



Bosjes Chapel, Western Cape, South Africa

Steyn Studio's sculpture in concrete echoes the surrounding mountains page 18

WAPPING WHARF, BRISTOL

ADF reports on the lively independent food quarter created in Bristol's transformed docks

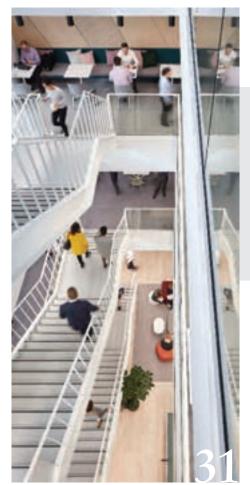
AECOM HEADQUARTERS, LONDON The workplace leader puts its own ideas to work



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FROM THE EDITOR



The launch of Herzog & de Meuron's major new 58-storey apartment block in Canary Wharf, One Park Drive, was somewhat overshadowed by some fairly stark words on Brexit from Sir George Iacobescu, chairman of developer Canary Wharf Group.

Speaking after Theresa May fired the Article 50 starting gun for what's sure to be a torrid two year race, he said that the UK construction industry would need to start producing its own labour and materials in big numbers to counter "serious inflation costs" resulting from a weak pound. Iacobescu also said that contractors who are tied into guaranteed maximum price contractors signed before June 2016's vote have seen losses on schemes they were expecting to make a profit on, which can't be good for anyone.

He said that around 60 to 70 per cent of materials, from cladding to steel to rebar, comes from overseas, and the UK "has to become more self-sufficient." With contractors now suffering from this inflation in import costs they are naturally increasing their prices, the compounding factor being potential further labour shortages. According to this influential developer, contractors have been guilty of relying too much on overseas labour, and leaving the EU will be a rude awakening that will force them to train UK staff up.

The 483-apartment scheme at Canary Wharf, the first residential development by the Swiss practice in the UK, is a striking cylinder made of projecting glazed boxes which will stand out among the square Docklands monoliths. However the bottom line is that its build costs have increased by 15 per cent since the Brexit vote.

The GLA has published a report that confirms just how big a contribution the architecture sector makes to London's economy, to the tune of generating £1.7bn per year for the city – and this is growing by over seven per cent every year. Launched at Mipim, the report not only shows how crucial the profession is in economic terms, it also contains the key fact that a third of architects in London are non-UK nationals, and most of those are from the EU.

London's deputy mayor Jules Pipe was upbeat about Brexit at Mipim, saying that London "will come through," pointing to the fact that Google, Facebook and Apple are all consolidating their presence in the city. However ensuring the continued income generation for the UK which the architecture sector has shown means ensuring that these professionals' future is secured in the capital – this has to be a priority.

James Parker Editor james@netmagmedia.eu



ON THE COVER... © ADAM LETCH

Bosjes Chapel is sited on a vineyard in the Western Cape district of South Africa, 80 km from Cape Town. It has been designed by Steyn Studio in a form that echoes the spectacular mountains nearby. For more information, go to page 18.



LIBESKIND'S LARCH

Futuristic physics centre lands in Durham

A timber-clad physics centre organised as stacked, sloped blocks has opened at Durham University in Durham, UK.

The £11.5m Ogden Centre for Fundamental Physics was designed by Studio Libeskind (New York) with Arup behind the project's complex structural engineering. The highly sustainable centre spans nearly 2,500 m² across three naturally-lit floors and features a 100-seat auditorium, flexible communal spaces, showers and bike racks for staff and students, and office space for 140 staff.

Daniel Libeskind, founder of Studio Libeskind, said: "This project is an example of how to design a highly-sustainable,

dynamic building within tight programme requirements. Light and openness is at the core of the design; at every move in the design process we incorporated simple, yet robust materials and considered the users' experience to create this important building for Durham University."

A spiral in plan, the building sports a ventilated timber rainscreen punctuated with linear bands of openable strip windows and a series of outdoor terraces, while canted curtain walls bookend the structure.

The spiral form of the building required column locations to be carefully considered and some of them are sloped to respond

to the architectural geometry and to allow for flexible room layouts. Internally, massive central skylight lights the lobby and meeting areas while soft grey concrete columns and ceilings are paired with warm wood finishes and frosted glass. The offices have been pushed to the perimeter to benefit from natural light and ventilation.

The centre is highly energy efficient: its exposed concrete ceilings take advantage of the night-purge effect and LED fixtures are used throughout while renewable energy sources such as rainwater harvesting, rooftop photovoltaics and a ground source heat pump were also employed.

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EVENTS

SEMINARS

Musicity at the RIBA 04 April, London www.architecture.com/WhatsOn

Listed Building Consent: When do you need it and how do you get it?

27 April, Cambridge www.architecture.com/WhatsOn

FESTIVALS

Clerkenwell Design Week 23-25 May, London www.clerkenwelldesignweek.com

London Festival of Architecture 01-30 June, London www.londonfestivalofarchitecture.org

EXHIBITIONS

Imagine Moscow

15 March - 04 June, London www.designmuseum.org/exhibitions/futureexhibitions/imagine-moscow

TRADE SHOWS

Materials 2017 25-26 April, London www.materials2017.co.uk

The Natural Stone Show 25-27 April, London www.stoneshow.co.uk

Clerkenwell Design Week 23-25 May, London www.clerkenwelldesignweek.com

Vision

06-07 June, London www.visionlondon.com

100% Design

20-23 September, London www.100percentdesign.co.uk

Healthcare Estates

10-11 October, Manchester www.healthcare-estates.com

COMMERCIAL

BREEAM 'Outstanding' for new Bristol office scheme

A speculative office building designed by Bush Consultancy has achieved a BREEAM 'Outstanding' design stage certificate – the highest rating for sustainability.

Aurora, located in Bristol's central business district, was benchmarked on the latest BREEAM assessment guidance. The project team said this represented the most stringent criteria for sustainability any UK commercial building has been subjected to.

The project has become only the sixth building nationwide and the only located outside London to achieve an 'Outstanding' status. Architects Bush Consultancy embedded various energy efficiency measures into the scheme, including solar panels, intelligent LED lighting, water-saving technology and a heat recovery system. There will also be electric car charging points, a roof terrace garden, bicycle storage facilities, lockers and showers.

Aurora will consist of six storeys, with each floor measuring 15,500 ft². Its striking facade and double-height reception area will lead through to a central glass atrium.

The building is expected to be ready for fit-out by the end of the year.



CGI of Aurora at night; interior; daytime showing roof garden will look

EDUCATION

IBI wins Cardiff HQ commission

IBI Group has been selected to design the new headquarters for Cardiff University's School of Journalism.

The practice will redevelop 2 Central Square, which is located next to the new Fosters + Partners-designed BBC Cymru Wales building at the heart of the city's Central Square development.

The school will be equipped with TV and radio studios, a 300-seat lecture theatre, six newsrooms, dedicated editing suites, a postgraduate research space, a library, and innovation and stakeholder engagement labs. Work on the interior is set to begin in August.

Architect Richard Golledge from IBI Group said: "Our Learning+ team is privileged to have been selected to design what will be a flagship learning environment, a place that inspires the next generation of national and international



journalists to succeed. As local architects that design leading education estates globally, we are proud to be contributing to the excellent reputation that both the city and Cardiff University have gained for first-class education facilities."



REPORT

Arup urges property sector to innovate

Arup is urging designers and property professionals to take advantage of the latest technology to save money and boost efficiencies.

In a report entitled 'Reimagining property in a digital world' the global engineering consultancy highlights that digital innovations, such as 3D printing and visualisation and artificial intelligence can improve the design process and foster intelligent decision-making.

Arup also urges designers and building managers to harness the power of IoT (Internet of Things) technology to track potential problems and optimise ventilation, lighting, heating or water usage to save energy and money.

Volker Buscher, Global Digital Services leader at Arup, said:
"Digital technology is redefining the property sector as we speak, bringing the potential to radically improve our working lives, increase asset value and create more sustainable buildings. However, investors, developers and owners of corporate real estate must be careful – this isn't about gadgets and equipment, it is about strategic thinking that avoids wasting money on the wrong innovations and inefficient capital and operational expenditure."

The report is based on Arup's work on major projects such as the King's Cross regeneration and the Crown Estate portfolio. The study includes details of prototype desks designed by Arup that can be customised for individual workers or automatically switch power off when not in use.

Also included in the report is the firm's research for The University of British Columbia in which the consultancy digitally simulated thousands of earthquake scenarios to identify buildings that would need a refurb or to be demolished.

RESIDENTIAL

Khan gives green light to two London high-rises



Mayor of London Sadiq Khan has given go-ahead to two high-density residential schemes in London.

Khan approved Allies and Morrison's previously rejected Hale Wharf scheme in Tottenham Hale as well as Moss Architecture's Palmerston Road development in Harrow and Wealdstone.

The mayor took over the schemes after local planners rejected them over concerns about height and development on the Green Belt, as well as affordable housing provision, but City Hall planners revised the plans and granted permission.

Khan said: "I am confident both these high-density developments will deliver hundreds of the much-needed, genuinely affordable homes Londoners need in areas of the capital ripe for further development. We've worked with the applicant on the Hale Wharf scheme in Haringey to increase the level of affordable housing and ensure the project will not encroach on the Green Belt, as was the case in earlier designs."

The two schemes offer high-density living: Hale Wharf includes a tower, Origin House, rising up to 21 storeys, and the Palmerston Road development goes up to 17 storeys. Plans for Palmerston Road

include 186 homes of which 74 will be affordable (41 per cent), while Hale Wharf will deliver a total of 505 homes, with at least 177 (35 per cent) being affordable.





VIEW POINT



Nigel Ostime from Hawkins\Brown gives his views on the barriers to quality in the planning and procurement process, and how they could be broken down

rchitects will tell you there is intrinsic value in good design. Quality is delivered through two distinct phases in the project process. The first is the conceptual design phase, and what is given consent in planning. In RIBA-speak (and not to get too bogged down in the detail) this is broadly Stages 1 to 3. The second phase is what happens to that design as it passes through delivery, Stages 4 and 5. (There is a third phase regarding alteration and extension to a building, but that can be likened to the first, conceptual stage for these purposes.)

Quality generated in the first phase can be lost in the second so both must be considered with equal weight. We must also remember that quality does not equal value. Value for some building clients means lowest cost. But as many architects will attest, low cost in construction is not an excuse for poor quality design. Architects have an instinctive belief in the value of good design, but this message is not fully recognised outside the profession. We need to do more to promote it but at the same time we also need to develop a better understanding of our client's financial drivers.

As we saw in the recent RIBA Client Satisfaction Survey (go to www.architecture.com and search 'RIBA for clients') architects are considered to be good designers but less strong on process and financial management. Also, architects are generally reckoned by clients to be good at either concept or delivery, but not both. This is a massive generalisation but it is also a widespread perception.

It is always the case that the more time there is for design the more considered the building will be and the better the outcome. The cost of design is small compared to the cost of building and it could be argued that 'fat' design makes for lean construction and thereby better quality and value in the built product. Mistakes on the drawing board (or

computer screen) are less expensive than mistakes on site. Multiply this by a factor for the building in use. Generating time for design iteration can be achieved through tighter management of the process but is also a factor of the fee. So clients have their role to play – as with most things you get what you pay for.

It can though be difficult to persuade clients to invest in a fully-coordinated design in the risky pre-planning stage, leaving an uphill task in the post-planning technical design stages. Design and build procurement compounds the problem. If we are to change this we need evidence from previous projects where the value of a robust detailed design stage can be demonstrated. The RIBA survey showed that clients view post-completion reviews favourably and we must use this to generate momentum in the uptake of Stage 6/7 activities and feeding this knowledge back into Stages 0/1 on the next project.

Outside the design team, local authority town planners have an important role to play in delivering quality

Outside the design team, local authority town planners have an important role to play in delivering quality. Often though, they lack the teeth to implement their duties robustly. This is partly down to skill-set and partly to lack of resource. It is also of course a function of the planning process, where the final decision can be politically driven and decided by committee members with little or no design training. However, democracy need not be a foil to quality.

The planner's role pre-application is two-fold: firstly what planning authorities were

originally set up to do – plan – and secondly in overseeing the planning application process. In the plan-making part, the planners determine the parameters within which we design. The UK system involves a set of relatively loose rules compared to those of countries like Germany or the US where a zonal planning system is more typical. These zonal plans set out maximum heights as well as land use and can also set out forms and typologies of buildings and design criteria that have to be met.

In the UK we have a plan-based but discretionary system. We could invest more in the plan-making process and set clearer parameters in the way that other countries do. As with individual building projects, briefing and preliminary studies at an urban scale are essential to good outcomes. Neighbourhood planning could deliver this function but it needs appropriate stimuli and finance for a more comprehensive take-up than has happened to date.

Post-consent, the under-resourced planners need help from wherever they can get it. One solution is to entrench a role for the concept architect who designed the scheme submitted for planning approval into the delivery stage, through a Section 106 mechanism. In this way, if the original practice is not taken on as delivery architect, they can at least act in a monitoring and reporting role, paid for by the applicant but in support of the local authority. This has been trialled but needs to become more widespread.

If we want better quality outcomes in our building projects we need to address all of these issues and evidence of success in previous projects is a good place to start. Ultimately we need to provide evidence of the value of good design and not rely on unsupported conviction.

Nigel Ostime is project delivery director at Hawkins\Brown Architects LLP



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AWARD

Trio of Civic Trust prizes for JMP

John McAslan + Partners has scooped the National Panel Special Award at the Civic Trust Awards for the Catholic Cathedral in Kericho, Kenya. The firm's Jumaa Mosque and Heritage House Museums in Doha also won Civic Trust Awards.

Design director Aidan Potter said: "We are delighted that our project has been singled out by the Civic Trust jury in this way. The Civic Trust Awards are highly respected and to receive their top award is incredibly gratifying."

The cathedral's design creates a unique and sacred place for a congregation of 1,500 seated celebrants under one giant inclined roof that has an ascending interior volume which is in excess of 1,375 m².

CULTURAL QUARTER

Rick Mather's Croydon cultural quarter gets go-ahead

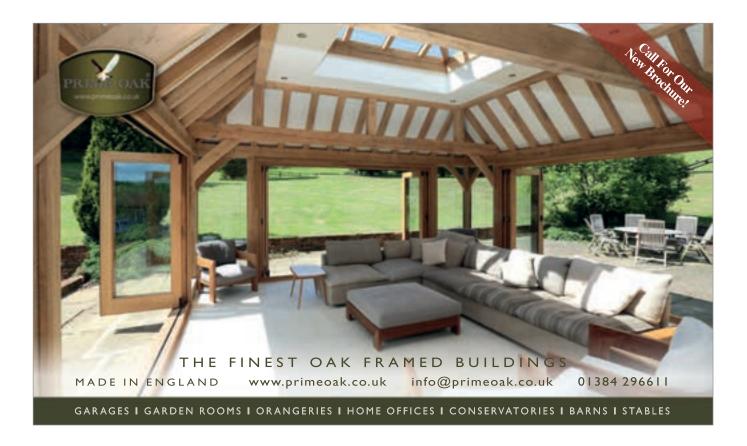
Detailed planning permission has been granted for the first phase of Rick Mather Architects' new cultural quarter in the heart of East Croydon, south London.

The development will see the eight hectare Fair Field area transformed into a "destination for arts, education and culture." This will include a heritage-led refurbishment of the iconic 1960s concert hall Fairfield Halls as well as more than 2000 new homes, regenerated streets and public spaces, a college, an art gallery, an energy centre and retail, community and office space.

"The proposal will revitalise an underused and tired area, turning it into a vibrant public space and reconnecting it with the rest of the town centre," said Cllr Alison Butler, deputy leader and cabinet member for homes, regeneration and planning at Croydon Council.



The proposals are being delivered by Croydon Council's development company Brick by Brick and a funding boost of £14.2m was released by the Government in February.



PRACTICE PROFILE

Märraum Architects

James Parker spoke to an emerging young practice to find out how they got off the ground in Cornwall, including putting a focus on using virtual reality to give clients exactly what they want

arraum Architects is an exciting new practice in fashionable Falmouth, Cornwall which has gone from to strength to strength in only a few years with some impressive residential renovations under its belt. Originally launched from German-born founder Michael Hormann's spare room in 2011, the firm recently moved to new riverside premises he designed in Penryn, just outside the town.

The name Märraum is itself an interesting construction of Michael's, to reflect the ethos of the firm – assembled from the German 'Marchen' folktales combined with the German word for space, 'raum.' As co-partner and architectural technician Adam Laskey says, "it's the story of space, the creation of space." 'Mär' also means sea, alluding to the firm's HQ which helps inspire many of its designs.

The practice is headed up by three directors – Michael and Adam, plus Adam's wife, Daisy Sawle, who is responsible for the overall running of the practice, business development opportunities and finance. In addition there's trainee technician Ed Piotrowski and Mina Booth, office coordinator and PA to the directors. Michael & Adam previously worked together at CAD Architects based not far away in Truro, and remained close friends when Michael was made redundant along with several other colleagues when the recession hit.

Laskey comments: "Me, Daisy and Michael have all known each other since we were about 18, working together in different jobs locally, from bike hire to wedding catering to running a cafe." He assures *ADF* that working closely with his spouse in the practice is actually a bonus: "We spend a lot of time together but we are one of those unusual couples that can tolerate each other 24 hours a day."

New premises

With projects coming thick and fast, last September Märraum decided that, in Adam's words, it was to time to "refine and reform" its offer. The firm decided to move next door to a space twice the size, and take on Mina. The decision to move partly came from the involvement of local accounting firm The Peloton which helped mentor the team, and encouraged them to expand. Says Laskey: "Gut instinct had got us from a sole trader to where we were, but was not going to take us to the next level."

The new building is a large unit in a former storage warehouse, with a central atrium as the key focus, containing a big communal dining table. As Laskey says, "in other developments you'd stick three or four more units in, but we wanted the space, and the sense of light." He says Michael's design, as well as the fairly idyllic setting, has led to reduced stress levels. This is also helped by other







A major practical benefit of VR is that it enables clients to understand – and help make – design changes

amenities such as a comfortable area with sofas and a library, not to mention "the ability to open the back doors and dangle our legs over the water."

The building has what is perhaps an even more important role when it comes to meeting clients, as the firm took the brave decision to not do initial 'free of charge' site visits – purely because the competition did it this way. Instead Märraum invites clients to come to Penryn to meet everyone that will be involved in their project, the new office providing the perfect setting. The firm believes that this is essential to communicating the benefits of its approach including a diligence in delivering exactly what a client requires.

Laskey admits that some clients do question the approach: "Noone does it, why are you?" But he adds: "as soon you explain the reasons, they are normally on board. People may say 'I'm not coming to you, you're 45 minutes away, but my reply is 'exactly'. I can't travel that far and get nothing from it, it goes both ways."

He says that establishing the initial confidence of the client having seen the whole team is important for the client as well as the practice. "It makes sense for them, because they're making sure they're employing the right team; it will never just be one person."

Webbed wonder

Another "turning point" for the growing firm, says Laskey, was refining how it presented itself to the market. Initially Michael's strong network enabled him to win jobs via word of mouth, but a difficult period following a scheme falling through led to an urgent discussion around how to improve the flow of new business.

"We found our website was a weakness, it was not found on Google," he says. "We made a big decision to make a large investment

in improving it, and it was the best decision we ever made." The result is the highly engaging and SEO-friendly www.marraum.co.uk, and it wasn't long before the firm was climbing the rankings. The practice is currently the top Cornish architect on Google, showing the power of a good website.

Laskey says that the site has not only led to competitors adopting a similar look, but it has led to a situation where the firm is now turning work down: "We are getting more enquiries than we can undertake." However he says this is a good problem to have: "It means we are getting the best projects for us as well as our clients."

