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10.16

Cover

Oculus, World Trade Center, New York City

Santiago Calatrava's winged subway connection opens to the sky
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BIRMINGHAM DENTAL HOSPITAL

A sparkling new stand-alone dental facility

AYLESBURY ESTATE, LONDON

HTA's masterplan harnesses streetscape to regenerate an inner London district

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Managing Editor
James Parker
james@netmagmedia.eu

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

Production Assistants
Mikey Pooley
Shelley Collyer
Rob Duncan
Kim Musson

Designer
Gabrielle Vinyard

Editorial Assistants
Roseanne Field
Jack Wooler
Teodora Lyubomirova

Editorial Coordinator
Sue Benson

Contributors
Norman Hayden
Ray Philpott

Sales Director
Lesley Mayo

Sales Executives
Suzanne Easter
Ian Fletcher
Kim Friend
Steve Smith

**Circulation/Reader
Enquiry Service**
Jane Spice

Managing Director
Simon Reed



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

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

Press Releases
editorial@netmagmedia.eu



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FROM THE EDITOR



I hope as you open ADF this month you'll notice we have changed a few things. While the overall mix of content is the same, you'd be forgiven for thinking that we had overhauled the whole magazine. We have a really smart looking new design, and I hope you agree it works. A big thanks to the team for pulling out the stops to make sure that it looks great, without damaging the all-important schedules!

As well as a generally bolder look, and more eye-catching typography, we have also greatly improved the 'signposting' – as magazine designers term it. This means that key sections in the magazine are more clearly delineated, bringing our in-house regulars such as 'Views' and 'Insights' to the fore. You may not be aware that we regularly publish, for example, a Practice Profile (this month's taking a close look at BuckleyGrayYeoman), Site Lines featuring architectural opinion on design matters, or a regular View Point column. Either way, the design is now helping to guide you to those sections.

Pondering the relative merits of fonts and page designs led me to thinking, as many others have, about the extent to which function and beauty are related. I subscribe to the view that we might instinctively think that certain objects, designs or buildings are beautiful because they work well. It may not be necessary to ascend the lofty conceptual heights of Aesthetic Functionalism (which holds that aesthetic merit is only to be found in the functional) to explain this. It might just be a case that things which work well, from a well-proportioned Georgian House to a 100 metre sprinter tend to look good to us because we intuitively 'feel' they work well.

Take the Jaguar D-Type – designed in the early 1960s purely from an engineering standpoint to maximise its aerodynamics in every aspect of its form. The result was an almost indecently curvaceous yet sleek car which only a philistine would criticise on its aesthetics. This seems to prove the theory, although perhaps buildings are a more complex matter of cultural expectations – for example Zaha Hadid's extraordinary visions may often be highly functional, but also divide opinion on their form and function. Even the pop star Moby weighed in recently, slating a ZHA hotel room design for allegedly putting being 'photogenic' above comfort.

The function and form debate becomes somewhat obscured as we approach the Stirling Prize award, with its judges taking in a wide swathe of criteria in reaching their decision. It comes not long after the snap-judgement cavalcade of the Carbuncle Cup (which incidentally Rory Bergin castigates on page 10). It is something of a shame that the general debate looks narrowly at a building's external factors rather than examining it more deeply before we pronounce on a building's worth.

A true scrutiny of beauty alongside function, rather than more shallow, and inevitably personal, ideas of whether something is 'appealing' to a viewer might be more useful.

Hopefully in ADF's case you'll agree that good-looking design is intrinsically linked with usability!

James Parker
Editor



On the cover... © Hufton and Crow

Oculus is a winged commemoration of the September 11th attacks on the World Trade Center, but also functions as a Transportation Hub and now also a Westfield shopping mall. Designed by Santiago Calatrava, it opened this Autumn.

For more information, go to page 14.
www.huftonandcrow.com



BUILDING GEOMETRY

Foster and Aish reveal geometry of Mexico airport

In a joint keynote to the Advances in Architectural Geometry Conference in Zurich, Lord Norman Foster and Foster + Partners head of applied R&D Francis Aish presented an overview of the design of the 470,000 m² Mexico City International Airport, currently under construction.

They explained how the entire terminal will be enclosed within a continuous lightweight gridshell, blending the vertical supports with the roof in a single flowing form, which is “evocative of flight.”

The project combines two strands of Foster + Partner’s past projects, referencing Stansted, Hong Kong and Beijing airports, but also showing evolution of the topological developments made in the roofs of the British Museum and Smithsonian Institute.

The talk showed how the Mexico project demonstrates the increasing ability to develop very large-span structures through the computational application of statics,

geometry and curvature.

The architects gave the lecture at technology university ETH in Zurich to an audience of over 450 in the Robotic Fabrication Laboratory, part of the Arch_Tec_Lab at ETH’s new Institute of Technology in Architecture.

The speakers also addressed the advantages and limits of computational tools for architecture in the question and answer session, specifically the role of computational tools for complex geometries in architecture.

According to Lord Foster, while the computer is “an extraordinary tool, it remains a tool; it is a means to an end and not an end in itself.” Francis Aish concluded: “What is interesting are the current developments towards the integration of computation and materialisation through digital fabrication, as is visible in the research and innovations emerging here at ETH Zurich.”

AWARDS

Search for 2017 sustainability trailblazers

The call for entries has been announced for the 2017 Ashden Awards, offering the chance for global trailblazers in the sustainable buildings sector to receive recognition for their efforts, with a particular focus on architects.

The Ashden Awards aim to “uncover the most exciting sustainable energy pioneers in the UK and in developing countries and emerging economies, who are breaking new ground when it comes to the construction of sustainable, low energy buildings which protect the environment.”

This year the charity said it is “particularly interested in hearing from architects, building engineers, developers and businesses supplying products or services to reduce energy use in buildings.”

As well as a financial award, the awards also provide winners with a wide-ranging package of “bespoke support” including business support, introductions to policymakers, potential funders and investors, and sharing of expertise.

Entry to the awards is free, with one UK winner and one International winner receiving an award of £10,000 each at a ceremony in London to be held in June 2017.

The deadline for entries in the Ashden Awards is 8 November 2016 at 11.59pm GMT.

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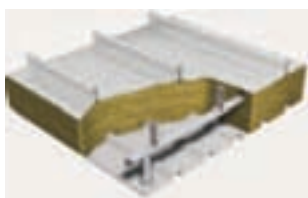


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CULTURAL BUILDINGS

Palace library will house historic religious archive

Wright & Wright Architects has unveiled designs for a new building which will house the historic collections of Lambeth Palace Library, currently split across several buildings and houses in London.

The practice was awarded the commission to design the new complex following what it said was a “highly competitive” design competition in 2015. Serving as the main archive for the Church of England, the library will house items dating back to the 9th century.

Plans are due to be submitted in December for a building in the grounds of Lambeth Palace, the Grade I listed London residence of the Archbishop of Canterbury on the south bank of the Thames.

The architects said the location “will provide the right balance between the needs of the collection, being within easy reach of transport routes, and a historic and integral link to the existing palace.”

The new building will be clad in red clay brick, to “pay homage to the surrounding palace buildings,” said Wright & Wright. The building has been designed to put the archives above any flooding risk, and to form a “bulwark” screening the garden from pollution and traffic noise.

