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11 CADOGAN GARDENS, LONDON

A revealing renovation of a boutique Chelsea hotel proves a test for ReardonSmith

THE ROYAL MINT EXPERIENCE

A presentation box of a visitor centre in Wales

Cover

Blavatnik School of Government, Oxford University

The Herzog & de Meuron building's
structure bags an international award
for Pell Frischmann

page 05

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Managing Editor
James Parker
james@netmagmedia.eu

**Advertisement Manager/
Joint Publisher**
Anthony Parker
anthony@netmagmedia.eu

Production Assistants
Mikey Pooley
Shelley Collyer
Rob Duncan
Kim Musson

Editorial Assistants
Roseanne Field
Jack Wooler
Teodora Lyubomirova

Editorial Coordinator
Sue Benson

Contributors
Norman Hayden
Ray Philpott

Sales Director
Lesley Mayo

Sales Executives
Suzanne Easter
Ian Fletcher
Kim Friend
Steve Smith

**Circulation/Reader
Enquiry Service**
Jane Spice

Managing Director
Simon Reed



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

**Advertising &
Administration**
t 01435 863500
f 01435 863897
info@netmagmedia.eu
www.architectsdatafile.co.uk

Press Releases
editorial@netmagmedia.eu



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FROM THE EDITOR



It seems like along with millions across the UK, the country's economy is Just About Managing six months after Brexit, but the combined pressures of wage stagnation and ever-rising housing and rent costs are continuing to bite hard for many. What of the future? Unfortunately Phillip Hammond could do little except offer a series of uncertain scenarios in his recent Autumn Statement. Worryingly, these included a more specific forecast from the Office of Budget Responsibility that due to Brexit, the Government would need to borrow an eye-watering extra £59bn over the next five years.

Other funding measures that he announced were more about investment than damage repair. Hammond and his boss Theresa May are trying hard to deliver 'whole nation' policies that will help the Just About Managings as well as the better off, and the Autumn Statement's ban on letting fees is a concrete example, whether or not industry likes it. The further announcements of Government millions for building 'affordable' homes (including £2.3bn to 'unlock' land, the key stumbling block) are another clear sign of the Chancellor's determination that his predecessor's maxim of cutting national debt is not the route to prosperity.

These announcements don't do anything to bridge the widening affordability gap between wages and cost of living, which some argue helped fuel the anger that led to Brexit (ironically itself likely to lead to higher prices). The small increase in the National Living Wage by Hammond was a drop in the ocean. Housing affordability is going to remain at the core of the debate – as it's unlikely that wages will keep pace with the cost deemed by developers to give them the margins required to make building worthwhile. There may be a rebalancing in prices from a reduced number of affluent overseas buyers post-Brexit, but will this make developers keener to build?

The number of affordable homes built in England this year fell to its lowest level for 24 years, according to the Government's own figures, which is shocking given the demand out there. Half of the numbers were built compared with last year – just 32,110, and the Government has been blamed for not intervening in the housing market, as well as for branding many homes affordable which were not – removing these would mean even poorer figures! Hammond really needs to ensure the Housing White Paper he has promised changes things, and emerges into the light of day quickly.

In the meantime there are some very exciting developments happening in fast, modular prefabricated home construction, including factories having been built by Legal & General and social housing provider Swan Housing. These can often represent good quality, affordable and low-waste housing, far from the problematic prefabs of the past that gave the method a bad name. But they are not what the industry is used to building. And when it comes down to it, will they be able to deliver the profit margins demanded by developers?

Even worse, when you have Ministers like Transport Minister John Hayes sticking his oar in to the debate around what constitutes 'ugly' in construction and broadly lambasting modern post-war public architecture, changing the approach on housing to deliver the sorely needed numbers might be even harder. We need to get real and look at delivering not just thousands more but millions more homes, fast, on brownfield sites, and this will mean new design thinking.

Currently it seems that on the delivery side, there is a lack of a concerted plan.

James Parker
Editor



ON THE COVER...

The Blavatnik School of Government, designed by Herzog & de Meuron, has won a major award for its structural engineer Pell Frischmann. Its superstructure has "stacked toroids offset floor to floor." See facing page.

© Eddie Jump

STRUCTURAL ENGINEERING AWARDS

Aquatic centre spans new distances to win at Structural Engineering Awards

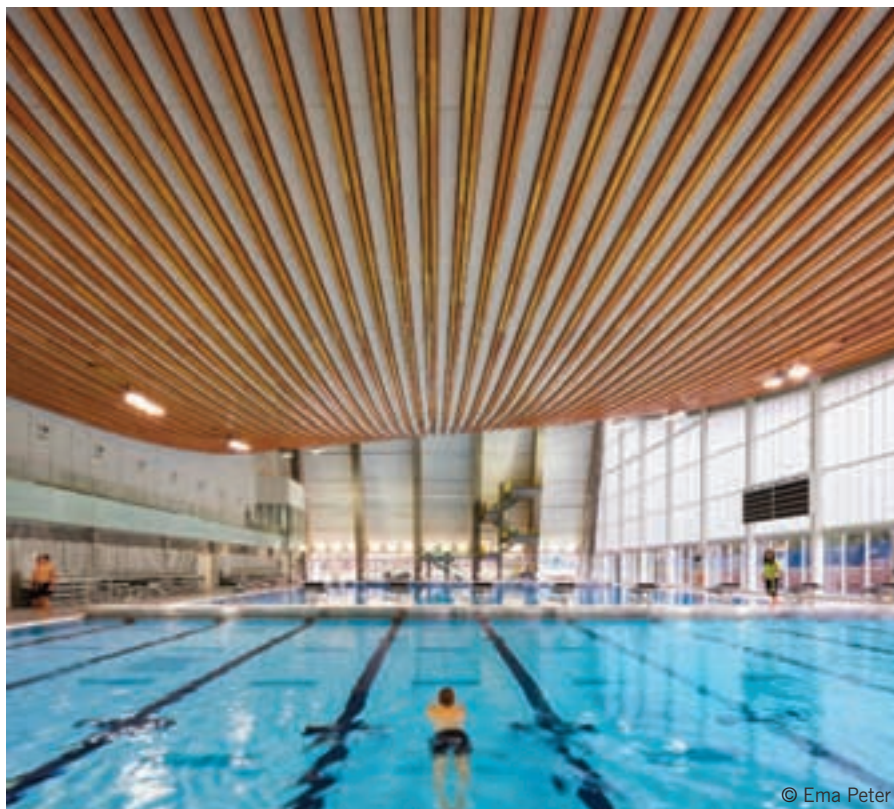
The Institution of Structural Engineers has presented the firm behind Grandview Heights Aquatic Centre in Surrey, Canada with one of the highest accolades in world engineering, The Supreme Award for Structural Engineering Excellence.

The Structural Awards recognise the world's most talented structural designers. Engineered by Fast + Epp and designed by HCMA Architecture + Design, Grandview Heights Aquatic Centre, which also won a World Architecture Festival award for Completed Buildings – Sport, includes what is thought to be the world's thinnest long span timber catenary roof.

The judges commented: "The project's undulating roof elegantly balances structural form with building use and celebrates the expressed materials. The adoption of timber permitted a structural depth of just 300 mm for a 55 metre span – which defies convention and demanded design excellence."

The other awards were as follows:

- **Sustainability:** 5 Broadgate – London, UK (BuroHappold, architect: MAKE)
- **Education or Healthcare Structures:** Blavatnik School of Government – Oxford, UK (Pell Frischmann, architect: Herzog & de Meuron)
- **Pedestrian Bridges:** Elizabeth Quay Bridge – Perth, Australia (Arup)
- **Sport or Leisure Structures:** Etihad Stadium Expansion – Manchester, UK (BuroHappold Engineering, architect: Populous)
- **Small Projects:** Formby Helical Stair – Formby, UK (Webb Yates Engineers, architect: RAL Architects)
- **Small Practices:** Expo2015 Hive – Milan,



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Italy + London, UK (Simmonds Studio, architect: BDP)

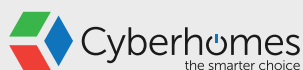
- **Structural Heritage:** Mount Stewart House – County Down, Northern Ireland (Mann Williams, architect: Elphick Associates)
- **Infrastructure or Transportation Structures:** Transformation of Birmingham New Street Station (Atkins)

- **Arts or Entertainment Structures:** Stavros Niarchos Foundation Cultural Centre – Athens, Greece (Expedition Engineering, architect: Renzo Piano Building Workshop Architect)
- **Commercial or Retail Structures:** Torre BBVA Bancomer - Mexico City, Mexico (Arup, architects: Rogers Stirk Harbour + Partners and LEGORRETA)

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EVENTS

TRAINING

Advanced Conservation Course
08 December 2016, Oxford
www.architecture.com/WhatsOn

The Building Regulations challenge: latest rules and guidance
08 December 2016, London
www.architecture.com/WhatsOn

EXHIBITIONS

Carl Laubin - 'A sentimental journey'
Now - 16 December 2016, London
www.plusonegallery.com/exhibitions

Shaping London's future workspaces
Now - 17 December 2016
www.newlondonarchitecture.org/programme/exhibitions

TRADE SHOWS

ARCHITECT@WORK
25 - 26 January 2017, London
www.architect-at-work.co.uk

Surface Design Show
7 - 9 February 2017, London
[www.surfacedesignshow.com](http://www surfacedesignshow.com)

Ecobuild
07- 09 March, London
www.ecobuild.co.uk

The UK Concrete Show
15 - 16 February 2017, Birmingham
www.concreteshow.co.uk

AWARDS

Brick Awards recognise UK's cladding craftsmanship and architecture



Britain's most impressive brick projects were recognised at the annual Brick Awards held in Hilton Park Lane in London on 10 November.

Over 200 entries from the design and construction sector competed across 15 categories including best education, public, commercial and refurbishment project at the Awards' 40th anniversary.

Caruso St John's RIBA Stirling Prize-winning Newport Street Gallery was once again in the spotlight, claiming Best Public Building as well as Brick Development Association (BDA) Craftsmanship Award and the coveted Supreme Award for the overall winner.

The scheme – an extensive conversion of former Victorian workshops into a gallery with brick facades and sawtooth roof in south London – was the only project to win more than one Brick Award. Other notable

projects that received an accolade include:

- Foster + Partners Maggie's Centre building in Manchester (Best Outdoor Space)
- Duggan Morris' New Loom House (Best Refurbishment)
- Gort Scott's 51 Hills Road in Cambridge (Best Commercial Building)
- Cotrell & Vermeulen's Brentwood School (Best Education Building)
- Hawkins\Brown Architects' St John's Hill for housing association Peabody (Best Large Housing Development).

The Architect's Choice Award went to Van Heyningen and Haward Architects for The Whitty Theatre in Berkshire, where bricks were incorporated in the external facade and internally as backdrop to the stage and foyer.

Linden Homes was crowned Best Large Housebuilder and Grangewood Brickwork Services – Specialist Brickwork Contractor.

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SUSTAINABLE SPORTS FACILITIES

Kick-off for UK's first timber football stadium

What's thought to be the world's first football stadium made of timber will be constructed in Stroud, Gloucestershire.

Designed by Zaha Hadid Architects, the 5,000-seat ground will be home to fifth-tier football club Forest Green Rovers and most of the elements will be made of sustainably-sourced timber, including the structure, roof cantilevers and louvered cladding. A transparent membrane will cover the roof to reduce noise and shadows.

ZHA's design was selected after a seven-month tender featuring over 50

entries from around the world.

Jim Heverin, director at ZHA, said: "We are very proud to be selected to design the new home for Forest Green Rovers that will not only be a new stadium but also an important addition for the community.

"The club's heritage, ambition and vision reflect our own, combining the latest material research and construction techniques with new design approaches to build a more ecologically sustainable and inclusive architecture."

Forest Green Rovers' stadium is part of the club's £100m EcoPark development

consisting of various public and private sporting facilities as well as a green technology business park with sustainably-built commercial offices and light industrial units.

Forest Green Rovers chairman and owner of green energy company Ecotricity, Dale Vince, said: "Zaha Hadid Architects has built some fantastic sports stadia and facilities around the world, including one at the Olympic Park in London, they've designed one of the stadiums for the 2022 World Cup, and now they've designed one for Forest Green."



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CLADDING

A coat of many perforations in Portugal



© Claudio-Vilarinho

A perforated mint-green cladding has breathed new life into a university building in Guimaraes, north west Portugal.

Designed by architect Claudio Vilarinho, the complex houses the Institute of Science and Innovation for Bio-sustainability at Minho University.

The prefabricated concrete panels, punctured with asymmetric openings, are strengthened with micro-fibres. They have no conventional reinforcement but prevent corrosion since the ductile material used doesn't crack. The building's skin requires little maintenance and will last longer than

alternatives, according to the architect.

Vilarinho said the facade alludes to titanium nanotubes which are studied at the school. He commented: "They have capacities for re-use and cheap production, in this way becoming an inspiration for an architecture that seeks sustainability as an ideal."

2016 Brochure available



Julius Bahn
OAK BUILDINGS

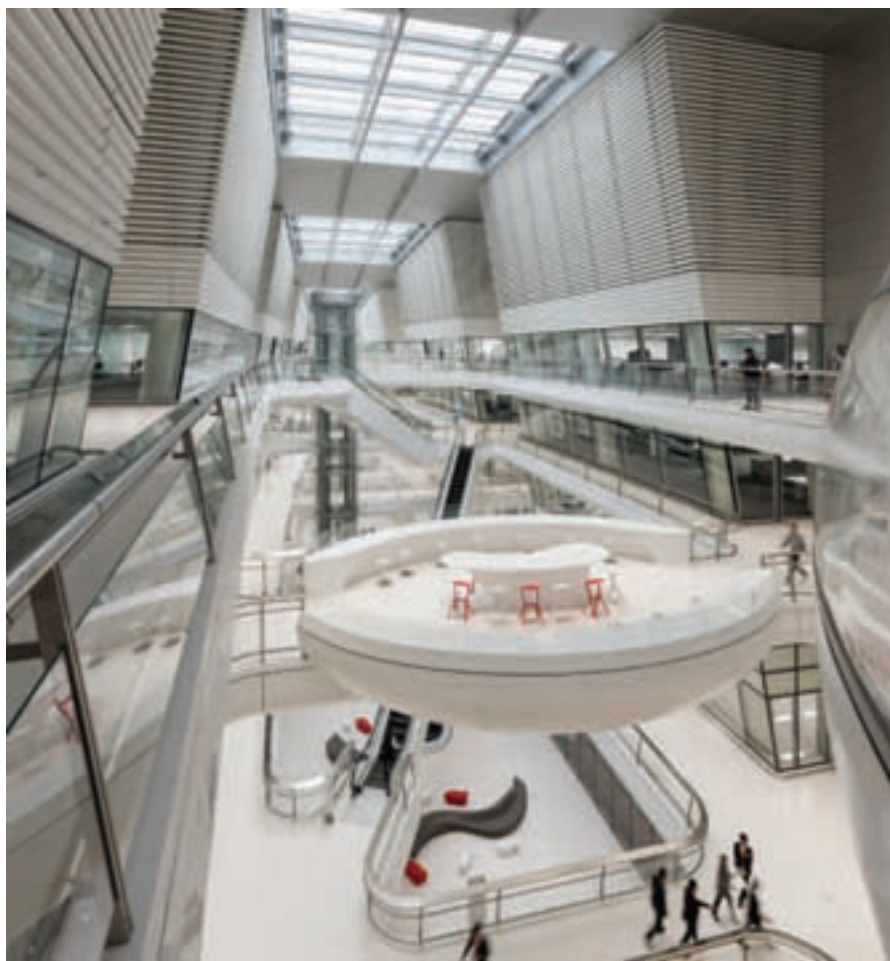


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HANKOOK TIRE R+D CENTRE, SOUTH KOREA FOSTER + PARTNERS

The new research and development centre for Hankook Tire has been unveiled in Daejeon. The new facility forms an integral part of Hankook Tire's "new vision for a corporate culture and brand," and the 96,300 m² R+D centre aims to attract the industry's top talent, providing an inspirational place to work, with light filled offices, advanced laboratories and dynamic social spaces. The architectural vision was to create a sleek, contemporary and mysterious building with a floating silver roof. The building has a dynamic, integrated plan that promotes visual connections between different areas, and the arrangement is highly flexible to enable future changes in use. The centre has attained a LEED 'Gold' rating, and integrates a number of sustainable design strategies.

Ref: 63775



NEW ROME/EUR CONVENTION HALL AND HOTEL, ITALY STUDIO FUKSAS

Italian architecture practice Studio Fuksas has completed the largest building in Rome in over 50 years. The New Rome/EUR Convention Hall and Hotel 'the Cloud' is an eco-friendly, earthquake proof complex that has taken 18 years of planning and construction. It will host auditoria, exhibition spaces and a hotel – amassing 55,000 m² in new public space. The complex "follows the simple orthogonal lines of the surrounding 1930s rationalist architecture," commented the architects. The spaces surrounding the centre will serve as two public squares. "Integral to the new complex and the neighbourhood, these new spaces will provide citizens with places for various leisure and outdoor activities, offering a new meeting area in this busy part of Rome."

Ref: 72272



CURRIE PARK WATERFRONT, FLORIDA CARLO RATTI ASSOCIATI

International design and innovation office Carlo Ratti Associati has unveiled the design of a new masterplan for the Currie Park waterfront of West Palm Beach, Florida, featuring a "one-of-a-kind" floating plaza that utilises some of the same technologies employed in the construction of underwater vessels. The project will transform a vacant area on the coast of Lake Worth Lagoon, the narrow sea channel that separates the two cities of West Palm Beach and Palm Beach, creating a major new complex that includes housing, retail, and leisure facilities.

Ref: 32295



ROYAL SEA PORT, SWEDEN WHITE ARKITEKTER

White Arkitekter has won a competition for a housing project in Stockholm Royal Seaport, together with Midroc. The project is located at the southern portion of Värtahamnen in the Stockholm Royal Seaport, an area that is being substantially redeveloped. The character of the housing estate has many similarities to the old port, with ramps and stairs made in concrete. Three buildings will give a common identity to the block thanks to their brick facades and masonry arches. The district's long-term project is part of the Clinton Climate Initiative that aims to tackle climate change. The development features six to seven floor buildings hosting a total of 90 apartments with construction due to take place between 2018 and 2020. The ground floors are designed as atelier apartments and commerce with high ceilings, "bringing more life to the street."