Accuracy a speciality

Laskey describes how the firm's approach – demonstrated initially in renovating domestic properties within a 10 mile radius of Falmouth – centres on a focus on the client's space needs. "We will look at your house and not build an extension just because you want one, but look at how you use the space. The room at the back that's cold and damp and full of boxes, how can we incorporate that into the space to improve it, rather than building something new and still having the same problem?"

He is also very proud of the accuracy that the firm is able to achieve thanks to its investment in ArchiCAD software which enables the team to design in 3D. On a current high-end new build residential scheme on the desirable Roseland peninsula, he says "the contractors are building a very complicated cranked roof, and we are 4 mm out over a 7 metre length."

Laskey continues: "I was always told 'we'll work it out on site' – but I'm being paid to work it out, that's my job, and there's no reason why I shouldn't." The house was built to scale in ArchiCAD, he says, "so every roof truss, rafter and hip was plotted in three dimensions, and nothing has gone away from the plans."

One of the practice's most demanding renovations yet was at a prestigious but dilapidated house on Dunstable Terrace on Falmouth, which led to three further jobs on the same street. "The building had been renovated so many times that we weren't able to find what was load bearing and what wasn't," says Laskey. "The floors were falling apart, so we said strip it and start again."

Other key projects have included the conversion of a Grade II listed former schoolhouse in Devoran, Cornwall (undertaken by Hormann as a sole trader but working with another architect – the late Chris Hendra) into two private dwellings for a couple and their children.

Another outstanding project – this time in the village of Feock – was a major renovation and extension of a simple two-storey timber chalet into a desirable house with views down the valley to the sea, with a high quality finish and materials. Its light, open plan internal areas led to it being used as an 'inspiration' project on TV's Building the Dream. Laskey says the clients are very happy, and adds "we have maintained a nice relationship with them."

Virtual reality

Thanks to further recent investment, the practice claims to be the first in Cornwall to offer virtual reality as part of its standard package to clients. This followed a conversation between Adam and computer programmers Sarah and Andrew Davey of Equin Ltd): "I said everything we do is based on 3D modelling and ISC files, so surely we can bring that into BIM and I can send it to a client to get a VR experience of a design." The friend then found three programs that interact; Märraum then trialled it with great success on the Roseland residential project, and as Laskey says, "the first



SENSITIVE RENOVATION

The practice rescued a fairly dilapidated house in Dunstable Terrace, Falmouth and turned it into a desirable double-height residence

reaction from the clients was 'wow.'

The firm now offers a free VR experience of any stage of a project – delivered in its conference room, and produced in around 15 minutes. A major practical benefit of VR beyond the simple excitement of experiencing the 'real' building before it's built, is that it enables clients to understand, and help make, design changes: "It gives people the confidence," says Laskey.

"Explaining to a client what certain aspects of a space will be like in 2D is incredibly difficult, but VR is very helpful for giving clients options," he adds, giving the example of a current client who is extending a bungalow upwards into the roof space, necessitating removing and replacing the roof.

With a tricky balance to strike between permitted building height and adequate head room, VR was ideal to show this client, who has arthritis, how much head room she needed. "500 mm higher was OK in theory but testing it in VR made her duck – so we increased it to 800, which made a huge difference but was within limits."

VR is also useful for helping explain things to the planning authority, he says – "there are certain things you do that they can't 'feel' in 2D," and with contractors – "on one complicated project we had the builders in the office and they looked at the VR walkthrough – they then decided to get a specialist to build the staircase."

As the practice and its reputation have grown, the team has had to be flexible regarding their mix of job roles, with Michael and Adam in particular having to accept compromises. The initial intention was for Adam to do more design work and for Michael to be able to get involved in initial client meetings. However as Märraum's workload has increased, they have had to concentrate more on, respectively, front-end scheduling and new business, and design delivery.

FACTFILE: MÄRRAUM ARCHITECTS

Location: Penryn, Falmouth, Cornwall

Number of staff: Five

Key specialism: Residential renovations

USP: Only Cornish practice offering free virtual reality

as standard

Unusual fact: Clients have to make initial visit to office





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NEW ARRIVALS

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



A TRIPLE MOVE TP BENNNETT

Three new recruits have joined London's TP Bennett from the custodial sector of Capita Property and Infrastructure's architectural team. Kevin Bell and Daniel Dominguez were appointed directors, while John McIntyre joins as a consultant. McIntyre was director of the Capita team, while Kevin and Daniel led the Justice Design sector working alongside the private sector and the Ministry of Justice on various custody programmes and pilot schemes within the prison estate. The trio has extensive experience in BIM. Jonathan Darke, TP Bennnett principal director, commented: "The new team will work cross-sector and we look forward to sharing their knowledge with the wider team."



PHILIPPE PARÉ GENSLER

Gensler's principal design director Philippe Paré has moved to the firm's London office. An expert in the design of workplace and cultural spaces for over 17 years, with more than 10 years at Gensler, Philippe has delivered unique workplace solutions for the likes of Hyundai Capital, NVIDIA and Adidas and has collected over 70 accolades throughout his career, including the AIA's Institute Honor Award for Interior Architecture, Interior Design Magazine's HIP and Best of Year awards. Duncan Swinhoe, regional managing principal for Gensler commented: "We are privileged to be able to welcome Philippe to Gensler's London office as he brings his exemplary reputation and wealth of forward-thinking and innovative experience."



Angus Morrison has joined self-build experts Allan Corfield Architects. Joining from Scott Brownrigg where he worked on large commercial, residential and education schemes, Morrison was previously at BDG Architecture + Design for several years, during which he was involved in the delivery of EDF Energy's UK training HQ. He also enjoyed a stint at Michael Laird Architects while at the University of Dundee, where he graduated with a Masters Degree in Architecture. Angus said: "I know that I will enjoy the opportunity of working alongside a diverse talent base, learning from those around me and contributing to what is a young but successful practice."



JULIA GILES WSP PARSONS BRINCKERHOFF

WSP Parsons Brinckerhoff has appointed Julia Giles as director of its Glasgow development team, with a focus on the public sector transportation business in Scotland. A leading practitioner in development and planning, Giles was previously a transport planning director at CH2M. She was lead author of Transport Scotland's Scottish Transport Infrastructure Project Evaluation guidance (STRIPE) and the project director on Transport Scotland's Development Planning & Management Advisor & Auditor and their traffic & transport advisor & auditor. She's also a professional reviewer for the Chartered Institution for Highways & Transportation.

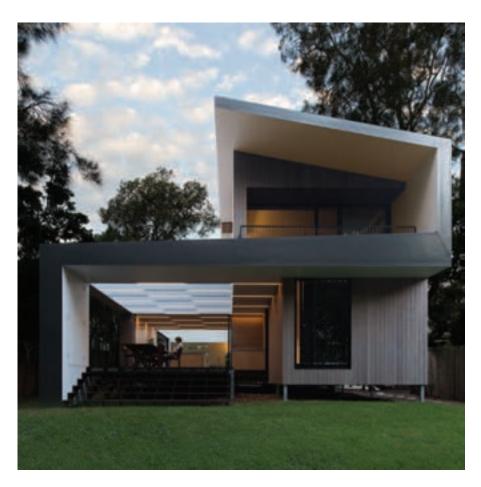


JAMES GREEN WILLIAMS LESTER

Dorset and Hampshire based architects Williams Lester have named James Green as a director. Green joins after spending nine years in New Zealand where he worked for the country's largest multi-disciplinary design office Jasmax as a senior project and associate architect specialising in healthcare buildings. His work involves the rebuilding of the earthquake-stricken Burwood Hospital Campus in Christchurch. Green said: "I am honoured and excited by the opportunity. The company has a proud heritage in delivering successful building projects over the past 30 years and we have a tremendous future vision for the practice, which we are busy implementing."

INTERNATIONAL FOCUS

Showcasing the latest projects from around the world. Visit www.architectsdatafile.co.uk and enter the reference number for more information



CONTEMPORARY SYDNEY BEACH HOUSE, AUSTRALIA PH+

Architects pH+ have completed a home for a private client on Sydney's Northern Beaches that expands upon and celebrates the traditional Australian timber pitched-roof house. The extension to this family home is identified by a tall, dramatic upper floor with a mono-pitched sloping roofline. This roof is made up of a single plane that folds in on itself to form a canopy, walls and private spaces that frame views out to the garden and sky. Internally, the rooms have been reorganised into a series of linear spaces; from living, to dining, to kitchen, to external deck/barbecue area, to garden. Floor-to-ceiling sliding glass panels can be drawn back fully into the adjacent walls, eliminating any distinction between internal and external space.

Ref: 17462



LA VINYA, SPAIN STUDIO RHE

Studio RHE has completed a unique four bedroom villa, La Vinya, at the edge of the world famous PGA Catalunya golf resort. Located in the foothills of the Pyrenees in northeast Spain.

Living spaces are broken into separate components and arranged along a robust stone wall. All accommodation is orientated to provide both complete privacy and carefully framed mountain views. The 80 m² open space living area is built into the hillside, and leads out onto a raised plateau that overlooks a solarium terrace and infinity pool, with an outdoor barbecue kitchen and in-pool daybed. A large double-sided fireplace breaks the living area into two light, open spaces with panoramic views.

The master bedroom is designed to feel like an entirely discreet space, despite standing just a few metres apart from the main residence. Modelled on a tree house, it uses floor-to-ceiling glass panels to take full advantage of the rich tree canopy surrounding it.

Ref: 40716



THE ANANTARA AL, OMAN ATELIER POD

Perched over 2,000 metres above sea level on the curving rim of a great canyon in Jabal Al Akhdar, Anantara Al Jabal Al Akhdar Resort was designed by Atelier Pod. The long inaccessible Jabal Al Akhdar, Arabic for "The Green Mountain," is a towering massif on the Sultanate of Oman's vast Saiq Plateau. The luxury resort is located on a 66,000 m² cliff edge plot, with a total built-up area of 24,000 m² including 115 rooms, six restaurants and lounges, a signature spa and recreation facilities.

Ref: 58708



BOSJES CHAPEL, SOUTH AFRICA STEYN STUDIO

The new chapel, set within a vineyard in South Africa, is designed by South-African born Coetzee Steyn of London based Steyn Studio. Its sculptural form emulates the silhouette of surrounding mountain ranges. Constructed from a slim concrete cast shell, the roof supports itself as each undulation dramatically falls to meet the ground. Where each wave of the roof structure rises to a peak, expanses of glazing are adjoined centrally by a crucifix. Inside, a large and open assembly space is created within a simple rectangular plan. Highly polished terazzo floors reflect light internally. The whitewashed ceiling casts shadows which dance within the volume as light levels change throughout the day. This modest palette of materials creates a neutral background to the impressive framed views of the vineyard and mountains beyond.

Ref: 13029



FORMER DEUTSCHE BANK SITE, GERMANY UNSTUDIO

Having been selected as the winner for the urban strategy of the former Deutsche Bank site in Frankfurt last year, UNStudio has now also been unanimously selected as the winner of the architectural competition for the redevelopment of the site. Comprising four high-rise towers with a multi-storey plinth and housing mixed-use programmes, large public spaces and incorporated subsidised housing, UNStudio's design for the former Deutsche Bank site will create a 'City for All' in the heart of Frankfurt. The jury selected UNStudio's design based on the silhouette and ensemble of the four towers, as well as the spatial qualities, which are also demonstrated by the integration of the listed buildings in the Junghofstraße.

Ref: 39452



THE SMILE ACADEMY, TURKEY SLASH ARCHITECTS

The design of the Smile Academy in Gaziantep, one of the biggest cities in the east of Turkey, "alters the perception of a clinic being an uncomfortable, scary place," according to the architects, instead offering a peaceful environment for both the visitors and staff. In this way, the polyclinic creates a new style of "health space" for the city. The characteristics of the double height interior have been designed to be similar to a store typology, where the entrance has a large gallery opening with a huge glass facade but no other windows. This project aimed to transform the restrictions of the existing space into "positive effects."

Ref: 85047



HOUSE LENTE, FRANCE KARAWITZ

House Lente is one of the few passive houses certified in France. Designed by Karawitz, for a Franco-Japanese family who wanted to build a contemporary wooden home with high energy performance. The house is constructed on stilts and clad in larch, and the building is surrounded by high hedges, that separate it from the neighbouring properties which are from a variety of different periods. The interior of the house is a space that is sequenced from one room to another with the 'genkan' lower part of the house so typical of Japanese architecture where shoes are deposited before entering. There is a large openplan room on the first floor which opens out onto a large terrace.

Ref: 33265

CPD FOCUS

The latest CPD courses, seminars and documents for architects

HEATING SYSTEM PROTECTION: OVERVIEW OF BEST PRACTICE



BoilerMag has launched a CPD course on best practice for heating system protection aimed at industry professionals. As one of the leading manufacturers of commercial and industrial boiler filters, experts at BoilerMag are available to visit your office to deliver the entry level course, which count towards annual CPD points requirements The presentation aims to give an explanation of the best practice for heating system protection, including the reasons and causes for protecting a heating system; what methods to use; and what the current regulations are. 0114 225 0624 www.boilermag.com

ENGINEERING VS LEGIONELLA



Props, videos and interesting practical demonstrations set Horne Engineering's CPD presentations far apart from death- by-powerpoint offerings and gives the HORNE philosophy on how engineering can help mitigate the risk of retrograde contamination of hospital water systems. Some myths will be busted: how biofilm will attach to almost any surface, irrespective of its smoothness, and why removing your tap's outlet fitting is a bad idea. The pros and cons of Chemical vs Thermal disinfection are discussed as well as the importance of elevated velocity flushing. 01505 321455 www.horne.co.uk.

TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



In two RIBA assessed seminars. Comar outlines: Stand & Deliver: a Study of curtain Walling - the design of curtain walling, it's properties and how it is used by specifiers. This seminar aims to offer an understanding of the points of Hll in the NBS specification system, and how best to make use of it. Designing functions & reliability into entrances - the issues that influence the function of main entrance design and technology. This seminar aims to offer an understanding of how user expectation influences door design and links this with hardware selection, entrance configuration and floor finishes. 020 685 9685

www.comar-alu.co.uk

SPECIFYING HARDWOOD TIMBER DOORSETS



Urban Front offer a RIBA certified CPD: Specifying Hardwood Timber doorsets which has been updated for 2017 to include for changes in building regulations and to include the more complicated fitting of timber doorsets into frameless and architectural glass. The CPD aims to educate specifiers on all the aspects of fitting hardwood timber doorsets into various private and commercial dwellings. Urban Front also have RIBA certified blogs which you can find on the RIBA website and on Urban Front's website. To make a booking please call Urban Front. 01494 778787 www.urbanfront.co.uk

BREATHING LIFE INTO CITIES



Scotscape's living wall CPD 'Breathing Life into Cities' is now available via webinar. The webinar is led by our living wall expert Niall McEvoy and takes approximately 1 hour with a 15 minute period for Q&A. As specialists in the design, supply, installation and maintenance of Living Wall systems, we are delighted to be able to offer CPDs on this topical subject. The Webinar is presented in real time, making it interactive and easy to exchange and discuss information. Niall McEvov will be on camera and will take viewers through a visual power point presentation on the design, installation and maintenance of Living Walls. There is a live chat at the bottom of the webinar session which allows you ask any questions you may have, and there is also a microphone Q&A session at the end of the presentation which also allows you to speak with Niall and your group. Attending our webinar is very simple and there is no need to download any software. Scotscape specialises in the design, installation and maintenance of living walls across the UK and Europe. Our long experience in the living wall market allows us to bring considered insight into best practice and straight forward installations to maximise the introduction of vertical greening into the built environment and create more sustainable urban environments. Along-with our proactive CPD programme for architects we also train other committed professional landscapers to use our system via interactive training days. 0208 254 5000

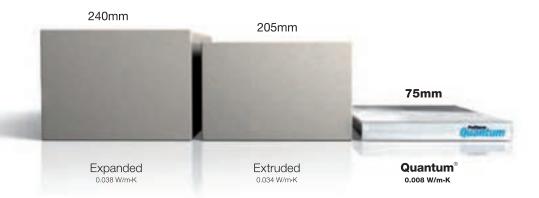
www.scotscape.net/living-walls

UNDERSTANDING MECHANICAL VENTILATION WITH HEAT RECOVERY FOR COMMERCIAL APPLICATIONS



The seminar 'Understanding Mechanical Ventilation with Heat Recovery for Commercial applications' from Airflow Developments Ltd guides the participant through the need for better indoor air quality in the UK and the benefits improved indoor air has on the inhabitants and the fabric of the building. Understand the technical aspects of a whole building approach to ventilation and the energy savings that can be achieved by implementing a ventilation strategy in commercial buildings that encompasses Mechanical Ventilation with Heat Recovery (MVHR). By explaining the principles of operation variants in equipment design, the drivers encouraging specification and the regulatory landscape, including European ErP legislation and its future, and Passive House approval, the participant will learn and understand the features and benefits that this technology can delivery for their projects. Studies have found that improving indoor air quality through providing fresh, clean, filtered, warmed air also has a positive benefit on productivity and occupant wellbeing, including reducing the symptoms of respiratory issues such as asthma. Using MVHR as part of an integrated ventilation system also helps the building to be assessed to BREEAM, the most widely used environmental for new buildings. 01494 525252 www.airflow.com

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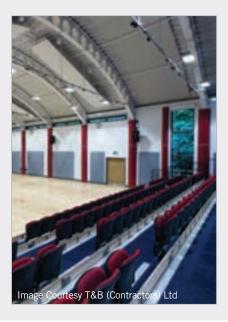


Top marks for Encasement at ManorLodge School in Hertfordshire

Structural steelwork around the perimeter of a new sports hall and theatre at Manor Lodge School in Shenley, Hertfordshire is being concealed using 70 semi-circular 'Circa' decorative column casings from Encasement interior to provide a durable, attractive and safe environment.

Manor Lodge is an independent coeducational school for early years to year 6 students and occupies a 10 acre site near the M25, which the new sports hall and theatre complex shares with the school's original grade II listed building and modern teaching blocks.

The £2 million project was constructed by T&B Contractors and designed by Aedifice Architects, which features a steel frame construction to provide the large, open interior space, while the exterior uses brick and wood cladding together with a planted 'green eco-roof'.



Inside the sports hall, Encasement's column casings, which range in height from 5.0 metres up to 7.7 metres, are used to conceal vertical steel supports around the building's perimeter to create aesthetic finish to the interior that integrates with the colour scheme while reflecting the school's own colours.

Manufactured from pre-formed plywood and finished with a highly durable Formica laminate in a Beaujolais K2046 colour, both 300mm and 500mm diameter casings were used to meet the needs of the installation and ensure the steelwork was concealed effectively.

As 'Circa' casings are normally supplied in 3.0 metre lengths, the column casings were stacked to achieve the necessary heights and also incorporated an aluminium feature joint as an additional design feature.

01733 266 889 www.encasement.co.uk

VEKA secures Secured by Design



Industry-leading PVC-U systems supplier, The VEKA UK Group, has been awarded membership once again of the national crime prevention initiative, Secured by Design (SBD), for both its VEKA and Halo brands. The VEKA UK Group partnered with Secured by Design several years ago and has maintained its strong relationship with the team, thanks to a shared ethos of designing out crime at

the product development stage. Secured by Design was established in 1989 and works to reduce crime by bringing Police Forces, developers and planners together at the design stage.

01282 716611 www.vekauk.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

Infographic seeks to help with F-Gas understanding



Mitsubishi Electric has issued a new infographic on the requirements and repercussions of the F-Gas Regulations to help explain why the legislation has been introduced and what people need to do about it. "We've designed this as a simple way of quickly taking in the main points which will be highly relevant to anyone involved in air conditioning, whether an installer, consultant, designer or building owner," explains Graham Temple, marketing manager for the company's range of split air conditioning systems.