An eight-storey tower is topped by a multi-functional public viewing space, allowing direct views across the river Thames to the Palace of Westminster.

A naturally lit reading room will have tranquil views across the historic gardens, and “state of the art” archival systems will facilitate ongoing conservation and storage of this unique collection of archives.

Rowan Moore, architecture critic and judging panel member said: “Wright and Wright showed a high degree of sensitivity to the Library’s contents and location, while giving it a confident new public expression.”

The library serves as the main archive for the Church of England and houses the second-largest religious collection in Europe after the Vatican



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COMPETITION

Velux extends invite to architects

UK architects who have recently designed an extension that includes rooflights could win a luxury weekend for two in Copenhagen, Denmark (plus £1,000 spending money).

To enter Velux's competition architects must "describe a recent single-storey extension project they have designed using the firm's roof windows." Entrants need to share an image from a project undertaken in the last two years, along with an internal image "demonstrating a brighter single-storey extension."

To enter, visit
<http://inspiration.velux.co.uk/spec-comp>

Entries to the competition can be submitted up until 23:59 hrs on Monday 31 October.

Grant Sneddon, Velux product manager, commented: "There is a growing trend to extend rather than move, and the market for extensions and roof windows is only set to grow, with many homeowners looking to spend big on architecture and building in the next six months."

The company commented: "Well designed, natural ventilation through roof windows can replace stuffy, stale air and reduce overheating."

SUSTAINABILITY

Green envelopes can 'detox' cities, Arup study discovers

According to a study by Arup, the contribution of 'green building envelopes' such as moss and vegetated walls, vertical farming and roof gardens, to air quality in cities has been underestimated.

Cities are being encouraged to 'turn green' to help tackle rising toxic air hot spots and tackle the problems of air pollution. In 2012 3.7 million premature deaths were attributed to exposure to poor air quality, with approximately 200,000 being in Europe, according to a 2014 World Health Organisation report.

Arup commented that green envelopes were "often dismissed as architectural window dressing, but they can reduce localised air pollution by up to 20 per cent in some locations, rapidly reducing toxic air at street level."

The leading design firm used advanced computer software to provide a visual representation of the flow of gases and help determine the effectiveness of green building envelopes to reduce pollutant concentrations. The report highlights plant species, such as pine and birch, which said Arup "are particularly effective because of their ability to capture large quantities of particulate matter, including during winter when pollution concentrations are highest."

The study also highlighted green envelopes ability to reduce sound levels from emergent and traffic noise sources – by up to 10 dB in certain situations – as well as temperature.

Arup's report stated: "According to a



© Arup/Chris Baker

2015 study by the US Environmental Protection Agency, urban areas with a population exceeding 1 million can be up to 12°C warmer in the evening than surrounding areas, and in particularly dense centres, green infrastructure could reduce air temperature by up to 10°C. Green envelopes can also reduce peak energy consumption in traditional buildings by up to 8 per cent."

Tom Armour, who is global landscape architecture leader at Arup said, "Tackling rising air pollution is a priority to help improve people's health. As our cities continue to become built up, 'grey' structures, such as walls and roofs, are a source of untapped potential for adapting into green spaces."

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VIEW POINT

Rory Bergin bemoans the Carbuncle Cup's lack of seriousness around the long-term importance of buildings – and a narrow focus on their outward appearance

The announcement of the recent Carbuncle Cup winner was widely covered in the media. It featured a shortlist of buildings voted on by *Building Design* readers and then crowned by a panel of judges, journalists and architects.

It is a bit jokey, a bit blokey, and the judges' comments are clearly intended to be amusing. Previous ones included "Phillips shaving aesthetic," "headache inducing cladding", and this year it got a bit darker: "balconies an open invitation to suicide."

The name Carbuncle Cup comes from an infamous remark by Prince Charles. He compared a carefully considered extension to the National Gallery by ABK to a "carbuncle" on the face of the building. This was a bit rich, given that the National Gallery is an anonymous and uninteresting piece of NeoClassicism whose sole merit is in providing a plain backdrop to the liveliness and intensity of Trafalgar Square. The replacement design by Robert Venturi and Denise Scott Brown is ordinary in the extreme and much closer to the popular idea of what a building in that location ought to be. That doesn't make it any good, though. The whole sorry story is a salutary tale of the perception of the profession and its vulnerability to uninformed comments which catch the zeitgeist of public opinion.

The award is published close to the Stirling Prize, and aims to counterbalance the high-minded seriousness of that with something that is frankly low-minded and less than serious. Is this a good thing? I don't think so.

Sir Nicholas Pevsner, when talking about wit in architecture, said that buildings are "too permanent and too serious merely to amuse." He was really talking about Mannerism, but he could have been talking about Post Modernism, which took the joke much too far. He meant, I think, that buildings are around for a long time, and the

ideas that they represent must be capable of standing the test of that time. While many of the Carbuncle Cup winners probably won't stand the test of time, I don't think that this is right way to point that out.

The Carbuncle Cup is a piece of froth, it says nothing serious or learned about the buildings it pillories, or the architects that it names and shames. The word pillory is relevant here, as it was a device created to enable the populace to pass sentence on low criminals by throwing rotten food, or worse, at them. It was a means of gaining popular approval by local leaders and enabling the mob to vent their spleens on those who were often even less fortunate than they.

Architecture is primarily about creating space for people...not about creating objects for them to look at

The victims were often maimed and disfigured by the experience. The joke was on them, you might say.

By focusing solely on the appearance of the buildings in this award, and ignoring the content – chasing sound bites rather than attempting to involve or educate – the Carbuncle Cup cheapens us all. Architecture is primarily about creating space for people to inhabit and act within, not about creating objects for them to look at. It is the backdrop to our lives, not centre stage. The more we accept a tabloid-like view of our work, either giving approval or heaping criticism, the less respect we will have for our own work and the work of our peers.

All of this is even more important in the post-Brexit, post-factual world that we currently live in. When so many opinions are half-formed, half-believed and half-baked, we should not settle for less than a fully

formed idea to build a building around. Even better, we should have as many ideas as possible and express them as well as we can.

Looking back through the history of London architecture, St Pauls was vilified at first, its sheer size dominating all around it. The Post Office tower followed suit, as did more recently the Walkie Talkie and a number of other Cup winners. As a result of literally putting their heads above the crowd, towers are likely to come in for criticism as they are more visible. It's a bit like the smart person in a class putting her hand up and answering the teacher's question, only to be sneered at by the portion of the class which has neither the knowledge or the confidence to respond. Making yourself visible invites attention and criticism.

We live in a time where popular culture is seen, read, digested and forgotten in the same time that it takes to write this sentence. Tweets, snaps, chats, grams, are all sent, exchanged, absorbed and dismissed in an instant. Opinions are formed, take hold and expressed routinely without thought or assessment of the meaning or impact of

CARBUNCLE CUP 'WINNERS' 2016

Lincoln Plaza, Isle of Dogs
(Hamiltons Architects)
5 Broadgate, City of London
(MAKE Architects)
One Smithfield, Stoke-on-Trent
(RHWL)
Poole Methodist Church extension
(Intelligent Design Centre)
Saffron Square, Croydon
(Rolfe Judd)
The Diamond, University of
Sheffield (Twelve Architects)

them. Careers are made and ruined in the blink of an eye. Andy Warhol's 15 minutes has been replaced with 15 seconds.

