose a kit which effectively

**These recent statistics could explain the ever-growing trend in pocket door systems as buyers look to find ways to save space in the home**



accommodates the weight, height and width of a door.

It's also important to understand how the kit works within the cavity – are the uprights made of wood or aluminium? This is a question of particular importance in areas of heavy use.

It should also be considered whether any extra features are required to add to the

refinement of the product. A 'soft close' system can be purchased as an accessory in order to gently decelerate the door into an open or closed position – this minimises slamming which can add to the lifespan of the product.

For the upmost in sophistication, some manufacturers have released automated pocket door kits, which can be activated by the push of a button, remote or even motion detector. In certain applications a fire rated system may be necessary, another option to consider.

### Quality manufacturing

Alongside practical factors such as door weight, size, and the availability of accessories – it's also important to choose a reliable and experienced manufacturer. When it comes to door hardware, quality is of the upmost importance – if you think about how many times a door can be open and closed in its lifetime, it's important to choose a system which is robust enough to cope with this. A good piece of hardware should outlive the lifespan of its owner.

*Stephanie Lee, is the marketing manager at P C Henderson*



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## ECLISSE launches London showroom

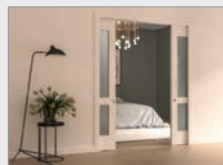


ECLISSE, the renowned brand and global supplier of pocket door systems has joined forces with Italian glass door supplier KARIS, to launch a beautiful new showroom in the Business Design Centre in Islington. Showcasing both its Classic Collection of pocket doors and

Syntesis® Flush Collection of architrave free pocket and hinged doors, the showroom gives the visitor an ideal opportunity to appreciate the design benefits of the company's product range while also understanding more about how its products are assembled and installed.

0845 4811977 [www.eclisse.co.uk](http://www.eclisse.co.uk)

## Rocket Pocket Door Systems



Rocket Pocket Door systems has caused a stir in the pocket door market which has traditionally been divided between the cheaper less complete wooden systems and the more expensive but more complete steel systems. Rocket Pocket has managed to manufacture a full, steel pocket kit which competes on price with the wooden systems. So now full steel pocket door systems are available for everyone's budget. Take a look at the website, you will be surprised just how accessible a great steel pocket door system is!

03309980617 [www.rocketdoorframes.co.uk](http://www.rocketdoorframes.co.uk)

## DirectDoors visualise what is possible



DirectDoors is proud to be the UK's largest pocket door kit stockist and supplier, the company doesn't just supply the pocket system, but it has the largest range of doors shown in real lifestyle settings to allow you to visualise what is possible and all are supplied by the company.

You can purchase its high quality Evokit single and double pocket door kits but also the Absolute-Frameless Evokit range, the latter requires no timber jambs or architraves, just clean sophisticated lines plastered right up to the door. DirectDoors' range doesn't stop there, it offers Unilateral, Telescopic, Glass and Fire Rated pocket doors.

01968 671 681 [www.directdoors.com](http://www.directdoors.com)

## Beautiful pocket door solutions



Slide Systems manufactures pocket door solutions here in the UK for ALL standard UK door sizes, with custom pocket sizes also possible. Its kits are supplied with everything but the door – galvanised steel pocket frame, door hanging/running gear and wooden jambs with dust brushes and rubber seals alongside a comprehensive installation guide and UK telephone support – to provide a completely finished

product. A range of accessories are also available. Slide Systems believe that its pocket door kits are not only the best value for money, but also the best quality for a space saving and stylish solution!

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



03309980617  
[www.rocketdoorframes.co.uk](http://www.rocketdoorframes.co.uk)



**Steel Pocket Door Kits** Quality product at affordable prices

# Airport hotel is soaring success

Up, up and away – GEZE UK has helped a stunning new airport hotel prepare for ‘take off’ with a range of products that have given it a real ‘wow factor’.

The Novotel London Heathrow Airport T1 T2 and T3 Hotel launched in March this year and has spacious modern interiors with a fluid configuration of public areas that make it suitable for travellers and other hotel customers.