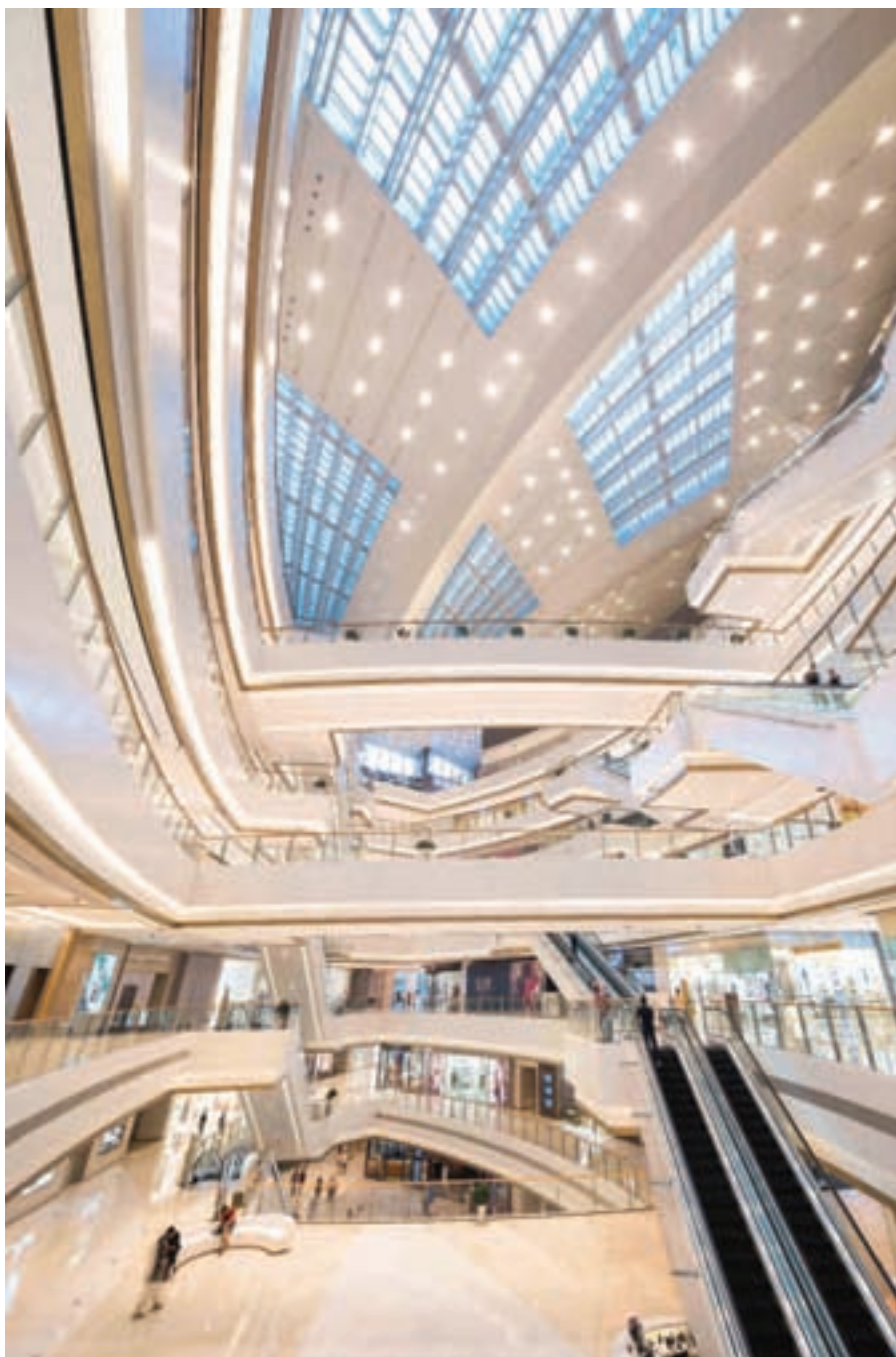
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ADDIRIYAH CONTEMPORARY ART CENTER, SAUDI ARABIA SCHIATTARELLA ASSOCIATI

Rome-based architect Schiattarella Associati has received double recognition for its design for the Center, firstly Concept Winner at the 2016 ICONIC AWARDS held by the German Design Council and also Honourable Mention at the American Architecture Prize (AAP) 2016. According to the architects, the Center "fulfils the client's need for a space where young Saudi art can express itself in 360 degrees." Sited on a rocky escarpment which required several surveys, the building contains "labs for experimenting, small artist shelters and vast exhibition areas."

Ref: 64242



OLYMPIA 66, CHINA BENOV

Construction has completed on retail development Olympia 66 in Dalian, China and it has now fully opened to the public. Benov was commissioned as the interior designer on and delivered the project in collaboration with Hang Lung Properties. Benov's interior configuration has drawn upon the form of the building's roof and its reference to the 'twin carp' symbol. The main retail spine runs through the centre of the mall linking the two large atria which sit on each side, reinforcing the geometry of the exterior. With multiple entrances and a desire to enhance connectivity and integration with the urban environment, the building is "extremely permeable for visitors," said Benov. Supporting this, circulation areas have been designed to allow visitors to "continually flow throughout the development."

Ref: 73082

CPD FOCUS

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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 HII 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

VENTILATION FOR PITCHED ROOFS



Hambleside Danelaw's recently approved RIBA CPD seminar analyses the importance of adequate roof ventilation with a particular focus on pitched roofs. The seminar covers a variety of product applications and selections to combat any potential condensation issues, delving further into types of condensation, which sometimes can be extremely costly. The CPD guides architects and specifiers through recognised British Standard Codes of Practice to guarantee compliance. The seminar identifies a variety of locations on a pitched roof where air can be introduced, products suitable to fill this void and the importance of roofing underlay types. 01327 701 900 www.hambleside-danelaw.co.uk

FREE RIBA-APPROVED CPD SEMINARS OFFERED BY A PVC-U LEADER



The **VEKA UK Group** is offering architects, specifiers, contractors and consultants the chance to further their understanding of PVC-U and its use in fenestration, while simultaneously earning points towards their Continuing Professional Development (CPD) – FREE of charge. The upcoming seminars – to be delivered throughout the country are approved by the Royal Institute of British Architects (RIBA), illustrating their value for professionals in the commercial sector. The free sessions are designed to be interesting as well as informative. 01282 716611 www.vekauk.com

EDUCATION CPD LAUNCHED BY FERMACELL



A RIBA-approved CPD which details how gypsum fibreboard out-performs other partitioning boards has been launched by **Fermacell**. The 45-minute presentation is designed to help architects design more cost effective, low-maintenance and high-performing partitions, understand materials for sustainable education construction, recognise and understand the true maintenance costs of an education building and how better building materials can reduce them in the long term, and how to maximise a project's performance without compromising quality. 0121 311 3480 www.fermacell.co.uk

THERMAL DESIGN CHOICES FOR ALUMINIUM FENESTRATION



'Thermal Design Choices for Aluminium Fenestration Systems' is a new RIBA approved CPD from leading commercial systems supplier, **Aluprof**. The CPD aims to give specifiers the knowledge they need to specify the correct systems and their thermal characteristics on a 'per project' basis. With aluminium systems now achieving Passivhaus levels of insulation it is important to understand how these systems achieve such levels of insulation and how the glazing and structure need to be designed. 0161 941 4005 www.aluprof.eu

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UNDERSTANDING UK BUILDING REGULATIONS RELATING TO RESIDENTIAL VENTILATION



This CPD from **Airflow Developments**, discusses the reasons why we need to improve indoor air quality in residential buildings and the Building Regulations that need to be adhered to for delivery of an effective, compliant ventilation strategy. The course will cover the following topics:

- Building Regulations and how they apply to the specification of a ventilation system
 - Understanding Compliance Guides and their place in the specification process
 - Good, better, best – From a simple extractor fan How Mechanical Ventilation with heat recovery can provide the complete ventilation solution
 - A system is only as good as the ducting installation – The do's and don'ts of installing a system
 - Sign off by Building Control is mandatory – How to comply
- Advise clients on the aspects of a poor indoor environment that can effect occupant health and degrade the fabric of a building. Explain the principle of operation of a Mechanical Ventilation with heat recovery system and where it will provide the most suitable ventilation solution. Fully understand that proper attention must be paid to the correct installation of ducting and the consequences in energy loss and fan performance when it is not. An overview of how to commission a fan system so that 'Installed Performance' standards are met and Building Control will sign off the project. 01494 525252 www.airflow.com



VIEW POINT

Nigel Ostone of Hawkins\Brown Architects and chair of the RIBA Client Liaison Group discusses the group's just-published industry survey, which has important revelations on what architects do well, but also what they must improve on

The best projects generally come about where the client/architect relationship is strongest, and for meaningful dialogue to occur there needs to be trust and respect within the project team. On Here East, an Olympic legacy project (pictured on page 16), Hawkins\Brown worked side by side with the client – stripped of badges and openly exchanging and challenging ideas. Consensus was built in a shared spirit of open dialogue. This recognition – demand even – that all those around the table can and should contribute to solving the problem was central to the success of the project.

This approach is unusual though, and poor collaboration is often diagnosed as a cause of the construction industry's epidemic of low productivity, low predictability, high fragmentation and lack of leadership. Report after report has confirmed the diagnosis and suggested cures, but in practice progress has been frustratingly slow and the industry appears resistant to real improvement.

Perhaps that's because collaboration is primarily about behaviour rather than something that can be fixed with technology. Protocols and tools help but it is as much about trust, cooperation, empathy and communication – in other words, people skills and human relationships. And as any relationship counsellor will tell you, the first step to healing a bad relationship is to listen to your partner and acknowledge their gripes.

We knew there were specific challenges from previous research, but did not know their true shape or size. Hence the RIBA Client Liaison Group's inaugural – and unprecedented – Working with Architects survey. It asked clients how satisfied they were with their architects on a specific job, seeking ratings on a range of technical

output and process management measures. As such, it could be the first, admittedly tiny, step on the path to healing the kinds of rifts that typify our industry.

In the conservative world of construction, this is revolutionary stuff. For professionals to invite criticism from clients is brave. High design quality, technical excellence and infallible expertise are the cornerstones of architects' deal with society, and they cling to them as facts. It takes a grown-up dose of humility even to conceive of a survey that calls these assumptions into question. But there really is no alternative: a state of denial is no way to survive, let alone thrive.

Just under 1000 people responded to the survey, roughly a third of whom were private domestic clients, a third commercial clients, and a third contractors. There was an even spread of sectors and building types, procurement routes, contract values and so on, making the sample relatively representative of the variety out there.

And the survey said...

The survey's findings are generally good news. The client body is very satisfied with our technical output. As ever with these surveys, though, the less good ratings grab our attention, as that suggests room for improvement. This one is no different.

The big finding is that the section of respondents who are most dissatisfied with us is contractor clients – so much so that we have treated them as a distinct market segment in the survey. Two opinion pieces in the report, one by Dale Sinclair, an architect with AECOM, the other by Paul Nash, President of the CIOB, attempt to explain why this is.

For Sinclair this result is no surprise, particularly if the architect is novated to the contractor. He pins the blame on proce-

Poor collaboration is often diagnosed as a cause of the construction industry's epidemic of low productivity, low predictability, high fragmentation and lack of leadership



It takes a grown-up dose of humility even to conceive of a survey that calls these assumptions into question

dural glitches, implying that architects should shoulder much of the responsibility for putting them right. His hit list includes the relationship in D&B contracts between architects and subcontractors, quality assurance at the deliverable interface, how we communicate programme and design intent, and the need for responsibility matrixes.

Nash's viewpoint on the other hand is at pains to recognise the need and value of architects. Skills in developing the brief, unlocking sites and negotiating the planning maze create real value. Like Sinclair, however, he sees things coming unstuck later on when architects and contractors interact. At this point it is all about value preservation. He implicates contracts, contractors' need for the design to be frozen, and, as he puts it, "the softer skills that underpin collaborative behaviours."

He also identifies differing attitudes to risk. Whereas architects are charged with looking at the big picture and are able to contemplate cost-benefit equations and design iteration, contractors are constrained by having guaranteed a fixed price and completion date. Focused (or blinkered, depending on your perspective) in this way, contractors' only project currency is risk management. These differing mindsets sabotage the chances of effective collaborative behaviour that only the most empathetic participants can overcome. There's a strong suspicion that architects don't understand

this or take it seriously enough.

Less disastrously, and in marked contrast to what they think of architects' technical skills, clients across the board find architects' process management skills merely adequate. This validates contractors' concerns to an extent. They are unusually dependent on, and thus sensitive to, good process management. It seems likely that sharpening up on efficiency, dependability, accuracy, and timing could yield strong returns for architects so inclined.

No matter how architects respond to the survey, perhaps the most hopeful finding concerns follow-up. Architects who follow-up when not contracted to do so are disproportionately highly rated compared to those who do not. If that wasn't persuasive enough, architects who do not follow-up are disproportionately poorly rated compared to those who do. Given that we get most of our work through repeat clients or personal recommendations, it would seem madness not to formally include post-completion follow-up as standard into our service offer. Certainly Hawkins/Brown will be upping the ante on this front going forward.

To find out more about the RIBA Client Liaison Group or to download a copy of the report free of charge, visit www.architecture.com/RIBA/Professional-support/RIBAForclients

PRACTICE PROFILE

2020 Architects

Norman Hayden meets a Northern Ireland team with a clear vision of the future

To produce a much-lauded conversion, have it featured prominently on television, and then win an award for it has to be a dream for most architects. This was the reality for Northern Ireland-based 2020 Architects whose conversion of a century-old cottage into a spectacular modern home landed the project a slot on Channel 4's *Grand Designs*.

The practice transformed a blacksmith's forge set in an Area of Outstanding Natural Beauty at Ballymagarry on the County Antrim coast.

The architects used a mix of traditional stone and modern materials and achieved a modern, sustainable and super-insulated straw bale and timber frame extension, nestled into the contours of the rural site.

Presenter Kevin McCloud called 2020 "the most innovative, forward-thinking, progressive architects in Northern Ireland." Moreover, the practice received a 2016 RICS Award for Outstanding Residential Property.

Richard McKinney, 2020 director and senior architect, explained why this has been the project which has given the firm the most satisfaction so far: "The typical role of an architect is to design, detail and periodically inspect the building through the construction process. However, on this project, we were able to get our hands dirty and realise the progress of the building on a daily basis. It was a rare opportunity to be involved both mentally and physically in a project."

McKinney feels the Ballymagarry house best reflects the company's ethos. "The 2020 approach to design is rooted in providing architecture that our clients feel at home in. It is design that responds specifically to its site context, while providing the necessary technical background to allow for a sustainable lifecycle for the building and provide a comfortable and healthy living environment for its occupants."

He adds, "We take pride in designing buildings where our clients have been involved in the design process, giving them a sense of ownership in the final product."

As senior architect, Richard co-ordinates all aspects of new build projects – from concept, design and right through to construction. His attention to detail has ensured projects run seamlessly, while his management and aesthetic treatment of each project has been key to the rising popularity of 2020 Architects throughout Ireland and the UK. Recently, he set up the practice's sister construction company, enabling 2020 to offer clients a one-stop shop.

The 11-strong team places a focus on sustainability, and an environmental ethos that sees beautiful architecture as buildings that look as if they have always belonged in their surroundings.

There are two other directors in the 2020 boardroom – Michael Howe, the directing senior architect, and office director Gareth



CLOCKWISE FROM TOP

Directors Gareth Boyd, Richie McKinney and Michael Howe

Boyd, who liaises with and co-ordinates all staff members to ensure work is delegated, priced and time-scaled correctly. Boyd also specialises in drawing up and preparing tender applications and presentations, a process enhanced by the installation of a dedicated Virtual Reality Suite.

The practice views valuable architecture as developing from an understanding of the local context, its culture, history and, most importantly, the clients themselves. It aims to pursue an open and collaborative process to ensure that each project is tailored to the needs and requirements of individual clients.

The practice's growth meant they had to move to bigger premises, and its new office in Ballymoney, County Antrim, was itself a renovation project which enabled the architects to put their own stamp on the workspace.

By stripping the entire interior back to basics, the design team exposed the original features of the building, including hand-made red brick from the River Bann and original steel beams. The block-work, alongside the steel, gives the office a rustic, warm appeal to balance the minimalistic, industrial look.

Another major residential project for the firm saw it design a home with two key components: a two-storey, barn-like element amalgamated with a traditional, single-storey unit – a protruding stone wall marrying the two. The large curved zinc roof enables this property to discretely nestle into its location. This house

It is human nature to strive for the best deal and the lowest cost. However people fail to see that it can be a false economy

Richard McKinney

features double-height glazed living accommodation with access to the garden.

The 2020 portfolio also boasts a minimalistic and elegant house at Ballymacrae, Portrush, also in County Antrim, offering panoramic views across the North Atlantic coast. The two-storey family home is designed with a striking white glazed box that references mid-20th century Irish house design, and gives the appearance of floating above the ground using a plinth of dark brick. Another modern home the county, this time in Carrickfergus, was designed on an elevated, split-level site which utilises stone and modern design concepts including a corten steel box window and terrace roof.

Currently, the 2020 team are working on two major restorations in County Antrim. The conversion of an old school house in Rasharkin has seen the exploration of concepts and design initiatives to preserve and maintain the uniqueness and character of a listed building, while modernising the property and bringing it up to modern-day standards.

The restoration of a 19th century Corn Mill in Templepatrick has required a sensitive design, being a Historical Monument of Irish

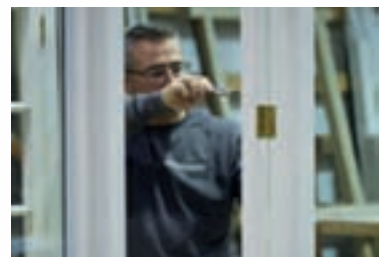
heritage. All proposed design work had to meet regulations set out by the Historical Monuments Unit.

What does Richard McKinney see as 2020's biggest challenges? "The 'new' 2020 was born in the depths of the last construction recession and we are very aware of how fragile the industry is despite its recovery and recent growth," he explains. "It is human nature to strive for the best deal and the lowest cost. However, what people fail to see is that it can be a false economy and can end up compromising on the level of design or detailed finish."

What then of the future? "We have worked tirelessly over the past four years to build the practice and client base to what it is today," he adds. "Even so, the work will continue to expand the current workload and adapt to the changes in the industry. The installation of our fully-immersive and dedicated Virtual Reality Suite will allow our clients to fully engage in their design before a single brick is even laid." ■

2020 VITAL STATISTICS

- 11-strong team
- Forge conversion gets TV coverage
- 2016 RCIS Award
- Context at the heart of design
- Virtual Reality suite



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Hundreds of events mark the UK's first ever Construction United Week

This October, those with an interest in the UK's construction sector may have been more interested in taking tea, kicking footballs and presenting in schools than designing and building the structures of tomorrow.

That's because the 17th-23rd October saw more than 130 events take place across the UK, with all areas of the construction sector joining together in order to raise money for good causes.

Created in order to provide a unified voice for the sector, and to tackle some of the biggest issues it faces, Construction United marked its first year by asking its partners and the public to host a fundraising event during one week of activity. The initiative's partners, including main contractor Morgan Sindall and leading product distributor SIG, joined forces to encourage participants to host fundraising events across the UK.

The NEC in Birmingham proved a hive of activity, with a number of Construction United partners taking part in UK Construction Week festivities. As well as inspiring talks from the likes of Time to Change, one of Construction United's partners, the event saw a unique five-a-side football tournament taking place featuring a number of teams from across construction.

The sports didn't stop there, with a number of challenges undertaken across the UK. While football proved popular, a number of cycling and rowing races also took place, as well as a fencing tournament.

Perhaps the most popular event across the week was the 'Big Brew Break', a tea break that encouraged team members to engage in conversation, with the aim of building team bonds and tackling mental health issues in the workplace, an issue that transcends the construction industry.



Another major issue that Construction United sought to tackle the skills gap in construction by encouraging young people to consider a career in the field. Several 'Construct a Career' talks took place across the country.

To date, the efforts of the industry have raised thousands of pounds for MIND, the Prince's Trust and CRASH – the construction industry's charity for the homeless.

Construction United is set to be even busier and bigger in 2017, and is actively looking for more partners and participants. For more information on Construction United, and to sign up, please visit the website, follow us on Twitter, Instagram and on Facebook.

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Kawneer strikes a global first



A leading UK manufacturer Kawneer has become the first supplier of architectural aluminium products in the world to achieve BES 6001, the framework standard for the responsible sourcing of construction products. So ground breaking was this accreditation that the governing body, BRE Global, had to create a category especially for the product

group. Kawneer's overall assessment of 'Good' for the sales, design, manufacture and supply of aluminium architectural products was carried out by the BSI and now sets the benchmark for others.

01928 502500 www.kawneer.co.uk

Firestone announces SPRA membership



Firestone Building Products, a global leader in the manufacture of EPDM (Ethylene-Propylene-Diene rubber) roofing membranes, has joined industry association SPRA (Single Ply Roofing Association). The move follows significant growth in the popularity of EPDM with both specifiers and contractors over the past few years, which has resulted in SPRA extending its membership to ensure it fully

represents the high quality single ply industry and is able to champion quality and standards for the EPDM market.

01606 552026 www.firestonebpe.co.uk

DRU dealers inspired by Spartherm HQ



DRU fireplace retailers from across the UK recently enjoyed the expertise and hospitality of German wood stove manufacturer Spartherm in a visit to its headquarters in Melle. Following the merger of DRU

Verwarming and Spartherm, DRU has now

become the principle distributor for Spartherm products in the UK, and has embarked upon the task of building an effective distribution network. The event consisted of guided tours of Spartherm's state-of-the-art manufacturing facilities to help DRU and its dealers develop the market for Spartherm in the UK.

0161 793 8700 www.drufire.co.uk

New LED lighting specification guide



Luceco has proudly launched a brand new publication demonstrating the range and diversity of its LED luminaires. The company has also showcased many new fittings, serving applications across varied industry sectors. Notable luminaires such as the High Efficiency Backlit LuxPanel, boasting a market leading efficacy of 147 luminaire lumens per watt and

the Platinum Downlight are featured, plus the new Epsilon, enjoying a unique and architecturally pleasing design with an elegant aesthetic profile, offering variation from flat panel concept.