The infographic can be downloaded at a dedicated website, which also includes a short animated video explaining the effect of certain refrigerants on global warming and why new products are being introduced. "We hope this helps increase understanding and are also talking directly with customers to ensure that we as an industry have all the information needed," ends Temple.

To download the free infographic and view the animation, visit the website.

www.timeforr32.co.uk

Big Foot Systems shortlisted in Awards



Sussex-based Big Foot Systems is delighted to announce that its new Lock 'n' Load frame has been shortlisted in the prestigious ACR News Awards. This innovative new product, a freestanding, non-penetrative frame designed to support mini split outdoor air conditioning units, has been nominated in the 'Air Conditioning Ancillary Product of

the Year' category. Designed to support mini split outdoor AC units, Big Foot Systems' innovative Lock 'n' Load Frame can support AC units on both flat rooftop or ground mounted applications.

01323 844355 www.bigfootsupport.com

Firestone move signals growth

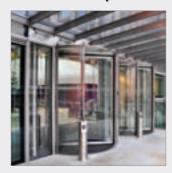


Roofing and lining membrane specialist, Firestone Building Products, has completed a move to new offices and stockholding facilities incorporating a new Building Products University Training Centre, as part of a major expansion plan based on continued

growth over the past five years. The move is designed to help support and create jobs by enabling Firestone's expansion and enhancing its Building Products University facilities, for architects and other specifiers as well as providing practical and theory training for existing and potential Firestone roofers and lining installers.

01606 552026 www.firestonebpe.co.uk

Boon Edam provides secure and stylish entry solution for The Francis Crick Institute



Boon Edam, a global market leader in entry solutions has unveiled a quality, engineered solution for a brand new, state of the art building in St Pancras; now home to The Francis Crick Institute. The research centre, is a base for 1500 scientists and staff, therefore, the entry solution required advanced security to ensure staff, visitors and equipment could be kept safe, whilst complimenting the design. The building is serviced by five Automatic Crystal Tourniket's and was selected following an assessment of everyday use including analysing the number of visitors whilst creating a user friendly and attractive gateway into the building supporting the green principles that were embedded into its design and carried through to its operation. The revolving doors use a combination of laminated and toughened glass, which results in a reduction in the traditionally framed elements of the door. The minimalistic, all glass revolving doors provided a stylish solution whilst also meeting the security requirements; with each stainless steel finished Crystal Tourniket supplied with an external night locking door, the additional feature provided a further layer of security for the building.

01233 505900 www.boonedam.co.uk

Kingspan holds 5th superbrand title



Kingspan Group has been awarded Business Superbrand status for 2017 – the fifth time the building products pioneer has earned the title. Based on the survey results from 2,500 individual business professionals from across the UK, as well as the independent and

voluntary Business Superbrands Council, the challenging process has been identifying the UK's leading business-to-business brands since 2001. Managed by The Centre for Brand Analysis (TCBA), nearly 1,500 brands were assessed for the three key attributes of quality, reliability and distinction.

01544 387 384 www.superbrands.uk.com

GUNNING HEATING LEADERS IN NATURAL CONVECTION

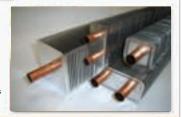


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Excellence in Innovation Award winners



EHC is delighted to have won the Lanarkshire Business Excellence in Innovation Award for the second year in a row. The innovative EHC Solar PV Ready Electric Radiator system makes use of an intelligent controller to ensure when the occupant is not using any of the energy being generated by the PV panels it is diverted to either

their Hot Water Cylinder or to EHC Ceramic Radiators. This innovative system provides a background heat during daylight hours until the main central heating system is required. The innovative radiators are the latest addition to the well-established and proven range.

info@electric-heatingcompany.co.uk

BUILDINGPROJECTS

WAPPING WHARF BRISTOL

Eating on the dock of the bay

Bristol's Wapping Wharf is being revamped into a new food hub for the city, echoing the area's historic past with a bustling new street plus a restaurant yard made of shipping containers. Teodora Lyubomirova reports



Bristol's vibrant food and drink scene has become a vital part of the city's cultural makeup. The city, which was recently described as a "gastronomic boomtown" by *The Sunday Times*, is renowned for its strong focus on sustainable food and passionate independent retailers.

Bolstering this reputation is Alec French Architects' mixed-use scheme in Wapping Wharf, which is already making waves as it includes the latest 'gastro hub' in Bristol harbour.

The Bristol-based architects' extensive masterplan will see the last undeveloped area in the city centre transformed into a mix of residential buildings, offices, a hotel and retail units, with a clear objective to become a new food and drink destination on the south side of the harbour.

Tough beginnings

The scheme, which has been over a decade in the making, was the brainchild of Stuart Hatton, managing director and founder of developer Umberslade, which in a joint venture with Muse Developments is bringing Wapping Wharf to life.

Umberslade bought the largely vacant site, located at the eastern end of Wapping Wharf between Floating Harbour and Avon New Cut, in 2003, and the scheme was given the go-ahead in 2006.

However, start on site was delayed until 2014 due to funding difficulties fuelled by the financial crisis. "No one wanted to lend me money," Hatton explains drily to *ADF* at a table in Mokoko, one of the cafes at the site. It was only after collaborating with the local council and securing Section 106 funding for the provision of housing – one of the residential buildings in the



development, Chandlers House, was sold to Sovereign Living, a shared ownership and market rent provider – that the scheme could take off. "To be honest with you, I will sing the council's praises because they really wanted [Wapping Wharf] to happen," Hatton adds.

In the meantime, Alec French Architects were fine-tuning the masterplan, which had to go through rigorous consultation with local councillors and concerned residents before being approved. Mark Osborne, director of Alec French, explains: "We had some very successful public consultations – although there were local residents who were very cautious about overdevelopment and the nature of the scheme as a whole; they were worried about heights, for example."

There was general consensus that the area's heritage had to be preserved, and the architects were tasked with creating a development that was sympathetic to the gritty character of Bristol's harbourside.

Osborne, however, argued that his practice had little to reflect on when deciding on the scheme's overall design. He comments: "Surprisingly, not much has been done to form this 'dock' character. So I wanted to see something more of the character of a 'wharf', with steep roofs and a mix of materials, particularly on the retail units where we have incorporated corten steel in between the glazing and some stone plinths, as well as some steel sections for the signage on the side."

This resulted in the architects specifying materials that contributed to the area's makeup, acknowledging its industrial past but also the modern appetite for rugged yet refined finishes.

Site specifics

Wapping Wharf, as the development is aptly named, is being carried out as a three-stage project regenerating a harbourside conservation area with rich history. The site was previously occupied by Bristol's 19th century New Gaol prison and the architects had to masterplan around some of the remaining structures, including the pitchroof stone stables that are now transformed into a pizza restaurant. Railway tracks, a legacy of the Great Western Railway's operations in the early 20th century, are retained to the north end of the site.

Phase 1 of the development, which commenced in 2014, saw the creation of multi-storey residential buildings clad in what the architects refer to as a "burnt stock" type brick'. Those house a number of glass-fronted retail units at ground level, alongside a new pedestrian route – Gaol Ferry Steps – that connects the Southville area across the river to the south with Museum Street to the north.

Once residents had got used to the new access following Phase 1's completion in 2016, it didn't take long for Wapping Wharf to catch on as a food and drink destination. Says Osborne: "One of the secrets of the success of this little street is the fact that it is

The new retail street connects the Southville area in the south with Museum Street in Bristol's harbourside to the north © Jon Craig

The architects specified materials that contributed to the area's makeup, acknowledging its industrial past but also the modern appetite for rugged yet refined finishes

ADF APRIL 2017 WWW.ARCHITECTSDATAFILE.CO.UK



A mix of materials, including Pennant stone and corten steel, was specified in keeping with Bristol's gritty harbourside

© Jon Craig

There are food retail units along the whole length of the route – including a beer shop, two cafes and an organic food supermarket, as well as a pizza restaurant housed in the former stables

an incredibly busy thoroughfare – cross the bridge over there and you're into a mixed neighbourhood [Southville], and the people who live there pass through here."

Gaol Ferry Steps is designed as a ramp with level terraces relating to the buildings rising with the ground, with trees planted at podium level. There are retail units along the whole length of the route – including a beer shop, two cafes and an organic food supermarket, as well as a pizza restaurant housed in the former stables at the top.

The sloping nature of the street has its pros and cons – the external landscaping had to be as non-slip as possible as well as durable and low maintenance. Osborne praises the landscaping design by internationally renowned landscape designers Gillespies including Pennant stone hard paving which he says was completed to an "exceptionally high standard."

Indie at heart

Osborne explains how the design of the street was conceived to offer distinctive frontages to independent retailers, aided by the gradient: "Stuart's idea was about small individual units which can be adapted for local traders rather than international brands and we designed a series of shopfronts and part of walls in between – because you can't just have glazing." He adds: "The units are nice and tall and as you go down there are double heights, so right at the end you've got a mezzanine, or

a potential for one at least."

The idea of encouraging independent retailers to bring bespoke food and drink offerings has been one of the main objectives for Umberslade, a company which is itself in essence a family business. "We are completely unlike the vast majority of developers," declares Stuart Hatton, explaining that even though independent retailers may not have the track record of established market giants, his firm was still willing to take a gamble for one simple reason: "I wanted Wapping Wharf to become a food hub, and independent retailers do food best."

Hatton insists it was vital for the development to get the right mix of businesses that could be complementary and serve the local community as well as draw people to the wharf from across the city. "You've got to buy into the community," says Hatton, who personally sieved through and interviewed the candidates for the units. "When you get the chance to chat to these people, you understand whether they get it or not."

With individuality being key to the development, he was able to take a selective approach: "If we wanted, we could have put nine coffee shops in here – that's how many people approached us."

To make matters simpler for tenants completing the fit-outs, the architects made some interventions to the empty units. "We designed them as shells and they were all the same type of specification," explains



Mark, adding, "One thing was to ensure the acoustic insulation was in place for residents above [the ground floor], so we put a deep concrete slab above the ceilings of the retail units and a floor zone above that, which is also quite dense."

To maintain a rhythm across the street, the team fitted the external glazing to all units and also installed the floor insulation and the ductwork.

The former prison stables that was turned into a pizza restaurant at the top end of Gaol Ferry Steps, was deemed "worthy of retention" in the masterplan, but the architects faced a challenge in supporting it structurally and extra care was needed while shelling around it.

Mitigating problems

A key consideration during construction and given the variety of businesses that were sought as tenants, was setting out the purpose of use of each unit as far in advance as possible in order to design the services appropriately. At times, the team behind Wapping Wharf had to take a 'best guess,' installing for example bigger extract ductwork in units likely to be let out to larger eateries or bars. This was not possible for all units due to planning conditions.

There were also practical issues around access to the back of the retail units, and a workaround was identified in the form of a route through the car park at the rear to combine space for delivery and an efficient

refuse collection system shared by each two units. A potential issue around kitchen odours from ground floor units affecting the residential part of the development had to also be considered, with the architects opting to specify horizontal ventilation on Phase 1; they are however tending towards vertical ventilation for future phases in a bid to further minimise the restaurants' impact on clean air across the flats. "The trouble with that of course is running a flue vertically through the residential dwellings - we were trying to avoid that in Phase 1 as it requires the chimney to go way above the roof to control smells and extraction," explains Mark Osbourne.

Low carbon technology was also implemented across the site to minimise the carbon footprint, with the architects specifying a combined heat and power plant that will be able to power future phases, as well as photovoltaic panels on the rooftops of the residential buildings.

Containing a new idea

Wapping Wharf's appeal as a smart, hip new food destination packing a strong mix of independent businesses has been bolstered by the quirky addition of Cargo – two two-storey buildings constructed from steel shipping containers adapted to the needs of nine businesses – five eateries, a barber shop, a cider shop, a wine shop and a florist. Outside, the front of the green-painted structures is extensively glazed,

The design initially considered for Cargo was to stack the shipping containers vertically, but the client wanted to create a terrace © Jon Craig

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Space in Cargo was limited and Alec French had to plan carefully to foster an intimate atmosphere within each eatery

© Jon Craig

PROJECT SUPPLIERS

Dry lining to the soffits: Knauf Blockwork (rear sidewalls):

Masterblock

External landscaping: Forest of

Dean Stone & Gillespies **Brickwork:** Ibstock

Corten steel: E C L Contracts
Retail doors to the rear of the units:

Ascot Doors

Flooring/insulation: Kingspan

Thermafloor TF70 **Glazing:** Alucraft

while a modest staircase leads to the upper, terraced deck.

Bristol is not new to the idea of using steel containers to create spaces – the city's Engine Shed project, designed by Childs+Sulzmann Architects, combined 20 containers to provides workspace for local businesses near Temple Meads in 2015.

Cargo's developer Umberslade however claims it is the first 'retail yard' made from shipping containers in the city. The idea for it was sparked across the pond in New York's meat packing district, where a holidaying Stuart Hatton was inspired by eateries operating from fishing containers.

He comments: "We already had a good mix of operators in the main retail units, but I thought, how can we improve on that?" The area at the bottom of Gaol Ferry Steps was vacant, so there was enough space to accommodate a similar containermade structure. "That piece of land was completely flat, so it seemed the obvious thing to do was to animate it so we squeezed 18 containers onto it, which I divided into nine retailers."

Initially the team considered stacking the containers vertically as their main structural holding points were in the corners, but Stuart wanted to create a first-floor terrace, and he says "as soon as you offset them, you have to create additional structural

elements to put the balance back."

Naturally, space was limited and had to be carefully balanced in order to foster an intimate atmosphere within each eatery. Mark Osborne admitted such challenges can be a blessing in disguise for architects. "It stops you from being formulaic," he argued, adding, "The key to us was to get the proportions right – make them too wide and they can become desert-like and uncomfortable." He concluded: "The successful thing with this masterplan was that it's very compact and manages to create that buzz and intensity."

Alec French had to tweak the drafts for Cargo on multiple occasions, with tenants wanting to borrow valuable inches of space. "It's quite easy to do this," assured Mark, "It's just a matter of planning amendments, of which there were quite a few," he laughed. The plans were then sent to Lions Construction, the containers supplier who delivered the parts and weld the structure together on site.

These 'boxy' types of catering developments have had their critics, who claim they are too space-constrained to be pleasant for diners, but Mark counters: "You can join a few together, or cut them to the desired size – it's all very flexible." Hatton adds, "It's like you're in someone's dining room. Take Lovett Pies – it's 8 ft wide and 20 ft long, a single container, but it's brilliant, so beautifully designed, because they've thought about how to use each square inch of space. [The containers] create a very intimate atmosphere, and creative people have seized on that to create something very special."

As with the main units in Gaol Ferry Steps, the developers have put the basics in place to help the tenants moving in – plylined the containers, installed insulation, drainage and ductwork in addition to the striking glazed shopfronts.

Following on Cargo's success, Umberslade is already stacking more containers – 38, to be precise – that will accommodate 17 businesses at the back of M Shed, the existing museum at the site.

With Gaol Ferry Steps and Cargo fully let and running, Phase 2 of Wapping Wharf's regeneration is set to commence this year. This will see a number of timberclad residential dwellings erected to the east of the site, along with retail units, a new street and the renovation of the Grade II listed remnants of the prison. More food retailers may also be invited to the area, providing plenty more varied and tempting offerings for Bristolian foodies along the city's harbourside.

Smoothing the way for disabled families



JD Wetherspoon is the first national pub chain to provide Changing Places toilet facilities, which give disabled people more space and additional equipment, including a ceiling track hoist and adult-sized height adjustable changing bench. Now, JD Wetherspoon

commissions leading disabled toilet provider Clos-o-Mat to provide the resource in its refurbishments where space allows. "Potentially up to 15 million people and their carers, families benefit from larger wheelchair-accessible toilets with a bench and hoist," explains Clos-o-Mat's away from home toilet project manager Kelvin Grimes.

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Unique offices made with SterlingOSB

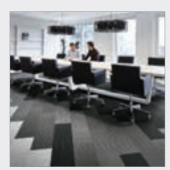


The versatility of Norbord's SterlingOSB knows no bounds; today it is a super funky way of furnishing a communal space while equally at home in a large scale industrial refurbishment. Glasgow based brand-led digital creative agency, Made Brave will

stand the test of time. Stephen Weir, the operations director at Made Brave, says about SterlingOSB, "We chose SterlingOSB because it fitted with the aesthetic we have in the office. We didn't want to create a space that was typical of what already exists; SterlingOSB complements the industrial feel we have in the office."

www.norbord.co.uk

Forbo's new Flotex Planks: a choice not a compromise



Forbo Flooring Systems has developed a new Flotex Plank collection, allowing users to create stunning, contemporary floor designs for areas where safety, hygiene and well-being are priorities. Combining the comfort of carpet, the durability of a resilient floor covering and the design versatility of a plank format, the new design collection lends itself perfectly to contemporary workspaces.

Offering six new designs: Triad, Box-cross, Lava, Seagrass, Concrete and Wood, in a 100x25cm plank, the collection provides endless design possibilities, from colourful and complex layouts to minimal, sophisticated aesthetics, which use shape and pile direction to create a stimulating floor pattern.

Flotex has the prestigious "Seal of Approval" from Allergy UK, as with the correct cleaning regime, it will not harbour dust mites. This makes the collection ideal for office spaces where people are likely to spend a prolonged period of time, especially at a time when work place conditions are understood to be responsible for 11 per cent of asthma cases worldwide.

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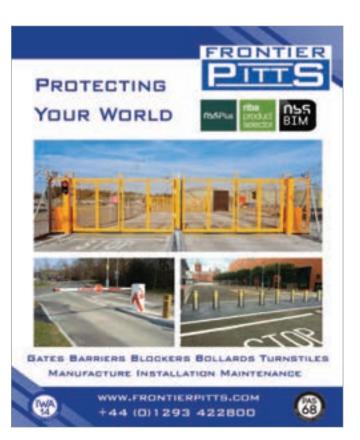
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Affinity255 creates minimalist office



Heavy commercial luxury vinyl tiles from Polyflor, were recently used on a refurbishment project at the Cardiff office of civil and structural engineering firm Cambria Consulting Ltd. Affinity255 PUR luxury vinyl tiles were installed throughout the

reception, meeting rooms and corridors at Cambria Consulting's office. The Affinity 255 PUR collection features 16 authentically reproduced wood plank designs in a wide plank format. Tapping into the trend for white wood flooring, Cambria Consulting chose the Planed White Oak design to create a crisp and clean interior design scheme.

0161 767 1111 www.polyflor.com

Selectaglaze launches new BIM models



Selectaglaze has launched a BIM model range for their secondary glazing, to assist those whose projects are designed with component and layered objects. They can be found in the RIBA National BIM Library. Spotlight, the Selectaglaze blog has been approved by RIBA as CPD material. Specifiers can accumulate CPD points by reading these blog categories: The Built Environment; Treat of the Month and Secondary

Glazing in Practice. Selectaglaze is a leading specialist in the design, manufacture and installation of secondary glazing.

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BUILDING

AECOM LONDON HEADQUARTERS ALDGATE, EAST LONDON

Putting the concept to work

When AECOM's workplace design practice was asked to create a central London hub for its own people, the global firm took the liberty of going back to basics to benefit employees' experience. Michael Willoughby reports

This is the second time I have entered AECOM's reception area in Aldgate, named after the old eastern gate to the City of London, so I am forewarned.

Last time, I was on the 16th floor of the American-based built environment behemoth's UK central London hub, I was taken quite sharply aback: Instead of meeting the gaze of a seated, steely-yet-friendly gate-keeper over a desk, the first thing I saw was a coffee machine and a casual arrangement of tables. I cast wildly around for the person who would stop me walking straight into the heart of the company before being spotted and warmly welcomed, ending my confusion.

Today however, I walk straight to the 'concierge' who has the role of not only directing visitors to their desired person, taking coats and bags, and booking meeting rooms, but also making coffee. He brings me to Jason Stubbs, UK and Ireland head of interiors for AECOM who was handed, he says, "what some might call a poisoned chalice," namely developing the 1,000-employee workspace in the new Aldgate Tower.