Architecture is one of the visual arts, but it is rather different to painting or sculpture, insofar as it cannot be appreciated only through the eyes of the critic – it must be visited and experienced. Towers, to be judged, should be seen from close up and from afar. They are designed to be visible from a distance and their impact should be judged alongside their intent.

Even better, although a distant speck on the horizon, is the idea that we might hear from the users and owners of the buildings before passing judgement on them. Without this important feedback we are simply designing for ourselves and our peers and blissfully unaware of our failings. But all this takes time and effort, and neither are readily available among journalists who are struggling to justify their existence with headline-grabbing material. Today it's migrants and the EU forcing straight bananas on us, tomorrow it's the Carbuncle Cup.

Architecture is a long-term business, however. It takes seven years just to get the name, and it takes a lifetime to master. Many of the best buildings that the recent

The name 'Carbuncle Cup' comes from an infamous remark by Prince Charles comparing a carefully considered extension by ABK to a carbuncle on the face of the National Gallery, itself an anonymous piece of NeoClassicism

century provided were designed by architects in the latter half of their careers. Fallingwater, Philip Exeter Library, the Farnsworth House, Villa Savoye and many others were produced by mature people with a supporting and critical team. They weren't invented in moments, produced in seconds and built by the masses, nor was there any desire to be popular by their designers. Popular with other architects perhaps, but not by the populace at large.

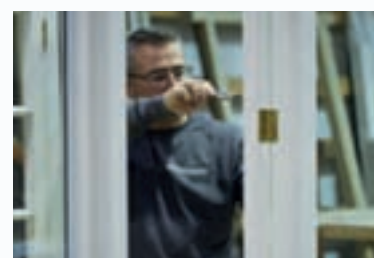
Yet, many of these buildings would prove popular with many people, if asked. The best way to judge is by asking them after

they have visited the buildings and experienced them. After all, it is the experience that we want to learn from, and not a five second glance at a photograph.

If we want to hear good things about our buildings we are going to have to do our bit. We have to provide the good stories, to do the surveys of tenants and residents, to interview the owner five years after the building is finished. If we want a more generous and learned debate about our work, we have to provide the fuel. If all we want to produce for comment are glossy visuals or photographs from a carefully framed view, with no people to be seen, then that is how we will be judged. We need to move the conversation onto the territory that interests us, or should interest us. How well does it perform, was it good value, are people happy to live or work there?

The Carbuncle Cup should be scrapped, and a better award put in its place. One that rewards experience and timelessness, and which doesn't aim to present an opportunity for journalists and trolls to offer cheap shots at an already beleaguered profession. ■

Rory Bergin is a partner at Sustainable Futures, HTA Design



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Essentials of Urban Design in Planning
18 October, Exeter
www.architecture.com/WhatsOn

Repeated work eats fees: How to create real possibilities to avoid project drift
24 November, Birmingham
www.architecture.com/WhatsOn

TRAINING

RIBA London CPD Roadshow
20 October 2016, London
www.architecture.com/WhatsOn

RIBA York CPD Roadshow
17 November 2016, London
www.architecture.com/WhatsOn

Conservation Course
03 November 2016, London
www.architecture.com/WhatsOn

AWARDS

Brick Awards
10 November 2016, London
www.brick.org.uk/brickawards.co.uk

British Home Awards
14 October 2016, London
www.britishhomesawards.co.uk

TRADE SHOWS

Independent Hotel Show
18 -19 October 2016, London
www.independenthotelshow.com

UK ConstructionWeek including:
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Smart Buildings
Surface Materials Show
Timber Expo
18 - 20 October 2016, Birmingham
www.ukconstructionweek.com

Sleep
22 - 23 November 2016, London
www.thesleepevent.com

Lightspace dot London
23 - 24 November 2016, London
www.lightspace.london

Surface Design Show
7 - 9 February 2017, London
www surfacedesignshow.com

LONDON MIXED USE

Founding a new heritage at Deptford development



Anthology Deptford Foundry, a new development whose first phase has been designed by Rolfe Judd, consists of 276 homes in the heart of one of south-east London's most vibrant and creative neighbourhoods, sitting on the site of a former metal foundry formed in 1831.

Eight buildings and one tower, make up the new development, with their design having been inspired by this rich industrial history. One, two and three-bedroom apartments all boast balconies or terraces and residents will also have access to an attractive communal landscape garden.

The development's commercial workspace will be occupied by affordable arts organisation Second Floor Studios & Arts, becoming home to artists, designers and 'makers.'

Andrew Long, director at Rolfe Judd Architecture, explains the design ethos: "The development is as much about public space and local connections as it is about the buildings. We want to create a vibrant community that is integrated and beneficial to the existing community."

The design concept aims to create a series of linked landscaped courtyards creating a new pedestrian and cycle route through. "The starting point was that buildings would form the spaces and create new



public squares," said Long. Another key design driver was the former manufacturing done on site, with cast metal moulds being used as the inspiration for the 'marker buildings' at either side of the development.

He explained that the project also embraced the local arts community: "We wanted to incorporate an aspect of artists' studios/working community within the design. Second Floor Studios & Arts were really excited about the idea from the offset and we worked with them to tailor the space to their needs."

With the site being triangular and a railway line nearby there were challenges to be addressed as Rolfe explained: "We needed to devise a site layout and building forms that would maintain the pedestrian route and visual connections, and also be a great place to live."

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The skylight is the focal point of the Oculus, and will open on every September 11th



WORLD TRADE CENTER TRANSPORTATION HUB

Calatrava's World Trade Center Oculus opens

Following opening to the public in August, the elliptical Oculus designed by Spanish-Swiss architect Santiago Calatrava in lower Manhattan recently saw the first opening of its skylight to commemorate the 11 September attacks.

The 160 ft-tall, steel and glass structure functions as the World Trade Center Transportation Hub, providing pedestrian connection between subway lines at Fulton Center and the World Trade Center itself as well as overground trains and the ferry terminal in Battery Park City. It replaces the original rail system which was destroyed in 2001.

The skylight is the focal point of the Oculus, and will open every 11 September. The building also features a Westfield retail mall and plaza, which is set to open when 3WTC is completed in 2018. The Oculus saw a series of delays and design issues, and eventually cost \$4.4bn.

The building is sited alongside the southern edge of Daniel Liebeskind's 'Wedge of Light' plaza, and its design followed the masterplan laid out by the American architect, using the angle of light to guide the orientation of the Hub.

Calatrava positioned the building at an angle which is out of line with nearby

buildings, so that at precisely 10.28 am each 11 September, which was when the North Tower collapsed, the skylight can be opened (weather permitting of course). The resulting beam of light that hits the floor of the Oculus will visually bisect the space.

The winged design symbolises a dove being released from a child's hand. Santiago Calatrava commented on the character of the building: "The treatment of the site creates a kind of pause amid the dense commercial towers. The combination of natural light and sculptural form give dignity and beauty to the building's lower levels and pedestrian walkways."