01952 238100 www.luceco.com

Hybrid receives award after award



Mitsubishi Electric's unique Hybrid VRF (Variable Refrigerant Flow) system has received further industry recognition by winning the Commercial Air Conditioning Product of the Year, at the HVR Awards 2016. This comes

straight off the back of securing the Award for the Air Conditioning Product of the year (System or Standalone) at the RAC Cooling Industry Awards in September. And the product has also been shortlisted as a finalist in the National ACR & Heat Pump Awards being held in Birmingham in January 2017.

01707 278772 www.hybridvrf.co.uk

Architects Datafile website



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

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Highly successful Schöck thermal break workshop at the IStructE

Professor Maxwell Hutchinson, past President of the Royal Institute of British Architects, radio broadcaster and television presenter, was on fine form as an insightful and entertaining keynote speaker for the 'Designing Effective Thermal Breaks' workshop at the Institution of Structural Engineers in London last month. The event, which was organised and hosted in the main IStructE theatre by international thermal break specialists Schöck, was extremely well received by a large audience of predominantly structural engineers, along with architects and contractors, from over 30 different companies.

As Professor Hutchinson, still an active architect with his own practice, stressed during his opening session: "the topic of thermal bridging is now becoming more and more prevalent and it has never been more essential to take the time to understand how to calculate and design effective structural thermal breaks".

The various sessions covered a number of



specialist subjects, including how to achieve optimum thermal break solutions at cantilever connections; deflection calculation using market software and services; and an understanding of the latest Schöck software.

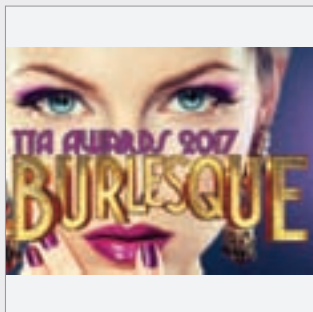
There was also a demonstration of other helpful Finite Element Method software; and an overview of additional tools and software currently available on the market.

UK Managing Director for Schöck Ltd,

Chris Willett (right of picture during his introduction to Professor Hutchinson seated) comments: "We were delighted by the numbers and general audience response to the workshop. It is an ideal way to get across some quite complex issues and we will be holding more of this type of event next year, including an architect focussed workshop".

01865 290 890 www.schoeck.co.uk

Time to get your entries in for TTA Awards 2017



There is little to beat the adrenaline-charged thrill of going up on stage to collect an award at the industry's 'night of the year'. Those who have been in the fortunate position of achieving the recognition of an award can tell you what it feels like. If your business has achieved something to be proud of in the past year, whether it is a particular initiative, a new product, a project or a member of the team who deserves special recognition, you should enter the Awards. It is now time to get working on those entries – you ain't gonna win it unless you're in it! Have a think about which categories you can enter – and you have until 31 December to submit your entries. The full category details and the rules are available on The Tile Association Awards website. There are some changes to the categories this year, for example the popular Best of Use of Tile in the Domestic Sector has now been split into two categories – Kitchen and Bathrooms/Wetrooms, while there is a new category of Best Ancillary Product – this is to give a better chance in the Awards for all those suppliers of adhesives, grouts and tools.

0300 365 8453 www.tiles.org.uk

Kährs Design Studio opens in Clerkenwell



Kährs has opened its new Design Studio in Clerkenwell, London's architectural and interior design district. Located on Albemarle Way – with a roof terrace overlooking The Priory Church of the Order of St John – the Design Studio will provide a central hub for Kährs award-winning wood flooring range. It will also showcase décor styles, furnishings and heating technology from brand partners – Earthborn, BoConcept and Nu-Heat – with Kährs' resident interior design team on-hand to provide help and expertise. Within the inspirational space, Kährs' wood floors will be shown in room settings, with a strong focus on colour. Claypains from Earthborn's palette of 72 colours have been chosen to complement the nature-inspired interior, whilst carefully chosen pieces from BoConcept's furniture range will further reflect the contemporary Scandi-style. Meanwhile, Nu-Heat underfloor heating, installed throughout, provides a working demonstration and comfort for the winter ahead. Throughout the coming months, Kährs will host a series of pop-up events at the new Design Studio, which is open to the design community by appointment – from 9am to 5pm, Monday to Friday.

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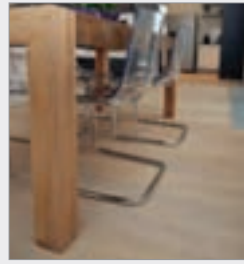
YOUR STYLE



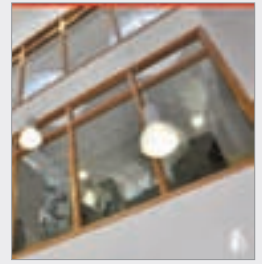
Frontier Pitts PAS 68 Compact Terra Barrier, with a SMT foundation specially designed by a third party Consulting Civil Engineers, was the specified Hostile Vehicle Mitigation (HVM) solution for Westminster Abbey. Successfully impact tested to the latest BSi PAS 68:2010 specification, Westminster Abbey's Compact Terra Barrier has been designed to follow the stringent heritage design style employed throughout Westminster.



More and more architects and builders recognise that using **James Jones & Sons' JJI-Joists** to construct walls and roofs gives the opportunity to maximise the insulation they are able to incorporate into a building. The shape of the JJI-Joist, with its 9mm OSB3 web means that cold bridging is reduced and the wide choice of joist depths make it easy to choose a specification that meets the specific design requirement to suit the building and location.



Osmo UK, the eco-friendly wood and finishes expert, offers architects and designers a unique looking and aesthetically pleasing wooden floor. Pre finished with Osmo Polyx®-Oil, the Harfa flooring range from ESCO flooring is the ideal choice for anyone who is looking for a statement floor. Harfa has been designed with a rough-sawn treatment and has been enhanced with cross-wise cuts that are grooved in the surface with great care.



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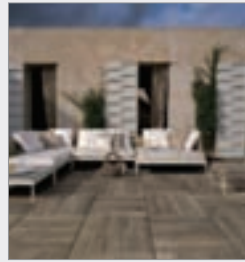




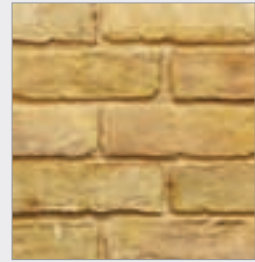
The Penman Collection from **Percy Doughty** presents a unique range of beautifully crafted products. These include traditional cast iron inserts, hand crafted mantels, fires and stoves available in a variety of fuel options. Since its introduction in 2009 the range has been established as a premium non internet range, built on over 60 years of experience in the fireplace industry creating high quality stylish and functional products.



As a market leader in the supply of dried aggregates for use within resin systems, **Long Rake Spar** works with the UK's main resin manufacturers who regularly utilise Long Rake Spar aggregates within their surfacing. The prestigious National Horse Racing Museum in Suffolk recently benefited from the installation of Addagrip's Terrabase Rustic resin bound surfacing which features beautiful natural aggregates from Long Rake Spar.



The Deck Tile Co's Levato Mono Porcelain paver system is designed for fast, cost effective installation over most surfaces including; single ply membranes, roofing felt and other delicate waterproofing systems. The 20mm thick porcelain pavers are also available in larger formats, are highly abrasion and stain resistant, fire and frost proof and achieve R11 slip resistance – required for outdoor use. Ideal for residential and commercial use.



The Yellow Stock brick slip from **Imperial Bricks** has been selected as its Product of The Year. Handmade using traditional techniques, these brick slips can be used externally or internally to replicate authentic period features or create a more contemporary loft house look. By using slips, the colour blend and texture of traditional London brickwork can be recreated with the additional bonus of faster installation. Imperial Bricks has 35 styles available.

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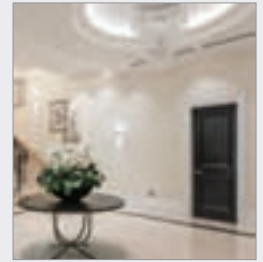
The Biodigester 'T' range from **Burnham Environmental Services Ltd** caters for 6-42 people and larger Biodigesters are available for up to 2000 people. All Biodigesters are suitable for variable loading. The 'T' range Biodigester has been tested to EN12566 Pt 3 and has a CE Mark. Owners are impressed by the limited maintenance required, infrequent emptying intervals and the 'Odour Free' totally aerobic process.



Docherty Group has introduced its 'HIPER' high performance heat interface unit. Installed in shared residential buildings, the HIU distributes heating and domestic hot water from a central plant system to individual properties. By removing the need for each area to have a conventional boiler, gas flue and hot water cylinder, the interface units reduce build costs. With the HIPER HIU, landlords can integrate renewable energy sources into the system.



A restoration project featuring **Earthborn** paints has won two categories in the prestigious 2016 Daily Telegraph Homebuilding and Renovating Awards. Ecopro Emulsion is a high performance, environmentally sound alternative to conventional emulsions. Claypaint maximises the natural properties of clay, producing a high performance, highly breathable paint. Both paints are EU Ecolabel approved and contain no oils or acrylics.



Door manufacturer **Ahmarra Door Solutions** has supplied bespoke panel doors for Westbourn, a newly-built luxury mansion in the Surrey countryside by luxury property developer, Hencan. The Artisan range has been designed specifically for the luxury residential sector and offers a wide choice of door and panel designs and additional joinery components. You can view the Artisan Panel Door Collection brochure on the company's website.

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As part of its portfolio **Century Stone** is an exclusive representative in the UK and Ireland for Eldorado stone. The texture and size of the stone profiles make the appearance to be believable as it takes the form of a natural stone then hand painted piece by piece by highly trained Eldorado

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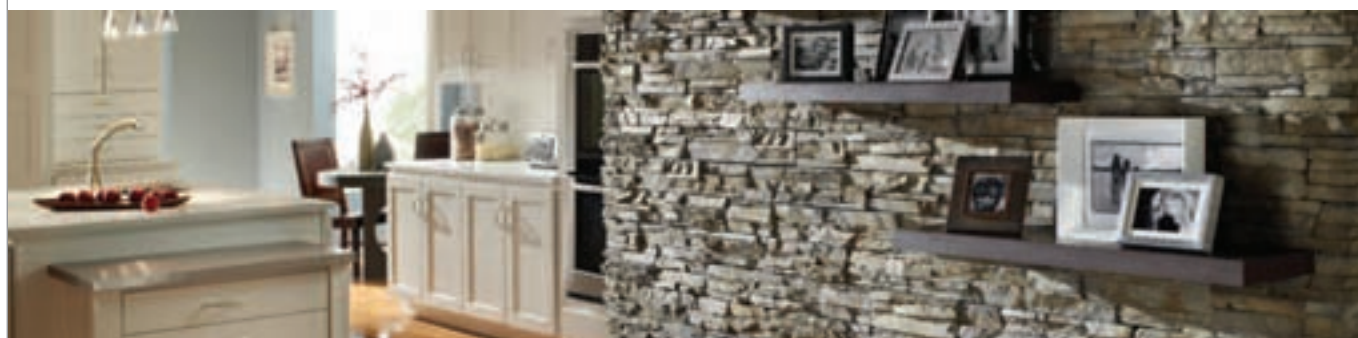
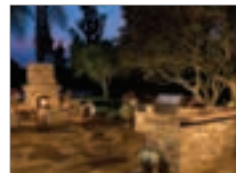
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The objective of this seminar is to offer a brief update on recent developments in building science, with an emphasis on airtightness in buildings and its importance for energy savings and moisture vapour transmission. The author's Canadian perspective also provides a look at how these issues are handled elsewhere



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BUILDING
PROJECTSTHE ROYAL MINT EXPERIENCE
LLANTRISANT

A case of presentation

Rio Architects has brought some creative sparkle to its design for a visitor centre near Cardiff which shines a light on the work of The Royal Mint. Ray Philpott investigates

For many centuries The Royal Mint has been producing coins that are part of everyday life in this country and abroad.

Yet, while its name is familiar, knowledge of The Royal Mint's essential role in the nation's development and economy has until recently remained the province of the body's employees and various academics and historians.

Now, however, it is proactively encouraging people to find out more about its history and its current operations in this new building in Llantrisant, south Wales.

Opened this summer, The Royal Mint Experience includes a tour of the money-manufacturing factory and a sophisticated interactive exhibition area within the Rio Architects-designed building.

Boasting bold, smart installations with artistic lighting and interactive audio-visual technology, the exhibition area gives visitors the chance to discover the role of this great British institution in an interesting and engaging way.

When it came to the design, The Royal Mint wanted an attractive, inspiring single-story building, making a bold visual statement externally and offering a stimulating experience internally – and one that could be built quickly.

For Cardiff and London-based Rio Architects this meant undertaking considerable background research in order to gain an in-depth understanding of exactly what The Royal Mint does. A diligent approach that saw it win a limited competition in 2012.

The basic concept behind Rio's solution was to create an envelope that is essentially a giant, shimmering 'gift box' containing treasure – the history and essence of The Royal Mint – within.





The design concept was to clad the building in an iridescent, tessellated pattern comprising identical irregular hexagons

Inside, the multi-million pound rectangular, largely metal-clad building features a variable-height entrance and reception area that literally sparkles with light, leading off to the exhibition tour and gift shop, a 60-seat cafe with external courtyard, educational facilities and offices.

Fantastic creations

Like many striking buildings, The Royal Mint Experience seems effortlessly straightforward, bold and readable to the onlooker, but as founding director Richard Roberts says, “the devil is always in the detail.”

He explains: “As part of our intensive research we carefully considered all the manufacturing processes. We saw how they make the dies, how the engravers work and the way the designers work the metals.

“It struck us that they make these fantastic creations and put them in highly attractive presentation boxes and that gave us the idea for the gift box concept. The challenge was creating a striking and attractive envelope that reflects the essence of what goes on inside.”

While touring the production process, the team witnessed the copper and silver blanks cascading off a conveyor.

Roberts says: “We were struck by how the coin blanks seemed to project individual colours creating a dazzling array of different effects, depending on how they caught the light. We were determined to somehow capture the essence of that process on the envelope of the building.”

Their design concept was to clad the building in an iridescent, tessellated pattern comprising identical irregular hexagons.



After exploring a multitude of different options for cladding material, the architects chose Rimex, a specially treated colour-tinted stainless steel with reflective properties.

Rigorous trials carried out by the design team led to the selection of four differently coloured and textured panels to be applied in a random-pattern.

Architect Irene Suarez-Jimenez takes up the story. “Our cladding concept is essentially an abstracted reflection of the coins minted at the factory that captures the changing hues associated with cascading coins, so the choice of material was extremely important.

“Rimex is an amazing product that constantly changes its appearance under different lighting and atmospheric conditions and even the angle it’s viewed from. It

complemented our vision for the facade perfectly.”

Given the complexity of the patterning, the team employed Revit BIM software to 3D model the design. Nevertheless, randomising the position of each panel within the facade to generate an abstract appearance of a ‘pocket full of change’ took hours of careful deliberation.

Gareth James, the project’s architectural technologist, says: “It was challenging to detail, but Revit enabled us to transfer our concept into accurate 3D models, to visualise the scheme for the designers and stakeholders in a recognisable format, and co-ordinate all the relevant building elements.”

James adds: “Each panel had to be positioned extremely accurately, which brought its own challenges, given the important

Given the complexity of the patterning, the team elected to employ BIM software to 3D model the building’s design



Here and there, seemingly random single and small clusters of hexagonally shaped windows punch through the facade allowing in pockets of natural light

FAST FACTS

Onsite work commenced: May 2015
Construction period: 44 weeks
Practical completion: April 2016
Stainless steel tiles: Rimex
Projected visitors: 135,000 per year
Building footprint: 1,700 m²
Size of site: 1.88 Hectares
Parking spaces: 168

interfaces with other building elements and the fact that the pattern had to wrap around corners and across doors.”

The team worked closely with the cladding specialists Richardson Roofing, who skilfully installed the design, getting corner and entrance panels pre-shaped at the factory and carefully fixing each panel to the metal sub-frame, ensuring a 10 mm tolerance gap.

The flat-roofed structure sits on pad foundations with a steel frame behind a pre-cast concrete plinth, while the cladding is mounted on metal-faced composite cladding panels with the bottom rows of plates skirting over the top of the precast plinth.

Transformed

Moving inside, the facade pattern is carried through into a different material at the recessed entrance, forming an abstract version of the pattern on the stone-clad walls of the reception and circulation area.

Roberts says: “The entrance draws you in because the soffit slopes down and the walls narrow as you move towards the main doors. Once through, the soffit and walls open up again into the central spine – the gathering space.

“There, circular rooflights deliver pools

of daylight producing interesting dappled-light effects, while randomly positioned and sized coloured LED lights accentuate this main circulation spine.”

As you progress towards the middle of the spine the ceiling falls and the walls narrow again, channelling people towards the exhibition area. Alternatively, visitors can choose to access the cafe and educational spaces which open up directly off the spine. At the far end, the spine expands once more to create a large area for accessing the tour beyond.

Here and there, seemingly random single and small clusters of hexagonally shaped windows punch through the facade allowing in pockets of natural light.

However, the exhibition area is mostly dark with accentuating artificial mood lighting to enhance the displays, created by exhibition specialist Mather & Co. “Mather’s design needed to work hand in glove with our architectural concept so there was a considerable amount of interface between us. The result speaks for itself – the exhibition compliments the building exceptionally well,” adds Roberts.

The single-storey building is actually double-height with a dropped internal plant well. This permits services and plant to be located out of sight, giving the building its clean profile.



This recess also ‘hides’ a photovoltaic array, which is one of the building’s sustainable features.

“Although mechanical ventilation and underfloor heating have been used, the building’s efficient footprint, super insulated facade, minimal glazing to limit solar gain and the introduction of opening clerestory windows for natural ventilation to the cafe and education rooms have all been employed to minimise the building’s reliance on exhaustible energy.”

Exterior and landscaping

Looking from outside, the building’s cafe features a floor to ceiling glazed frontage which opens up onto an external courtyard paved with hexagonal granite sets.

The external landscaping of the venue needed some considerable thought as The Royal Mint wanted the building to be seen by passing traffic using the adjacent road, with visitor car parking situated in the former grounds of a derelict farmhouse.

Roberts says: “You approach over a footbridge that cuts into woodland through which the Nant Muchudd River flows and the facility is slowly revealed. You find yourself on an enclosed piazza bounded by a natural ‘pennant’ sandstone wall topped with security fencing which creates the effect of being cocooned in a separate area.

Challenges

For fairly obvious reasons, The Royal Mint is a highly secure operation and one potentially complicating factor in the construction of this building was that it forms an integral part of the mint’s secure perimeter; once a visitor is through the entrance doors, they are in The Royal Mint itself.

“In fact,” explains Roberts, “we’ve slotted the building into a section of the secure perimeter, so it’s partly on the ‘air-side’ of the business.”

“However, through close liaison with The Royal Mint’s security team from the outset the building was constructed with little effect on The Royal Mint’s everyday business. Detailed construction phasing limited the numbers needing to go air-side and the few who did went through full security checks.”

Probably the toughest challenge for the architects has been successfully translating their original design concept into reality.