"We wanted to get away from what we had in the old offices," Stubbs tells me when I describe the experience of my first visit.

The reception area design, which took inspiration from the hospitality industry, helps project the open and collaborative nature of the AECOM brand





COLLABORATIVE

Providing more collaborative space was one of the big project goals which emerged from the research carried out by AECOM

"We don't have a formal desk as such, we have baristas, people need to greet you."

The reception area design, which took inspiration from the hospitality industry, helps project the open and collaborative nature of the AECOM brand as well as being an ideal spot for casual internal-external meetings (of up to 150 people!), for which a room booking is not needed. Crucially, concierges have another role, to grant – or deny – access to the bank of meeting rooms immediately adjacent to the welcome space – hence the 'free range' aspect.

The glazing affords a great view over the assortment of towers for which the City of London has become both famous and infamous, but for Stubbs and his colleagues the panorama is more meaningful: He can point to the scores of buildings which AECOM has had a hand in creating – such as test fit space planning and project management services for the Shard, costmanagement for the old RBS building whose roof we look down upon – even carrying out engineering services for the Category A fit-out of Aldgate Tower itself.

Collaborative spaces

"More collaborative space was one of the big goals from the research Stubbs and his

Desks are entirely flexible and arranged into what the company calls "neighbourhoods" organised by practice speciality

Strategy+ team carried out for the 85,500 ft² space, between December 2015 and April 2016. Back then, there were several London sites, including one in High Holborn and one in Victoria, as well as locations in St Albans and Croydon. The latter two offices were retained, with the Aldgate Tower forming part of a 'campus.' It houses all the business unit functions – encompassing and bringing together everything that falls under the brand. Collaboration between every office is encouraged, with WebEx and Telepresence conference facilities linking everything.

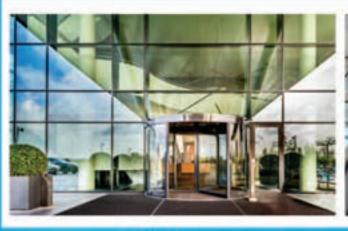
This focus on collaboration drives the layout. Apart from the reception, the 16th floor is purely meeting rooms. The corridor in-between also seems to owe much to hotel design, enlivened by furniture sourced via

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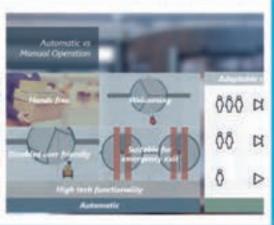
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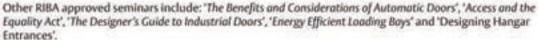






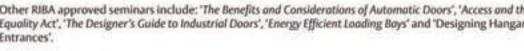
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ENVIRONMENTAL

Like everything else in the development, the chairs and tables score highly against the SKA environmental rating tool

The Furniture Practice. Like everything else in the development, the chairs and tables score highly on the SKA environmental rating tool. There are over 100 'good practice' measures covering energy and CO₂ emissions, waste, water, materials, pollution, wellbeing and transport of products and materials. Even though this added time and cost to the project, it was important to make sure the project rated highly, says Stubbs, because AECOM's sustainability team was involved in writing the SKA rating standards.

But apart from the casual seating, there are, of course, desks. These sit around the periphery of the building – still offering stupendous views – food and drink services are collected around the staircase, which is covered in further detail later. These desks are entirely flexible and arranged into what the company calls "neighbourhoods" organised by practice speciality; 'bleed spaces' sited between these feature semicasual seating. At the ends are what they call "touchdown" spaces with large screens for breakout meetings.

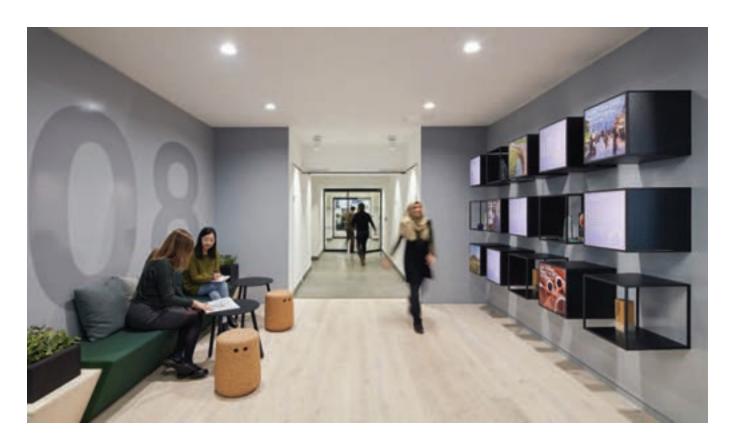
Floors also have smaller bookable meeting rooms towards the core and all walls are magnetic, allowing for further opportunities to display work. There is even a "mini-theatre" with cushioned

benches to seat 30. This replaces the "rows and rows of desks with everyone jammed in," of the former office, says Stubbs.

Employees who work on floors eight to 10 (the building has other tenants) can plug in their laptops at the workstations and, in 25 per cent of cases, monitors can be adjusted into a standing position.

Meanwhile, the task lighting can be controlled by the occupants – over and above the fluorescent ambient lighting. Staff don't have private drawers, but access to a private locker, plentiful "hard stationery" such as staplers at the end of the workbenches and portable plastic caddies for pens and Post-Its (replacing the 35 crates of stationery that were got rid of when the office moved).

There is another aspect to making sure the flexible floors work properly – in the form of elective "floor champions." They keep the stationery caddies stocked, the print facilities working properly and are trained to handle basic systems issues, such as getting onto the server. They are also charged with making sure that the storage – which is open, with no cupboards or drawers in order to prevent hoarding – are kept tidy. In that way, better facilities were offered as a quid pro quo for handing more responsibility to the teams themselves.



Another aspect of the design that helped reduce costs for the service team is an app guiding employees through common tech problems and replacing some of the function of the IT help desk such as getting printing sorted out or getting online. The trained-up on-floor champions are the next port of call. If that fails, the team of IT specialists in Aldgate will get involved and – if things are really bad – there are more people to call in Basingstoke who will save the day!

Open to a staircase

The most striking aspect of AECOM's office, though, is the huge, open staircase that connects four of the internal floors. This was not without its risks and challenges: stickers attached to the inside of the steps caution users to hold onto the handrails and forbid using mobile phones and open coffee cups on the stairs. (The danger comes from dropping something on someone's head far below.)

There were further health and safety issues in creating the staircase, which was challenging due to concerns about potential spread of fire. Staircases need to be contained within a volume in order to stop any spread. The normal solution would have been to have fire curtains around the

staircase, but that would have prevented the openness and permeability the team was seeking.

Instead, fire-rated walls are pushed back to make way for the catering facilities. The staircase and environs serve several purposes, centred on a high-spec catering function. Each floor through which the staircase flows has a different name and type of offering, including tables for sandwiches, a full-service restaurant and kitchens. There are even rocking chairs overlooking the City.

Stubbs says that this is far better than most clients' set-ups, with two tea points on each floor and people always ending up going to the same space. "Those 50 staff members don't meet the other 50," says Stubbs. "We are using design to create serendipity and improve well-being [through having to shift for caffeine]. You don't want to push it on people, but we have had an amazing amount of positive feedback." As if to prove his point, I see a contact of mine heading up the staircase. An unintended boon of the grand staircase is its function as an all-office meeting area, when the whole 1,000 people gathered around the staircase on several floors hear big company names address the assembled staff.

STAFF RETENTION

AECOM's recent 100-day review of the office revealed a "very positive" reduction in staff turnover figures

ADF APRIL 2017 WWW.ARCHITECTSDATAFILE.CO.UK



CATERING FOR EMPLOYEES

The building has high-spec catering facilities All images © Hufton+Crow

PROJECT FACTFILE

Research and design:

December 2015 – April 2016

On-site: April 2016 – September 2016

85,500 ft² over five floors.

Project design (workplace strategy / change management / interior design / building engineering / cost, project management & sustainability consultancy):

AECOM

Size:

Main contractor:

Overbury

Loose furniture:

The Furniture Practice

Joinery:

Benchmark, Specialist

Joinery Group

Workstations: Herman Miller "We can't fit the whole company into one environment and it would be foolish of us to have created a space just for that," says Stubbs. "When our head of buildings and places spoke, everyone could see and hear. It was fantastic."

If the staircase was a challenge, it was one the team took up with gusto. The staircase was installed over a nine week period as if it were three separate staircases, with each portion completed before construction of the next level down was started.

A smash hit for staff

The office in total has been a smash hit with staff. Communications executive, Catherine Llewellyn, who helped show me around, says she can't imagine going back to the "old way" of working which she describes as "1980s."

And AECOM being famous for its building services practice, the building yields up its secrets to engineers who are starting out: part of the ceiling void is open so that they can "get under the hood" of a real installation. In fact, the entire process can be examined by graduates.

"You can say (to designers, engineers, cost-managers and clients) – don't forget these things that could catch you out,

The most striking aspect of AECOM's office is the huge, open staircase that connects four of the internal floors

which might be hard to envisage," says Stubbs "The exposed ceiling services detail looks inexpensive, but exposed steelwork requires specialist intumescent paint finishing that could drive up cost if there are large quantities to spray. For a graduate designer or engineer, these things might not be high on the radar, but working in a space that offers a training and learning platform is invaluable for career-development."

Stubbs says that staff retention was a big worry moving to a new home, but AECOM's recent 100 day review of the office revealed a very positive reduction in turnover figures.

"The workplace plays a very important part in retaining and attracting staff," he says, "and I think we are at the top of our game when it comes to architecture and engineering, construction services and the environment."

'Autonomy Pro' from Century Office



Autonomy Pro, the sit/stand workstation from Century Office, gives users the option of purchasing a completely new workstation or keeping their existing worktop to fit the Century Office frame. The height of the Autonomy Pro utilises the latest technology allowing the height

adjustable desk to be increased from 640mm to 1300mm at the touch of a button; giving users autonomy over their workspace in the office. The sit/stand desk can evenly lift 130kgs, which means there is no need to clear the worktop before adjusting the height.

01206 844541 www.century-office.co.uk

RIDI provides personalised lighting



RIDI Lighting has supplied an innovative, low energy and high quality LED lighting system to an office space in central London. The offices of recruitment agency Boston Hale underwent a significant refurbishment. Michael Jones & Associates LLP selected RIDI's ARKTIK LED

luminaires with the new PSQ diffuser, which ensures a broad distribution of light while minimising glare, providing a comfortable environment for staff. They also specified RIDI's intuitive and adaptable Control 3 lighting management system, so that employees could adjust light levels and to adapt to their personal preferences.

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ROCKFON work at the forefront of developing high quality stone wool acoustic ceiling and wall solutions. They are proud to exhibit their latest innovation, new generation ROCKFON Mono Acoustic on Stand 23 at the Materials Show, London. ROCKFON Mono Acoustic quickly became a preferred solution for architects, when the system was first developed, as a contemporary, high performance, versatile alternative to traditional gypsum and plaster walls. Now ROCKFON have taken the solution a step further by adding marble powder to the render to create an even smoother, whiter and more refined acoustic surface that enhances any interior environment. Unlike other monolithic, flat surfaces, ROCKFON Mono Acoustic is able to control reverberation by offering outstanding Class A sound absorption, all thanks to its stone wool core. Ideal for any space, ROCKFON Mono Acoustic offers true versatility. It can be installed on sloping, flat or curved surfaces, either in a suspension grid or mounted directly on existing ceilings or walls. The new white surface of ROCKFON Mono Acoustic is extremely bright and offers 99 per cent light diffusion and 87 per cent light reflection.

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MATERIALS 2017 EXHIBITOR

Saracen wins contract for office fit out



Sirius Minerals Plc has awarded leading workplace consultant, Saracen Interiors with a contract for the complete fit out and refurbishment of its new company head-quarters at Prospect House – the iconic, former Scarborough Building Society. Saracen

started on site earlier this month and Sirius expects to occupy its new offices in July. The 55,000sq ft fit out covers three floors and will include the installation of new mechanical and electrical facilities throughout. The new HVAC design and fit out is expected to save the company an estimated 40-50 per cent on energy bills overall.

enquiries@saraceninteriors.com

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MATERIALS 2017 EXHIBITOR



Materials 2017 promises a convincing debut

Materials 2017 will debut this month in London, as an event with a comprehensive approach to materials for architecture, construction and design

aterials 2017 arrives in London on 25 and 26 April, transforming the ILEC Conference Centre, Earls Court into a compact and intimate showcase for the latest developments in building materials.

At a time when the format adopted by some industry events is being questioned, this free-to-attend niche show explores materials in depth, presenting a strong case for potential visitors to attend.

The organisers have placed a special focus on products that provide practical solutions for structures, envelope, facades and finishes, with aesthetics and functionality as the core themes of the event.

Event director David Schindler comments: "Architects and contractors need to consider the form, space and light of buildings and in order to create these with optimal design and efficiency they need to specify the best possible materials for the structures and facades.

"Materials are developing so fast in terms of innovation, sustainability, and performance, it is vital that those who specify materials have the best possible and most up-to-date information to guide their design and construction techniques.

"This is the case both in terms of the educational content in the conferences and seminars at Materials 2017, but also in engaging directly with the manufacturers and suppliers within the exhibition."

Conference

Moderated by architecture journalist Ruth Slavid, the conference which spans the two days will discuss materials in detail. Slavid explains: "There's a really good line-up of speakers, a combination of practitioners and people from industries who are at the forefront of development. People like Andrew Waugh of Waugh-Thistleton who has really pioneered the use of CLT in building, and Tim Macfarlane, who is responsible for some of the most innovative recent work in glass."

The discussions will explore the characteristics of each material, whether wood, glass, concrete, or composites, highlighting how different contextual applications, fittings, and manufacturing processes can unlock alternative uses.

An evening reception on the 25th (Tuesday) will expand the event's key themes, featuring Vinesh Pomal, architect at Levitt Bernstein and RIBA presidential ambassador for young architects, as well as Tony Devenish, chair of the London Assembly Planning Committee, speaking on the timely issue of housing density.

Expansive exhibition

A broad selection of forward-thinking companies – ranging from huge multinational manufacturers to smaller domestic suppliers – have been confirmed for the event bringing with them a wealth of knowledge, experience and product developments in brick, composites, concrete, glass, insulation, metal, stone, timber, and more, in a showcase of cutting-edge innovations.

Among the latest additions to the exhibitor list are Aurubis UK, Brimstone, Metro Urbane, Piveteaubois, who join the likes of Ketley Brick, Metamark Technical Films, Kallisto Stairs, and CED, alongside

many others.

The full array of exhibitors can be found at www.materials2017.co.uk/exhibitors

Meet the Buyers

Materials 2017 will be the ideal environment for intensive business discussions, product sharing, and procurement.

The Meet the Buyers Forum will allow architects and specifiers to schedule face-to-face meetings with key manufacturers and suppliers, facilitating the inception and retention of valuable business relationships.

Companies benefiting from this platform so far include Stora Enso, Pilkington UK, The Concrete Centre, Armourcoat Surface, and Graphenstone.

CPD and seminars

A packed CPD seminar program with more over 10 hours of content will be delivered across two seminar areas. Designed to give all professionals the opportunity to gain knowledge of the latest materials' specification, there will be a distinct emphasis on current trends and innovations.

Seminars from key industry players – including Sika, Aggregate Industries, Pilkington, Wienerberger, Imperial Bricks, Arup, and more – will cover topics including Using Phase Change Materials in Construction for a More Sustainable Built Environment, High Performance Structural Adhesive Systems for Glazed & Panel Facades, and Using Concrete as a Sustainable Material in Design.

Materials 2017 is free to attend – register at www.materials2017.co.uk

Understanding laminated glass

Structural applications are one of the glazing areas offering the greatest added value for glass processors, but it is important to avoid improvisation and risks according to Michel Palumbo and Maria Teresa Mazzucchelli, glass safety service designers for Vetrostrutturale.

Sometimes, glass designers focus too heavily on the aesthetic and formal aspects of projects without going into the detail of how laminated glass behaves, especially in a moment of catastrophe. This is partly why the latest technical standards and the most recent technical documents require understanding of the behaviour of laminated glass after a partial or total glass catastrophe.

For many years, the role of polymer interlayer in the overall behaviour of laminated glass was not taken into account given polyvinyl butyral's minimum or negligible shear transfer between panes of glass. PVB is without doubt the most popular plastic interlayer in the production of laminated glass for structural and non structural applications.

Today, however, there are extremely interesting laminate interlayers on the market with substantially more sheer behaviour than that offered by traditional PVB. These polymers primarily include the so called structural PVBs (DG41 by Solutia and Trosifol ES by Kuraray) as well as Kuraray's Sentry Glass Plus and Evasafe by Bridgestone.

Compatible

What makes these polymers worthy of note is not only their greater rigidity to shear stress but also the stability and retention of this prerogative in the medium and long term, and in temperature ranges that are totally compatible with the standard requirements for creating laminated glass walk-on glass, roofs, steps, railings and walls/shop windows.

Correct design must globally consider the aspects influencing the mechanical behaviour of glass for structural applications and take into account the behaviour of the "laminated glass and relative securing systems" not only in conditions of ordinary functioning (SLS) or overload conditions (ULS) but also in cases of partial (CLS) or total (PR) breakage of the laminated glass in the least favourable environmental conditions.

The temperature of the load application is a key parameter in determining the behaviour of laminated glass. As the temperature increases, the rigidity of the laminated glass diminishes because of the reduced rigidity of the plastic interlayer. All plastic interlayers alter their behaviour according to temperature, some considerably (standard PVB and structural PVB), others in a far less

obvious manner (Evasafe and DG41).

At temperatures above 20°C with medium and long duration loads, the behaviour of Evasafe is especially interesting since its stiffness remains virtually constant whereas that of PVBs (both ordinary and structural) continue to decrease with time and temperature, falling rapidly below the values of Evasafe.

If the behaviour of the polymer varies substantially according to temperature, the overall behaviour of the laminated glass will also vary. At the design phase, it is necessary to consider the most serious conditions for the laminated (glass plus plastic interlayer) in standard conditions.

Another parameter that impacts strongly on the behaviour of plastic interlayers (and consequently that of the laminate containing them) is the duration of the load application.

For applications envisaging the long-term application of loads, and having to size the laminated glass in the most demanding duration and temperature conditions, it may prove effective, in order to reduce the glass thickness in play, to use a polymer with reduced variability in stiffness over time and/or with temperature, rather than a plastic that performs well in ordinary conditions but is far less stiff in the more extreme cases.

A third extremely important design aspect when choosing a plastic interlayer consists in assessing so-called environmental robustness, which is a polymer's ability to withstand environmental attacks, expressed essentially by assessing resistance to water, humidity and UV rays over time.

Another important aspect of the design stage is the behaviour of the laminate glass in the event of partial (one sheet in the laminate) or total breakage of the laminate glass. In the case of structural applications, this aspect clearly cannot be overlooked. Safety criteria in the event of a glass catastrophe can be schematically defined as follows:

- Collapse Limit State the need to guarantee structural safety by foreseeing that every glass element for structural applications can sustain the external design loads, even with a broken pane.
- Post Breakage behaviour "the need to limit the risk of immediate post-breakage collapse". This aim, obvious to all skilled designers, must be achieved by defining



suitable combinations of glass and plastic interlayer, in keeping with the chosen securing system.

Design awareness

The role of alternative plastic interlayers to the PVB ones available on the market, and the availability of technical design documents published in Europe in recent years, means that it is today possible to design laminate glass with formerly unthinkable awareness. This new design awareness calls for the combination of the need for resistance with design loads and post breakage safety criterion.

The introduction of the Collapse Limit State and Post Breakage concepts have rooted the awareness that laminated glass is far more than a combination of simple panes of glass and that its global behaviour depends onthe securing systems as well as the plastic interlayer.