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PRACTICE PROFILE

BuckleyGrayYeoman

BuckleyGrayYeoman is a name that is increasingly heard in connection with award-winning projects, as Norman Hayden discovers



ABOVE Pure Aldgate, east London
FACING PAGE Channing School, Highgate

Over the past 20 years BuckleyGrayYeoman has developed a growing reputation for delivering high-quality design that has been acknowledged by a number of recent awards and has seen the practice climb to a position of 48th in a list of the 120 largest architectural firms in the UK.

The awards it has scooped include: RIBA, Evening Standard, RIBA Housing Project, Architects' Journal, FX Interior Design Award, Retailers' Retailer of the Year, Shueco and Surface Design.

Formed in 1997 and based in London's Shoreditch, the architecture and design practice specialises in offering what it describes as "pragmatic and deliverable solutions to complex design issues". With an expanding portfolio of work across a range of sectors including offices, residential, retail, hotels, schools and masterplanning, BuckleyGrayYeoman prides itself on delivering projects on time and within budget, regardless of the size or complexity of the challenge.

Directors Matt Yeoman and Paul White lead a staff of 90. Paul, who gained his architectural diploma from Manchester and a BA from Leeds joined the company in May 2006, and has over 20 years of professional experience. He works with national and international clients delivering projects across a wide range of sectors including office, leisure, education, residential and retail.

Blending design rigour with proven commercial expertise, Paul specialises in providing a range of architecture and interior design services, delivering outstanding buildings, refurbishments and interiors.

Heading up the education team, he is currently overseeing a number of projects, including the redevelopment of Channing School in Highgate and the recent completion of one of the UK's leading independent girls' schools, Roedean. The school's Grade II listed boarding houses have undergone a complete overhaul. In 2014, Paul oversaw the new-build contemporary IT and events building at Forest School in Snaresbrook, north east London.

White is also leading the masterplan for Chelmsford County High School for Girls in Essex. This significant development will provide new facilities for the school while remaining sensitive to the original historic buildings on site.

White's involvement in major workplace refurbishment schemes includes the remodeling of the old F.A. HQ in Soho; a 64,000 ft², eight-storey building for Aviva Investors. Aimed at the creative industries, the workplace offering provides a robust aesthetic with a palette of concrete and steel. For Lasalle Investment Management, he oversaw the sensitive refurbishment of a Grade II listed 34,000 ft² office building in the Covent Garden Conservation Area.

White is currently overseeing the comprehensive remodelling and refurbishment of a landmark 200,000 ft² building on Old Bailey.

© Timothy Soar



The way we procure buildings is the biggest challenge currently. The quickest and cheapest methods do not always deliver either the highest quality design – or what the client wants and expects

Paul White

The scheme, which includes two extra floors, will position the building in the top segment of the refurbishment stock.

Most recently, he led the design team on the major upgrade and repositioning of Commodity Quay, St Katharine Docks for Prestbury Investments. Some 130,000 ft² of commercial space has been transformed, incorporating a dramatic double-height entrance space linking the front and back entrances.

He also refurbished 30 Market Place for CBRE Global Investors, undertaking a series of complex structural changes to enact a complete transformation inside and out, Caroline House, a commercial office project in Holborn, creating 14,000 ft² of office space, and the Covent Garden head office of Fred Perry.

Fellow director Matt Yeoman holds a DipArch from Oxford and a BA (Hons) from Canterbury and was a founding partner. He recently completed several projects in the workplace sector across London, such as C-Space, a former carpet factory on Old Street and Yalding House, the home of BBC Radio. Matt is currently working on 750,000 ft² of office space at the Goodsyard in Bishopsgate.

Matt says his constant drive is to achieve simplicity in design, believing that even the most complex design constraints can be overcome with practical and effective solutions.

Other senior staff at the practice's Shoreditch office include associate directors Laura O'Hagan, James Greenaway, Amr Assaad, Oliver Bayliss, Andrew Henriques and David Rose.

Further completed projects by BuckleyGrayYeoman include Henry Wood House, a major co-working space for The Office Group in the West End of London. A further project of note is The Passage, which is thought to be London's largest voluntary

sector resource centre for homeless people.

In addition, the practice has worked on several boutique stores for the Fred Perry brand in London, Cologne, Munich and Bangkok, the Citadines Apart'hotels in London, Paris and Hamburg, and Pure Aldgate, a high-quality student accommodation building in east London.

Pure Aldgate is seen as an iconic project with its 20-storey tower containing over 400 student bedrooms and social spaces, including a SkyLounge on the top floor with spectacular views across London.

White also points to the Channing School project as being particularly satisfying. "We have enjoyed a long and creative period working with this school and client," he comments.

"Initially, we designed their new dining facilities, but most recently it was completing the new sports hall and sixth form facilities. Following this award-winning new-build project, we are currently on site with the next project for the school, which is their performing arts building, due for completion in early 2017."

Earlier this year, BuckleyGrayYeoman announced its involvement with a new gallery concept being unveiled at Cromwell Place in London's museum district in Kensington. The project will see a cluster of up to 30 galleries operating in five listed buildings opposite the Natural History Museum. This new gallery hub of over 35,000 ft² has been designed to house offices, flexible exhibition space, viewing rooms and art storage.

Pondering the firm's current work portfolio, White says: "It is very varied. We have just received planning permission for a new creative retail and maker space hub in Belgravia for Grosvenor, which will start on site later this year.

"We are currently on site with three new-build office projects in Central London for the Berners-Allsopp Estate and Great Portland Estates and we are also about to submit a planning application for a new-build gallery in South Kensington. This will be a significant addition to the already burgeoning art gallery scene in the area."

What does he see as the biggest industry challenges? "The way we procure buildings," says White without hesitation. He elaborates: "The quickest and cheapest methods do not always deliver the highest quality of design – neither, for that matter, does it always deliver what the client wants and expects."

Nevertheless, things look positive for BuckleyGrayYeoman. The practice currently boasts a turnover £9.5m with budgets from £500,000 to £30m and with many exciting projects on site and others about to move to detailed design, the future has never looked stronger.

"Our approach to having a broad range of sectors, clients and project sizes has created the foundation for a successful practice," concludes White. ■



BUCKLEYGRAYYEOMAN FACT FILE

- Formed in 1997 and based in Shoreditch, London
- Award-winners across a range of sectors including offices, residential, retail, hotels, schools and masterplanning
- 90 members of staff including two directors and six associate directors
- Turnover £9.5m with budgets from £500,000 to £30m

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SITE LINES

Shaping spaces for people

Architect and professor Fabrizio Rossi Prodi offers five principles for creating residential developments with rich and diverse opportunities for social interaction as well as a distinctive character, with a particular focus on social housing

A research project on social housing and new residential neighbourhoods across Europe helped me to learn a few lessons and form some ideas that I wrote down in a book (*Arbitare Sociale – Social Housing*, published in 2014) and tested in real projects, such as via Cenni in Milan, and Teramo, also in Italy (illustrated below). I saw these ideas as a new ‘humanistic’ approach to architecture and especially to urban, common space.

1. Giving form to community values

The first issue deals with the city and its values. New residential settlements do not respond exclusively to a constructive or functional logic, they are not just a piling up of economical box-shaped structures, and most of all they do not stand in isolation. They require the construction of a piece of urban fabric and owe a respect to the city’s existing compositional principles and rules: its morphological typologies, systems of mass and emptiness, scales and measures of the existing urban fabric and the social flows and systems of relationships. In short, they attempt to rediscover the profound identity of place, however ‘suburban decay’ can be the existing local situation, ie architectural and social decay, and absence of urban quality.