Two sets of GEZE Manual Sliding Wall (MSW) systems – consisting of a total of nine glazed panels with two pass doors – were installed, incorporating natural patterns and forms from the air, sky and clouds. They present a showpiece room divider between bar and restaurant areas that allows the floorspace to be opened out or separated for different uses, such as private functions or breakfast service.

The first set of six panels has an overall screen size of 5010mm whilst the second has three panels and an overall screen size of 3294mm demonstrating the bespoke nature of the MSW system both are 2400mm in



height. Each panel discretely locks into the next one via a floor locking device, which is completely hidden from view. A recessed roller track is fitted above to further enhance the sleek appearance whilst its SmartGuide system enhances functionality.

The hotel’s impressive entrance was created by a pair of automatic sliding doors, fitted with pocket screens for extra safety and powered by Slimdrive SL NT operators.

With a height of just 7cm – Slimdrive SL NTs are almost invisible, virtually silent in operation and can move leaf weights of up to 125kg. They are ideal for buildings with high

levels of footfall and a continuous flow of people heading in and out of the building. The glazed doors were etched with spheres incorporating a ‘welcome’ and a Novotel logo. A fretted canopy was fitted over the exterior of the entrance.

Also fitted were 300 TS 2000 NV BC overhead door closers to bedrooms and public areas. These closers are suitable for doors with up to 1100 mm leaf widths and provide fire and smoke protection. They have an adjustable closing force which means that they can be balanced to reduce noise from guests entering or leaving their rooms.

GEZE UK worked on the project with owner and developer Nine Group, London based Konzept Interior Design and architectural ironmongers Franchi Plc of Kent, from its early stages of development. GEZE had worked with the developer on a previous installation at Novotel Canary Wharf and its owners were sufficiently impressed to contact the company to work on this new hotel.

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

## Emergency lighting to BBC’s DIY SOS



As part of the BBC’s *DIY SOS: Big Build* project, Mackwell provided its emergency lighting systems and technical expertise to an ambitious project to create the North Kensington Community Centre and rebuild the Dale Youth Boxing Club which was destroyed in the Grenfell

Tower fire. Mackwell’s non-maintained emergency lighting with LED was specified. The Maxwell XYLUX LS IP65 fitting was used because it can be placed in high ceilings, mid-height ceilings, open areas and escape routes, with optics tailored to the light distribution required.

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

## New wardrobes for the developer market



A new range of contract wardrobes has been developed by Pantera Wardrobes that are ideal for the developer market. The full height hinged or sliding doors are available in a range of modular sizes with matching infill panels for maximum

flexibility, and are available in a choice of finish, colour and handles to create an individual look when planning interiors. Pantera have significant experience in the house-building industry working alongside architects and house-builders from the initial design stage to installation, on schemes across London and the South East.

01634 914108 [www.panterawardrobes.com](http://www.panterawardrobes.com)

## Baffle ceiling for Rome Airport extension



The refurbishment of Italy’s Fiumicino airport has seen the design and specification of a vast sweeping ceiling canopy incorporating Hunter Douglas Architectural’s Tavola Baffle ceiling system. The ceiling canopy, which has been designed to let in great swathes of natural light,

looks down on over 10000sqm of retail outlets on the first floor and a 3000sqm Italian food and beverage street which also features Hunter Douglas Architectural’s Tavola system within the ceiling void. Tavola baffle ceilings are ideal for such environments, creating atmosphere and contribute to a highly efficient and comfortable acoustic environment.

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

## Hardwearing and durable protection



Osmo UK has expanded its Spray-Wax range with the introduction of a new 3010 Natural option. Developed with professional users in mind, Spray-Wax provides a durable, low maintenance and hardwearing surface for all interior wood, including those in wet rooms.

Osmo UK Spray-Wax is based on the original Polyx-Oil finish. Producing a resistance to water and dirt, the product is hardwearing and smoothes the chosen surface. The range includes seven finishes, featuring matt, satin, transparent, gloss and opaque options in Clear, White and Natural tones.