In order to improve the behaviour of laminated glass, or to increase the sizes but with the same thickness (a crucial aspect in the architectural sphere), it is possible to consider interlayer polymers that make a major contribution to the transfer of shear stress between panes subjected to external actions. The intrinsic features of these polymers for structural applications are also very interesting in terms of contribution to the Post Breakage behaviour they are able to provide to the laminate as a whole.

Today's designers have the option of using several types of laminated glass thanks to the presence on the market of various types of interlayer with diverse specifications that may be more or less suited to a specific situation.

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BIM Level 2 – Are you in the 90 per cent that believes the industry is not ready?

Back in April last year the UK government's BIM mandate came into force, requiring all centrally procured public sector building projects to be BIM Level 2 compliant, which represents a significant milestone on the journey towards the digitalisation of the built environment. However, despite BIM being very much the industry 'buzzword' many people still do not fully understand BIM, its capabilities or where we are on the roadmap towards Level 3.

Bauder and bespoke BIM

At Bauder we fully acknowledge these challenges, which is why we actively support our clients and suppliers with the development of their own BIM knowledge and objects, as we realise that this can only be beneficial for everyone involved.

Last year we extended our BIM offering with the launch of 19 new generic water-proofing system objects and we can now also provide totally bespoke objects, which incor-



porate full model data in COBie format and can be accessed in many of the other popular software programmes, such as Vectorworks and Bentley, via a plug in. In fact, our everevolving BIM object library now includes well over 100 models for our single ply waterproofing systems alone, covering every possible build-up permutation. In order to receive a bespoke object and the associated guarantee you will need to register your

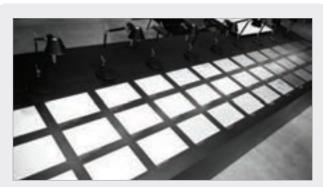
project with us so that we can in turn provide you with the required technical support to ensure that the object is most suitable to meet the exact requirements of your building. An example of this is providing project specific wind uplift calculations, as they can obviously differ significantly based on a building's location and surrounding environment.

Future of BIM

Realising all of the benefits of BIM may not quite be on the horizon, but with the way that the industry is now wanting its data BIM clearly represents the future of how people will be constructing buildings, and it may well get to a point where if you cannot provide data in the required format you simply will not be able to trade.

For more information on BIM and to download your free objects now visit the website.

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More than 60 new colours and finishes

CRL Stone will be unveiling its new ranges of quartz and porcelain surfaces at The Natural Stone Show. CRL Quartz is a highly durable engineered quartz stone, available in 32 colours, with a polished finish and in thicknesses of 20mm and 30mm. The extra-large slabs measure up to 3200 x 1650mm. Enabling designers and architects to respond to interior trends while meeting the demands of modern living, CRL Quartz is non-porous, stain, scratch, heat and shock resistant. Ceralsio porcelain is available in 27 colours and three thicknesses – 12mm for a slim worktop, 10mm for floor tiling and 6mm for wall cladding. With its many benefits including a strong resistance to wear and tear, scratch, stain and ultra-violet, Ceralsio is suitable for interior and exterior use. A highlight of the CRL Stone stand AA1 will be numerous large samples such as Ceralsio Calacatta Gris and Marquina, as well as two architect's desk presenting both full collections.

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NATURAL STONE SHOW STAND AA1



Brick problems solved for architects

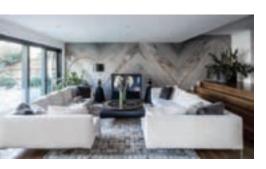
Experts on Imperial Bricks' stand 3/4 at Materials 2017 will help architects, specifiers and developers choose the right bricks for renovation, extension and new build. Imperial Bricks offers the widest range of traditional handmade, wirecut, pressed and reclamation bricks and slips available from a single supplier in the UK. Its full range of 35 bricks will be on display with special show discounts and free samples. Complementary products on display will include Limetec hydraulic lime mortar, a 'must' for traditional handmade bricks, available in regional shades to suit any project. In addition, brick tinting solutions from Bebbingtons will showcase the possibilities of bespoke weathering and its suitability for matching new bricks with old ones. Brick experts will available on the stand to help architects and developers with common problems and issues, for example sourcing the correct materials for conservation areas or on Listed buildings that require imperial-sized bricks.

01952 750816 www.imperialbricks.co.uk

MATERIALS 2017 EXHIBITOR

Natural Stone Show includes free architects' CPD on stone design

Visitors to the Natural Stone Show this month can benefit from a one-day CPD workshop showcasing European innovation





Taking place at the Natural Stone Show on Tuesday 25 April 2017 at ExCeL London, attendance to 'European innovation meets stone design' is free, provided attendees pre-register.

Offering an "invaluable insight for architects," the programme consists of more than five hours of RIBA assessed CPD seminars and will provide "innovative solutions to design professionals when using natural stone."

The day will be hosted by Vincent Marazita, one of the world's leading international stone consultants.
Graduating from Harvard in 1981, Marazita lived in Italy for six years, teaching in the Architectural Department at the University of Genoa. Returning to the US as a consultant for the Italian Government, he has worked in the international dimensional stone industry since 1986 serving on the National CES Quality Control Committee for the American Institute of Architects and the jury for the National CES AWARDS for the AIA.

Programme highlights

In a session titled 'Curve appeal at St James's market: new stone architectural solutions to urban redevelopment' Vicky Brown and James Roberts discuss how Make Architects overcame a number of technical challenges to deliver a project that both resonates with its historic identity and provides a dynamic new entity through the innovative use of curved portland stone panels, provided by Albion Stone.

In 'Redefining Stone: new load bearing Solutions' Steve Webb shares his vision of stone, not just as a high end luxury floor product, but as a "proletarian building material" and low carbon alternative to concrete. He will also present a range of

case studies including Clerkenwell Close, the Victoria & Albert Museum and a number of private projects.

Peter Harrison explores 'Innovative methods for successful stone detailing,' and 'Innovative facade solutions: the combined benefits of a natural stone and cork composite' looks at a new lightweight cladding and flooring system.

'Innovate App Technology: applying augmented reality to stone selection' will allow architects and designers to view large-size samples and applications in different settings, opening up a "world of possibilities" when designing with natural stone. Attendees will be able to try the technology out for themselves in this interactive session.

The workshop also presents excellent networking opportunities. This includes a complimentary three-course lunch served at Zero Sette and refreshment breaks throughout the day. Attendance is subject to availability with priority given to architects.

Other day themes at the show will be The Conservation Day that examines authenticity and appearance in stone conservation; an Industry Day that includes the launch of the Ethical Stone Register; Specialist one-to-one advice from Ask the Expert in the Stone Federation Village; and exemplary design and execution of stonework in the Natural Stone Awards Gallery.

In addition there will also be over 200 exhibitors, who are sourcing granite, marble, sandstone, limestone, slate, travertine, quartz, terrazzo and sintered stone from around the world.

To secure a place visit www.stoneshow.co.uk/ architects-designersday-registration



New Simpson Strong-Tie catalogue

The 2017 edition of Simpson Strong-Tie's flagship catalogue is here. Alongside the UK's largest range of connectors for timber and masonry construction, sit over a dozen new products and several range extensions, including: Post Bases; I-Joist hangers; Angle Brackets; Structural screws and Masonry Ties. The catalogue is also brimming with installation advice and performance characteristics and safe working loads. Sales Director, Jon Head explains: "It's been a busy time for Simpson Strong-Tie, with all new ranges for Light Gauge Steel and CLT construction, as well as our significantly expanded nails and screws ranges. We've really pushed the boat out to increase our core range though, which, coupled with our rapid made-to-order service." The latest version is available from Simpson Strong-Tie on request and can be downloaded from the website.

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VIVIX® delivers a natural touch



When David Turnock Architects were commissioned to design the new Silsoe Church of England VC Lower School with a fabric first approach and emphasis on energy efficiencies, VIVIX® by Formica Group panels were specified for the

facade. The design brief required a blend of natural woodgrains. 8mm thick VIVIX panels in Golden Morning Oak, Mission Oak and Barn Oak were selected for the facade; meeting the requirement for a wooden cladding aesthetic, but providing superior performance properties than its natural counterpart.

0191 259 3512 www.formica.com

Hollo-Bolt® specified for 8-storey facade



Lindapter's Hollo-Bolt, the original expansion bolt for structural steel, allowed contractors to quickly secure the 'Flows Two Ways' sculptural facade to Helena 57 WEST in New York City. Using just standard hand tools, saved the contractor time and labour costs while ensuring no damage to the artistic components. The Hollo-Bolt is CE Marked and has the full ICC-ES approval for resisting wind loads and seismic loads.

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From rural housing to high-tech showcase



Welcome to Väla Gård outside Helsingborg, where the innovative facade hides an exciting transformation. Skanska in Helsingborg wanted to bring together its many offices and locations in the city and chose Väla Gård for the purpose. The beautiful rural building was turned into modern and environmentally friendly offices through the use of solar cells and insulation. For the facade, the architects at Tengbom Arkitekter opted for perforated metal sheets from the RMIG City Emotion programme. Väla Gård is a well-known location and a landmark for the area. By using the creative freedom provided with RMIG City Emotion, the architects were able to design a facade that was very much in line with the architectural style and character of the existing farm buildings. RMIG has manufactured and supplied the perforated metal sheets used for the facade at the short ends of the buildings. The use of corten steel and the tree motif created using RMIG ImagePerf, help the buildings stand out and at the same time blend perfectly into the surrounding forest area.

01925 839600 www.city-emotion.com

Updated brochure shows full range



Specifying modern brick-faced soffits just got easier, with the publication of Ancon's new 16-page Nexus brochure. Developed by Ancon and Ibstock Kevington, Nexus is an advanced lightweight system that makes modern brick-faced soffits and lintels simple and achievable, particularly in fast-track

environments. Expanded and updated to include the full Nexus range of soffit units and lintels, the new brochure shows the various options now available for achieving different visual effects by varying the style and type of lightweight stainless steel carrier and real brick slip facing.

0114 275 5224 www.ancon.co.uk/nexus

New light on Brunswick House



NW Architects's brief was to transform an existing 1970s office building in Southampton into high end student apartments. The solution was to re-clad the main tower and utilise Metal Technology's System 17 and System 4-35Hi architectural aluminium systems, not

only in the tower but also in the development of the three-storey street frontage. The extensive remodelling of the external envelope featured the complete design flexibility and superior, whole life performance of System 17 high rise curtain walling. A new lightweight floor constructed mostly from System 17 was also added to the street facade.

028 9448 7777 www.metaltechnology.com

Wraptite-SA exceeds air tests



Wraptite-SA the high performance airtight membrane from the A. Proctor Group has once again surpassed the initial air test targets for an innovative new children's home project in Havant. In order to successfully achieve the Passivhaus standard, buildings are required to

pass three air tests throughout the construction process. The development at the new children's home was designed requiring an airtightness level of less than 0.5. Wraptite-SA was applied externally to the timber frame panels in continuous pieces creating a highly insulated and sealed finished building, and achieving the required standard.

01250 872261 www.proctorgroup.com/air-barriers

Single ply solution stands up to kerb



Creative thinking is enabling a £9.5m redevelopment to cost-effectively deliver striking aesthetics for a landmark building. Marwood Tower, is being redeveloped by Liverpool Mutual Homes. A key architectural element is

the mansard roof that wraps around the two-storey block round the courtyard and also provides covered walkways for the residents. Sub contractor Range Roofing has used 1700m² of Protan EX-A adhered single ply membrane complimented with Protan's Omega profile to form the roof, accommodating the 79 degree mansard, 11 degree main roof area, and the covered walkways within the courtyard area.

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Under the skin

As well as aesthetic and performance requirements, the need for more sustainable envelopes is influencing architects' choice of materials when it comes to facades, says Simon Wild of Formica Group

rchitecture has been described as "a visual art where buildings speak for themselves". In practice, however, it is not always possible for architects to pursue their aesthetic vision without compromise. The requirement for projects to be functional often means that the initial design concept has to be modified. Balancing factors such as building infrastructure and environmental considerations, including stricter energy regulations and budget limitations, can be a challenge.

Today's facade options are making it easier for architects to create buildings that balance the functional and cost requirements of the client's brief with aesthetic choices, to deliver 'statement' design. Some of this expanded choice of envelopes made available to architects is being facilitated by manufacturers. For example, manufacturers are now using the benefits of High Pressure Laminate (HPL), once predominantly specified for interiors, and bringing the benefits of the material's properties to rainscreen cladding solutions.

Traditionally, HPL has been specified for interiors due to its durable, hygienic and easy to maintain properties that make it ideal for the requirements of the built environment. Equally significant to its popularity is the broad selection of decorative options the surface permits.

Considering both aesthetic and functional demands, it is understandable that architects are taking advantage of the benefits afforded by materials such as HPL and increasingly applying the material to building envelopes. Take for example the internationally-renowned Rogers Stirk Harbour + Partners (RSHP), the architects behind Lewisham Pop-Up Village, who selected HPL rainscreen cladding as part of a practical solution to housing homeless families currently living in B&Bs.

Case study: Lewisham Pop-Up Village

With the Government wanting to build a million new homes by 2020, and having



built just under 293,000 homes in February, council projects like Lewisham Pop-Up Village play a supporting role in alleviating the housing crisis. In its design approach, RSHP took steps to meet the social responsibility of the 24-home Pop-Up Village without compromising on looks.

The vibrant coloured rainscreen cladding and striking red stairwells are the first aspect of the 'village' likely to be noticed by passers-by and inhabitants. RSHP specified VIVIX panels by Formica Group because of their substantial choice of colour that made it possible to inject the sense of visual vitality and a welcoming feeling that was integral to the design. Beyond the facades, the material properties of the rainscreen cladding specified also supported the building's overall sustainability credentials.

RSHP wanted to achieve a 'future proof' design with long term value. The rainscreen cladding, the panels were manufactured in Europe according to the ISO 9001 standard which under the building's Life Cycle Assessment confirms

COLOURS

The vibrant rainscreen cladding is the first thing passers by will notice on the Lewisham project © Mark Gorton – Rogers Stirk Harbour + Partners

A lightweight material such as laminate is beneficial in contributing to a lower carbon footprint, particularly with regards to transportation



© Mark Gorton - Rogers Stirk Harbour + Partners

they were manufactured with minimal impact on the environment.

Within environmental considerations a lightweight material such as laminate is beneficial in contributing to a lower carbon footprint, particularly with regards to transportation. Lightweight panels also offer ease of application, including some having the option to be placed over existing surfaces, which in turn assists in meeting construction deadlines and budget requirements. In addition, future building work can be undertaken with minimal disruption to inhabitants.

Steps were taken to significantly diminish the waste produced on the Lewisham site, for instance the facade panels were pre-cut offsite to ensure a sustainable installation process. In addition, since the panels were manufactured in Britain, the transportation distance and overall carbon footprint of the project were also reduced.

The Pop-Up Village is designed to have a lifespan of 60 years. In order to provide 'portability' to facilitate reconfiguration to other areas of vacant land, the specification of sustainable and durable material is essential to the project. Lightweight facades

make their future reconfiguring and reuse elsewhere easier to handle.

In its design, development and execution, Lewisham Pop-Up Village is an example of how architects can specify sustainable building products that complement energy efficiencies without sacrificing aesthetic vision. This is partly thanks to the technology being used by manufacturers to create solutions with extensive colour and texture choices based on an understanding of the factors important to architects.

In the case of Lewisham Pop-Up Village, the bright pink and orange panel colours were achieved using a digital and print service. Similarly, modern technology facilitates the specification of panels with the look of natural surfaces, for example wood, metal and stone, but in material with better durable, hygienic and cost efficient properties. From an architect's perspective, the prospect of more design choices means that they are one step closer to achieving a building that visually speaks for itself.

Simon Wild is European category marketing manager at Formica Group



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Kalwall creates healthy shelter

round eight million people a year are expected to be sheltering under Kalwall at the beautifully-designed new bus station at West Croydon. Designed by Transport for London Architects, this is an unusual example of how translucent Kalwall can offer many different advantages above its normal use for translucent traditional building cladding and rooflighting.

The brief for this project was to create a user-friendly waiting and assembly shelter to service the thousands of passengers using this important and busy transport hub linking the 150 buses an hour with the adjacent tram stop and West Croydon railway station.

The normal choice of construction for a translucent and weatherproof canopy would be to glaze the roof with glass, However in-house architect Martin Eriksson and the project team at TfL realised that Kalwall offered a better solution in this location which would not only solve the brief and contribute to a better design but would offer many other benefits over traditional glazing.

For example, since Kalwall is much lighter than glass it meant that the supporting



structure needed to be less strong and far less chunky. In additional, not only would the shelter be less high but the vertical supports would be less obstructive and open up a better view of the environment.

Unlike conventional glazing, highly insulating Kalwall is far more attractive than glass while eliminating shadows and glare and the stark contrasts of light and shade; improving the experience for passengers below.

Also, due to the way it diffuses natural daylight downwards and at night reduces vertical illumination and reflection upwards, it controls light pollution on the surrounding

high rise buildings. Soil and detritus are less obvious on Kalwall than on glass and maintenance and cleaning is much simpler because access scaffolding is not required and maintenance staff can safely walk across its surface.

One of the main attractions of specifying high performance Kalwall for conventional buildings is its unique effect on both the interior and exterior. Internally, rooms are flooded with diffused natural daylight which creates a stimulating and very attractive environment. Although translucent, it also offers the big advantage of privacy while the elevations appear crisp, simple and inviting. When illuminated at night they emit a very attractive ethereal glow.

Apart from being specified for all types of new build, Kalwall is increasingly used for the refurbishment of cladding or rooflights on aged buildings. Case studies and technical information are available from Structura LIK Ltd.

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South Shields starts a new chapter



South Shields is benefitting from a £16 million cultural centre featuring an iconic circular facade created with the Kingspan TEK Cladding Panel. Creating a curved structure can pose a challenge, but the Kingspan TEK Cladding Panel was successfully engineered to provide

a smooth, highly insulated exterior envelope. To achieve this, the structural insulated panels (SIPs) were designed and factory cut into narrow widths. This allowed them to be quickly and easily fixed to the concrete frame.

01544 387 384 www.kingspantek.co.uk

ArcHaus receives facelift from Remmers



The exterior of this iconic building was suffering with high levels of damage, including salt ingress and excessive cracking to the render and brickwork. Salt Inhibitor was used as a 'masonry salt blocker' and applied to the exposed brickwork. Large areas of the render were repaired with Restoration

Render and the deep section repairs were completed with Remmers Betofix R2, a fast curing, high strength concrete repair mortar. OS Concre Fill and Impregnation Primer were also applied prior to the application of the final protective coating system.

01293 594010 www.remmers.co.uk

VEKA secures Secured by Design



Industry-leading PVC-U systems supplier, The VEKA UK Group, has been awarded membership once again of the national crime prevention initiative, Secured by Design (SBD), for both its VEKA and Halo brands. The VEKA UK Group partnered with Secured by Design several years ago and has maintained its strong relationship with the team, thanks to a shared ethos of designing out crime at

the product development stage. Secured by Design was established in 1989 and works to reduce crime by bringing Police Forces, developers and planners together at the design stage.