So, whether the construction is in an area of suburban decay or simply in the outskirts of a town, the source for identity of architectural and urban space – required to be transplanted into new settlements – is actually to be sought further away, sometimes in

This is the task at hand: not just to build boxes or to sculpt a volume, but to create a scenario that can highlight the values of a community or help to create one

the character of city centres, or in the forms of landscape patterns, or even in new proposals of clustering.

Identity can be found not only in the physical forms of the fabric itself, but also in the cultural expressions and in the spirit of the community. This is the task at hand: not just to build boxes or to sculpt a volume, but to create a scenario that can highlight the values of a community or help to create one through the design of fragments of urban fabrics and their open spaces. Nowadays, instead of volumes, our design tool is outdoor space and voids that have to be conceived, arranged and connected; the design of new facades and masses is not a goal in itself, it is rather a means to shape urban space and to conceive its life.

In a way, the ‘street’ pattern can be seen as the key concept for a humanistic development that goes beyond the usual two dimensional drawings, and conjures space with the third dimension of facades, volumes and voids, and even a fourth dimension (time),





These places are at the same time neither completely public nor completely private and are suited to non-institutionalised socialisation

Fabrizio Rossi Prodi

conceiving people as they and move in space at different hours of the day and in different seasons for a variety of functions and groups. Contemporary design through 3D modelling and advances in virtual reality enables the architect to envision, control and experience the future shape of dwellings and neighborhoods in movement and in time.

2. Shifting the boundaries between private and public

After three decades of retreat, a devolution of value from the private to the communal sphere is under way. Even the focus of contemporary architectural debate is shifting from the linguistic exploration of morphology and its architectural formal characteristics to the design of communal places and spaces. The design of public space and urban voids looks at sidewalks and areas

delimited by walls or views framed by masses, landmarks and various systems of landscapes; in other words it is concerned with a variety of elements and functions that influence spatial experience and social practice.

Thus expressions such as semi-private, semi-public and especially 'in-between spaces' are in use today: these places are at the same time neither completely public nor completely private and are suited to non-institutionalised socialisation. There must be a soft shift from the public domain to these other domains. The task is that of designing a map of behaviour, populated with different zones scaled to fit certain experiences.

The spaces should be well placed, well sized and connected to functions and movement, in order to avoid their being rejected and degraded. This assumption is realised in new developments, especially in tighter sites where, in order to create this stream of common and in-between places and transitions, traditional closed blocks are often opened up though maintaining recognisable urban shapes.

3. Sustainability beyond the building

Further suggestions come from a long period of hermeneutics, weak thought and postmodernism which is now in decline and in its wake a renewed attention for reality and its problems has arisen including the need to value and protect our resources. The design consideration now is for construction materials, energy saving, and lifestyles.

Far from the excesses and idolisation of greenery, sustainability must not be confused simply with that of the project alone. On the

contrary, the first goal of sustainability lies in a balanced project that fosters quality in architecture and the urban realm - in designing pieces of urban fabric that are liveable and dignified. As a consequence, some architects are designing experimentally with timber and new materials, others with green roofs, re-use, shading systems and geothermal energy. Ventilation chimneys are back, as well as the principles of good orientation. Even in the urban design of masses and voids designers let themselves be guided by natural influences such as winds and solar exposure, shadow and noise whilst taking care not to unsettle the continuity of the fabric - the morphology of the places themselves.

Good architects have rediscovered that systems of loggias, terraces and greenhouses constitute an environmental safeguard which controls the internal micro-climate. And now we acknowledge that many of these solutions were part of the cultural heritage of good design and construction methods that have belonged to our regional traditions since ancient times.

4. Fluid modernity and a multi-ethnic society mean closer attention to people's habits

As a consequence a new residential landscape is arising with a mixed functionality, varied housing typology and a spatial, functional and distributive design that transforms it into opportunities for life and social encounters.

These new residential developments incorporate a variety of activities such as shops, offices, workshops, service providers and semi-public spaces and move beyond the ghettos of mono-functional culture. Functions such as a social housing administrator, common living-rooms and kitchens, workshops, community gardens, and play and sports areas create opportunities for developing community spirit.

A variety in dwelling types generates an architectural vitality accommodating different family typologies that are ever more common today: one parent families, cohousing groups, student communities, single or elderly persons and allows for flexibility in time. Today's city dwellers expect a higher quality of life, therefore as designers we are forced to change the approach from providing housing as a product to considering it a service.

Well beyond drawing beautiful forms, the architect's main task has thus become to design places that help personal and social life and which foster values such as humanity and domesticity. Moreover, design can't focus only on flats and outdoor spaces; for a successful neighborhood we need to actually design a community, envision its members and groups, their service-systems and places - in short help to develop the life of the community.

5. Only a dialogue of various disciplines helps a project to thrive

This implies the need to explore different fields, causing them to react and discover new syntheses and new paradigms in the short-circuit between different approaches and topics. We must make all the elements on the production chain work and design together: those dealing with finances, social research, planning, spatial dynamics, design, technology, sustainability, construction, social planning and housing management. Combining these will be key to the built environment supporting further advance in building neighborhoods and social housing. ■

Architect, Professor Fabrizio Rossi Prodi is founder of Florence-based architects Rossiprodi Associati



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FERRING PHARMACEUTICALS HEADQUARTERS, DENMARK FOSTER + PARTNERS

Construction has started on the new country headquarters for Ferring Pharmaceuticals A/S in Denmark, designed by Foster + Partners. The 39,000 m² company offices are set for completion in 2019. Located on the urban fringe of Copenhagen in Kastrup, the site occupies a pivotal waterfront position. The building sits on a large stone plinth which acts as the first line of defence against floods and integrates the design of street furniture and landscape elements. The lightweight glass building 'floats' above the contrasting heavy plinth below. The six stacked floors and roof canopy cantilever further capture the surrounding views and create self-shaded spaces on each floor. The triangular form of the building is driven by the shape of the site, which is surrounded by water on all sides.

Ref: 88774



SHENZHEN REGENERATION, CHINA MLA+

MLA+ in collaboration with Felixx Landscape Architects & Planners and Chinese partners China Academy of Urban Planning and Design (CAUPD) and Shenzhen Municipal Design & Research Institute has won the first prize in the design competition for the regeneration of the area along the G107 highway, in the Bao'an district of the city of Shenzhen. The main challenge was to come up with a future-proof design that carefully integrates and addresses the complexity of the existing urban fabric. In MLA+'s design, the G107 highway is still the driving force of the area connecting the different areas, but its function changes from an utilitarian infrastructure to a key driver for urban regeneration. Within this main structure hubs are created for different urban functions.

Ref: 85949



SHEIKHA FATIMA BINT MUBARAK PARK, ABU DHABI BENYO

Benoy has released striking new visuals revealing the futuristic vision behind Abu Dhabi's upcoming Sheikh Fatima Bint Mubarak Park. The AED94 million renovation, due for completion in 2018, will allow Benoy to redefine the site of the former Khalidya Ladies Park and transform it into a world-class destination. Commissioned by The Department of Municipal Affairs and Transport at Abu Dhabi City Municipality, the open air environment will host "an eclectic variety of pioneering features, activities and events, conceptualised to fuel discovery and support the core tenets of the Abu Dhabi Vision 2030."