Roberts comments: “It’s fine creating an interesting concept, but you have to make it work. In this case a lot of hard work and research by the whole project team has resulted in a building that both we and our clients are proud of.” ■

PROJECT DETAILS

Client: The Royal Mint

Architect (design and project):
Rio Architects

Main contractor: ISG

Project manager/QS:
Mott MacDonald

Civil & structural engineer:
Bradley Associates

Building services:
Troup Bywaters & Anders

BREEAM accredited professional:
Riogreen

Exhibition design: Mather & Co

Landscaping: Bradley Associates

Cladding contractor:
Richardson Roofing

Stainless steel cladding supplier:
Rimex

Steelwork: Morgan’s of Usk

Glazing: AB Glass

Roofing: Briggs Amasco

Circular rooflights: Roofglaze

Paving: Marshalls

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Switch House, Tate Modern Extension



The latest architectural wonder to rise from the banks of the river Thames is Switch House, the highly anticipated extension to Tate Modern. Ancon's contribution to this landmark project was the fabrication of 12,000 special stainless steel corbels and

over 600,000 stainless steel pins which now support and restrain the stunning brick facade, helping to turn this unusual design concept into a reality. The 10 storey extension is a spectacular twisted pyramid-like shape, draped in an elegant brick lattice which is designed to allow light to filter in and out of the building

0114 2755224 www.ancon.co.uk

The latest word in design technology



The Word is a stunning new library and digital media centre, the landmark focus of a £100 million regeneration of South Shields in Tyneside. The creative facade design for the advanced facility, completed in Autumn 2016, was enabled by a technologically advanced UV resistant building membrane. The new North East Centre for the Written Word was designed by award-winning practice FaulknerBrowns. "The individual pages of a book were the inspiration for the building's exterior, to be realised using an open facade system. This presented the challenge of providing full weather resistance protection to the building envelope while also allowing the structure to breathe," explained director Malcolm Brown from FaulknerBrowns Architects. "The Powerlon UV Colour product achieved both of these critical technical performances, therefore allowing us to deliver our architectural ambition." UV Colour from Industrial Textiles & Plastics is a polyacrylic breathable membrane that provides long-term protection to the building envelope and for use on exposed installations behind timber, glass, metal or composite materials. It is available in eight standard colours and has a 10-year guarantee.

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Heradesign returns to the Tate Modern



After a successful installation of Heradesign ceilings from Knauf AMF in the education rooms at the Tate Modern, Heradesign was chosen for the community room in the Tate's new landmark building, the Switch House, on London's South Bank. Heradesign in matt black was specified for these rooms to create a

uniform finish that does not reflect light onto the glass partitions and surfaces. Heradesign is highly durable and its textured appearance enhances the industrial heritage of the buildings.

0191 518 8600 www.knaufamf.com.

Norscot top of the class after VEKA M70



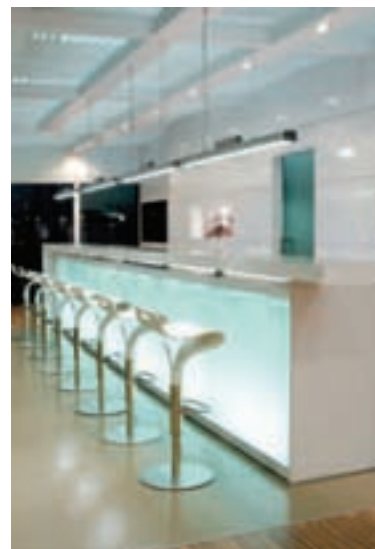
A beautiful and historic yet remote building has been given a new lease of life thanks to Norscot, fabricators and installers of state-of-the-art PVC-U window systems from The VEKA UK Group. Abden House in Dornoch acts as an occupied college and

office building. Callum Grant, commercial director at Norscot explains, "Following a comprehensive on-site survey, 92 Tilt and Turn windows were fabricated using VEKA's M70 profile. The versatility of the system, both in terms of its non-intrusive styling and flexible methods of opening made it ideal for this job."

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Revealing Victorian secrets

The sensitive interior upgrade of a boutique hotel in Chelsea revealed itself to be an even bigger challenge for the architects, once they discovered the myriad of secrets the building held. James Parker goes behind the scenes



High-end boutique hotel 11 Cadogan Gardens comprises four attached four-storey Victorian townhouses in a small street tucked away behind Sloane Square in west London. The internal remodelling of this grand old building was, on the surface, a tantalising proposition for hotels specialist ReardonSmith Architects. However, the first extensive upgrade the building had

seen for a number of years was to provide a series of surprises which would test the firm's expertise.

Client Cadogan Estates and new operator Luxury Hotel Partners decided that they wanted bigger guest rooms for a highly discerning, and high paying, clientele. This would enable the hotel to achieve revenue not possible with the currently largely small rooms. Not only that, some of the back of



The biggest challenge for the architects was that the hotel was to be kept open during the entire refurbishment

house provision was limiting and the client wanted to ensure that staff felt valued to help them provide a high standard of service. There were also numerous unused spaces which were being wasted, although in remodelling them ReardonSmith and interior design firm JSJ Design would need to reproduce the very English eccentric glamour which was the hotel's unique selling point.

The biggest challenge for the architects was that the hotel was to be kept open during the entire refurbishment. ReardonSmith presented the client with high, medium and low intervention options in its feasibility study, but in order to maintain live operation throughout, the only choice was low intervention. This (in addition to the need to adhere to time and cost parameters) meant a holistic 'stripping out and starting again' approach was not possible, instead the architects would have to carefully work around the existing building, and its guests.

A careful three-phased solution was arrived at by the architects, which would require patience from hotel guests, with workmen sometimes working in very close proximity to guests dressed in their finery. However project architect Gary Kellett says that in addition to many design challenges, ad hoc alterations made over the decades resulted in some near-farcical moments during the project. "You would turn the water off at one end of the hotel, and at the opposite end someone's bathroom would go offline." He adds that the project team took a diligent approach: "Whenever we shut off the services we had a full design team meeting, and put strategies in place."

11 Cadogan Gardens had 62 guest rooms on commencing the project; the refurbishment would cut this to 56 but include eight new suites among a total of 25. Kellett describes the approach taken to investigating the space available to see where it could be rationalised effectively: "Part of the challenge was to understand what the unusable space was, and how we could utilise it to bring it back into sellable floor area. There were a number of small box rooms which were being used for storage and ancillary space, as they could not be used for guests."

Kellett explains further how looking creatively at what the spaces could deliver helped guide the design, and the "back-bone" of the project was turning 12 small single rooms into six suites. The new guest rooms are in a wide range of sizes and

styles, but all exude the quirky but high quality look of the hotel. Many are fitted around the "nooks and crannies" of the building's Victorian interiors. They have all been finished to a painstaking level of detail; something which ReardonSmith prides itself on.

A complex past

Those many reactive interventions done over the decades, lacking overall control, meant that in places the structure had been compromised. However, the extent to which this was a problem was only revealed as each area of the project was tackled, when building elements were removed.

While the primary layouts of the houses remained as was (staircases, light wells, windows), Kellett confirms that there have been "a lot of interesting interventions, which threw up some interesting level changes." He adds that these piecemeal alterations were generally "tweaking to solve an internal problem – what you end up with is inefficiencies that manifested themselves in very small rooms."

In dealing with these challenges ReardonSmith had to address the building sensitively, "while maintaining the design intent and ensuring the project did not escalate beyond our control." Explaining this further, Kellett says it tied into the key design driver of future-proofing the building: "We had to ensure that scope creep didn't occur and that it became a higher intervention project. This meant taking a firm approach to ensuring things happened within certain parameters. Not only to benefit the scheme itself, but also any further major interventions the hotel wished to do at a later date."

This future-proofing included earmarking spaces which didn't need to be addressed as part of the low intervention, but which could accommodate lift shafts along with guest circulation routes within the lower ground floor in future. Services risers were also introduced with branches for future expansion. In the meantime however there was the small matter of a host of structural challenges posed by the existing building.

Pandora's Box

One of the 'headline' discoveries made once close investigation began was that a significant section of the roof structure had been removed, compromising the strength and integrity of the rear pitched roof. In addressing this however, reintroducing new supporting steels could impact on ceiling



heights, harming the premium nature of the suites. ReardonSmith had to work closely to jointly develop design approaches with structural engineer, MEP partners, and interior designer to ensure the design vision was maintained.

In one room, as Kellett explains, once the ceiling joists, rafters and timber binder had been exposed it was discovered that a large amount of the existing roof structure was insufficiently supported: “One end of the timber binder was in effect hanging in the air.” He explains how the solution avoided compromising the MEP services: “We had to reintroduce a primary structural steel to ensure that the load paths of the existing roof were transferred out and picked up on the original masonry party walls. Because the new structure spanned the length of the room through the mid point it did not interfere with any of the new services.”

The need to remove substantial amounts of asbestos discovered in the roof void not

only meant the top floor was off line for a period, it also revealed 14 water tanks. While some were redundant, there were much bigger structural issues that requiring careful handling by the design team.

Kellett explains: “To be frank, a lot of the structure that was thought to be taking the load of the tanks actually wasn’t – they were almost hanging, supported by lightweight timber partitions rather than their load being transferred down to the party walls.”

In two guest rooms past alterations had compromised timber purlins which took the load of the roof, including the tanks. Removing the tanks significantly helped reduce the load, but further steel supports were needed. “These needed to span the full length of the room as intermediate support was not possible,” says Kellett.

Given the constraints of the site, he and the structural engineer devised a ‘cranked steel’ member with a spliced centre section detail allowing the beam to be transported



through the site in smaller sections and bolted together when in place. A new fan coil unit and associated ductwork above the ceiling had to be carefully positioned below the steel to not compromise the ceiling height, or existing door opening, and there also had to be enough clearance for bespoke wardrobes.

In a lot of the hotel's lower floors, large sections of the original timber joists had been cut out to make way for past installation of plumbing and/or electrical services. Says Kellett: "It was only once we lifted the floorboards that we could see that a lot of the structural integrity of the primary floor members had been compromised," and new joists and strengthening would need to be introduced.

Attention to detail

The key differentiator in a high-end boutique hotel, enabling it to command high premiums a tough market, is the attention to detail in guest rooms, including if not more so, bathrooms. Says Kellett: "We set the bar exceptionally high on getting the fine detail right, having worked with big brands such as Four Seasons, and we have a no-compromise approach."

While this often comes down to prosaic issues such as careful coordination of positioning of services, the result is consistent bespoke-designed quality. With extensive experience in fine finishes, and materials such as the large-format stone panels used on bathroom walls, ReardonSmith was able to meet the client's stringent expectations.

Working in collaboration with the interior designer, the architects took a leading role in ensuring elements such as mechanical fixings and waterproofing were carefully integrated to achieve a high quality finish. This included making sure that "interfaces between the vanity units, bath, upstands were all allowed for," Kellett explains. He adds: "This is second nature to us, and we were able to offer support to the interior designer."

Sometimes, the architect had to take a firm line challenging the client's expectations, such as holding back its desire to remove one of five private entrances to the suites. "We had to explain this would create an uncomfortable back of house/front of house crossover which we felt was unacceptable," says Kellett. However with the two key suites (the Guinness and Cadogan Suites located on the ground floor) being remodelled with respectively a larger bathroom and walk-in closet, the client was satisfied with the solution.

We set the bar exceptionally high on getting the fine detail right

Gary Kellett

Back of house

With ReardonSmith quickly realising that improvements to the back of house areas were a key focus, but here also there were hidden surprises. "We found unknowns such as active and redundant manholes," says Kellett, "but we were very quickly able to come up with alternatives, even while we were on site."

Although the kitchen and laundry were not touched as the hotel had to maintain constant operation, a whole new back of house area was created for staff including changing rooms, offices, toilets, canteen. From having an original staff canteen of around five square metres, the difference seen in staff going back into these areas was "night and day," says Kellett. He adds: "Now whenever you are at the hotel there is a nice buzz around the back of house, it feels alive again."

Conclusion

While Kellett says that "going into this project we had to do an awful lot of undoing in order to move forward," there were challenges the firm had to grapple with beyond those thrown up by the building itself. The project commenced in January 2015 but due to a change in main contractor did not complete until April 2016.

The architects harnessed their already strong relationship with the client to take ownership of project delivery to a large extent, even spending five weeks on site during "more challenging periods." Says Kellett: "It was crucial we were able to brief the hotel and give them advance warning. Given it was a boutique hotel were fortunate to be able to interface with most staff."

With all eyes on minimising the contract overrun, ReardonSmith ensured handover of guest rooms was done as quickly as possible without compromising quality, including liaising directly with suppliers and sub-contractors. The galvanised relationship with the client will be invaluable on further renovation projects it has planned in Chelsea, which are sure to pose their own set of challenges for the architect. ■

PROJECT DETAILS

Architects:

ReardonSmith

Interior designer:

JSJ Design

Project manager & QS:

The Trevor Patrick Partnership

Services consultant:

Kehr & Tucker

Structural engineer:

Galbraith Hunt Pennington

Principal contractors:

Bay Construct, A&J Interiors

FRONT OF HOUSE

All dry lining elements and metal sections:

Knauf

Stone backer:

Dukkaboard

Waterproofing/tanking:

RIW

Mechanical:

Daikin

Guest room media hubs:

Teleadapt

BACK OF HOUSE

Tiles and sanitary ware:

Vitra

Ceiling tiles and flooring:

Altro

Vanity units (male and female changing areas):

Venesta

BEDROOMS

Supply and install of all stone surfaces:

Chiltern Marble

Joinery:

Edmont

Casegoods:

O'Donnell

Specialist decorator:

CJ Decs

Specialist plaster mouldings:

Ornate Plaster

Building services:

Aveat

Electrical installation:

Ambient

Sika Liquid Plastics provides Grand solution

The Grand Hotel in Brighton is ready to welcome guests to its iconic seafront accommodation whatever the weather thanks to a roof overlay system applied with Sika Liquid Plastics' Decothane Omega 15 solution.

The latest roofing project is the third to be delivered at the hotel by contractor, Allweather Roofing & Construction, part of the Allweather Group, and forms part of a wider refurbishment scheme by main contractor, J. Davies Building Limited.

The 130m² roof area of existing asphalt roof had been leaking in several areas and Allweather Roofing recommended the Decothane Omega 15 cold liquid-applied system as the ideal solution for overlaying the roof, taking into account the exposed seafront location.

The installation team began removing the screeded raised walkway which was on the existing asphalt. They then jet washed the substrate and carried out patch repairs by cutting out areas of the surface that had blistered, and replaced the asphalt in these areas to create a level surface.



Various items of plant are located on the roof, which is surrounded by a parapet wall with box gutters at each end. Allweather Roofing carried out the overlay in two phases, moving all the plant to one side of the roof while the first section was refurbished to allow the hotel to remain fully operational throughout the programme.

Following refurbishment of the first roof section, the plant was then moved across to the newly resurfaced area while the project was completed and all items of plant were then reconnected in their original location.

For each section of the roof, Allweather Roofing applied Sika Liquid Plastics' Quick Cure Primer and, once this had cured, the Decothane base coat was applied,

followed by Sika's Reemat glass fibre mat reinforcement. The base layer was then allowed to cure before a top coat of Decothane Omega 15 was applied.

The new waterproofing membrane was dressed up the parapet wall that surrounds the roof area. Allweather Roofing lifted the existing lead flashings and took the Decothane Omega 15 system up the wall and then redressed it, replacing the original lead over the newly waterproofed area as it was in good condition.

The roofing contractor also removed the old screeded walkway and created a new non-slip walkway on the roof between the fire escapes at each side of the building.

Re-waterproofing of the box gutters was an important element of the project and Allweather Roofing removed the existing felt to expose the asphalt covering the surface before replacing it with the same Decothane Omega 15 system used for the flat roof surface.

01772 259781
<http://gbr.liquidplastics.sika.com>

Affinity255 adds sophistication to hotel



Heavy commercial luxury vinyl tiles in stunning wood effects from Polyflor's recently launched Affinity255 collection were chosen to give The Grand Hotel in Swansea a new look. The Affinity255 collection was designed with a 2mm gauge so that they could be easily

installed alongside other 2mm vinyl sheet flooring from Polyflor's heterogeneous, homogeneous and slip resistant safety flooring ranges where different specifications of flooring need to be installed side by side. Affinity255 samples can be ordered free of charge.

0161 767 2551 www.polyflor.com

Holiday Inn use hybrid air conditioning



A new 250-bedroom hotel has become the first in the UK to use an innovative hybrid air conditioning technology that removes the need to install leak detection equipment in occupied rooms. The Holiday Inn Express Birmingham City Centre is using Mitsubishi Electric's Hybrid VRF (Variable Refrigerant Flow)

system to keep guests comfortable in a controllable, energy efficient way, whilst still offering the full flexibility of design and installation that VRF air conditioning is synonymous with.

01707 282880 www.mitsubishielectric.co.uk

Guests relax under Hunter Douglas



A new £4.5 million hotel spa features a dramatic £60,000 timber roof ceiling, manufactured by leading architectural products manufacturer Hunter Douglas. The building features a 20m indoor swimming pool complete with 600m² Hunter Douglas

111m linear open solid wood ceiling system. Specified in African Ayous on a corrosion-resistant suspension system, the exterior grade multi-faceted ceiling, was complex in design and installation due to the shape of the triangular openings that were formed by the roof structure, into which the solid wood ceiling had to be installed.

01604 766251 www.hunterdouglas.co.uk

Crittall proves popular at Poplar



Crittall steel windows provided the original fenestration in the art deco Poplar public baths when they were built in 1934 in London's East End. Weather-tight, energy efficient Crittall products were the ideal replacement when the Grade II listed building was refurbished and transformed into a state-of-the-art leisure centre. A mix of Crittall Corporate W20 fixed lights with screwed in vents, Corporate C2000 fixed lights and cold form doors were installed; more than 170 units in total. The slim profiles of the steel windows make a major contribution to the light and airy appearance of the sports hall.

01376 530800 www.crittall-windows.co.uk

New Bauhaus-inspired bathroom fittings



Samuel Heath's new Landmark collection enables designers to achieve a totally co-ordinated finish for the increasingly popular industrial interiors theme in residential, commercial and high-spec hotel projects. Inspired by the simplified forms and functional efficiency redolent of the Bauhaus era, Landmark consists of two striking collections, Pure and Industrial:

Landmark Pure is a well-balanced range with minimal embellishment and balanced proportions giving a clean, concise appearance, whilst exquisite detail provides the distinctive styling essential to luxury bathroom design. Landmark Industrial marries bold proportions with beautiful form, completed by machine detailing to create a contemporary, urban style with a practical, highly tactile finish.

In keeping with the modern vogue for metallic, both collections are available in a range of matt and high-gloss finishes. Landmark can be seen at Samuel Heath's Design Centre Chelsea Harbour showroom. Product details and stockists can be found by visiting the website or by contacting the company directly.

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

No room at the Inn! Not in Grimsby



Kestrel Aluminium Systems once again welcomed the opportunity to work in partnership with Grimsby based fabricators Fabrique Specialist Glazing on a vital part of the supply chain in the development of the brand new Holiday Inn Express in Grimsby Town Centre. Having worked successfully in the past Fabrique approached their aluminium supplier Kestrel Aluminium Systems to assist them with the project from the outset and the two companies worked in partnership for the entire project, from product specification to delivery. Specifying the 75mm and 100mm Curtain Walling system created a smart and modern solution for glazing the wide openings on the ground floor. This popular and robust system provided a simple solution for Fabrique to install efficiently to make the building watertight. The project brief included the installation of 80 windows that needed to be thermally efficient and capable of accepting acoustic glazing. The 60mm Window System was the ideal choice offering low U-Values with Fabrique choosing to install 35 and 40 decibel acoustic glazing to ensure all guests of the hotel enjoy a quiet night's sleep!

0121 333 3575 www.kestrrelaluminium.co.uk



Hidden benefits for hotel interiors

Powermatic door closers from Samuel Heath deliver outstanding performance in fire resistance and accessibility, but it is their concealment that delivers a host of benefits for hotel projects, and which has made them the specifier's choice for hotel interiors. British designed and manufactured, Powermatics fit neatly between the door and frame and are totally concealed when the door is closed. They do not have the unsightly control arms and boxes that are unavoidable with surface-mounted devices and, as such, ensure that nothing interferes with the appearance of the door and interior. They also help to create a more homely, less functional, ambience within the room, assuring a more comfortable and relaxing guest experience. These benefits have seen Powermatic used by the world's leading designers on impressive hotel projects across the globe, including The Savoy and Brown's Hotel, London; ARIA resort and casino, Las Vegas; Hilton, Manchester and the exclusive South Lodge hotel and spa in Surrey.

0121 7664200 www.samuel-heath.co.uk

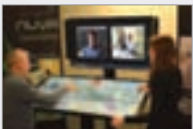


DELABIE launches BIM

DELABIE, one of the European market leaders for commercial water controls and sanitary fittings, has modelled its core products to meet the requirements of BIM technology. Available in two formats – REVIT and IFC, the files can be downloaded via the website. Widely used in public procurement projects, Building Information Modelling allows stakeholder collaboration, reduces the risk of errors and lowers costs at the design stage. The digital model also provides information to support a building's operation throughout its lifecycle. In addition to a 3D graphic representation, the 'smart' object also includes technical data for DELABIE's core products. DELABIE's BIM files can be downloaded using the Datashare facility. All the documents relating to a particular product can be downloaded simultaneously, including product sheets, images, installation guides and approval certificates. There is no need to register to access the files.