01282 716611 www.vekauk.com

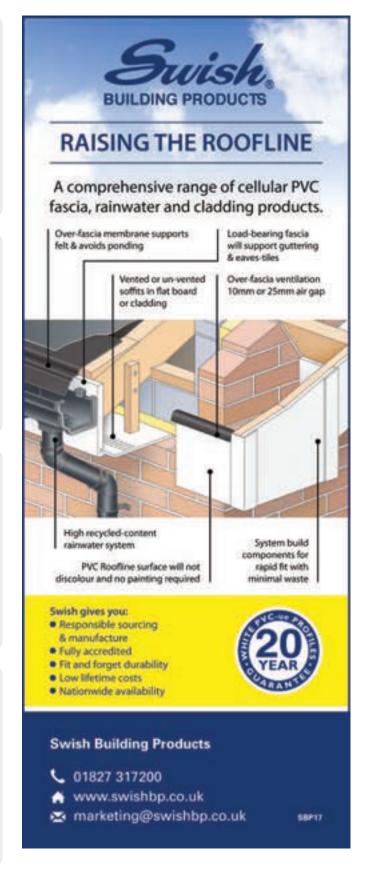
New range of sun-shading systems



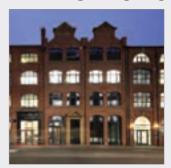
A leading sustainable building envelope specialist, Schueco UK, is updating its sun-shading offering by launching in the UK three new high-quality systems: two are large louvre blade ALB systems and the third utilises C-shaped and Z-shaped blades, a new departure in blade design. The first Schueco

ALB system for 2017 – designated as 'hi-tech' – provides highly effective sun-shading unaffected by wind. It incorporates large louvre blades in a variety of different geometries, colours and arrangements, thus allowing architects maximum design freedom.

01908 282111 www.schueco.co.uk



Senior's glazing reigns supreme on Sovereign Street



Aluminium doors, windows and curtain walling from designer and manufacturer Senior Architectural Systems have been specified for use on a new commercial development in the heart of Leeds, West Yorkshire. The new Concordia Works scheme on Sovereign Street has been created through the innovative refurbishment of an old five storey yarn and cord warehouse dating back to the early 20th century. Designed by architects Gpad London, the building combines an attractive mix of original features and modern elements to create a high-specification office space. Owing to the scheme's prominent city centre location, the exterior of the building has been given a stylish and sympathetic makeover with Senior's dark coloured slim framed SPW 300 aluminium windows and SF52 aluminium curtain walling paying homage to the former warehouse's industrial heritage. Senior's thermally efficient SF52 curtain walling has been used to create the feature glazed arches to the entrance level, with the design continuing with the window arches that have been installed to the floors above. Completing the fenestration package are Senior's SPW 500 doors which are ideally suited.

www.seniorarchitectural.co.uk

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Roseview have also created their own midrail profile, replacing the external interlock line that gives away even the most convincing timber-effect windows as uPVC. Traditional hardware and external putty lines are expertly recreated. The result is the most authentic timber-effect sash window ever produced. The Ultimate Rose does all this while offering 'A' rated energy efficiency as standard, enhanced security, and exceptional acoustic performance.

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TORMAX improves school safeguarding

Significantly upgrading safeguarding standards, Derbyshire County Council Construction has recently completed a new reception area at the William Allitt School, incorporating a sliding automatic entrance system from TORMAX. Giving good visibility from the office, staff can easily monitor people and pupils as they come into and leave the building. Powered by the TORMAX iMotion 2302 sliding door operator, a long-life span with exceptional reliability is assured thanks to the unique, high-torque motor that has been cleverly designed without any of the elements that commonly wear out, such as gears and brushes. The old entrance to the main building was concealed within a recessed courtyard with the office situated elsewhere, meaning there was no external door security. Aiming to improve the safeguarding of pupils, the newly constructed reception area.

sales@tormax.co.uk



The future of architectural products

Hueck UK has expanded its market leading portfolio with the addition of four new premium products (Volato SLS 075, Lambda WS 075 FC, Lambda SA (silent air) and Trigon GSP). Hueck is one of Europe's largest manufacturers and suppliers of aluminium window, door and facade solutions, specialising in both standard systems as well as bespoke applications. The company offers a wide choice of profiles, all of which are designed to integrate with each other. Adding to its existing suite of sliding systems, Hueck has launched Volato SLS 075 - aimed at the premium entrance door market. The system is available in a range of designs to offer creative freedom in architectural projects and has a slim profile for enhanced aesthetics. Hueck has also expanded its popular Lambda series with Lambda WS 075 FC and Lambda SA (silent air). Lambda WS 075 FC combines the advantages of window construction with the appearance of a slender facade design; and is a cost-effective alternative to traditional curtain walling. Lambda SA is a revolutionary soundproofing system. Lambda SA can reduce noise pollution by up to 39 dB.

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Sundolitt XPS specified at University



Sundolitt (XPS) extruded polystyrene was specified for new student accommodation at the University of Hull. Approximately 4000m² XPS 300 grade was installed and supplied through building materials distributor, MKM in Hull. Sundolitt's XPS boards provided not only high thermal

performance that contributed to a U value for the floor of 0.11W/m²K, but the necessary water resistance. With the ability to withstand extreme loads, the boards were installed in layers to a thickness of 270mm, to raise the height of the ground floor.

01786 471586 www.sundolitt.co.uk

Staying in shape with Kingspan



Thanks to the compact design of The Kingspan KoolDuct System and KoolDuct Panels, Kingspan KoolDuct Delivery Partner, cg3 Systems, has achieved a millimetre-perfect HVAC fit-out of a new multi-million pound

sports and leisure complex located in Newry city centre, Northern Ireland. The Kingspan KoolDuct System and circular ductwork formed from Kingspan KoolDuct Panels offered an innovative HVAC solution. Unlike galvanised steel, both systems are pre-insulated using Kingspan KoolDuct panels.

01544 387 384 www.kingspaninsulation.co.uk

OPTIM-R installed at medical centre



GP practice staff in Aberdeen city are enjoying a new and improved environment at their purpose-built facility, with the help of the Kingspan OPTIM-R Balcony & Terrace System. The centre features a spacious roof

terrace. To insulate this, while also maintaining an even transition from the internal area, 30mm thickness of the Kingspan OPTIM-R Balcony & Terrace System was specified. Unlike conventional insulation, Kingspan OPTIM-R panels feature a microporous core which is evacuated, encased and sealed in a gas-tight envelope.

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





Gunning Tubular Radiators



Gunning's specially designed Tubular Radiators are low level heating units which are very small in size but due to the large surface area of the spiral finns give an excellent heat output. Tubular Radiators are available in five different lengths, 500mm, 1000mm, 1500mm, 2000mm and 2500mm. They are 100mm in diameter and stand just 200mm high. They come with floor or wall mounts and are powder coated standard black or white.

sales@gunningheating.co.uk

'Outstanding' learning environment



The eight schools that comprise the Midlands batch of construction under the Priority Schools Building Programme (PSBP) will deliver 'state of the art' facilities – right through to their ventilation. Engineering

expertise from air movement specialist Gilberts Blackpool has enabled the team to deliver a bespoke strategy that addresses the issues and considerations raised in the EFA's ventilation specification for PSBP. Thus, Gilberts' innovative roof-mounted hybrid Mistrale Fusion System has been integrated into specially-designed roof turrets, to provide stack ventilation to the open areas of each of the schools.

01253 766911 info@gilbertsblackpool.com

Lakehouse's bespoke heat pumps



Global Energy Systems offer bespoke air source heat pumps which supply customers with hot water and central heating. The heat pumps work by extracting free available heat from the ambient, outside air. Actor Martin Wenner has purchased an air source heat pump from

Global Energy to heat his luxury holiday home situated in the heart of Bowland, Lancashire. It boasts a surround sound cinema, sauna and hi-fi system. By pairing a heat pump, solar panels and a wind turbine Martin has an extremely cost effective and environmentally friendly heating system for his off the grid 5 star holiday let.

enquiries@globalenergysystems.co.uk

AET FlexTouch with CO₂ Mode Control



AET Flexible Space, a leading provider of Under Floor Air Conditioning systems offers the FlexTouch controller to allow enhanced indoor environment control for occupant users and facilities managers. Available in black or white, the FlexTouch controllers are proving a popular

option for meeting rooms and cellular offices where accessing the floor recessed Fantile controller may be restricted. The new FlexTouch 3 enhanced model incorporates sensors for CO₂, humidity, VOC's and particulate count; all of which can have an effect on indoor air quality and subsequently health and wellbeing of occupants.

01342 310400 www.flexiblespace.com





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Designing-in the benefits of UFH

Toby Howard-Willis of JG Speedfit looks at some of the key design considerations for modern house design when it comes to underfloor heating

ousebuilders are fast realising the benefits of underfloor heating solutions (UFH), prompting architects to give more focus to this during the design of new properties. However, with so many different underfloor heating systems on the market, and technology still maturing, it can be difficult to know exactly what needs to be considered in architectural plans as house design continues to evolve.

The most effective underfloor heating solution is one that is designed around the individual needs of the customer and the likely requirements of the occupants.

Ever since the introduction of the Green Deal in the UK back in 2013, house-builders have been asking architects to plan projects with energy efficiency in mind, in order to meet sustainability targets. As a result, the traditional image of a bricks and mortar house has started to change, with angular glass buildings, barn conversions and small building projects becoming the norm. While architects are increasingly designing buildings to harness as much natural energy as possible, these designs are making typical heating installations more challenging to achieve.

Through the looking glass

Take angular glass buildings as an example. These are designed with a view to attracting as much natural light as possible, to save on traditional lighting bills.

However, heating a room with such a distinctive architectural design can be difficult to achieve with conventional radiator systems. Not only is it impossible to install a radiator to a glass wall, but because of the fabric of the building, 'insulation by design' is difficult to achieve whichever heating method is chosen. Very few are designed with the aim of providing any additional insulation above and beyond the heating output that you would expect to achieve.

This is helping to make underfloor heating more popular. By heating a building through pipes underneath the floor, a steadier background heat can be created, reductions in energy use can be achieved, and of course, the need for radiators is eliminated, thus solving a tricky design problem. The latter point is of particular benefit when you consider the increasing demand for minimalist building designs with greater space and more pleasing aesthetics.

Even for buildings without large glass 'concertinas,' the price of designer radiators can be prohibitively expensive when compared to the relatively lower cost of underfloor heating. Consider also that the time it takes to install UFH for a typical 110 m² building is roughly a day, compared with more than three days typically required to install a traditional radiator system, and the benefits of UFH for modern buildings start to become very clear.

Zonal planning

As more modern buildings begin to utilise timber frame construction, UFH installation is becoming a more flexible and versatile option for architects. While little changes on the top floor of a building, the bottom floor typically becomes more open plan.

Architects can use this to their advantage when it comes to considering zones of the building that need to be heated. The term 'zone' is used to describe an area to be heated and controlled by one thermostat. Typically, an entire home will be sectioned into different zones, where the temperature and heating duration need to be controlled. Increasingly, there are instances where there are two rooms combined into one zone. In this instance, it is important to consider how these zones will be heated.

For example, if you have a modest



Since the introduction of the Green Deal in 2013, housebuilders have been asking architects to plan projects with energy efficiency in mind





hallway in your design with a downstairs toilet, this could comprise one zone to be heated by the same thermostat.

Alternatively, a kitchen, dining area and small utility cupboard could be combined into a single zone to heat for greater energy efficiency. Intelligent heating control solutions, such as a four-in-one wireless thermostat, can aid convenient control of an underfloor heating system. This can allow homeowners to heat individual zones of the building from their smartphone. When buildings are designed with zone control in mind, homeowners and occupants can maximise their energy efficiency savings.

Combating heat loss

It is also important for architects to consider the location of a new build property, as this can sway any decision surrounding heating systems. Most buildings are designed to be as energy efficient as possible, but the location of the building itself can often have a detrimental effect on heat retention.

For example, if a building is situated in the middle of a moor with frequent winds battering the side of the building, this is likely to result in significant heat loss, so it is important for architects to make this information available so that it can be accounted for in the underfloor heating system design. If the heating system manufacturer understands the rate at which heat will be lost from a building according to the minimum standards set by Building Regulations, they can often design an optimum system around this. A good place to start is by looking at the insulation of a home, as well insulated buildings typically have a very low heat loss.

A plastic revolution

The uptake of plastic plumbing methods is already making life easier for architects,

Traditional heating systems are becoming more complicated and expensive to install when compared to underfloor heating

who no longer have to worry about visible copper pipes affecting the interior aesthetics of a building. Unlike copper, plastic pipes can be woven through the fabric of a building and threaded through walls, ensuring that there are no visible pipes on display. However, the real beauty of plastic pipes and fittings is that they can be engineered in different colours – for example, JG Speedfit offers both red and blue pipes for projects where easy identification of hot and cold or flow and return pipework is important, or just for added convenience, signalling all isolation points in the event of a heating system failure.

As more and more architectural designs prioritise aesthetics and energy efficiency over practicality, traditional heating systems are becoming more complicated and expensive to install when compared to underfloor heating. As the first fix plumbing industry starts to move towards more flexible and convenient solutions, architects are also beginning to accommodate new and effective methods of building design.

For effective building designs, the need for multiple stakeholders in the building industry to collaborate to understand and facilitate the building design requirements – of both the housebuilder and the planned occupants – has never more important.

Toby Howard-Willis is technical engineer at JG Speedfit

JG Speedfit's simple and affordable



JG Speedfit, one of the UK's most trusted plumbing & heating push-fit manufacturer offers fittings and pipe that are not only renowned for the reliable and leak proof connections they create, but also for the ease

of use they offer and speed at which they can be installed, de-mounted and re-fitted without the need for additional tools. JG Speedfit's simple and affordable underfloor heating solutions empower architects to create luxurious heat without compromising on interior design. The company offer a variety of underfloor heating solutions that are compatible with various floor types and projects.

info@johnguest.com

You can have it all with Speedheat



Creating an airy, open space for living calls for clean lines and minimum fuss – but you also need to keep cosy. Speedheat electric underfloor heating can help to achieve it all. Installed with minimum disruption and no noticeable build up in floor height, Speedheat's system is invisible under your choice of final floor finish. It is ideal for new build, renovation and redesign projects and comes complete with state of the art,

unobtrusive controls. Speedheat spells the end to ugly radiators or trailing cables, with nothing to spoil the view.

info@speedheat.co.uk





Nu-Heat underfloor heating for contemporary underground dwelling

The property: Ashbrook Annex, South Oxfordshire

A contemporary, single storey, highly-glazed dwelling built into the surrounding hillside with zoned screed underfloor heating connected to the property's home automation system.

Project location: South Oxfordshire Project type: Creation of a bespoke, underground family home with large areas of glazing

Requirements: Bespoke, high-performance screed underfloor heating solution with zoned control connected to the building's home automation system

Total UFH area: 221.8m²

Solution: Nu-Heat SL14 high heat output

screed underfloor heating Client: Ashbrook Homes

Project brief

Nu-Heat were tasked with the design and supply of a bespoke, efficient underfloor heating (UFH) system for Ashbrook Annex, a single-storey, contemporary dwelling built into the hillside in South Oxfordshire.

The UFH had to be zoned for efficient heating control and low running costs, as well as have a high heat output to offset heat losses from the property's glazed frontage. The system was also required to integrate with the property's home automation system.

Project solution: Nu-Heat screed underfloor heating

Nu-Heat specified and supplied a high heat output, liquid screed UFH solution with Cliptrack, which was specifically designed for Ashbrook Annex. Easily installed during the construction of the building floor, Nu-Heat SL14 minimised potential impact on the overall build schedule, and proved a cost-effective, efficient solution for the property's heating requirements.

SL14 comprises Fastflo UFH tubing, which is held in place by Cliptrack, before liquid screed is poured over the top.

- High performance heat output
- Works well with setback time control
- Tried and tested, cost effective solution
- Bespoke designed to the property
- Simple to install



All images @ Ashbrook Homes



- Floor components fitted at first-fix stage
- Full design performance indemnity

Client review

James Barrett, Ashbrook Homes: "We wanted the property to be modern, but not 'in your face'", he explains, "And we also wanted it to be cheap to run. Underfloor heating is the perfect fit. We didn't need to worry about the location of radiators – which would have been difficult to accommodate as much of the front of the house is glazed."

"I have used Nu-Heat in other projects and have always found them to be well-priced, prompt and helpful in the design stages. Above all they offer a good product."

"We (Ashbrook Homes) installed the system ourselves and find it simple and straightforward. Laid under a liquid screed the system integrates perfectly with a newbuild property with a minimum loss to headheight. Important for underground living!"

"An added bonus to our Nu-Heat underfloor heating is how easily it linked up with the home automation system. This



means that we don't need to worry about the schedules or performance, as they simply take care of themselves."

System information and project advice

Nu-Heat can offer help and support throughout all stages of your underfloor heating project. We know that no two projects or clients are the same, and we take pride in designing and delivering bespoke systems that meet exacting project requirements and client demands.

Use our expertise to confidently specify tailored underfloor heating and acoustic solutions that are backed by free, lifetime, technical system support for your client.

Ask the experts

Contact Nu-Heat to discuss your upcoming projects.

01404 540650 info@nu-heat.co.uk www.nu-heat.co.uk

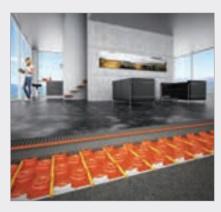
Energy-efficient underfloor heating

ow to specify a lasting, energy-efficient underfloor heating system that is quick to install.

Schlüter®-BEKOTEC-THERM is a low-height, energy-efficient and quick reacting modular underfloor heating assembly. This system can be used in new build and renovation projects, and is a green choice with economical, energy saving properties.

Its low supply temperature of approximately 30°C, compared to between 50-55°C in some traditional systems, means Schlüter®-BEKOTEC-THERM is extremely effective not only with conventional heat generation methods but also regenerative energy sources, such as ground and air source heat pumps. Since the thinner screed requires much less material, the final construction is lighter and lower than traditional screed installations, saving considerable construction time.

When it comes to screed systems and solutions, an integrated solution – here products are designed and manufactured to complement each other – is the key to a lasting, successful flooring installation. In this



respect, Schlüter®-BEKOTEC and BEKOTEC-THERM really stand out from the crowd: Schlüter-Systems Ltd offers a complete assembly warranty when its systems are installed by a member of the Schlüter Approved Installer Network.

The Schlüter Approved Installer Network allows approved installers, who have completed full training with Schlüter, to install the system. The network not only gives accreditation to the individual but also to the

company as a certified organisation. This provides reassurance to you, as the specifier or architect, that the system will be installed to the manufacturer's standards and best practice and minimises risks, ensuring a quick and reliable installation.

The system also features a range of thermostat and control modules, the current generation of room sensors and control modules significantly increases the flexibility and convenience of regulating the temperature of the room. As the core of the system, the base module can be connected to a timer module for energy-saving temperature reduction. The connection modules for wired or wireless room sensors can be freely combined with the base module, which enables the flexible expansion of existing systems at any time. Modern wireless and wired room sensors allow for individual room temperature control to suit requirements. The Schlüter®-BEKOTEC-THERM system can also be integrated with Building Management Systems (BMS).

01530 813396 www.schluter.co.uk





Expertise from SE Controls forms part of innovative energy saving building research

new research project being undertaken by the University of Sheffield into the use of predictive modelling to save energy in non-domestic buildings, is drawing on expertise and data from leading smoke and environmental ventilation specialist, SE Controls, to help support the study.

Funded by a grant from the Engineering and Physical Sciences Research Council (EPSRC), the new research programme explores the potential of making energy savings of up to 25 per cent through the development and use of Model Predictive Control (MPC) in commercial buildings.

The project will use advanced machine learning techniques, a branch of artificial intelligence, to construct a building control system that produces good internal conditions while using the smallest amount of energy possible, allowing more sustainable design and usage.

This knowledge and expertise of



controlling natural ventilation was one of the reasons behind SE Controls being invited to form part of the project steering group for the MPC research.