Ref: 59526



CONGO KINTELE CONGRESS CENTER, CONGO **AVCI ARCHITECTS**

Designed by Avci Architects, the Congo Kintele Congress Centre project, is located in the Kintele Region of Congo's capital city Brazzaville. Avci Architects developed a design in which the 1500 seat Congress Hall, the 300 person Presidential Hall, the 1000 seat Banquet Hall and the 1000-person Public Piazza are placed in a line sequence interrupted by courtyards, all reached by a public sheltered colonnade. The use of materials were to a large extent dictated by the requirement of speed of construction, and availability of modern construction and cladding materials. Thus although it would be more cost effective, concrete frame was ruled out in favour of steel and more easily transportable lighter cladding materials, for example aluminium panelling for massive cladding elements such as block or brick work. Beyond that, efforts were made to use natural materials at all times such as timber, and stone.

Ref: 13114



WESSAL BOUREGREG, MOROCCO **ATKINS**

Construction has started on the Wessal Bouregreg project, a visionary scheme to transform the cultural and social landscape of Morocco's capital, Rabat. Atkins designed the masterplan for this inner city site, for Wessal Capital, an investment fund for tourism and real estate projects in Morocco. Using a reinterpretation of the geometry of a traditional Moroccan mosaic tile as its inspiration, the masterplan delivers axes and views to key existing and future buildings, as well as to new cultural open spaces.

Ref: 98102



SEBRAE SUSTAINABILITY CENTER, BRAZIL **DR. JOSÉ AFONSO BOTURA PORTOCARRERO**

The Sebrae Sustainability Center in Cuiabá, Mato Grosso, is setting the standard for green buildings in Brazil. The building has achieved an Excellent rating under BREEAM In-Use International Parts 1 (Asset Performance) and Part 2 (Building Management) making it one of the first buildings in Brazil to achieve this accolade. The Center was developed based on the principles of sustainable architecture and makes reference to Brazilian indigenous cultures. Built on an east-west plane to maximise sun orientation, the building's canopy overhangs to provide passive solar shading to prevent direct radiation and possible reduction of thermal comfort.

Ref: 91243



HOTEL & RESIDENTIAL PROJECT, NORWAY **SKANSKA**

Skanska has signed a contract with HAV Eiendom to build a hotel and retail space as well as to develop apartments in Bjørnvika, Norway, one of Oslo's most sought-after areas. The two buildings to be erected include underground parking garage, basement and technical rooms below ground and two floors above ground with commercial premises. From the third floor up, one of the buildings will comprise seven floors with a total of 253 hotel rooms, while the other will contain seven floors with 54 apartments. HAV Eiendom is developing the hotel and the commercial spaces while Skanska Property Development is delivering the apartments. Skanska Norway is the general contractor for the entire project, which has a total gross area of 26,300 m². The project has ambitious environmental targets. The commercial premises of the building has the ambition to achieve the certification BREEAM-NOR Very Good. The project is planned to be completed in June 2019.

Ref: 40590

CPD FOCUS

INTRODUCTION TO THE LRWA



The LRWA announces the launch of its RIBA approved CPD presentation, exclusively available online for specifiers, architects, and surveyors; allowing time conscious professionals the opportunity to gain CPD points without having to set aside a specific time during the working day to go out and attend a seminar. Specifiers who complete the CPD will also be able to understand the technical and financial benefits of specifying liquid applied roofing and waterproofing systems, as well as learning about the product and installation standards that have been set within the industry to ensure optimum performance is achieved.

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LIVE LIFE OUTSIDE: RESIN MINERAL BOARD OUTDOOR FLOORING, DESIGN AND INSTALLATION



Millboard has launched their first RIBA Assessed CPD seminar. The seminar will help architects understand the requirements and priorities for outside flooring, regulations for outside flooring areas, properties of resin mineral boards, identify potential applications, design considerations for specific areas and best practice. This CPD seminar has been designed to educate architects about resin mineral board for outdoor flooring, the options available and the ways in which they can be customised to the specific design needs of the client and blend in with building design.

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KNOWLEDGE SHARING



CRL is delighted to announce that it has now been approved by the CPD Certification Service as an accredited CPD provider. As a result, the structural defects insurance specialist, is delivering a series of workshops and training sessions for the construction industry from the end of September. Topics include: refurbishment and conversion training, approved inspectors warranty inspection training and sessions on how builders and developers can use social media to generate business. Please visit the CRL website for further information on all CPD training, venues and costs.

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FACADES AND FIRE SAFETY: ROUTES TO COMPLIANCE



Kingspan Insulation are thrilled to announce the launch of their latest RIBA-certified CPD 'Facades and Fire Safety: Routes to Compliance'. The CPD discusses rainscreen and masonry facades in habitable high rise buildings of 18m or above, and how to comply with the fire safety requirements of the Building Regulations and Standards. By the end of the CPD, it should be clear what is deemed acceptable by Fire Safety Engineers, BCBs. The presentation also covers legislation and guidance in England, Wales and Scotland.

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HOLE TRUTH ABOUT VENTILATION



Engineers have to take into account a dizzying array of factors when deciding what ventilation design to select within a building. These include: energy efficiency, indoor air quality, the presence and type of contaminants and the impact of potential noise pollution. All this in tandem with an airtight building envelope means there is a lot more to specifying ventilation louvres than simply working out aerodynamic performance and keeping out the rain. That's why **Ruskin Air Management** offer a CIBSE accredited seminar aimed at outlining the process of selection and siting of louvres.

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TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



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UNDERSTANDING UK BUILDING REGULATIONS RELATING TO RESIDENTIAL VENTILATION



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

- Building Regulations and how they apply to the specification of a ventilation system
- Understanding Compliance Guides and their place in the specification process
- Good, better, best – From a simple extractor fan How Mechanical Ventilation with heat recovery can provide the complete ventilation solution
- A system is only as good as the ducting installation – The do's and don'ts of installing a system
- Sign off by Building Control is mandatory – How to comply

Advise clients on the aspects of a poor indoor environment that can effect occupant health and degrade the fabric of a building. Explain the principle of operation of a Mechanical Ventilation with heat recovery system and where it will provide the most suitable ventilation solution. Fully understand that proper attention must be paid to the correct installation of ducting and the consequences in energy loss and fan performance when it is not. An overview of how to commission a fan system so that 'Installed Performance' standards are met and Building Control will sign off the project.

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The RIBA CPD seminar "Fast Track Screeds" on the 20th October will assist architects and design professionals in understanding how material types differ in performance and how different screeds can be applied to aesthetic effect, avoiding screed failures by specifying suitable materials and construction methods in line with current European and British standards and building regulations.

Architects and construction professionals are invited to gain knowledge and receive up to date information to ensure the correct

AN INTRODUCTION TO DAYLIGHTING WITH ROOFLIGHTS



An online slideshow by **The National Association of Rooflight Manufacturers**, whose Technical Committee advises Government on Rooflighting in respect of Building Regs. Relevant to stages 0, 1 and 2 of the RIBA Plan of Work and applicable to domestic and non domestic projects, the seminar covers: the benefits of natural daylight and basics of designing daylight into buildings with rooflights; how rooflights can help to achieve required light levels for specific building usage; the role that rooflights can play in reducing energy usage and CO₂ emissions and much more.