01491 824449 www.delabie.co.uk

Optimising project costs and delivery



In order to maintain competitive advantage it is crucial for organisations to effectively exchange knowledge and ideas. Due to the increasing number of globally distributed teams the need for clear and effective collaboration is required to reduce human error.

These problems can all be solved through the implementation and use of nuVa from Cereno. nuVa is a fully immersive remote meeting environment that enables teams to focus on a dedicated workspace regardless of their location, giving all necessary resources access to key project information significantly reducing scope for error.

info@cerenosolutions.com

Trunk CLT's Passivhaus projects



Trunk CLT Ltd is engaged in a variety of Passivhaus and low energy projects – guaranteeing airtightness and bringing attention to detail forward. Director Mike Jacob, a Certified Passivhaus Tradesperson, says: “CLT is airtight, but that doesn’t mean we can rest on our laurels. Junction details are critical and

knowing how to treat them is fundamental to the long term success of a CLT Passivhaus.” Trunk CLT Ltd provide an end-to-end service with in-house engineering and design capability coupled with a full supply and erect package for projects located in any location.

info@trunkclt.com

RAINBOX® attenuation system prepares the ground for high tech car supermarket



The RAINBOX® Cube attenuation system from water management specialists JDP has prepared the ground for a brand new state-of-the-art high tech car supermarket in Dundee. JDP was asked to design and supply an effective stormwater drainage management solution to protect the impressive new facility, in conjunction with Graf UK who carried out the installation, on behalf of main contractors CM Steel Buildings. The JDP technical team designed a system incorporating their RAINBOX® Attenuation Solutions. RAINBOX® Cube modular crates were selected for the project, being load bearing, and suited for the requirements of heavy traffic applications or difficult site conditions. A total of 671.7m³ RAINBOX® Cube crates were supplied and delivered for quick and easy assembly on site. The RAINBOX® Cube system allows two crate modules to be stacked one inside the other, providing significant savings on transport costs and CO₂ emissions. The system is designed to have a high rate of infiltration and barrier free inspection across the whole area allowing the entire system to be monitored.

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The rise and rise of CLT buildings

Dr Keerthi Ranasinghe discusses how cross-laminated timber is helping architects go to new lengths

Architects' desire to create sustainable structures has pushed technological innovations beyond the imaginable.

Cross-laminated timber, or CLT for short, has been drawing a lot of attention in this area in recent months. A highly sustainable and versatile construction material, CLT has been incorporated in a range of buildings, from small detached homes to tall multi-storey towers.

Just 10 years ago, glued laminated timber (glulam) would have been considered the best solution for large, wide-span structures, but today CLT provides an equally attractive option.

Typically manufactured from European softwoods, the creation of the material itself is a key highlight. Similar to glulam, the product is formed by the layering of timber planks (known as lamellas), yet unlike glulam, where all the lamellas are set parallel to the grain, those in CLT are set mostly perpendicular to each other.

They are then glued together under pressure (laminated) to create stable structural panels, whose size is seemingly limited only by transportation restrictions.

Exposing the timber elements is a design touch applied in many modern buildings

The panels are shaped using Computer Numerically Controlled (CNC) machines to specific dimensions. This guarantees exceptional levels of accuracy, allowing for panels to be produced with window and door cut-outs in the exact positions, permitting much more freedom around the positioning and design of these

features, and ultimately leading to a more creative result.

Taking cues from the development of glulam, CLT has greatly enhanced structural properties thanks to its lattice style lay-up.

While glulam offers substantial directional strength for use in beams and columns, the product has limitations with issues including shrinkage, fractures and fissures.

CLT on the other hand has enhanced strength and stability characteristics with less issues of shrinkage and enabling the creation of larger structures.

Green credentials

From its origins as raw timber, which locks away carbon dioxide as it grows, right up to the installed product used in energy-efficient buildings, CLT contributes to sustainability.

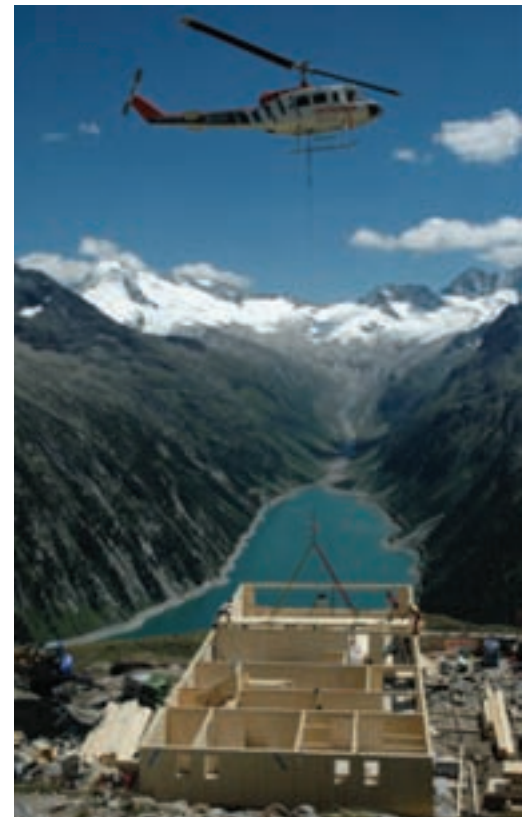
CLT can also be quickly and easily transported and installed, providing significant cost savings and a reduction in environmental impact. A faster build programme and reduced preliminaries mean reduced costs across the board.

Exposing the timber elements is a design touch applied in many modern buildings. The visual appeal of CLT fits the bill with an attractive pale appearance that gradually yellows through UV exposure.

CLT around the world

While we still consider CLT as a 'new' method of building, it's been applied in projects across the globe such as swimming pools, museums and high-rise developments. Ultimately, CLT has formed a crucial part of some designs and has made for a very visually satisfying end product.

While architects can specify much larger timber structures than before, transportation to site remains an obstacle. But even





this can be overcome - for example, by delivering large CLT panels by helicopter.

This quality of the material has benefitted an ambitious 20-storey development in Canada, which has been made possible by the sheer size CLT panels can be made to and the combined strength properties it has when used with a concrete basement and core structures.

Canada has also recently published its CLT design guidance as part of its building code, while in Australia the National Construction Code was changed to allow the use of timber construction systems under the Deemed-to-Satisfy (DTS) Provisions for buildings up to 25 metres in height.

The UK is currently one of the biggest users of CLT within Europe and there are a number of eight or nine-storey CLT buildings either being built or already built in London.

There is significant potential for the use of CLT in the mid-rise residential and commercial sectors where steel would usually be the product of choice. However, unlike other products architects have known for years, work is still being done on research and standards for CLT.

The UK is currently one of the biggest users of CLT in Europe with a number of buildings being built in London

An important milestone would be the introduction in 2020 of a unified European circulation method as part of Eurocode 5. Nevertheless, designers are able to find solutions for their individual projects and this allows additional freedom for truly remarkable bespoke buildings.

It's clear that CLT will become a more popular choice in the future, with standards becoming harmonised and the benefits becoming more appreciated.

A crucial benefit of CLT for designers is that buildings are not confined to the standard 'box type' constructions of the past - instead, they allow architects to be more creative in building design.

Dr Keerthi Ranasinghe is the principal structural engineer at Exova BM TRADA



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EGGER helps Wyder reach new heights!

EGGER UK's new OSB HDX 30mm load-bearing panels have been used by Wyder Engineered Timber Systems Ltd as part of a £250,000 expansion to its manufacturing facility near Preston in Lancashire.

Wyder, which celebrates its 10th anniversary next year, specialises in the design, manufacture and supply of I Joist Flooring and engineered wood products to the UK construction industry.

The company has expanded its production facilities on-site by creating a 280sq.m mezzanine level using EGGER OSB HDX boards to house modern, spacious offices for its growing workforce, new meeting rooms, catering and washroom facilities.

EGGER UK specialises in the design and manufacture of structural flooring boards for use in both residential and commercial build projects throughout the UK and Ireland.

The high cost of moving premises is leading many businesses to look at installing mezzanine floors as a way of utilising space.

Produced using a special recipe, EGGER



OSB HDX is a game changer for those involved in mezzanine flooring projects. The new 30mm structural flooring board is ideal for use in industrial, commercial and warehouse flooring applications – being wider, lighter and stronger than conventional 38mm boards, as well as having higher load points and UDLs.

EGGER OSB HDX is a 2400mm x 675mm board with a tongue and groove on the two long edges. Against a typical 38mm chipboard equivalent with a 600mm width, the user gets just over 11 per cent more coverage per panel. Despite this extra width, it is around 20 per cent lighter than 38mm

chipboard making it easier to manoeuvre and quicker to fit. The low swelling properties of OSB HDX means the board is less likely to pick up moisture that can lead to uneven floors, which is another added benefit to the installer.

Wyder Engineered Timber Systems currently employs 33 permanent staff at its Preston depot. It has grown steadily since 2008, with a strong customer base in Lancashire, Merseyside and Greater Manchester, serving major national housebuilders Bellway, Morris, Keepmoat and Elan Homes. It also supplies regular clients as far afield as London and Glasgow.

The company focuses on and specialises in the design and supply of structural engineered wood products and the manufacture of floor, wall and roof panels and creating bespoke solutions for the construction industry from self-build projects to large timber frame and commercial projects.

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Acoustic performance with Profloor



A new development of luxury apartments at 27 Box Lane, Boxmoor, near Hemel Hempstead, which required an acoustic performance between the separating floors, has achieved it thanks to the innovative Profloor Levelling System from A. Proctor Group. Profloor Levelling System was specifically developed to

allow a level finished floor to be installed on a cambered, stepped, or uneven subfloor. The floor is levelled by inserting packers in each levelling base to adjust the level of the timber battens, and create a level finished floor, with no need for wet trades in the process.

01250 872261 www.proctorgroup.com

Densostrip for concrete beach huts



Raymond Brown Construction Ltd has started to install 119 new concrete beach huts at Milford on Sea. The new beach huts are being constructed from pre-cast reinforced concrete units to form four individual terraces totaling 250m length. The sealant in each culvert

section will play an essential role in ensuring longevity. Winn & Coales widely used Densostrip sealant. Densostrip is a compound rubber and bitumen joint sealing strip for precast concrete units to provide a permanently flexible watertight seal when compressed between joint faces previously primed with Densostrip primer.

020 8670 7511 www.denso.net

Amazon Distribution Centre gets SEAMSIL roofing treatment



It was no surprise that SEAMSIL, Delvemade's patented silicone external repair system was recently specified and used to treat the metal roof of one of Amazon's distribution facilities, based in Bristol. SEAMSIL, is the time-proven external repair system for cut edge corrosion on profiled Plastisol/PVDF coated steel roof sheeting. Invented and developed by Delvemade over 20 years ago with the full co-operation of BSC (now Tata Steel). SEAMSIL provides an effective long-term solution to edge corrosion in critical roof overlaps and gutter overhangs, which if not treated quickly and effectively can lead to leaks and eventually to partial or complete roof replacement. Approved contractor High Access Maintenance Ltd undertook the project also using DELCOTE HPG, manufactured by Delvemade, specifically for the refurbishment of galvanised steel, aluminium plus concrete and asbestos cement gutters. Used in conjunction with SEAMSIL 300 for defective joints, the coating system provides a seamless solution to long-term weatherproofing of gutter surfaces. Manufactured by Delvemade Ltd in Manchester, SEAMSIL and DELCOTE HPG are available from Giromax Technology.

01204 868604 www.delvemade.co.uk

Benefits of using Engineered Timber



The benefits of Timbmet Engineered Components (TEC®) compared to Timber are explained in a new brochure that underlines why the company is at the forefront of innovation in the largely traditional timber industry. Manufacturers and installers will find that Timbmet's multi

layered construction of TEC® offers stability and stress performance far in excess of Timber. These highly engineered wood products – available in four key species – are made by joining/gluing multiple pieces of material together.

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Wraptite-SA passes Passivhaus air tests



Wraptite-SA the high performance airtight membrane from the A. Proctor Group has surpassed the initial air test targets for a new children's home project. The Anchorage at Dibden Purlieu is being built to Passivhaus standard, which will help to

achieve a significant reduction in energy bills. Wraptite-SA, the only self-adhering vapour permeable air barrier certified by the BBA, makes a significant contribution to a building's thermal performance by preventing lateral air movement. It also provides high vapour permeability, which allows any water vapour to escape the wall construction efficiently, reducing any interstitial condensation problems.

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GEZE UK makes a dramatic entrance

It used to be quite a performance accessing one of Birmingham's premier theatres until GEZE UK stepped into the spotlight and took a starring role.

The Birmingham Repertory Theatre previously shared an entrance with its neighbour, the Library of Birmingham, an iconic building which was created as part a £188 million redevelopment and completed in 2013.

However, over the last couple of years, The Rep's growing audiences to its three auditoriums, required direct access from Centenary Square. The solution needed to combine accessibility with a welcoming front of house appearance that would add to the theatre's star attraction.

The Rep's operations manager Nigel Cairns commissioned GEZE UK to identify the best options for the venue which draws approximately 170,000 customers to over 500 performances every year. In turn, GEZE UK hired Glass Solutions as its 'co-star' to undertake all the glazing work required for the venture.

The result was a circular sliding door – cheerily etched 'hello' and 'cheerio' to herald entrance and exit – which used a Slimdrive SCR automatic operator with a 360° drive mechanism.



The entrance – measuring 3800mm – makes a grand statement but is actually a real space saver, allowing a large number of people to flow through the lobby at any one time while maintaining a feeling of space and airiness within a contemporary setting. It also creates an effective draught lobby, minimising heat loss or gain.

GEZE UK also created a second entrance to the theatre's Marmalade Bistro and Bar which is situated to the west side of the building, within its famed arched facade. This has provided standalone access to the restaurant with a pair of automatic swing doors operated by Slimdrive EMD-f's installed street side, and a single sliding door powered by GEZE's Slimdrive SL NT automatic operator, inside which creates a further draught lobby.

Due to their slim design and a drive unit height of just 7cm, all of the Slimdrive range can be discretely installed so they are barely

noticeable to customers and as with all GEZE's automatic operators, they assist with the demands of the Equality Act and are BS 8300 compliant.

Said Andy Howland, sales director of GEZE UK: "The Rep is at the heart of Birmingham's transformation plans and the redevelopment of Centenary Square coincided with The Rep's own centenary. However, as an outward-looking arts and entertainment venue, it is always looking to evolve and develop and the addition of a new 300-seat auditorium, alongside its main stage and studio, has placed new demands on the building. Creating entrances to access these wonderful facilities is a real honour and will help The Rep receive its audiences in the years to come."

Nigel Cairns, Theatre Operations Manager of the Rep, said: "The creation of a new main doorway by GEZE UK has given us a stylish, practical and welcoming entrance allowing visitors direct and clear access to our box office, auditoria and conference and banqueting suites. As we prepare for a busy autumn season of shows ahead we look forward to the new doors being put to good use by thousands of theatre goers."

01543 443000 www.geze.co.uk



Air tight timber frames



Introducing the latest innovation from leading construction connector manufacturer Simpson Strong-Tie; the timber frame panel closer, or TFPC. This useful connector provides the quickest and most accurate way of drawing together timber frame panels and eliminating gaps – and that's important, because those gaps contribute to air leakage and insulation issues. The TFPC features an angled plate which guides a structural screw (included) into the adjacent timber frame panels at precisely the angle necessary to pull them together to form an air tight bond, with the added benefit that it won't damage the substrate. The special design of the screw cinches the panels together and gives 3kN of shear capacity – keeping them that way. Simpson Strong-Tie Timber Frame expert Fraser Pilkington explains: "It seems such a simple solution, but we put a great deal of thought into making it easy to use, with no room for error. The combination of the guide plate and screw achieves exactly that." The TPFC is supplied as a kit, which includes the guide plate, structural screw and two square twist nails. Search TPFC for a demonstration video as well as performance data and installation advice.

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Milan Museum. Image courtesy
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Bridging the divide: a question of choice

David Clarke of IDSystems looks at the options for specifiers when it comes to choosing glazed doors to bring the outside in

Bridging the divide between indoors and outdoors is one of the main reasons homeowners seek to employ 'open plan' design in their properties. To address this demand, architects are turning their attention to different types of glazing to visually unlock the space and maximise natural light.

In residential developments, the choice open to architects would most often come down to picking between bi-fold doors and sliding doors. While each type has its pros and cons, specifiers must take into account various factors before deciding which one is right for their project.

Bi-fold doors

These doors work perfectly whether installed in a small urban courtyard to flood the property with light or in a cliff-top rural location to reveal the surroundings, for example.

Popular on the continent for decades, the UK bi-fold door market has only taken off in the last five to 10 years. Available in a variety of materials including aluminium, timber and composite, the big advantage of the bi-fold door is its ability to completely open up a space, seamlessly connecting the outside and inside without any physical partition being present.

With a maximum panel width of around 1100 mm, bi-fold doors are perfectly suited for smaller openings that can incorporate a single access door. As part of a system with an odd number of leaves, the doors provide a combination of practicality when closed and visual appeal once open.

Bi-folds with a flush track are best suited for sheltered locations where the track lies within the floor, enabling a level threshold inside and out. Alternatively, there are weathered tracks offering a small step down that creates an



effective weather seal, best suited for more exposed locations.

One thing however would not escape those with an eye for detail – at least some part of the door frame will remain visible. For example with the Sunflex SF55 aluminium system, the sightlines are 115 mm in width – meaning on a 5 metre opening 46 cm of frame would be visible.

Sliding doors

These systems have come a long way since early aluminium sliding doors became commonplace in the late 1970s. Unrecognisable from their predecessors, the modern systems run smoothly for ease of use while their narrow frames allow for the creation of visually attractive projects.

Aluminium is the material used for the majority of sliding doors sold in the UK, but timber options, which can provide wider panels with glass sizes of up to 3,000 mm wide, are also available. Moreover, timber systems require a minimal

The bi-fold door can completely open up a space, seamlessly connecting the outside and inside without any physical partition



Sliding doors' main advantage is their narrower profile offering a year-round solution for maximising views or natural light

amount of vertical frame.

Sliding doors' main advantage is their narrower profile – with a higher proportion of glass to frame, these systems offer a year-round solution for maximising views or natural light.

The trade-off though is that unlike bi-fold doors, sliding doors do not create a complete opening, with one panel of glass usually visible at all times, unless the system is slid into a pocket. Typical configurations provide a half, two-thirds and three quarters opening, and are best suited for large openings.

Similarities

While inherently different, bi-fold and sliding door systems share many attributes in terms of performance, price and customisable options.

Bi-fold doors tend to be priced per panel and for German-engineered aluminium systems customers can expect to pay from around £1,200 per double-glazed panel. Sliding doors are usually priced per linear metre and the starting cost of a high quality aluminium system is around £1,200 per metre.

To enhance thermal performance, a system should meet Part L of Building Regulations and double-glazed bi-fold and sliding doors can provide U-values around 1.6 W/m²K – triple glazed versions are capable of around 1.3-1.4 W/m²K. Highly thermally broken aluminium bi-fold doors can achieve values as low as 0.9 W/m²K.

Both types of doors can be customised in any RAL colour and finish in aluminium and timber options, with a range of handles and hardware. Moreover, both can be used in conjunction with moveable corner posts to create completely open corners.

In conclusion

There is no right or wrong answer when choosing between bi-fold and sliding doors for an open plan living space. The key factors come down to location, the amount of time they are likely to be opened and the size of the opening. As a general rule, sliding doors are more apt for bigger openings while bi-fold systems are typically better suited for smaller ones.

David Clarke is marketing coordinator for IDSystems



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Transformation of Electricity House



Situated in the heart of Bristol's city centre, the imposing Electricity House has been restored to its former glory by developer Crest Nicholson, bringing back the building's distinctive art deco style. Many of the original art deco features have been recreated, including the style of the window and door systems from Smart Architectural Aluminium, specified both for their authentic appearance and outstanding performance. Supplied and installed by Techniglaze, the company's Alitherm Heritage system provided the perfect solution for windows from the first to the fifth floor.