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



# Super modern platform lift design creates seamless finish



W harf Studios consist of a ground, lower ground and basement commercial units in a new residential development. Platform lifts were required to provide disability access to the entrance of each of the seven units. Furthermore, additional provisions for access needed to be achieved inside the units due to the different levels.

Thirdways Interiors appointed the Platform Lift Company to come up with an unobtrusive design solution which would blend in with the modern office interior and mirror its sophisticated up-market appearance. The senior project designer also required that the lifts were glazed and that they complimented other architectural features including the spiral staircase design.

The Platform Lift Company used its in-house design expertise to come up with two different types of lifts to accommodate the different levels of height. To overcome the 650mm height difference from the entrance



down to the ground floor level it was suggested that a scissor lift would provide the best solution. To reach the different levels within the units the Platform Lift Company recommended its Swedish Style lift which comes with its own fire rated lift shaft.

Thirdways Interiors were presented with

the design concept of using a black finish with stainless steel and glass for both types of lifts. Happy that the lifts would remain in keeping with the modern environment and reflect the new design of the offices, the Platform Lift Company were given the go ahead to build seven scissor lifts and seven Swedish Style lifts complete with glazed shafts.

The installation process was handled with supreme care and precision. Each lift was installed using a ramp system instead of a pit to avoid any structural changes or having to dig down. The final results met the brief, the scissor lifts with their black and stainless steel finish with glass panels have remained in keeping with the balustrading at the entrance of the office building. Equally, the platform lifts finished in black with stainless steel match the ultra-modern interior design of the office units and the glass shafts create a seamless finish.

01256 896000 [www.platformliftco.co.uk](http://www.platformliftco.co.uk)

## Bespoke designs to Nando's Sydenham



Known for its unique style, vibrant interiors and eye-catching patterns, supplying tiles to Nando's Sydenham required particular attention to detail from the CTD Architectural Tiles specification team. CTD Architectural Tiles created a bespoke offering from the popular Kursaal range. Creating a statement entrance, a mixture of two colours from the range were used, Kursaal Slate and Kursaal Raven, supplied in specific cuts all fabricated especially for this project. The experienced team at CTD Architectural Tiles prides itself on fulfilling any objective, no matter how unique.

0800 021 4835 [www.ctdarchitecturaltiles.co.uk](http://www.ctdarchitecturaltiles.co.uk)

## Quality Lift Control Systems from DAC



Digital Advanced Control (DAC) is a leading UK Lift Controller Manufacturer. It offers a range of quality Lift Control Systems and ancillary equipment for all types of elevators. DAC has supplied its high performance products to a wide range of clients including Universities, Government buildings, Office blocks, Residential buildings and Local Authorities.

As part of its Quality commitment DAC offers an unrivalled and Industry leading five year guarantee on all its manufactured boards. The company is well known in the Lift Industry for supplying Safe and reliable products with a huge emphasis on Quality engineering.

01327 879334 [www.digital-advanced-control.co.uk](http://www.digital-advanced-control.co.uk)

## Restoration gains a lift



The Chapel at the Royal Victoria Country Park in Hampshire welcomes the public following a £3.5m restoration – with access for people of all mobilities supplied by a Stannah passenger lift. Opened by Queen Victoria in 1863, this Grade II\* iconic building is the last remaining element of the British Army's first

purpose-built military hospital. From the ground-floor exhibition to the first-floor viewing gallery and tower above, the 8-person traction lift, fitted within Stannah's FX structure to protect the ancient walls, welcomes everyone. The Chapel has a remarkable story...

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

## Passion for the KLEEMANN elevator



Going far beyond the traditional lift design, KLEEMANN cultivates a whole design culture. Rather than thinking of the elevator as a box, KLEEMANN Design thinks of it as a unique space inside the building and transforms the whole elevator experience.

Vibrant colours, lighting, exceptional material quality, all contribute to the development of new space qualities that lift the passenger's mood and stimulate the senses. KLEEMANN Design team works closely with the architect to complete his vision, by enriching inspiration and enhancing freedom to create.