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Thermal bridging is now so prevalent, that calculating an effective structural thermal break has never been more essential. **Schöck Ltd** is therefore hosting a workshop, to bring the latest design principles to Structural Engineers, Architects and Technicians at The Institution of Structural Engineers in London on the 9th November from 9am-1pm with a buffet lunch. The workshop is free and accrues CPD points. Early booking is recommended.

For full details and to register visit the website or contact Schöck directly.

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specification for all types of projects, as well as being provided with an opportunity to network with like-minded professionals.

Dave Alderman, Specification Manager, explains: "The full scale models that we hold here at the Specification Centre enable our guests to visualise our systems from substrate to finish. We encourage our attendees to bring their drawings to discuss project specific queries following the presentations."

Topics covered in Mapei CPDs range from underground construction to large format tiling and each seminar is approximately 40 minutes with time for questions over refreshments and a catered lunch.

For the full CPD calendar and to book your place, please email CPD@mapei.co.uk.

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ROCKPANEL® products awarded top BRE Green Guide Rating

ROCKPANEL Group has once again displayed its commitment to sustainability as all 16 certified construction elements with Durable and Durable ProtectPlus facade boards received best-in-class Green Guide Ratings of A+.

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ROCKPANEL FS-Xtra boards were also evaluated within two constructions, receiving an excellent score of A. The extra fire-safe boards offer outstanding reaction to fire performance, and when fitted on aluminium or steel supporting structures with blind rivets, have a Euroclass rating of A2-s1, d0.

ROCKPANEL boards are available in a



wide range of designs to suit virtually any application including natural Woods, sparkling Brilliant, and stylish Metallics. This provides specifiers with outstanding choice and design freedom.

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manufacturing process allows more than 400m² of boards to be produced from 1m³ of basalt. ROCKPANEL Group is committed to a process of continuous improvement on sustainability and was the first cladding manufacturer to receive certification from the BRE complying with EN 15804.

Read more about this company with sustainability in its nature on the website.

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ECOBAT – The strength behind BLM



In 2017, BLM British Lead will celebrate its 85th birthday. The company has seen many significant changes within the industry, with legislation and within its own organisation during its time but none have been greater than its acquisition by ECOBAT Technologies in 1994. ECOBAT Technologies are the world's largest producer and recycler of Lead. The combined group recycles and processes in excess of one million tonnes of lead every year, primarily through recycling spent lead acid batteries. Having the strength of ECOBAT at its core has without doubt got BLM to where it is now.

01707 324595 www.britishlead.co.uk

GEZE takes the stage at LEAF event



GEZE will be taking centre stage at an industry forum to discuss the latest developments in architecture across the globe. GEZE will be taking part in one of the most anticipated events on the programme when Karen Sum, GEZE's global account manager, chairs a roundtable on how the built environment can shape users' health, safety and wellbeing. The event is free to attend for senior delegates although there is a small charge for junior/mid-level professionals. GEZE also has a stand at the event which will allow delegates the chance to view new products and talk to their contacts in between the sessions.

01543 443000 www.geze.co.uk

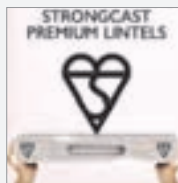
Building Innovation achieves BBA



Tapered insulation experts, **Building Innovation**, has achieved British Board of Agrément certification for its Inno-Fix and Inno-Bond insulation products. The certification covers both flat and tapered board options, providing specifiers with independent assurance of the products' performance, and is available to download from its website. Inno-Fix and Inno-Bond are suitable for mechanically fixed single-ply waterproofing systems on concrete, timber, and metal decks. In addition, Inno-Bond is also suitable for fully adhered single ply waterproofing systems.

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Supreme Premium lintels with Kitemark



Supreme Concrete 'Premium' lintels have become the first range of concrete lintels to be awarded the prestigious British Standards Kitemark – one of the world's most recognised symbols of quality and safety. The award means that building specifiers and contractors can now use the lintels to demonstrate best practice procurement, reduce risk and guarantee consistent, independently assessed quality and reliability for their projects. The range of precast and prestressed lintels includes both standard and high-strength options.

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Vent-Axia shortlisted in HVR Awards



British ventilation manufacturer Vent-Axia is delighted to announce that it has been shortlisted in the prestigious HVR Awards 2016, which celebrate innovation in the building services sector. The company's award-winning Sentinel Kinetic Advance is a finalist in the Commercial Ventilation Product of the Year category. This is the second time

the Advance has been shortlisted in a month, with the HVR nomination following hot on the heels of the Advance being named as a finalist at the Electrical Industry Awards.

0844 856 0590 www.vent-axia.com

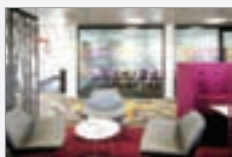
Supreme puts its weight behind BIM



Supreme Concrete is putting its weight behind the UK Government Construction Strategy with the launch of a new range of Level 2 BIM profiles for its concrete structural components. The widest range of BIM profiles to be made available for structural concrete products, the new profiles will include Supreme's full range of high performance cast concrete lintels, padstones and floor beams. Compatible with most popular digital modelling programmes, the profiles will be free to download from the respected RIBA BIM Library.

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Signbox completes major project



Architectural signage specialist, Signbox, has recently completed a stunning new interior and exterior signage project for the West London offices of Japanese entertainment giant, Bandai Namco. The project, which was completed over a six month period and delivered in

conjunction with project lead, Resonate Architectural Interiors, delivered a range of bespoke external LED illuminated signs, vinyl graphics, manifestation graphics, wall paper graphics and acrylic shaped door signage.

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including timber, metals, natural stone, concrete, plastics and much more. Fix In 5 offers sound deadening properties.

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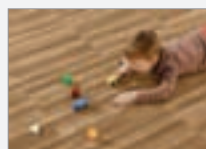
Pro Awards deadline extension



Panasonic has announced a deadline extension for submitting entries into the PRO Awards 2016. Installers, Architects, Consultants, Distributors and Engineers will now have until 31st October 2016 to put their best projects forward. The PRO Awards are free to enter and open to projects featuring Panasonic heating and cooling systems, in a residential, public authority or commercial environment. There are many great prizes up for grabs including a once in a lifetime trip to Japan, plus international recognition for the winner of each category. Other prizes include Panasonic Lumix cameras, awarded to all qualifying entrants.

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Polyflor reports impressive performance



UK vinyl flooring manufacturer Polyflor has recently published a Sustainability Report which outlines the environmental milestones achieved and improvements made by the company in the past year. The 80 page annual report covers Polyflor's environmental credentials, explains how

vinyl is a sustainable flooring option and highlights the company's charity work and involvement in the local community. Key achievements for 2015 include Polyflor gaining individual BRE assessments across 8 additional products, with 33 ranges achieving an A+ rating.