01934 876 100 www.smartsystems.co.uk

30 shades of VEKA



The VEKA UK Group has overhauled its successful Variations colour range, consolidating its offering to VEKA and Halo customers into one unified suite. The industry-leading suite has now been expanded to 30 solid and woodgrain finishes. By showcasing traditional colours that are seeing a renaissance, as well as more contemporary shades, Variations has met with success in all sectors of the market. The VEKA UK Group is issuing new Variations finger swatch books, providing fabricators and installers with a comprehensive yet easy-to-use overview of the new range, in a handy format.

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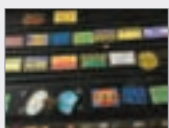
New grooveEe glass balustrade system



International staircase and glass balustrade specialists, EeStairs – has launched grooveEe, an innovative new concrete balcony and glass balustrade system. Revolutionising the delivery of concrete balconies guarded by balustrades, the grooveEe system does not require metal fixings – resulting in unobstructed views through glass. Perfect for contemporary projects with a minimal aesthetic, grooveEe features a channel for glass mounting integrated in the concrete, guaranteeing ease of installation when compared to traditional options.

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Adapta stays true to its vocation



Thousands of adverts, streetlights, road signs and urban buildings in cities. The proliferation of this type of publicity incurs high costs for municipal coffers for cleaning and maintenance services. Adapta, staying true to their innovative vocation in the search for new solutions, has developed a powder coating which enables the easy removal of a wide range of these adhesives. The product has been designed in super-durable quality (Adapta SDS) and its finish has a smooth texture or micro texture. This product incorporates other functionality such as anti-graffiti features as well as its anti-adherent feature.

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Washington Leisure Centre builds community connections with Reynaers

The Sunderland community now has access to an exceptional leisure facility with curtain walling from Reynaers, a leading provider of aluminium glazing systems.

Putting leisure at the heart of the community, the centre underwent an £11 million development and was rebuilt to encourage participation in a comprehensive range of indoor and outdoor activities.

Washington Leisure Centre's offering now includes pools and flumes, a health suite with a sauna and steam rooms, a wellness centre, a soft play area across two levels as well as outdoor floodlit synthetic football pitches. It also boasts a multi-purpose sports hall that can accommodate trampoline training to an international standard.

Thoughtfully positioned glazed areas from Reynaers enhance connectivity between these internal and external spaces whilst maintaining privacy for visitors.

The overall approach to the architecture is 'soft', with architects Watson Batty utilising



a combination of timber and insulated composite cladding panels, with sedum roofing to knit the building into its green surroundings of Princess Anne Park.

The Reynaers systems incorporated into this approach are Vision 50 doors as well as both CW 50 and CW 50-SC curtain walling.

Vision 50 is a non-insulated flush door system offering solutions for high-traffic, ground-floor areas. The system provides the

ideal combination of premium performance and ease of production, and safety can be maximised with anti-finger traps.

Offering unlimited design freedom and maximum transparency, CW 50 is a curtain walling system available in several aesthetic, technical and glazing variants to comply with all visual and performance requirements. Washington Leisure Centre also uses CW 50-SC, the structurally clamped variant.

Rebecca Cope, marketing manager at Reynaers, said: "The Reynaers product range is built with the end-user in mind, and the Washington Leisure Centre brings a wealth of opportunity and benefits to the Sunderland community.

"The use of large panels is perfect for this contemporary build and floods the leisure centre with light, allowing maximised natural light and green views for physical and mental wellbeing."

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Window security – a clear solution

By Martin Oates – Commercial Director with SE Controls

Window security is a key design requirement with all market leading systems tested to the PAS 24 standard to meet the demands of the Secure By Design (SBD) initiative and Building Regulations Approved Document Q (ADQ).

Automated windows that are utilised for ventilation strategies will also need to comply to the standard, which requires the actuators to resist 3000N of negative force when the window is closed. This is becoming commonplace in applications such as school refurbishment where façade automation remains a popular and cost effective solution of providing improved ventilation performance over manually operated windows.

The SECO N 24 25 twin actuator from SE Controls has successfully passed the PAS 24 test and in addition to presenting physical resistance to intruders, it also provides a signal to the controller, should the window fail to close fully, to maintain the integrity of

the security system, as requested by the SBD schools standard. Two locking points in one neat enclosure with programmable gasket relief optimise weather performance and security to meet BS 6375 parts one, two and three in addition to the PAS 24 test.

Bespoke fixing brackets and reinforcement to the window is often required to provide sufficient strength for the fixing, which is usually the weakest point of resistance, as the actuator provides two x 4000N of resistance to forced opening.

The ability to manufacture bespoke body lengths allows SE Controls to locate the locking points on different size windows exactly as tested, relative to the corners, to maintain consistency of performance and compliance. Test conducted with an actuator located at the centre of a vent will either not pass the test or can only be utilised for different widths.

Similar to EN12101-2, the fabrication and installation solution requires a process that is



audited by an independent notified body and must be re-tested annually.

If you have requirements for SBD or ADQ certified automated windows, please contact the SE Controls team for further information.

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Welsh Slate wins an A grade



Natural Welsh Slates feature on a new £3 million primary school in Scotland. A contemporary take on the traditional Scottish vernacular has been topped with roofing by Welsh Slate, part of the Lagan Group. Some 1,000m² or 19,000 Penrhyn

Heather Blue Celtic-grade 500mm by 300mm natural slates were specified by South Lanarkshire Council for the new £3 million Abington Primary School, the authority's fifth project using Welsh Slate. At Abington, the Welsh slates were installed by Braisby Roofing for main contractor CCG who completed within 44 weeks.

01248 600656 www.welshslate.com

Bradite's Fastrac offers protection



Perfect protection and decoration for ferrous metals is now available from Bradite's new Fastrac single pack, direct-to-metal coating. Released to public view for the first time at November's P&D Show Fastrac is available, as a gloss (ME53) or satin (SE53) finish in eight ready mixed

colours – gold, silver, black, white, red, blue, green and yellow. Available in 250ml, 1 litre and 2.5 litre tins, Bradite Fastrac is manufactured under the auspices of ISO 9001:2008 quality and ISO 14001:2004 environmental management systems.

01248 600315 www.bradite.com

Centor Integrated Doors win gold!

Centor is celebrating after taking Gold in the prestigious German Design Award 2017 competition.

Competing against 118 other entries in the Building & Elements division, Centor Integrated Doors were awarded a distinction for outstanding design quality and declared 'best in category'.

The German Design Award is only open to entries nominated by the German Design Council or one of its foundation members. An esteemed jury of international experts ensures that prizes are exclusively awarded to projects that represent ground-breaking contributions to the international design landscape.

A total of 1,988 products were nominated for a German Design Award 2017 and the innovative features of Centor's Integrated 205 Folding Door were deemed to embody exceptional product design quality.

Launched in 2013, Centor Integrated Doors enable homeowners to enjoy all the benefits of inside-outside living, without the compromises. Innovative built-in screens and shades control insects, sunlight and



privacy, providing unprecedented versatility all year round.

The seamless aesthetics of Integrated Doors result from cutting-edge design, offering contemporary styling with hinges and locks hidden from view. Thanks to Centor's cleverly engineered hardware, the doors provide an elegant user experience every time with smooth and reliable fingertip operation.

Centor's Managing Director, Nigel Spork,

commented: "As homeowners increasingly desire to connect with the world beyond their walls, I am delighted that we can provide them with a way to create inside-outside living without the compromises."

Suitable for many styles of home, Centor Integrated Doors are made to order from a range of customisable options.

Discover more on the company website.

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Opening the doors to an iconic landmark

The British Airways i360 in Brighton is a jaw-dropping new landmark that combines contemporary glamour with a seaside legacy. And GEZE UK is helping open the doors for millions of visitors to head skywards for views of an incredible coastline.

The unique visitor attraction, with its slender 530ft tower and glass viewing pod offering 360-degree vistas, opened this summer. Beneath it lies the Beach Building, housing the attraction's flexible event space, shop and restaurant.

It's here, within a dramatic glass facade, that six pairs of sliding doors provide access to the venue, powered by GEZE's Slimdrive SL NT single operators. Their slim design and a drive unit height of just 7cm makes Slimdrive SL NT operators almost invisible in elevation, ideally complimenting the aesthetic of the glazed frontage. Designed to be virtually silent in operation, the Slimdrive SL NT provides safe and easy access in high traffic areas and was considered the perfect solution by Fill Metalbau, an Austrian specialist company tasked with developing the building envelope in steel and glass.

In defining the right doors for the Beach Building, the company had two key issues in mind: they would need to be robust and resilient. British Airways i360's beach front location meant that they would need to battle the elements. The force of potentially strong winds made the use of swing doors impractical which meant that automatic sliding doors were the obvious choice. They also needed to be rigorous in performance with high visitor numbers expected.

Slimdrive SL NT operators have a proven track record of outstanding performance; in TUV test cycles, their endurance is measured by over one million operations. Sliding doors are also an excellent space saver and their installation into the Beach Building maintains the aesthetic of its seamless glass facade.

The attraction was twelve years in the making and is the brainchild of architect-entrepreneurs David Marks and Julia Barfield of Marks Barfield Architects, best known for the design of the world-famous London Eye.

The glass pod of the British Airways i360 is ten times the size of a London Eye capsule and is capable of carrying up to 200



passengers as it slowly rises 450 feet up the slender steel tower during its flights, providing panoramic views of the Brighton and Hove coastline and across the channel.

Out to sea, stand the skeletal remains of the West Pier, now a feature of Brighton's seafront with a desolate beauty of what once was.

The British Airways i360 is the world's tallest moving observation tower, the world's first vertical cable car and holds the Guinness World Record for the world's most slender tower.

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StoneMaster adds visual appeal



StoneMaster masonry blocks from Aggregate Industries provide a revolutionary walling product with the inherent beauty of indigenous stone. Designed to add value and visual appeal to any traditional or contemporary commercial or residential building project, StoneMaster is available in two finishes, smooth for a classic finish, and washed, which gives a sparkle for outstanding aesthetics. Both finishes are available

in a pencil chamfer edge profile. It's available in five colour variations, to replicate regional sandstones and limestones.

01285 646900 www.aggregate.com

Pilkington makes a powerful impression



The atrium of a commercial building is one of its key selling points and it needs to impress. It was with this in mind that developer Boston Properties and architect Duda Paine Architects specified the 10-storey, almost-35-metre-tall glass facade that fronts the atrium at its landmark 601 Massachusetts Avenue project in downtown Washington DC. Using the Pilkington Planar™ glazing system combined with Pilkington Optiwhite™, a wall of glass that

delivered maximum transparency was created so the whole atrium felt as much like an outdoor space as possible.

pilkington@respond.uk.com

The benefits of maximising natural daylight and ventilation in buildings

Building design can have a huge impact on our health. Throughout our lives we all spend a large amount of time indoors, away from natural sunlight and a natural air supply.

Health and Wellbeing is defined by the World Health Organisation (WHO) as a “state of complete physical, mental and social wellbeing”. The UK Green Building Council (UKGBC) also includes social, psychological and physical factors into their definition.

A recent research study carried out by research agency Cadvantage surveyed 150 architects and found that of their sample only 11 per cent (17 architects) could correctly define what Health and Wellbeing means in building design.

The research has identified that Health and Wellbeing is taken into account in all sectors of building design, however not by all architects, with only 59 per cent of the architects working on designing education buildings, 57 per cent in healthcare, 48 per cent in office spaces, 44 per cent in retail and most worrying of all 35 per cent in residential. In construction it is widely accepted that natural light and ventilation can vastly improve health, concentration levels and performance so these findings will not be well received by the UKGBC or other organisations such as NARM (the National Association of Rooflight Manufacturers), who regularly promote the health and wellbeing benefits of light from above in building design.

The UKGBC believe that generous access to daylight as well as a supply of natural ventilation should be part of the design considerations for Health and Wellbeing. However, Cadvantage have further



Studio Designer neo™ rooflights specified for Steven Myhill's 'Summerhouse'



Studio Designer Conservation Rooflights Mews, London

revealed that 43 per cent of the architects surveyed felt that the support they receive from manufacturers is inadequate when they are specifying products that meet Health and Wellbeing needs.

According to NARM, daylight is an essential natural asset. There is a growing body of evidence to suggest that buildings enjoying high levels of natural light are literally more successful than those more reliant on artificial light. In all environments the eye and brain functions respond better to natural light, so people perform better, while passive solar gain can reduce energy costs.

It's clear from the UKGBC, WHO and NARM that introducing maximum natural daylight and ventilation to buildings is key to improving the Health and Wellbeing of the UK population. One solution to this is to specify rooflights on a design scheme. Rooflights can flood up to three times more natural light into a space than a vertical window of an equivalent size, and rooflights such as the Studio Designer Range from the Rooflight Company provide almost unlimited arrays of glazing to truly maximise natural light from above.

To find out more about Health and Wellbeing in rooflighting and how the Rooflight Company can help you integrate light and natural ventilation into your projects contact The Rooflight Company directly or visit the website.

With thanks to Cadvantage and NARM for their statistics in this article.

01993 833108 www.therooflightcompany.co.uk

NorDan celebrates 90 years in business

NorDan, one of the biggest Scandinavian producers of high quality, high performance timber windows and doors, celebrated 90 years in business in 2016.

The firm was founded in 1926 by Johannes Rasmussen, and is today run by the third generation of the Rasmussen family. NorDan prides itself in using carefully sourced, certified sustainable raw material. Timber from some of the slowest growing forests in northern Europe, to enable it to produce very high quality frames which create energy efficient products for the construction industry.

It is a firm which is constantly innovating. It has designed incredible windows, with credentials and certification that satisfy Passivhaus and beyond. Beyond windows, are solar windows which are in effect solar panels within the window system – the future, today!

Rasmussen the founder invented the world's first tilt and turn window, designed to have good weather properties against high winds and driving rain, but be flexible and easy to clean from the inside.



Earlier this year the firm relaunched its three handled window product as “StormGuard” – a unique offering. A timber window which works on a bolt system with no hinge mechanism. It is highly secure and with added safety features as the third handle can be removed, leaving the window safer in certain applications such as student accommodation and commercial premises, where the window will only tilt in for

ventilation, but still able to “turn” when facilities managers need to carry out any maintenance.

NorDan is frequently the supplier of choice to the UK construction market – capable of supplying, for example massive contracts such as the 3,000 windows to contractor Jerram Falkus for a regeneration project in East London, or one set of low u value windows for this Year's European Green Tourism Award Winners “Lewis Long House”, a self catering business on the western isles Scottish Island of Lewis. The owners experienced 113mph winds in the last storm, and were hugely complementary of their NorDan sliding patio doorsets, which robustly withstood the equivalent of a hurricane.

And at a leading homebuilding show, this year NorDan launched its SMART door technology to the UK market on an impressive exhibition stand. The stand also featured a 7.5m sliding patio doorset to rival any thoughts of bifold doors.

01506 433173 www.nordan.co.uk

Lift your front door up to a new level!



A front door is one of the most used parts of the house. It is the first to greet visitors and a key area that can let in the cold during winter.

Garador's recently launched FrontGuard Plus range of entrance doors has been specifically designed to provide the ultimate in functionality and design for a new generation of modern doors.

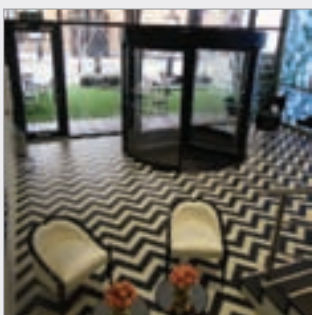
Weatherproofing and insulation has been taken to a new level. The door leaf is filled with 65mm thick high-density polyurethane foam, providing high thermal efficiency with overall U-Values down to 0.87 W/m²k. The well-engineered design includes a sturdy aluminium frame with thermal breaks and insulating polyurethane foam built in to eliminate thermal bridges and minimise heat loss.

A five point security locking system comes as standard on all doors.

Design is a vital aspect, and these doors come in eye-catching modern and contemporary ranges in a choice of colours and wood effect finishes.

01935 443709 www.garador.co.uk

Tormax opens on Mayfair



A tastefully opulent working environment, the Office Space in Town Mayfair serviced offices at 10 Brick Street welcomes staff and visitors into the impressive central atrium with a semi-automatic TORMAX three-wing revolving door that requires just a gently push from the user to initiate rotation. TORMAX worked with JPJ Installations Ltd to deliver this sustainable solution, successfully combining easy access with reduced energy consumption. Finished with dramatic black profile, the revolving entrance perfectly enhances the classically understated interior decor. Taking its design cues from the roaring Twenties, 10 Brick Street combines typical art deco hues with striking geometric patterns in black and white. With a selection of boutique offices to suit between five to eighteen people, clients benefit from a range of elite services including first-class reception, back-office and bespoke business support not to mention fibre optic internet and integrated phone system. Making the space feel more like a five-star hotel than a serviced office in central London, the impressive TORMAX revolving entrance is a key feature of the airy atrium, reflecting the effortless glamour of the era.

sales@tormax.co.uk

Enhancing the public realm

The city centre of Lahti, Finland, has been transformed by the consistent application of Nordic Standard copper from Aurubis to unify normally utilitarian elements such as bus shelters, lift and stair enclosures – and even a road under-pass.

Designed by Helsinki based JKMM Architects (www.jkmm.fi), a new transport hub in front of the historic railway station links the rail network to both long-distance and local bus lines. It consists of a 60-metre long canopy for the bus terminal, enclosed lift and stair structures, local bus stops on the street and supporting landscape elements. There is also an 80-metre long tunnel beneath the centre.

These disparate elements on different levels are united within the complex city environment by their high-quality materials, including Nordic Standard copper in different forms. Straddling the new deck over the street below is the new terminal for intercity buses with a dramatic canopy and pillars clad in perforated copper. Next to it is a delicate and airy glass elevator tower with the shaft



covered in copper sheet and copper wire mesh, an elegant counterpart to the powerful silhouette of the canopy.

This and two other elevator towers, also made of glass and copper, connect the lower level street to the bus stop shelters on the street above. Lighting is placed behind

perforated copper parts in various elements and will enhance the character of the place during the long dark winters. The side-walls, parapet and face of the underpass are all copper-clad, creating an impressive copper portal.

Nordic Standard is produced by Aurubis, part of the world's leading integrated copper group and largest copper recycler. In addition to Nordic Standard, other Aurubis architectural surfaces include Nordic Brown pre-oxidised copper with either light or dark brown oxidation that otherwise takes time to develop in the environment. Various Nordic Green and Nordic Blue factory-applied patinas have also been developed with properties and colours based on the same brochantite mineralogy found in natural patinas all over the world.

Aurubis copper alloys include Nordic Brass – now also available pre-weathered – Nordic Bronze and the innovative Nordic Royal with a long-lasting golden colour.

01875 812 144

www.aurubis.com/finland/architectural

Bauder delivers first class roofing solution

British Airways i360 is the world's tallest moving observation tower and first vertical cable car. At the entrance of the attraction on Brighton Seafront is an accessible roof terrace area that features over 1,500m² of Bauder's reinforced, inverted hot melt waterproofing system with hard landscaping.

The futuristic British Airways i360 is a 531 foot tall structure located at the landward end of Brighton's historic former West Pier. Eleven years in the making, British Airways i360 is the brainchild of architect-entrepreneurs David Marks and Julia Barfield of Marks Barfield Architects, best known as the practice that conceived and designed the world-famous London Eye. Groups of up to 200 visitors will glide gently upwards to a height of 138 metres in a futuristic, fully enclosed, hand-crafted glass viewing pod to admire 360-degree views across Regency Brighton and Hove, the South Downs, the English Channel and the south coast east to Beachy Head.

Passengers board each flight via the alluring outside terrace deck, which features reconstructed tollbooths of the original iconic



West Pier that now serve as a ticket office and café, where people can relax and socialise. Understandably this roof top area will experience significant amounts of foot traffic all throughout the year, so the client wanted to install a waterproofing system that was both robust and of the highest quality. Given these requirements, Bauder's hot melt structural

waterproofing system with hard landscaping was a natural choice. The system is designed to last the lifespan of the building and provides a monolithic, fully bonded membrane that is self-healing to minor punctures and ideal for use on protected roof areas. As part of the system approved contractor Accurate Roofing also installed inverted insulation, to deliver high thermal performance in exposed conditions and help retain heat within the beachfront building below that houses a brasserie, cafe and gift shop.