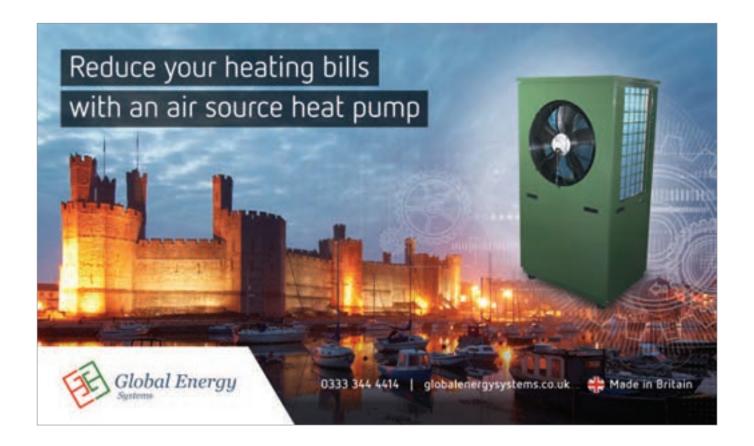
SE Controls' Design Manager, Dr. Chris Iddon, who will attend the steering group meetings, explained: "Non-domestic buildings, such as office spaces, currently account for 18 per cent of the UK's carbon emissions and between 40-90 per cent of this

is energy consumed in the heating and cooling of buildings. Also, data from The Carbon Trust estimates that around £500 million worth of energy is wasted by commercial buildings every year, so this research into more effective building control and management is essential."

In addition to the involvement of SE Controls, academics from the university's departments of Civil & Structural Engineering, Electronic & Electrical Engineering and School of Architecture are also working with other leading industry partners, including Arup, Buro Happold, LCMB and Trend Control Systems as part of the process of exploring methods to make MPC economically viable for building energy management.

Further information on SE Controls' products, solutions and projects can be obtained online by emailing or by telephone.

01543 443060 www.secontrols.com



All-in-one marketplace for heating



Warm-On is an online marketplace with the purpose to bridge the gap between installers or small construction business owners and manufacturers of heating equipment. The company helps its customers to make the quick and rational decision in the field of comfortable

heating and frost protection. Its information resources and technical advisors offer impartial assistance to customers and help accelerate the sales cycle of small businesses. Warm-On creates the basis for a long-term business relationship through its high quality products and services, as well as through its attractive dynamic discount system.

info-uk@warm-on.com

Effective heating controls



Effective heating controls are a vital part of an efficient central heating system. Heating controls manufacturer ESi says it makes huge sense to look more closely at the options. ESi offers a range of programmers from a simple 1 Channel version to a 3 Channel Multi-purpose programmer providing separate timed heating control for living and sleeping zones in a home, whilst also providing timed control of hot water. Take a closer look at the full range of controls on the website.

01280 816868 www.esicontrols.co.uk

Vortice supplies Trio Square



Architects Hinton Cook and their client Trio Square, turned to Vortice to help solve ventilation challenges at a Ryton upon Dunsmore development. The site had two important issues to resolve. Part of the site had to comply to System 3 (MEV) of Building Regulations

Part F and the other part of the site had to comply with System 4 (MVHR) as well as complying with planning guidance on noise ingress. Tony Green-Hurst of Vortice said: "Hinton Cook and Trio Square understood the challenges they faced and allowed us to help them design the ideal ventilation system for each of their properties."

sales@vortice.ltd.uk

MVHR units now with Bluebrain control



Following the launch of its ceiling/void mounted HRX-aQ Mechanical Ventilation with Heat Recovery (MVHR) appliances with intelligent air management, Domus Ventilation, part of Polypipe, has introduced this same advanced 'Bluebrain' control to its wall mounted MVHR units. The new Domus HRX-D and HRX-2D wall mounted MVHR units intelligently

match ventilation rates to the internal environment and occupants' requirements, for maximum homeowner comfort.

vent.info@polypipe.com



Ortal The fire in your life



DRTAL Constantly updated to lead in design and innovation, Ortal fireplaces add YOURLIFE. YOUR FIRE. an unexpected architectural feature that bring wonder to any surrounding. With a varied product line of over 80 models including island and curved fireplace, there is a fire to accentuate any design as well as a rich selection of special features including reflective interiors, dual line burners and protective mesh. Providing heating solutions that are both creative and effective, Ortal fireplaces can be installed where others cannot in a wide range of spectacular formats for use with natural gas or LPG. Ortal fireplaces are exclusively available through Robeys and selected retail outlets throughout the UK and Ireland.

Robeys

Robeys Ltd, Riverside, Goods Road, Belper, Derbyshire, DE56 1UU. Tel: 01773 826085. info@robeys.co.uk www.robeys.co.uk

Giving vent to artistic flair



Designers and specifiers can give full vent to their artistic flair through developments at Gilberts Blackpool Ltd. The independent air movement specialist is now offering the capability to hydroplate its ventilation grilles, diffusers and louvres. The innovative printing technique enables any of

Gilberts' aluminium grille and diffuser profiles for interior air distribution to be finished in whatever colour or finish required. The hydroplating facility compliments Gilberts' powder-coating service, which enables its products to be supplied in any solid colour required, and now, 'chrome' powder to provide a polished chrome diffuser effect.

01253 766911 info@gilbertsblackpool.com

High temperature ASHP - from LG



The new high temperature version of LG's Therma V ASHP is proving popular across the UK. It can deliver water at up to 80°C for cascade dual refrigerant cycles of R410a and R134a and up to 65°C for single refrigerant high temperature systems. Its ideal for combining with hot water cylinders or thermal stores and has been successfully linked with other renewable technologies including solar PV. To find out more, head to the website or email LG for further information.

HVAC.marketing@lge.com partner.lge.com/uk

Polyflor launches Secura luxury flooring



Polyflor, a UK residential and commercial vinyl flooring specialist, has launched its new Secura PUR collection of luxury vinyl sheet flooring, designed to create inspiring home interiors for modern living. Made in the UK, the Secura PUR range features 22 designs which authentically replicate the natural character of wood, stone and abstract materials in a practical and durable sheet

format. On-trend new additions include white and grey oaks alongside contemporary concrete and slate effects.

0161 767 1111 www.polyflor.com

Folding partition and movable walls

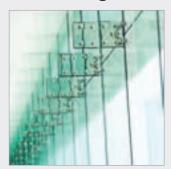


Building Additions are a specialist folding partition and movable wall company based in the UK that offer a complete one stop service from initial design of your bespoke sliding partitions or operable wall systems, through manufacture and installation of the individual units and a full after care service.

Building Additions folding partitions and movable walls come in a wide range of finishes with different acoustic properties. They can be tailored to suit almost any space providing a quality solution to maximising the use of space within any commercial building.

sales@buildingadditions.co.uk

Dow Corning launches Crystal-clear Silicone Technologies



Crystal clear silicones provide high strength, high performance, durability and architectural design freedom. Dow Corning® TSSL silicone film for interiors is engineered for area lamination of structural glass-glass and glass-metal bonds such as glass staircases and railings. Its exceptional strength and flexibility accommodate the movements and vibrations generated by walking on glass stairs and grasping glass railings. This new laminate allows designers to avoid unsightly drilling when joining glass pieces. Dow Corning® 2400 Silicone Assembly Sealant hot melt is designed for manual and automated assembly, bonding and sealing of specific structural glazing designs, crystal clear insulating glass edges and general sealing applications. It provides immediate grip and strength upon cool-down, and requires no primer for the majority of non-porous substrates. It delivers excellent resistance to ultraviolet (UV) light, high and low temperatures and weather. These two new Dow Corning technologies complement the company's recently introduced Dow Corning® TSSA silicone film for bonding fixed-point exterior glass facades.

+32 64 888 000 dowcorning.com

First Suffragette's office given new vote of confidence thanks to development



A historic office building has been given a new lease of life thanks to a development project that involved ironmongery firm SDS London. SDS London supplied Solmaz Ltd, with a vast quantity of ironmongery and hardware for the project. Over 40 product lines were supplied, to the project, which was once used by the Suffragettes as a base for its movement for political and social change. The development saw five luxury flats built in Bedford Street, Covent Garden, London; and SDS London supplied all of the Ironmongery for 76 doors in the complex, which included main entrance and interior doors. Up until 2012 the building was used for office space before being converted into residential accommodation. Solmaz Ltd was the main contractor for the project and the Stonehaven Group were the developers. On working with SDS, Faruk Tepeyurt, who is Contracts Coordinator comments: "A project of this nature demands that you use the very best suppliers and SDS is very much this when it comes to ironmongery. Their range of products, knowledge and customer service can't be matched. They played an integral role in ensuring the development was a success."

020 7228 1185 www.sdslondon.co.uk



Closing the gap

Acoustic and fire safety standards must be adapted to meet modern product requirements, argues Kye Edwards of partitioning firm Ocula Systems

ommercial working spaces seem to be continually evolving and numerous workplace studies have been carried out to assess the advantages and disadvantages of individual working spaces versus open planning. Not surprisingly however, the results cast no clear winner – the environment simply works best when it complements and enhances an organisation's specific needs and requirements.

The workplace partitioning and doors market has reacted well to the changing demands for a more flexible and transient environment and there's now a plethora of product choice for specifiers. It's this amount of choice that has enabled clients to truly personalise a working environment to cater for a specific organisation's needs and the space it occupies.

Standards in sync

Finding the right product is no longer the main problem, but specifying partitioning can be complex in projects with an enhanced focus on acoustics and fire protection. While the industry has flourished, bringing a vast product choice to the market, the statutory requirements have lagged behind and it is vital that standards are adapted to these new technological developments.

For example, manufacturers test their products to technical acoustic standards and try to simplify the results for the clients. However, it's generally acknowledged that the test results do not always reflect how the product will be used, so more detail and clarity is required within the standards to address that complexity.

The standards need to be more prescriptive in specifying what should be tested in order to represent what is physically installed on site, such as the number of joints or modules and whether the doors are tested in a screen or independently. It is vital that the standards are not open to interpretation and that's why Ocula is

PRINTED

A printed glass is used on twin glazed FT partitioning and double-glazed doors as a privacy screen in the new SIG Regional Distribution Centre in Manchester

The standards need to be more prescriptive in specifying what should be tested in order to represent what is physically installed on site



FIRE & SOUND

This partitioning system provides high levels of fire performance and sound reduction while incorporating Crittall-style glazing

working with the Finishes & Interiors Sector Association to agree an effective and consistent measure.

The outcome of this collaboration is seeking to identify a standardised solution that would not be misrepresented, would give manufacturers a 'level playing field' and would convince suppliers and installers. We are hopeful this will influence future industry standards and reduce confusion for buyers and specifiers in this market.

Trends

A client needs to feel confident that the product design is not only aesthetically pleasing and to the brief, but will also perform acoustically. Products are available for any application, and their performance is consistently measured and presented. This is the case whether they are single or double-glazed partitions for acoustic separation, or timber-framed systems reflecting a high-end opulent warmth, bespoke printed glass for privacy or fire-rated glass for escape routes.

There's also a great choice of products designed to enable ease of installation and personalisation of an area. One of the most

Manufacturers test their products to technical acoustic standards, but test results do not always reflect how the product will be used

recent trends follows the industrial theme of Crittall-style glazing with a dramatic banded design. There's also more choice in door opening systems, such as acoustic sliding doors that offer a better use of space within a room, as well as LED lighting solutions that provide added privacy through switchable glass that becomes opaque at the touch of a button. Consideration is given to make all these systems easily relocatable and modular in design, to assist in providing a flexible workplace.

Kye Edwards is business development director of Ocula Systems



Specialist folding partition manufacturers & contract installers of folding doors, partitions and movable walls.

Building Additions have an established reputation for the manufacture, supply and installation of room partitions and movable walls throughout the UK. The skill, knowledge & experience we offer guarantees the right solution to meet the requirement of interior design professionals.



Tel: 01373 454577

Email: sales@buildingadditions.co.uk

www.buildingadditions.co.uk

Rhokett selects ISD Solutions

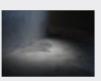


Specialist composite panel contractor ISD Solutions has completed the fit out of new high care production facilities for Rhokett, the rapidly expanding luxury high volume dessert maker. The new 1,410m² food processing centre at

Cranbrook, will provide Rhokett with further capacity to match high levels of demand. Under the £150,000 contract ISD Solutions' Coldstore division was responsible for the design and ground floor fit out of the new warehouse, incorporating manufacturing and food preparation rooms, as well as cleaning, wash-down and lobby areas.

01452 520 649 www.isd-solutions.co.uk

New Frameless Grill for wetroom floors



CCL Wetrooms, one of the UK's leading Wetroom Specialist have launched the latest development in Wetroom drainage – the new Frameless Grill – incorporating the minimalistic beauty of a Stone-Infill Grill, but without the border of a metal frame. The new Frameless Grill, which only has a 5mm

shadow gap visible around the perimeter of the drain and no visible frame, has been designed to complement all brassware finishes and sanitary ware designs, including the latest in luxury boutique trends such as brushed nickel, copper and rose gold.

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

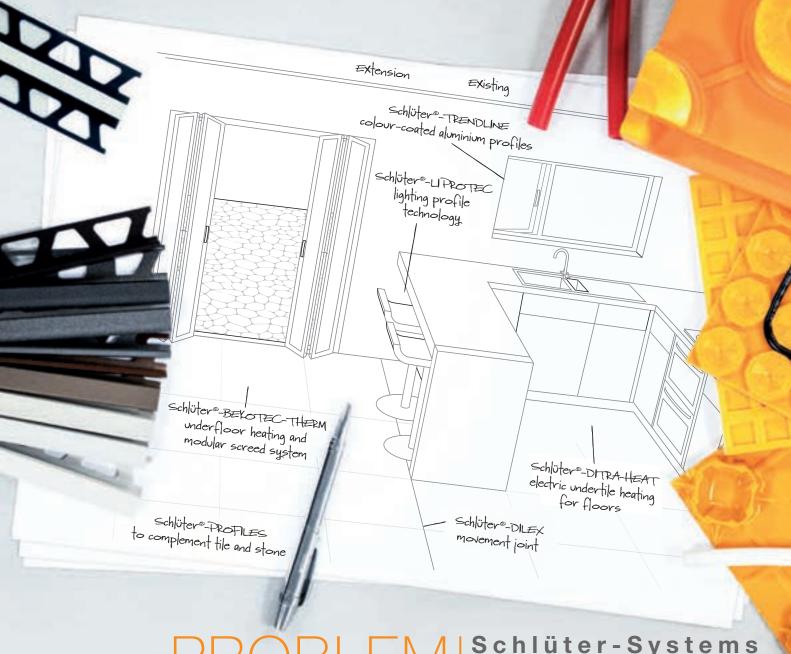
magrini baby changing units



tried & trusted by young professionals

safe - strong - stylish





PROBLEM SOLVED

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When specifying underfloor heating, you need a system you can trust.

Underfloor heating by Schlüter-Systems offers solutions for all project scenarios by coming in two forms; the hydronic Schlüter®-BEKOTEC -THERM and the electric Schlüter®-DITRA -HEAT-E, both suitable for use in commercial and residential installations with tile and stone coverings.

Backed up by expert technical support, whenever, wherever you need it.

Making the decision to choose Schlüter-Systems even easier.

To find out more call 01530 813396 or visit www.schluterspecifier.co.uk





Bespoke ceiling adds unique touch



Hunter Douglas has helped transform a lecture theatre at the University of Birmingham. The overhaul of the Avon Room included Hunter Douglas wall and ceiling panels in real Cherry wood veneer, plus motorised blinds. However, the panels differed from the usual

ceiling system because they were manufactured from engineered solid wood (ESW) and to meet the design brief of the architect, they were produced as six "wings" with 9mm "dummy" circular perforations, which allowed them to be invisibly fixed to the suspension system.

01604 766251 www.hunterdouglas.co.uk

Crown Paints celebrates colour



Architects and designers looking to get up to speed with inspired, eye-catching colour schemes for their projects will find help at hand with Crown Paints' latest trends. Colour Influences 2017 is Crown Paints' way of celebrating its love of colour – and the programme gives specification professionals useful insight into the shades which will shape professional interior

and exterior environments in spring and summer this year. The colours are available in Crown Paints' high quality, professional brands, Crown Trade, Sadolin and Sandtex Trade, which are all crafted with over 200 years of knowledge and experience.

0330 0240310 www.crowntrade.co.uk

Saniflo launches raft of new products



Saniflo – inventor of the macerator with more than 60 years' experience and the number one in the UK macerator market – is launching a raft of new products featuring new technological advancements for the domestic and commercial plumbing sectors, a new product

catalogue available now and an extended warranty for domestic products. The hassle-free, plug and play range is designed to be the best on the market featuring ease of installation and maintenance with new and improved noise and vibration reduction.

020 8842 0033 www.saniflo.co.uk

Pro Ply Tile Backer Board from Norcros



Norcros Pro Ply Tile Backer Board is a high performance, mineral based, water-resistant backer board, which is both mould-resistant and exceptionally strong. The product is manufactured using a process that produces very little in the way of CO₂ emissions, unlike cement-particle and gypsum boards. The board is silica and asbestosfree and has a Class A1 non-combustibility

fire rating making it ideal for use with underfloor heating and in build-ups for fire resistant systems and firewalls. As with all Norcros Adhesives products, Pro Ply is covered by a lifetime guarantee.

01782 524140 www.norcros-adhesives.com

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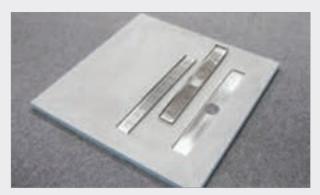
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Marmox Showerlay³⁶⁰ drain

British company specialising in insulation and waterproofing products, Marmox, has added a new drainage solution to its range of Showerlay floor level shower bases, which has been designed to simplify the installation of plumbing in both new-build and refurbishment applications and is compliant with all relevant standards. Joining the company's extensive range of products, the new Showerlay³⁶⁰ Drain, as the superscript title suggests, is fully rotatable to enable use in horizontal as well as vertical outlet connections – or any angle in between – for total flexibility. For even greater ease and adaptability of installation, the compact drain measures just 80mm deep with a 50mm water seal. It can be utilised with both of Marmox's Showerlay trays, which are tileable sloping bases for a shower area on either a wooden or concrete sub-floor.

sales@marmox.co.uk









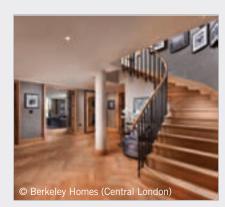
Mapei UK wood products used in central London apartment development

apei UK has specified and supplied products for the installation of wood flooring on an area of 13,000m² throughout the prestigious Berkeley Homes Abell & Cleland Westminster apartment development.

The apartment building comprises one, two, three and four bed apartments and penthouses which have been completed to the highest specification and using Eco-rated products from Mapei's range of resilient products, for substrate preparation ready to receive the engineered wood flooring.

Jason Mortenson, Project Director from Berkeley Homes (Central London) commented "We have used Mapei's Eco prim T primer with great success, giving us a high quality base before starting our flooring works with the key benefits of being safe, sustainable and easy to use."

Mapei's Eco Prim T is a water based and low VOC solvent free primer for interior use, ideal for priming before installing levelling



compounds. At Abell & Cleland, Eco Prim T was used throughout before applying Latexplan Trade to level and smooth the substrate, ready to receive floor coverings.

Ultrabond Eco S940 1K is Mapei's one-component, solvent and isocyanate-free sililated polymer adhesive with extremely low emissions of VOCs can be used with all types

and sizes of engineered wood flooring, hence it's suitability for the installation at Abell & Cleland. Throughout all apartment flooring in the development, Mapesonic CR sound proofing matt was laid directly below the wooden flooring to offer a 17db sound deadening reduction.

The Project Director from Loughton Contracts Plc, the flooring contractor responsible for the supply and installation of floor finishes at Abell & Cleland, said: "The Mapei products were easy to handle and move about with the difficult daily logistical issues we faced, and confidence in application during install was high."

Mapei's dedicated Specification Centre is located in the heart of Clerkenwell and provides detailed specification and technical assistance for your project. Call Mapei for more information and full details about the product range.