[uk@kleemannlifts.com](mailto:uk@kleemannlifts.com)

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# Uplifting research

Nick Mellor of the Lift & Escalator Industry Association (LEIA) advises on the latest standards on lift safety, and looks at some of the developments driving innovative solutions in the market

There have been many changes in the legislative background and standards covering lifts, escalators, lifting platforms and associated equipment over the last few years. Following the new BS EN 81-20 in 2017, several standards in the EN 81 family are being revised to keep in step with BS EN 81-20. What does this mean for architects?

## Regulations & standards

The latest step in creating relevant, up to date standards has been the publication of BS EN 81-20, the main safety standard for new lifts in new buildings. This came fully into force on 1 September 2017 and is now the harmonised standard for the design of new lifts.

In addition to the main safety standards, there are also standards such as BS EN 81-70 for lifts to access buildings for those with disabilities. This standard has recently been revised. The new EN 81-70 includes details of new car sizes which allow turning by passengers in wheelchairs, new requirements for the light reflectance values (LRVs) at lift controls, and requirements for lifts with destination control using new technology such as touch screens.

While BS EN 81-20 covers new lifts in new buildings, there are situations where a new lift in an existing building cannot fully comply. BS EN 81-21 has been revised and provides solutions where the pit depth or headroom available is less than that required on a new build.

## Changes to technology

Not only are the regulations surrounding lifts changing, but the product offerings and technology are increasingly becoming more innovative and high-tech.

Lifts, like other building systems, will increasingly be connected as part of the Internet of Things (IoT). Remote monitoring of lifts is nothing new (there is a standard from the mid 1990s) and many clients specify the use of remote monitoring to give them real time information on the



status of their lifts. This provides the possibility for owners and managers to have better data on the availability and usage of their lifts, and on passenger flows in the building. There are benefits also for maintenance by allowing data from the lift to be monitored, and maintenance calls scheduled, to meet the needs of the equipment and minimise disruption. It is also interesting to see that the EC Machinery Directive is being reviewed for the broader implications for AI, IoT, robotics and cybersecurity.

Lifts are already very energy efficient due to the drive by many manufacturers towards machine-room-less technology (this becomes housed in the lift shaft) using high efficiency gearless traction machines. Standards such as the BS EN ISO 25745 series now provide a standardised method for measuring and classifying the energy usage of lifts and escalators and are referenced from the BREEAM guide. However, while voluntary schemes such as BREEAM have been quite useful, they can be seen to be prescriptive and include

**The key to improving the energy efficiency of lifts is in materials research**

## LIFTS ON SHOW

Liftex 2019 takes place from 15-16 May 2019 at ExCeL, London, and will feature the latest lift technology and solutions. The seminar programme will also address key areas such as legislative changes and their impact on design and specification. For more information visit [www.liftex2019.com](http://www.liftex2019.com)



requirements which do not necessarily optimise the energy performance of the building.

Traction lifts are inherently energy efficient because they use a counterweight, which balances the weight of the lift car, and a proportion of the lift's rated load.

Hydraulic lifts are often seen as not having such good energy credentials but can use less power during standby making them a viable alternative for shorter travel, less intensively used lifts.

The demands of the marketplace and competition between lift manufacturers are set to drive further efficiencies. So, this is one area where the use of statutory regulation is redundant – at least at the level of the lift installation.

The key to improving the energy efficiency of lifts is in materials research. So, while the current energy efficiency of lifts owes much to the development of permanent magnets used in lift machines, who knows what material advances we might see in the future?

*Nick Mellor is managing director of the Lift & Escalator Industry Association (LEIA) and Liftex 2019*

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Resiblock and Pennyfarthing Homes have combined to ensure the protection and stabilisation of paving and roadways at the new Alexandra Meadows development in Hampshire. Following testing by site engineers WSP, Resiblock '22' was

approved to be used at Alexandra Meadows on all the Local Highway Authority roads. The products success at the Bloor Homes site of 'The Greenway' in Didcot, where LHA roadways are also made up of Concrete Block Paving, led to WSP recommending the use of Resiblock '22' to Hampshire County Council.

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