This new landmark is an exceptional example of how modern architecture and roof landscaping can revive a historical monument, which is expertly and intricately intertwined with over 150 years of history. British Airways i360 has already attracted significant interest and proven extremely popular, welcoming its 100,000th visitor just three weeks after it was opened to the general public in August 2016. The attraction was given a Royal opening by His Royal Highness the Duke of Edinburgh in October.

01473 257671 www.bauder.co.uk

Kingspan at exclusive apartments



The Kingspan OPTIM-R Balcony & Terrace System was the product of choice for a luxury apartment building right in the heart of the capital. 42-43 Pall Mall is a new build development, featuring four spacious apartments. The target roof U-value of 0.15 W/m².K

proved challenging, even transition between internal and external spaces did not leave enough room for conventional insulation. Kingspan OPTIM-R panels have an aged thermal conductivity of 0.007 W/m.K, allowing them to match the thermal performance of other insulation materials at a fraction of the thickness.

01544 387 384 www.kingspaninsulation.co.uk/optim-r

Kingspan releases details guidance



Kingspan Insulation is helping specifiers and installers to close the performance gap with a new technical guidance series, providing standard details for Kingspan Kooltherm K106 Cavity Board. The first document in the series is now available for download, covering applications of 90mm Kingspan Kooltherm K106 Cavity Board within a 100mm wall cavity. The comprehensive

technical document provides clear details, for a variety of wall junctions, that have been carefully developed with the aims of being buildable, achieving good thermal performance and minimising risk.

01544 387 384 www.kingspaninsulation.co.uk

Park Hospital stays green



Kingspan Kooltherm FM Pipe Insulation is set to provide long-term energy savings for an amazing new children's hospital, built entirely within a park. With the project also aiming to become "the most sustainable hospital in the UK", limiting energy loss from building services was obviously a key consideration. As

a result, Kingspan Kooltherm FM Pipe Insulation was specified for pipework across the facility. Kingspan Kooltherm FM Pipe Insulation is the most thermally efficient insulation material commonly used on pipework with thermal conductivities as low as 0.025 W/m.K.

01544 388 888 www.kingspanindustrialinsulation.com

Architects Datafile website



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

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

www.architectsdatafile.co.uk

Kingspan insulates Grand Design



A range of premium and high performance products from Kingspan Insulation have been installed on a stunning new beachfront home on the Isle of Wight, featured on *Grand Designs*. Kingspan Kooltherm K8 Cavity Board was used

to insulate the majority of the walls throughout the property, whilst a further two layers of Kooltherm K7 Pitched Roof Board were applied to the ground floor overhang. With thermal conductivities as low as 0.020 W/m.K, the products delivered the required thermal performance with a slim build-up.

01544 387 384 www.kingspaninsulation.co.uk

New monthly acoustics podcast series



Acoustic specialist Saint-Gobain Ecophon has launched a monthly podcast series for architects, contractors or, in fact, anyone looking to understand more about acoustics and how to achieve optimum acoustic specification for indoor environments. The podcasts are available

to download for free from the Ecophon website, iTunes and Stitcher. Suitably entitled 'A Sound Effect on People', the initial series of 30-minute podcasts is presented by former ITN News presenter Salma Cranefield.

01256 850977 www.ecophon.co.uk

Airflow adds VAV control to MVHR range



Airflow Developments has added Variable Air Volume dampers to its Duplexvent range of commercial Mechanical Ventilation with Heat Recovery units. The VAV systems constantly monitor the air volume supplied and share this information with the ventilation unit. The systems ensure optimum air quality and comfort by allowing the ventilation

to respond effectively to the demands of each area of the building. Buildings such as offices, schools and hospitals can utilise this technology to protect the building fabric, as well as ensure occupants are benefitting from healthy, fresh air and a comfortable indoor climate.

01494 525252 www.airflow.com

Raychem take heating to new levels



Raychem from Pentair Thermal Management has launched its new SENZ range of thermostats, enabling users to control their electric floor heating system simply and easily through an innovative touchscreen functionality and WIFI capability. Combining modern design, easy-to-use touch and swipe controls, and intelligent

operation for new levels of comfort and performance, Raychem SENZ and SENZ WIFI feature the latest cutting-edge heating control technology. The Raychem SENZ range requires no maintenance, providing peace of mind for installers and end users.

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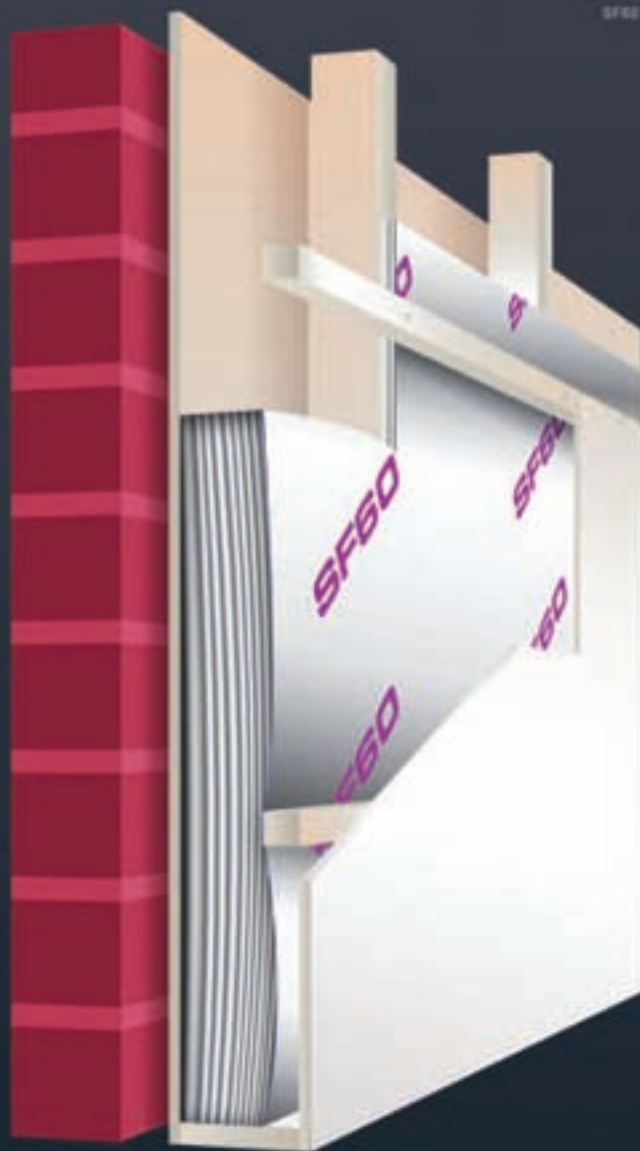
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Under floor air conditioning upsurge



AET Flexible Space; in conjunction with their distribution partner, Hitex, are delighted to have received orders to supply their under floor air conditioning systems to several major refurbishment projects in Riga. AET Flexible Space has previously achieved success in Latvia at the Nordea Bank Headquarters in Riga, a

building awarded with 'Most Energy Efficient Building' in Latvia 2011. The AET Flexible Space system utilises the plenum as the ventilation duct, eliminating the need for ceiling based duct work, making it easy and economical to adapt to changes in the workplace.

01342 310400 www.flexiblespace.com

Solray at the University of Leicester

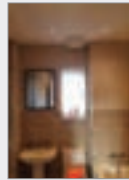


Comyn Ching have recently installed bespoke Solray Electric Disc Panels at the University of Leicester, specially manufactured to complement the futuristic light fittings. Solray Panels have been tested to EN14037 and our special Security Solray Panels are approved by NOMS for fitting in safer cells having

withstood attacks by prison inmates (see the video link on the company website). Please visit the website or contact the company directly for more information.

sales@solray.co.uk

Vortice selected for winning project



Voted the UK's best regeneration project in the National Housebuilder Awards, Branston Leas by St Modwen Homes, has selected Vortice system 1 centrifugal Quadro fans for its two, three, four and five bedroom properties in Burton upon Trent. Technical Marketing Manager Jennifer Quinn said, "We are delighted to be working alongside local electrical contractor PCE Installations of Burton Upon Trent in supplying our range of Quadro fans to this prestigious local project. These energy efficient ventilation fans are stylishly designed and fit beautifully into the interior decor at Branston Leas."

01283 492949 www.vortice.ltd.uk

Elegant PV solar solutions



The new Elegance Carport System released: single and double bay designs now available for home and business use. Integrating solar PV into homes and businesses has never

been easier than with Solarport Systems. With over 40 years of design and engineering experience, the UK based mounting structure supplier creates solutions to bring solar PV to rooftops, car parks, walkways and beyond. Solarport Systems pride themselves on the ingenuity, cost-effectiveness and aesthetics of our designs. For a personal, commitment-free quotation please contact Solarport Systems.

dave@solarportsystems.com

Gaia warms to modern island living



Gaia's electric underfloor heating system has been installed in two new award-winning properties completed last year on the Channel Island of Jersey. Designed by local practice Godel Architects, the two two-bedroom houses, known as Zeelandia, are sleek and modern, with subtle references to

the Art Deco period. They have already won an award for 'Best un-built scheme'. Built by Jersey contractor and developer Cape Construction, the properties are of concrete, stone and glass construction and are heated with Gaia's electric underfloor system throughout.

projects@gaia.co.uk

Now 4iE works with central heating



Warmup has launched the new +Kit that makes the 4iE Smart WiFi Thermostat compatible with both underfloor and almost all types of central heating. The 4iE is smarter than other thermostats, using SmartGeo™ to control your heating automatically and reduce heating usage by up to £170 for a typical UK home. EasySwitch™ technology works in the background to find better energy deals and switch you automatically, saving a combined £378 in total. For more information please visit the company website.

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New standards in electric fires

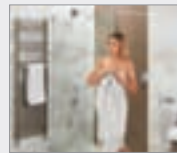


With today's highly efficient homes it's not always essential, or sometimes even possible to have a gas or wood burning fire fitted. However, if you want the warmth, plus the look and feel of such a fireplace, then an electric suite is perfect for you. The two new Infinity electric fires are based on

Charlton & Jenrick Ltd's best-selling gas fires, and are available to fit frameless in the wall or into a fireplace suite. The fires feature the new 3D Ecoflame™ technology from Charlton & Jenrick, which offer a very exciting realistic flame effect with four mood settings.

sales@charltonandjenrick.co.uk

Heating up the bathroom



Abacus Bathrooms has been developed to offer the most comprehensive list of world class products to bathroom retail customers. The portfolio is comprehensive and one area which is seeing fundamental change in terms of design is heating. Towel warmers and radiators are often the stand-out design products

in a scheme – alongside tiles and brassware. Today's consumer is looking for something different in the bathroom. Although white and chrome/steel will always be popular, designers are being asked for new colour-matched, powder-coated radiators and modern warmers.

sales@abacusdirect.co.uk

London's latest 'Monument' benefits from one kilometre of Waterloo Air Products



Waterloo Air Products has supplied over a kilometre of its advanced air distribution products throughout The Monument Building – an impressive new commercial development in Central London. Waterloo's products help to make sure the air throughout the building provides a comfortable working environment for everyone. Neighbouring the iconic Monument to The Great Fire of London and opening 350 years after the historic event, the new 10-storey development boasts over 94,000sqft of office and retail space. To meet both the air diffusion and architectural requirements, Waterloo supplied almost 3,000 products for the development including Linear Slot Diffusers, Plenum Boxes and Exhaust Valves. The building has been designed to give occupants a working environment that brings the best out of them and air distribution and control plays an important role. On each floor of the building, Waterloo air distribution units have been slotted seamlessly into the ceiling adjacent to ceiling tiles to provide an aesthetically pleasing look. The air distribution units have been fitted strategically throughout the building to provide the correct air tightness.

01622 711500 www.waterloo.co.uk

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Hadrian cubicles add to Shake Shack style



Fast food chain Shake Shack sprouted from a hot dog cart in Manhattan in 2001. All UK locations feature Hadrian Elite Stainless Steel toilet cubicles in the washrooms including one of the latest to open in the St David's Centre in Cardiff. Hadrian cubicles are manufactured in Canada and distributed in the UK by Relcross Ltd, the door and washroom hardware specialists. Shake Shack were familiar with Hadrian toilet cubicles in the USA and were delighted to find they were readily available in the UK too but with specifications adjusted to match UK requirements with longer cubicle doors and sightline gaps around the door edges eliminated. The Elite cubicles are finished in brushed stainless steel and they don't just look good but are highly durable with easy clean low maintenance. Like Shake Shack, Hadrian is very committed to sustainability. These cubicles feature a high 91 per cent recycled content. Relcross Marketing Director Stuart McMaster said: "with Hadrian Cubicles we can offer the best from both sides of the Atlantic with world leading manufacturing and design quality made to British specifications and styles."

01380 729600 www.hadrian-cubicles.co.uk

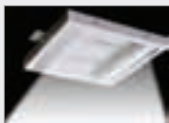
Vicaima takes centre stage at theatre inspired Porto Hotel



Vicaima coloured laminates and performance door solutions have been selected to take pride of place at the recently refurbished four star Mercure Porto Centro Hotel. To enhance the refined interior of this important refurbishment, the hotel chose Olive Grey as the theme colour from Vicaima's Dekordor HD Colours Range. This hard wearing continuous pressure laminate finish is ideal for such situations, affording durability and an extensive tonal range to cater for a multitude of interior design requirements. When it came to performance, room entrances were specified to have the Vicaima Portaro door system, which creates a completely matching door and frame. These units also afforded fire resistance to 30 minutes (FD30) and with acoustic soundproofing to 41dB. As a finishing flourish and to evoke the theatrical element, Vicaima were also asked to provide an integrated side panel with a built in LED strip. This custom element cast expressive ambient light and emphasized the beauty of the Vicaima door entrance system. Dekordor HD in Olive Grey is just one of 22 attractive and contemporary laminate colour options from this exciting and recently introduced Vicaima range.

01793 532333 www.vicaima.co.uk

Starshot high output LED luminaire

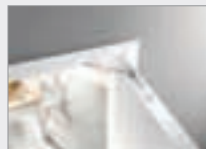


Waveguide Lighting has announced its new Starshot sealed luminaire, designed for use where precise light levels and high uniformity are required. It is available with IP40 sealing for internal use in food hygiene standard applications, general manufacturing and warehousing,

and in IP65 versions for external installation in applications such as canopy lighting, flood lighting, perimeter illumination and walkways. Measuring a compact 400 x 400 mm and suitable for surface mount, recessed or chain fitting, four standard outputs are available. Starshot is mains powered, with power consumptions of 43 to 107 W.

info@waveguidelighting.co.uk

A grand entrance to the market place



Slamming doors, damage to walls and furniture and trapped fingers could be a thing of the past with the introduction of GEZE's ActiveStop – a new control mechanism for internal swing doors. It's a sleek, recessed door control – measuring only 28 mm wide incorporating a draw-in

damper – which can be seamlessly integrated into swing doors making them quiet, smooth and easy to operate. GEZE ActiveStop has a gentle stopping action which breaks the swing of the door and stops it in a desired position.

01543 443000 www.geze.co.uk

Titanic effort with Gerflor!



For Titan Interior Solutions placing its flooring needs in the hands of quality suppliers is at the very helm of its ethos. It's a mind-set that happily embraces international flooring and interiors specialist Gerflor. David Cartwright from Titan Interior Solutions commented, "Quality is as important as Health and Safety. Companies like

Gerflor provide solutions that are design led, innovative, with the right price point and the quality they supply is never compromised. A prime example is the main stand expansion at Anfield Stadium where a large amount of Gerflor Creation luxury vinyl tile flooring being laid."

01926 622600 www.gerflor.co.uk

Expona flooring is fashion forward



High design luxury vinyl tile flooring from Polyflor's Expona Commercial collection was recently chosen as part of a sophisticated and stylish interior design scheme for Handbag Clinic in Islington, London. Expona Commercial luxury vinyl tiles in the Crème Swirl

design were selected for the shop floor area. The subtle Crème Swirl design from the Abstract effects collection within Expona Commercial has high end design appeal, complementing the store interior and the luxury handbags on display.

0161 767 1111 www.polyflor.com

Choosing the right workplace settings

Oliver Ronald of The Boss Design Group explains how the emergence of the concept of settings is influencing workplace design to benefit performance

Workplace design and furniture specification are no longer just about the space available.

The modern office is all about settings – how people work and are managed, and the technologies that enable their work. It's also about finding new and better ways to structure time and to design space that will maximise the happiness, success and wellbeing of individuals.

Employees need to be able to easily switch their mode of focus – be it focusing, learning, socialising, or collaborating – in order to stay fulfilled and productive. This in turn has led to the birth of a series of designated settings within the workplace.

Every organisation has its unique character in terms of strategies, culture, challenges and opportunities, but when creating a high performance work environment, there are six key applications that need to be considered when specifying furniture.

Welcome

First impressions count, and the foyer or reception area is where visitors discover what defines an organisation. This space can also perform as a business lounge. Relaxed and informal seating solutions – like modular seating that offers unrivalled levels of flexibility and practicality – ensure waiting time is spent comfortably. High-backed meeting booths also make it possible to hold short meetings there as opposed to bringing visitors into the body of the organisation and occupying meeting spaces that could be used for more critical business activities.

Home

Many people require a dedicated workstation due to the nature of their work. Highly mobile workers do not necessarily need to own their own desk, but when they are in

the office they need a place to perform individual work.

The solution is to provide them with touchdown facilities. Ergonomic considerations and physiological support are important for all workers, but of paramount importance for those with work profiles that require dedicated workstations. Enclaves or enclosed spaces should be located nearby for when people need to concentrate, make phone calls or conduct confidential interactions. Well-planned home spaces help people improve individual work processes, speed up the development of ideas, improve learning and gain access to information quickly.

Collaboration

People tend to be away from their desks holding meetings formally or informally, on or off campus, so collaboration settings should be located adjacent to home settings to assist in the speed of the development of ideas and flow of knowledge.

There is a growing trend towards glass-fronted meeting pods that help continue the flow of nomadic working patterns and teamwork. It's also important that vertical surfaces feature throughout the workplace. From meeting booths and pods, to stand-alone media walls that offer TV, video and online facilities, or a fixed whiteboard, a variety of technological functions should be made available.

Staged meeting

Staged meeting 'sets' accommodate planned and traditional meeting requirements – board meetings, seminars, client presentations or informal networking events. As traditional meeting chairs may not deliver the necessary levels of ergonomic support demanded by emerging workstyles, it's vital that ergonomic seating becomes a priority.



Contemporary armchairs provide a warm and luxurious welcome to the offices of RBS in Amsterdam



A work hub offers intimacy and privacy for individuals working in solitude in the London office of AJ Gallagher

While staged meeting sets are more likely to be defined by the fixed elements of partitioning, air conditioning and lighting, glass-fronted acoustic meeting pods provide a flexible alternative. With various configurations available, and with most pods boasting power and data capabilities, specifiers have endless design options. Some even boast special lighting systems to improve concentration and wellbeing.

WorkCafe

Taking a cue from the name, the WorkCafe provides a combination of working, socialising and refuelling to foster employee productivity and wellbeing. It is a compelling new way to generate energy in the office – a hub where people choose to work. Whereas a standard cafeteria's activity spikes at breakfast and lunch, with some activity around break times, the WorkCafe is a dynamic hub throughout the entire workday. Soft seating solutions with integral USB and power points are advisable.

Circulation

The primary paths through the workplace provide plenty of opportunities for planned and unplanned encounters. Knowledge

Employees need to be able to easily switch their mode of focus

moves quickly through networked groups and from chance encounters. Valuable encounters often take place in transitional spaces like hallways, coffee areas, or outside a doorway, so furniture that provides easy access to power can support the use of mobile technology. Sympathetically located standing height tables and bar stools can also encourage spontaneous exchanges, and visual displays such as monitors and writable surfaces can support discussion and idea sharing.

Knowledge workers need to be able to continually switch between their four main modes of working throughout the day. By introducing workplace settings, the choice of office and contract furniture will not only serve to support their patterns of working – it will foster individual and corporate wellbeing.

Oliver Ronald is the sales & marketing director at The Boss Design Group

Saint-Gobain PAM UK extends range



Saint Gobain PAM UK has extended its Vortx range with the launch of stainless steel anti-ligature floor and shower gratings for applications such as prisons and mental health care facilities that demand a high level of safety and security.