0121 5086970 www.mapei.co.uk





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access panels, riser doors and steel doors. Products are designed and manufactured to the highest quality standards and accreditation. In 2014 Profab Access set a new benchmark in the industry being the first UK Access Panel manufacturer to achieve Certifire status. Their products have been specified on prestigious builds in the UK and exported all over the world. All of their BIM objects are available to download from the NBS National BIM Library.

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Composed of sustainability

Alex Collins from Ecodek says that wood polymer composites present a new world of sustainable, durable construction materials

ood Polymer Composites (WPCs) were first developed in the US in the early 1990s as an alternative to timber used in applications where durability, rot and infestation resistance were required.

Currently, the most widespread use of WPCs in North America is in outdoor deck floors, but they are also used for railings, fences, landscaping timbers, cladding and outdoor furniture for parks and recreational areas.

For such applications, a wood-polymer composite material is also considered to be more environmentally friendly, as it requires less maintenance than the alternatives of solid wood treated with preservatives or rot-resistant solid wood species.

Manufacture

WPCs are manufactured from a mixture of finely ground wood particles ('wood flour') and heated thermoplastic resin – both virgin and recycled polymers can be used. In the case of Ecodek, the raw materials for the thermoplastic resin element of the WPC mix are millions of recycled plastic milk bottles. The relative proportion of the mix is also important and is usually around 35 per cent resin to 65 per cent wood flour, to minimise moisture absorption.

In the UK, wood flour is a waste product of the timber processing industry and is generally sourced from FSC [Forestry Stewardship Council] or PEFC [Programme for the Endorsement of Forest Certification] accredited suppliers.

Some WPCs therefore have an almost 100 per cent recycled composition and products are capable of being fully recycled at the end of their working lives. Few other materials are able to claim such strong environmental and sustainability credentials.

The most common method of production is to extrude WPC into the required shape or profile, although injection moulding techniques are also widely used. Because of the organic content of the wood flour in the mix, WPCs tend to be processed at

relatively low temperatures compared to traditional thermoplastic extrusion and injection moulding methods.

Solid and hollow sections can be extruded with ribbed, curved and grooved surface profiles readily achieved, allowing a considerable degree of flexibility in both function and aesthetic. WPC materials can also be moulded, with or without simulated wood grain detail to further improve their appeal.

Where do WPCs fit?

WPCs have many advantages over comparable timber alternatives. A good quality WPC will not erode and is resistant to rot and attack by wood-boring insects etc. It is extremely stable, does not crack or split, has excellent workability and can be shaped and cut using conventional woodworking tools. WPC can also be readily curved with the application of heat to form strong, arching contours.

In the UK, markets where WPC products have proved to be most popular are in decking boards for the commercial and domestic landscape sector and in particular, for balcony decking in luxury apartment developments.

Here, the durability, clean, sharp profiles as well as the minimal maintenance requirements have persuaded many of the leading housing development companies to install WPC decks. As WPC is permanently pigmented and requires no preservative coating, there is no risk of leachate dripping from beneath the deck and falling on properties below.

Carbon negative production

Another important factor in the success and popularity of WPC in the UK is the sustainability of its composition and manufacture. In a recent life-cycle assessment programme undertaken by the BioComposites Centre at Bangor University, production of Ecodek WPC decking products was considered on a cradle to factory gate basis, including all significant materials, transport, energy use and packaging inputs.



RESILIENT

A good quality WPC will not erode and is resistant to rot



CARBON REDUCTION

Production of WPCs being carbon negative was a huge achievement in modern manufacturing

Results showed the products had a net effect of 'removing' carbon dioxide from the atmosphere rather than adding to it. Production actually being carbon negative was a huge achievement in modern manufacturing and believed to be a first for a UK manufacturer, clearly illustrating the environmental credentials of WPC. The study showed that Ecodek's 2016 production

Some WPCs therefore have an almost 100 per cent recycled composition

absorbed the same amount of carbon as 300,000 trees.

To achieve carbon negativity – effectively removing carbon dioxide from the atmosphere rather than adding to it – requires a much more aggressive approach than carbon neutrality, which merely nullifies the effect that an entity has on the environment.

The future

Clearly, WPC products have an important role to play in the UK construction and landscape markets. The potential for product and market extension is huge, and manufacturers will continue working closely with industry bodies to identify new and innovative ways of capitalising on the unique characteristics of this exciting material.

Alex Collins is technical director for Ecodek



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Problem free patios with new BAL External Tiling Systems

ith living space a premium these days, more and more people are expanding their homes outwards to create much needed freedom to entertain and relax.

This trend for outdoor living has led to a growing market for ground terraces and patios with variations in coverings and design.

While wooden decking may seem a popular choice of covering, being cheap to install, without ongoing treatment and maintenance it may become susceptible to damage, making natural stone, ceramic or porcelain tiles a great alternative. Tiled coverings and the right system also allow a seamless transition to be made from inside to out.

To cater for this growth, BAL has launched an exclusive range of external tiling systems, using proven technology from its sister company Gutjahr, which protects outdoor coverings from rain, frost and heat.

BAL External Tiling Solutions offers architects, designers, specifiers and contractors innovative drainage, ventilating and uncoupling products for all types of patio or ground terrace, as well as balconies and roof terraces.

These new products represent a completely new range of solutions for the BAL portfolio and work as a system with current BAL preparation, waterproofing, adhesive, grout and sealant products for tiling.

This means for the first time architects, designers and contractors are provided with a true 'one-stop-shop' for terrace and patio systems for tiles, pavers and slabs.

Complete protection against water damage, frost and heat

Gutjahr are the inventors of the passive capillary surface drainage system. Complete with edge profiles, drain grates and guttering, the patented systems are simple to install and provide rapid, immediate and high volume drainage of water.

By removing the water, you are taking away the biggest threat to the tiled assembly and protecting the long term integrity of the floor assembly and covering. Problems such as cracking due to the freeze/thaw cycle, staining, warping, efflorescence and even weed growth on loosely laid tiles or slabs, are inevitable if surface water is able to penetrate below the tiled surface and is unable to be





drained effectively.

BAL is introducing a number of Gutjahr products to its portfolio including water-proofing, drainage matting, mortar, drain grates, edging profiles and guttering, which combined with its full range of tile adhesives, grouts and sealants, makes BAL the UK's ONLY full system provider.

Innovative solutions to meet your needs

Among the systems on offer from BAL include a Thin Drainage Assembly for direct point adhesion for break-proof coverings, a Standard Drainage Screed Assembly for the solid bed fixing of ceramic, porcelain and natural stone and concrete paving, and a Thin, Lighter Weight Drainage Screed with an epoxy drainage screed for a strong but comparatively lightweight build-up compared to conventional systems.

Each system offers a specific solution to cater for design needs, whether this is a requirement for minimal height build-up or for example the specification of 10mm thick break-proof porcelain tiles.

The Gutjahr system also includes a range of drainage grates and gullies, trims and profiles which are available in a number of interchangeable sizes and designs for varying assembly heights or individual project requirements.

In BAL you can call on a company in its fifth decade of specification support that understands the challenges and pressures faced by designers, architects, specifiers and contractors when designing and building tiling installations whether on large commercial or small domestic projects.

01782 591120 www.bal-adhesives.com info@building-adhesives.com

Plaswood presents new seating designs



The new, 100 per cent recycled Plaswood Edge bench introduces a maintenance free and sophisticated product range which combines versatility with outstanding long life properties, stylish designs, together with sweeping contemporary lines, for both outdoor and indoor settings. Mike

Baxter, external affairs director at RPC bpi recycled products, which produces the Edge, says flexibility is the key to success: "The new designs are refined, simple to install and are also ideal for indoor or outdoor use, especially when sited in damp or humid locations such as for swimming pools, locker rooms and gym changing facilities."

0333 202 6800 www.plaswoodgroup.com

EnviroBuild – the ideal solution

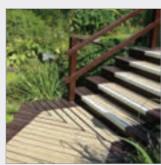


EnviroBuild are a leading UK supplier of Hyperion anti-slip composite decking and Hyperion low maintenance composite cladding & fencing, the ideal solution for any commercial and residential outdoor space, as it does not rot, split, warp, splinter or ever need treating. The composite

products are FSC 100 per cent certified and have 90 per cent recycled content. EnviroBuild offer a full take off service, including free samples and same-day quotations, with our expert team on hand to help throughout any project.

info@envirobuild.com

Low cost solution to slippery decking



Wooden decking can become hazardous in damp and slippery conditions, creating the possible threat of a slips or falls for anyone walking across the surface. Outside areas where people gather need to be made safe so FibreGrid has come up with a solution to this problem with the development of Anti Slip Standard GRP Decking Strips, part of its affordable GRP SlipGrip® Standard range. Timber decking becomes safer with these quick and easy to install DeckGrip Strips, which come supplied with decking screws and are pre-drilled. Available in lengths of 1,200mm and 2,400mm and widths of 50mm and 90mm, these decking strips are ideal for most decking areas and walkways. They are designed with a chamfered edge to provide additional safety which reduces any possibility of trips and falls. Unlike other products, no glue is required to install the product. From an aesthetics view point, given the choice of widths available, DeckGrip Strips are able to complement existing decking areas by making a feature of the Strips against the timber substrate.

01440712722 www.fibregrid.com



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High capacity surface water drainage for Primark Distribution Centre, Kettering

he Primark Distribution Centre, near Kettering was developed by London Metric Property Plc. Known as Thunderbird 2 the £77 million facility comprises a 93,000m² warehouse, some 5,000m² of office space and 50,000m² of hard standing with parking for 175 HGVs and 530 cars. A major earthworks operation was necessary to level the ground and create the vast plateau on which the building and hard standings were constructed. With such a large hard standing area an effective surface water drainage system was essential.

Having supplied high capacity surface water drainage channels for hard-standing areas at numerous distribution centres thorough out the UK, Hauraton were confident their RECYFIX® HICAP® high capacity channels would comply with the stringent specification asked for by the contractors.

It was decided to drain the hard standing area using four sizes of RECYFIX® HICAP®



– 100, 200, 300 and 680 because of their overall volume capacities. As well as straight runs of 100 and 200 channels, the 200, 300 and 680 sizes were installed in a step fall arrangement providing an enhanced water volume for these runs of 366,324 litres per metre (l/m). All the sizes supplied had fixed ductile iron, 14mm open slot inlets finished with KTL, a rust resistant coating. All 1229 metres of RECYFIX® HICAP® channel installed complied with loading category



Class F900 (900kN).

In addition some 200m of Hauraton FASERFIX® KS 100 channel with HEEL-SAFE ductile iron gratings were also installed in the site car parks requiring a loading category of Class C250 (250kN). The gratings were also specified with a KTL coating.

01582 501380 www.drainage-projects.co.uk



Fordingbridge transforming Garden Centre retail space

Almondsbury Garden Centre recently improved their external sales space with the addition of a large walkway installed by specialist design and build contractors Fordingbridge.

The brief was to provide a structure, with wow factor that had to maximise the potential from the multi-level site. Covering 102 linear meters with a span of 3.7m, the barrel-vaulted walkway at Almondsbury, was covered using Opal 60 Fabric. Exclusively developed for Fordingbridge in response to customer requests for a canopy fabric that is both UV stable and fire retardant whilst allowing 60 per cent light transmission. The high performance cloth allows optimal flexibility and strength providing freedom of shape and size, with minimal maintenance due to a smooth finish and an innovative self-cleaning surface treatment.

Fordingbridge is presently working with Hillier on several of their sites. Hillier Eastbourne is currently undergoing a major extension with a Fordingbridge portal frame structure, creating an additional 20,000

square feet, due to be opening Easter 2017. The extra retail space will allow room for five additional concessions, as well as giving even more room to offer a great range of plants, garden accessories and home items.

Fordingbridge has more than 50 years' experience in the design and build of canopies, walkways and inspiring building solutions to the Garden Centre sector, and have earned an excellent reputation for creating aesthetically pleasing, affordable solutions.

Other recent projects showcasing Fordingbridge's innovative approach include the installation of a hybrid canopy at Longacre's Bybrook Barn. Using steel stanchions and glulam timber arches for an 8m span and 60m length, the aesthetic keeps the wow factor of the timber arches coupled with a contemporary feel with the use of steel. The steel stanchions can be galvanised or finished using powder coating, which can be applied using any RAL colour. This lends itself well for the structure to remain in-keeping with any branding guidelines.



The hybrid is more about client preference, as the structure guarantee of 25 years remains true for all options. It has more to do with how our canopy and walkways blend in with the chosen environment, creating a seamless outdoor retail space.

Architects and specifiers wishing to find out how we can collaborate on projects may contact Fordingbridge via phone or email to arrange a free site visit to discuss solutions.

03333 318 502 info@fordingbridge.co.uk www.fordingbridge.co.uk



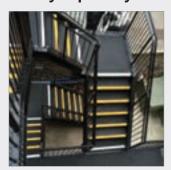






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Safety a priority with heavy duty stair tread



FibreGrid's SlipGrip® Heavy Duty Anti Slip Stair Treads are produced using FibreGrid ExtremeCore™ grit, which is twice as hard wearing as the industry standard quartz. The contrasting yellow or white nosings at 55mm x 55mm comply with UK Building Regulations and the Disability Discrimination Act. An example of its application is at the Sheffield Girl's School , where FibreGrid recently completed a major installation. The many stairwells at the school were fitted with the stair treads, plus Heavy Duty GRP Sheets, resulting in an extremely slip resistant finish in a high foot trafficked area. With a pre-constructed design, SlipGrip® non-slip stair treads can be walked on immediately and fitted with ease keeping downtime to a minimum, so helping to prevent unnecessary accidents. As well as offering a 10 year wear guarantee, the low profile fibreglass construction is also produced by the pultrusion method which means they will not bend, warp or split over time. In addition to being non slip, SlipGrip® is also chemical resistant providing the perfect solution for potentially hazardous areas, and is suitable for metal, wood and concrete stairs.

01440712722 www.fibregrid.com

Exemplary public realm with concrete



Shortlisted for the 2016 Stirling Prize, Trafalgar Place near London's Elephant and Castle provides an exemplar for high density development and the exceptional public realm that helps define the project, featured in an important new case study from the trade body Interpave. The carefully designed external spaces which help define the project are a result of the close working relationship between landscape architects Randle Siddeley and an Interpave member paving manufacturer. The entrance square, central pedestrian street and access ways to dwellings are characterised by high quality concrete block paving set out in patterns using five different sizes for visual richness. With a combination of three shades of grey, the paving blocks have been shot-blasted for a sparkling, textured surface. For the more homely northern route and play area less formal, 'rumbled' concrete block paving style was used in warmer rustic colour tones. Concrete flag paving provides level access around the courtyard linking the various spaces generated by raised planters of varying heights. The concrete flag paving incorporates up to 60 per cent recycled and reclaimed materials.

0116 232 5170 www.paving.org.uk



ANNOUNCING THE NEW 10-20mm MINI MEGAPAD



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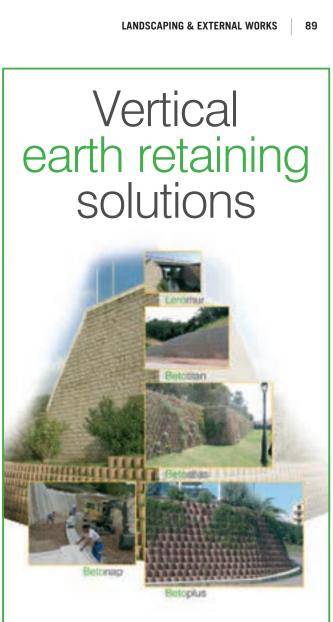
Designing for retro-fit

Designing for retro-fit is often a problem as the impact of taking up existing surfaces can be prohibitive. Clients asked for a solution when installing paving or decking at extremely low heights. Wallbarn developed the MINI MEGAPAD 10-20mm available for both paving and decking. This is a loose fitting suspended system; the weight of the slab or timber joist keeps the system secure. The pedestals are fully adjustable via a telescopic thread, so tiny changes in the height are possible. The pedestals have a series of spokes around the circumference and a handle on one side so "fat fingered" contractors can twist the stems effectively. The MINI MEGAPAD 10-20mm is ideal for fitting paving or timber decking onto flat roofs, balconies and terraces. So long as you have a structural surface beneath, rather than take up and replace old terrace surfaces, just overlay them.

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A flexible external flooring solution



Levato Mono Porcelain paver system from The Deck Tile Co. Ltd is a flexible external flooring solution for the design conscious. The system enables fast, cost effective installation over most surfaces including; single ply membranes, roofing felt and other delicate waterproofing systems. The porcelain pavers are also available

in larger formats, are highly abrasion and stain resistant, fire and frost proof and achieve R11 slip resistance. With all of its features such as height adjustable and slope correcting supports, high load bearing and only 45kgs per m², over 40 finishes available.

info@thedecktileco.co.uk

Introducing the new Stone Ash range



TimberTech's EasyClean Terrain Stone Ash™ decking has an appealing light grey colour that makes it perfect for contemporary outdoor spaces. The boards have a very authentic grained texture that makes them practically indistinguishable from wood. The company's Stone Ash decking is a capped

composite decking product. Each board is protected by a fully protective wrap-around polymer sleeve that is designed to keep moisture out and prevent staining. Furthermore, the Terrain range benefits from a 25 year residential warranty with added fade and stain cover.

www.timbertechuk.co.uk



Low maintenance decking

James Latham is seeing the popularity of its premium quality composite decking ProFi soar due to its outstanding performance properties which include minimum maintenance, superior stain resistance, extra high impact strength and a high friction surface. These impressive features mean that ProFi – which is manufactured in Finland, Germany and the United States by UPM – is perfectly suited to high traffic areas, continuing to perform to optimum levels while looking fresh, smart and clean for years to come. In addition to withstanding typical traffic usage such as the constant moving of chairs and tables, ProFi – which comes in two stunning design styles, UPM ProFi Classic Deck and UPM ProFi Design Deck - also resists staining from hazards such as cooking oil, sun lotion and drink spillage and it can endure extreme temperature changes (-40°C to +40°C).

marketing@lathams.co.uk

Architects Datafile website



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Denso Steelcoat protects footbridge



Winn & Coales Denso Steelcoat 100/400 system was chosen by Hampshire Rigging Services to protect the suspension of the footbridge at Thames Ditton Island, Surrey. For this project the Denso Steelcoat was applied to a steel wire rope which is fitted

to the four tower tops from which the footbridge is suspended. The wire rope where the groove fits in is approximately one metre in length and 44mm diameter. Particular attention was given to the application of Denso Steelcoat on the four tower tops and the anchorage bars, which had previously suffered from some corrosion.

020 8670 7511 www.denso.net

Resin Bonded Ltd - BoundWorx®



Resin Bound surfacing is fast becoming the popular choice for designers seeking a contemporary alternative to conventional surfacing solutions. Striking in appearance; the sleek and sophisticated aesthetic is created by coating a blend of natural stone with a clear, UV stable

resin. Resin Bonded Ltd have over 47 years' experience in the industry and have specially formulated Resin Bound materials to ensure maximum durability, permeability and UV-Stability. Considering these benefits, it's no wonder increasing numbers of architects are making BoundWorx® Resin Bound surfacing their first choice.

info@resinbonded.co.uk

Making dream park homes come true



Mike England Timber has shaped itself as one of the UK's leading independent timber suppliers. Established since 1987 Prestige & Homeseeker Park & Leisure is one of Europe's most successful manufacturers of park homes

and leisure lodges. The company approached Mike England Timber to help create a log cabin feel for their Foresters Lodge. Mike England Timber specified Sikkens Cetol WP 567 BPD base coat, together with Sikkens Cetol WF791 translucent finish coat. They also wanted the internal ceiling to have a warm, slight oak look. After discussion with Sikkens, Mike England Timber recommended its Cetol WF 771.

01254 687950 www.sikkens-wood-coatings.co.uk

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