The range is available in five different options that can be used in general applications with tiled, marble, vinyl and resin floors. The grating bodies are threaded NPSM and supplied with Torx security screws. In common with all Vortx gratings and rodding eyes, they can be installed with a removable bottle trap and filter basket.

sales.uk.pam@saint-gobain.com

Kaldewei's new washbasins at Sleep



Kaldewei's new washbasins made of steel enamel were a key feature at Sleep this year. Already a well established brand, the introduction of this new segment, means bathrooms can now be fitted out using a single material, a harmonious design vocabulary and a matching colour scheme.

The Silenio washbasin by Anke Salomon is distinguished by exceptionally soft interior lines. Flowing gently inwards from both sides, the lines open out into a soft hollow which contrasts with the rear section of the basin which falls steeply.

01480 498053 www.kaldewei.co.uk

Mall project demonstrates innovation



Hunter Douglas has designed and manufactured a complex metal linear ceiling for a major shopping centre as part of a £5 million refurbishment. Hunter Douglas was specified for the £200,000 ceiling project, key to which is a herringbone pattern in a range of colours. Architect William Lee at ESA Ltd selected the pattern in 30BD, choosing four complementary colours, RAL 9010/1035/1036/2013, to create an eye-catching design that reflected the modern feel of the upgraded shopping centre. The ceiling project also showcased Hunter Douglas's expertise in baffle systems.

01604 766251 www.hunterdouglas.co.uk

Europe's first modular felt ceiling



A £15 million headquarters for one of the country's top outsourced switchboard and telephone answering service features Europe's first modular felt ceiling system, developed and manufactured by Hunter Douglas. A ceiling was required for the canopy within this space and when the architect was shown Hunter Douglas's new HeartFelt Ceiling System – a budget-friendly ceiling made from 100 per cent recyclable material, including the special carrier system – it was immediately selected for the 150m² space. The panels are manufactured using thermoformed polyester fibres.

01604 766251 www.hunterdouglas.co.uk

Mapei UK products used for refurbishment of Gatwick Airport's North Terminal Departures

Mapei UK have recently helped complete a flooring refurbishment project in Gatwick Airport's North Terminal Departure costing approximately £2million. DMC Contracts carried out the installation, leading the design between Mapei and Gatwick Airport to deliver a robust flooring system that would tolerate the demands of a busy airport terminal.

As the UK's second largest airport and the most efficient single-runway airport in the world, Gatwick Airport required a screed that could endure the high volume of footfall which it encounters daily. Mapei specified a screed containing their Topcem binder, also including Mapefibre NS12 polypropylene fibres, to replace up to 9,000m² of the previous flooring in the North Terminal Departures.

Topcem, which carries an EC1 rating, produces a perfect screed to use prior to the installation of any flooring where rapid drying



Courtesy of Gatwick Airport

is required – allowing light foot traffic after just 12 hours, ensuring the airport experienced minimal disruption. Mapefibre NS12 helps to create a strong matrix within the screed which is more resistant to the stresses induced by the setting and hardening process. Once laid, the floor was left for 28 days before it was drop-hammer tested, where it received a Category A rating.

400x400 porcelain tiles and 600x300 conglomerate tiles were then laid with Mapei's grey coloured Granirapid – a rapid setting, high strength, flexible tile adhesive suitable for a busy airport environment. The floor tiles were grouted with Mapei's popular Ultracolor Plus Grout in the 'Cement Grey' shade (113).

With Gatwick's moving annual total passenger numbers recently reaching over 41 million, the airport required an abrasion resistant flooring for some 400m² of the baggage area floors. Mapei's Ultratop Industrial was specified because of its excellent abrasion and wearing resistance to the high volume of traffic in the area. To prevent staining the Ultratop Industrial was sealed with Mapecoat I 600 W.

0121 508 6970 www.mapei.co.uk

Only the best from Gerflor at Highgate



When the Highgate School in North London wanted to carry out a major refurbishment they would turn to an Architect who would have their vested interests at heart, together with providing an eye for modern detail, while giving a nod towards the school's

venerable past. The project would be a perfect fit for international interiors and flooring specialists Gerflor. The design of their products support studying in the best environment possible. Architect Ed Toovey would settle on 540m² of Gerflor's award-winning Creation 70 LVT to deliver the look and feel he was after.

contractuk@gerflor.com

Mapei UK promotes new literature



In response to industry demand, Mapei has released a new brochure for wood flooring products and installation systems. Along with an easy to use selection chart for wood flooring, products used in each system are listed along with their technical characteristics. Products range from primers and surface membranes to silted and polyurethane adhesives, as well as levelling compounds, acoustic layers, and high traffic

lacquers/hardwax oils and products for maintaining the natural appearance of the wood floor. Contact Mapei for your brochure.

0121 508 6970 www.mapei.co.uk

Safetytread - pioneers of anti-slip stairnosings

Safetytread products are a range of bespoke, premium, high quality anti-slip stair nosings manufactured in the UK.

Safetytread is environmentally friendly and provides a more economical solution than cheaper plastic materials. The treads will add excellent slip resistance to any staircase (internal or external); can be tailor-made to fit the exact dimensions of a stair tread and are available in a wide range of colours.

We will meet your stair nosing requirements with a tailor-made, bespoke solution, filled in your desired colour.

For more information please visit www.safety-tread.co.uk or call us on 01202 625596.

 **SAFETYTREAD**
ANTI-SLIP STAIRNOSINGS

Altro resins break new ground on North Herts College new campus



Altro resin flooring is providing the ultimate in colour, flexibility and durability on an award-winning, £10 million refurbished campus at North Hertfordshire College, in Hitchin. Altro Flexiflow™ and Altro MultiScreed™ EP Naturals have been used within the multi-functional hub space on the new campus, which links three teaching buildings. The award-winning design for the new campus was created by international design practice Scott Brownrigg. Altro Flexiflow is tough enough to handle high impact areas, yet be flexible enough to move with a building. It gives a uniform and seamless finish with uninterrupted lines, and is self-levelling, which makes installation easy. With 28 colour options it's flexible enough to fit into any design vision. Altro Multiscreed EP Naturals is a tough surface that can handle the hardest bumps and knocks. A solvent-free epoxy resin system, it has a natural appearance with nine colours evoking tones of concrete and stone. The product has improved performance and produces a high strength floor with exceptional abrasion and chemical resistance. With a nominal thickness of 4mm, it can be coved and laid to falls.

01462 480480 www.altro.co.uk

Education brochure launched by fermacell



A leading manufacturer of gypsum fibreboard has published a new brochure specifically for the education sector. A brochure highlighting the fact that with fermacell gypsum fibreboard all that education specifiers have to choose between is six systems, compared to dozens when using conventional plasterboards, has been launched by the European manufacturer. The new 24-page A4 "Solutions for educational buildings" brochure details the reasons why fermacell should be used for educational buildings, ranging from impact resistance (for which fermacell now offers a 20-year warranty) to its hanging strength which negates the need for most pattering and helps to make walls and rooms easier for architects to design. The guide explains how fermacell meets the requirements for highly demanding educational buildings in terms of impact resistance (all are tested to BS 5234-2 – severe-duty), sound insulation (five levels of acoustic performance as per BB93) and fire safety (from 30 to 120 minutes fire resistance). It also shows, with illustrations and tables, how just six systems and four basic constructions using fermacell satisfy all the requirements for sound, fire and impact resistance.

0121 311 3480 www.fermacell.co.uk

ING specifies Formica Group VIVIX®



SP Architecture Engineering has specified Formica Group's VIVIX® for the revamping of the courtyard garden in the building offices of ING in

Rozas, Madrid. The renovation project included a central pond and surrounding 15m² patio with plant features. Formica Group's 8mm thick VIVIX panels in Porcelana were specified for the facade due to its rainscreen properties, ability to limit excessive moisture and ease of maintenance. Selected facade panels featured a perforated pattern containing Clementine from the Formica® Collection.

0191 259 3512 www.formica.com

Hidden housing solutions



New research has revealed almost two million people have unmet accessible housing needs, giving providers an opportunity to adjust their offering to meet demand. Clos-o-Mat can give a single source to address prolonged independence,

at least in the bathroom... Clos-o-Mat can provide comprehensive design advice, through to supply, install, commissioning and maintenance of appropriate equipment- including hoists, shower seats, support systems and the only WC unit developed specifically for disabled people, the Clos-o-Mat Palma Vita wash & dry toilet.

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A bathroom that works for everyone

Designing washrooms for multi-ability use is a sensitive process and the influx of products combining style and substance means architects are spoilt for choice. Lisa Ward of Bristan offers expert guidance

When planning a residential development, architects face the challenge of appealing to the widest possible audience.

While research may be carried out among potential buyers, it's often impossible to determine the profile of the occupants and their needs.

Some properties will be targeted to a certain market – like city penthouse apartments and retirement homes – but for standard developments, one size must ultimately fit all.

When looking at standard housing, it's crucial to secure the broadest possible appeal. In terms of achieving this, the bathroom is second only to the kitchen as the hub of a home and has the potential to provide a serious selling point.

However, a proportion of potential buyers are likely to find conventional bathroom products and layouts difficult to negotiate, for example elderly people and the very young, people with disabilities or reduced mental capacity or mobility.

Why design matters

The rise of multigenerational living means that different generations – with different needs – are often living under one roof. According to the Office for National Statistics (ONS), 2012 figures showed a 30 per cent increase in the number of multi-generational homes over the last decade.

In addition, according to the Intergenerational Foundation think tank, over half a million households have at least three generations living under one roof, and that number is expected to rise further by 2019. It has also been estimated the next 20 years will see the number of people aged 85 and older double to over three million

This is just part of the whole picture which defines the great need for homes that facilitate independent living. For architects, designing accessible bathrooms is a viable option to ensure wider appeal, but it's also proved a challenging aspect of the planning and design work.

Reshaping the space

In the past, bathrooms for people with reduced physical or mental capabilities looked like they belonged in a hospital ward rather than the home. This has posed a problem for architects to make such washrooms attractive to potential buyers.

When installing easy-to-use, accessible amenities, architects ran the risk of creating a space that could serve as a constant reminder of illness and disability.

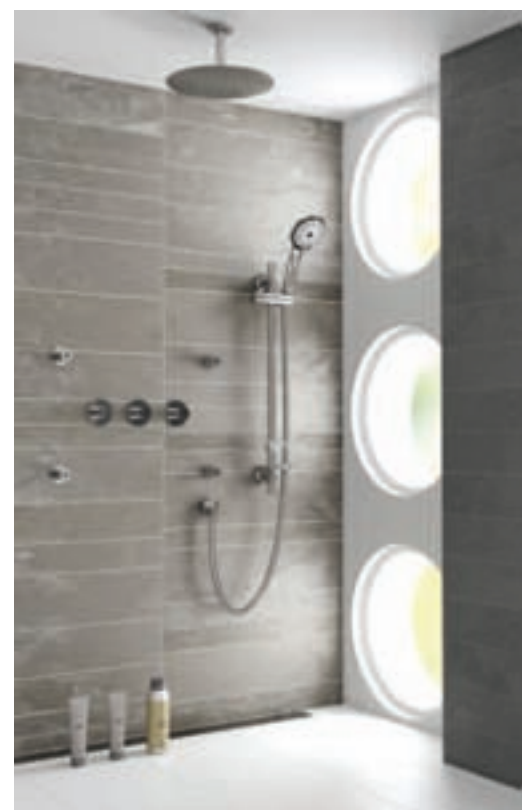
Fortunately, things have moved on and today it is simpler than ever to create a stylish bathroom that can be used safely and easily by people with different abilities.

Wetrooms

A major recent phenomenon is the wetroom. Over the last few years, wetrooms have experienced a huge resurgence in line with minimalist trends and an increasing consumer desire for luxurious open spaces. In fact, according to recent research by Anglian Home Improvements revealed 43 percent of people would choose to add a wetroom to their home.

Wetrooms are appealing to style-conscious buyers and are also easy to use by all, offering the benefits of a shower installation while eliminating many of the possible hazards.

One important advantage of a wetroom is that there is no need to delineate the shower area, so all of the space can be fully



A wetroom brings all the benefits of a shower installation, while eliminating many of the possible hazards



utilised. This gives more space to manoeuvre with a walking aid or shower chair. Moreover, as the whole of the bathroom area has a level floor, the risk of tripping is reduced and it can be further minimised by installing non-slip vinyl flooring.

Shower safety

Shower installations have traditionally been of the TMV3 mixer type, feeding off the stored hot water system, but it is now possible to have a bespoke electric shower designed for ease and safety of use. Aesthetics have also progressed and manufacturers are now producing ultra-safe shower designs appropriate for a domestic property.

A thermostatic electric shower can be set to deliver heated water at a safe temperature and the maximum water temperature can be changed at installation to suit more temperature-sensitive users.

Certain models meet the British Electrotechnical Approvals Board (BEAB) care standard and have Royal National Institute for the Blind (RNIB) endorsement. These incorporate features designed for the elderly and less able which facilitate independent showering, like large, easy-to-move dials, raised markings and audible clicks when settings are adjusted, as well as illuminated stop/start buttons,

Aesthetics have progressed and manufacturers are now producing ultra-safe shower designs appropriate for a domestic property

LED digital setting displays, grey contrasting back boxes, longer riser rails and handle-style dials.

Grab rails

A potential barrier to the inclusion of wetrooms in new developments is the fact that gravity drainage is not always an option. This can be overcome by the use of a level-access pump (LAP) which provides a reliable solution for waste water.

For builds specified to embed accessibility features, grab rails are essential. They need to be thick enough for someone with a condition like arthritis to be able to grip, with a non-slip or textured surface. Residents with visual impairment need to be considered, so a strong contrasting colour should be chosen.

Shower seats should also be available and these can either be removable or fold down to enable the shower to be accessible to users of all ranges of mobility.

Straight rails offer a good aid for those with limited mobility, or simply to offer reassurance for those who are nervous about their balance, but an angled rail should be positioned adjacent to shower seats to aid users' movement.

Layout

The bathroom layout should be planned for optimal comfort, with adequate space provided. Having taken specialist advice from an occupational therapist, the Bristan specification team can help with critical measurements to ensure that products are appropriately positioned and a comfortable, easy-to-use environment is created.

Balancing the necessity for accessible facilities with a design that is attractive to buyers of all abilities can be challenging. However, when it comes to the bathroom there is an increasingly wide range of products for architects wishing to provide housing which is comfortable and inclusive.

Lisa Ward is group product manager at Bristan

Latham's range of FR products is second to none



James Latham offers one of the biggest ranges of high performance, fire retardant panel and timber products on the market, all directly available from stock through its nationwide network of depots.

Fire damage in buildings can be devastating and as a result, flame retardant products are being specified in construction to help reduce this impact.

Latham's extensive collection of fire retardant products includes; CE marked Birch Plywood, Timber Cladding, Chipboard, MDF, MF/MDF, OSB, and Decorative Products for interiors including Valchromat, MFC, HI-MACS solid surface, Laminate and Fire door blanks.

All products are certified and independently tested to Euroclass B or Euroclass C and copies of these reports and the Field of Application are available to download from the website.

These fire tests are carried out for the manufacturer by an approved third party



and measure readings such as; rate of fire propagation, lateral fire spread, total heat release and smoke production.

Andrew Wright, Director of Latham's Limited said, "The number of projects where Fire Retardant products are being specified is increasing. When the correct fire retardant product is specified and installed in accordance with the Field of Application, they can provide the first line of defence in a

fire, helping to protect lives in both commercial and residential properties."

Mr Wright added, "We are continually reviewing our range to ensure we have the most up-to-date offering available for all our customers and our team of knowledgeable and experienced staff can provide information and samples for all these products."

0116 257 3415 www.lathamtimber.co.uk



Wetrooms embrace Lifetime Homes

Wetrooms are a popular addition to modern builds thanks to their appeal as stylish and versatile bathrooms. They are also the perfect example of a bathroom that conforms to the highly regarded principles of the Lifetime Homes Standard. The Lifetime Homes Standard is a set of principles that refers to an 'Inclusive Design' of housing – one that provides maximum utility, independence and quality of life for individuals of all ages and abilities, without affecting aesthetic value or cost-effectiveness. Wetrooms are spacious, level access bathrooms without trip hazards which allow for easy entry into and out of the showering area. Fully waterproofed, they offer an open plan showering area that can be used by anyone. CCL Wetrooms design, manufacture and supply wetroom drainage and waterproofing solutions to create versatile wetrooms for all abilities and ages.

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

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WWW.ZEROPLUS.CO.UK



Surface water channels efficiently drains aircraft hard-standing at Cork Airport

Beginning in June 2003 a €144.3 million investment in new 28,300m² facilities at Cork International Airport was completed in August 2006. The development included a new terminal and hard standing for parked aircraft. The hard standing area was drained by three sizes of Hauraton RECYFIX® HICAP® high capacity channels – 150, 200 and 300. All the sizes had fixed ductile iron 28mm open slot inlets that comply with loading category Class F900.

Having supplied high capacity surface water drainage channels for aircraft hard-standing areas at both Gatwick and Heathrow, UK airports, Hauraton were confident their RECYFIX HICAP channels would comply with the stringent specification asked for by the Cork Airport design engineers.

With aircraft tow trucks alone weighing 80 tonnes, manoeuvring aircraft impose an enormous burden on any surface drainage system. Not only must the area be efficiently



drained, the installed system must also withstand the twisting forces exerted by turning aircraft and numerous service trucks.

During the construction stage, just over 300 metres of RECYFIX HICAP were installed in the airport's taxiways and hard-standing areas adjacent to the terminal building.

Tim Connolly, Hauraton's managing director, was pleased when his company's high capacity channels were chosen for Cork Airport expansion scheme: "The HICAP channel components are made from specially formulated recycled polyethylene (PP), the heaviest one metre channel used, with the ductile iron inlet, weighed 25kg so allowed one-man-lift of the unit. This greatly simplified handling and logistics for merchant and contractor who found the combination of a tough PP channel and ductile iron slotted inlet resisted site damage during installation. The completion of this project means Cork ranks as one of the best regional airports in Ireland with its modern facilities and state of the art equipment. As with all Hauraton surface water drainage channels, the performance of the RECYFIX HICAP range complies with European Standards (hENs) and carries the CE mark".

01582 501 380 www.hauraton.co.uk

Let Laidlaw take the strain



A railway station in Essex is looking brighter and fresher after architectural hardware supplier Laidlaw installed its market-leading Nylon Line handrails. It was asked to supply more than 180 linear metres of its premium

40mm nylon handrails for the bridge and stairs that connect the two platforms at Great Bentley Station. This range is one of the most effective ways for organisations to comply with guidance in Approved Document M and BS8300 because its 4mm thick polyamide sleeve has a low thermal conductivity and is 68 times warmer to touch than stainless steel and 950 times warmer than aluminium.

01902 600400 www.laidlaw.co.uk

Extend exterior paint into Autumn



Specifiers can extend the window of opportunity for external decorating projects into autumn with Sandtex Trade 365 All Weather Masonry Paint. The product is specially formulated for late seasonal work, due to a high performance Pliolite® Resin formulation that is designed to combat difficult weather conditions. This means the traditional exterior painting season can carry on later in the year compared to conventional masonry paints. With 15 years' proven durability, Sandtex Trade 365 features exceptional adhesion and provides a long-lasting finish.

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Laidlaw introduces Biometric readers



Laidlaw Security Systems has announced that it is to fully integrate Invixium biometric readers into its portfolio of products. Invixium – a world-class manufacturer of next-generation biometric products – is an industry-leading system that is based

on smart innovations and functionality, making this cutting-edge technology the ideal complement to Laidlaw's products. Laidlaw, a trusted name among architectural suppliers, will now integrate Invixium biometric readers with Orbis, its groundbreaking, licence-free software, which offers unparalleled features for any access system.

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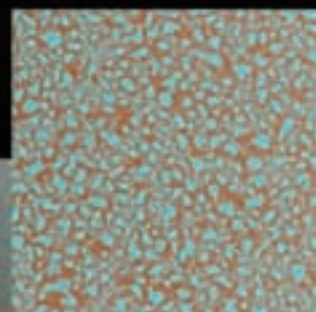


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