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Reynaers is proud second-time sponsor of SFE Facade awards



Leading aluminium systems company Reynaers has again partnered with the highly respected Society of Facade Engineering (SFE) to support FACADE2016, the third international awards for facade engineering excellence. The three categories open to individuals, companies and project teams are Facade of the Year – New Build; Facade of the Year – Refurbishment; and finally Facade of the Year – Innovation; considered from the former categories or as a stand-alone entry. The awards are free of charge to enter. Paul Duffy, Sales Director at Reynaers, said: "Reynaers is a keen supporter of innovation in the construction industry and we will continue to support the recognition and rewarding of excellence in facade design, engineering and application." The awards will be presented on December 1st at the prestigious Glass Supper, held at the historic and architecturally renowned Gibson Hall in the City of London. Entries will be judged by an esteemed panel starring some of the foremost experts from the field of facade engineering and design. Entries for the competition must be received by October 31st.

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BUILDING
PROJECTSBIRMINGHAM DENTAL HOSPITAL
EDGBASTON

A bastion of health

Britain's first new stand-alone dental hospital and school in 40 years, on the site of a former BBC studio, also has healthy environmental credentials. Ray Philpott reports

On the outskirts of Birmingham, the BBC's long-defunct Pebble Mill Studios site in Birmingham is being transformed into a life sciences and health-care campus.

At its heart is the new £50m Birmingham Dental Hospital and School of Dentistry, a state-of-the-art teaching and clinical facility, which enhances Birmingham's reputation as a hub for medicine and science.

Designed by Worcester-based One Creative Environments, the hospital in Edgbaston is the first of a number of potential healthcare facilities being constructed on the 27-acre former studio site and forms part of a vast network of organisations, surgeries, medical facilities and hospitals in the area known as the Edgbaston Medical Quarter.

The new facility replaces the current 1960s dental hospital in the city centre and will host more than 600 undergraduate, postgraduate students and trainees each academic year.

It comprises a long, rectangular south wing, which is home to a range of services for the public and a y-shaped north wing providing world-class research facilities and a modern learning environment.

These four-storey, concrete-framed constructions are linked by a steel-framed atrium and central reception area at ground floor, with entrances on two levels. The steel-framed top floor of both blocks contains the plant.

Dental chairs and surgeries are located in the south block while the north block has dedicated teaching rooms, a library, flexible learning zones, laboratories and research facilities. The design takes into account the heavy servicing required for these facilities and the benefits of placing laboratories near plant areas.

Although a seemingly straightforward concept on plan, the end product is the result of a carefully thought out and clever design. Working to a tight budget, it's been skilfully evolved to meet the complex requirements of the medical practitioners, teaching staff, students and key stakeholders within the hospital's many clinical departments.

Meeting complex needs

Plans to relocate the old dental hospital had been ongoing for some time when One became involved in 2010. One was commissioned to undertake a feasibility study to analyse various development sites, with Pebble Mill emerging as the front-runner. Consultations followed and after gaining detailed planning consent in 2012, construction began in 2013.

The landmark development has been led by Birmingham Community Healthcare NHS Trust, together with its partners the University of Birmingham, Birmingham and Solihull LIFT (BaS LIFT), Prime plc, Galliford Try, Calthorpe Estates and One.

One's managing director Matt Tebbatt says: "We had a year of weekly consultations and meetings with a large and diverse array of stakeholders and user groups. The facility needed to be located near the University campus with good transport links. Inside, ease of wayfinding was high on the agenda, as was clear division between teaching spaces and clinical spaces and the need for each dental clinic to have easy access to the imaging department."

Tebbatt adds: "Ultimately, the interior layout is actually relatively simple, but getting there has been anything but. We had to ensure all departments are proportionately sized and in the right position, so patients – who are often anxious and in



We had to ensure departments were in the right position so patients can move with the minimum of stress

Matt Tebbatt, One Creative Environments



FAST FACTS

Location: former BBC Pebble Mill Studios site (1971-2007)

Total project cost: £50m

Site: three acres

Building area: 15,500 m²

BREEAM rating: Excellent

Facilities: 154 dentistry bays/ treatment areas

Opened: March 2016

Being responsible for the interior design as well as the architecture brought its own advantages

pain – can move through the building with the minimum of stress. When people arrive they need to intuitively know where they are going.”

Being responsible for the interior design as well as the architecture brought its own advantages in this aspect for One, which worked with users to develop a wayfinding strategy.

“The design of the atrium, the central hub of the building, is critical,” says Tebbatt. “Every department is quickly and easily reached from there and each has its own reception and sub-waiting area. The waiting areas are on the balconies of the building so they can be seen more clearly, and found intuitively.

“To make interior navigation easy our interior designers selected a fairly neutral pallet in general but used striking colours for the wayfinding, so visitors and patients know to follow specific colours to get to their destination.”

Embossed cladding

The building is clad in attractive metal sheets, many of which are embossed with a design based on a microscopic view of dentine inside the tooth, called odontoblasts.

“If you’re a dental student it’s instantly recognisable and if you’re a patient or visitor it’s a nice pattern that flows into the building. We wanted a design that wouldn’t date and something that had depth behind it and the microscopic tooth pattern embodies what the hospital and the whole organisation is all about.”

The Trimo Qbiss One panels are made from pressed, sheet-rolled steel. Some are powder-coated while others feature a special metallic finish and are used across

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**ABOVE**

The significant height between atrium floors, plus inclusion of glass balustrades, enabled the architects to maximise natural light

the building apart from the plant areas. Each one is purpose-built and pressed in a factory using a secret process to create a seamless panel that is able to have pattern imprinted on it, using Qbiss Artme panels. Every panel was made for a specific location on the building.

The precision panels are mounted to the concrete frame with just 1 mm tolerance. Bespoke flashing around windows and corners is used to manage the differences in tolerances between the cladding and concrete.

Tebbatt comments: “The cladding adds a real crispness and sharpness to the building. The panels provide an almost perfect 90 degrees crease on the corner without a visible joint, making the building look clean and well defined.”

Structure and light

Structurally, the steel-framed atrium acts as a flexible link that can accommodate movement between two essentially separate

concrete-framed buildings utilising post-tensioned concrete slabs.

While the atrium is equivalent to nine stories high, making it nearly as tall as the demolished 10-storey studio block, it contains just four 5 m-high levels. Three steel bridges link the north and south blocks across the upper floors at each level – two for staff and students to use and one is reserved for transporting clean and dirty goods and equipment. On the ground floor a corridor behind a glass screen enables the movement of clean equipment and supplies and items requiring sterilisation or disposal without passing through public areas, separating ‘back of house’ functions from the front of house activities.

The significant height between the atrium floors, and the installation of glass balustrades throughout the atrium, has enabled the architects to maximise natural light, a design feature found throughout the building.

“Having lots of bright natural light

makes people feel more comfortable,” says Jason Whittall, One Creative Environments’ director of architecture and BIM. “It’s essential for dentistry, where accurate colour matching of teeth and dental materials is extremely important. Artificial light can impact on how the eye perceives colour, making natural light crucial to some of the functions.”

For this reason, 3.6 m-high glass window units have been fitted in many locations throughout the hospital.

“We’ve utilised direct natural light wherever it is critical and where possible, a lot of careful design went into the window units to enable maximum light penetration of deep spaces,” says Whittall. “Inevitably though, there are some internal rooms and spaces where we’ve had to exploit borrowed light, too, through glass walls and panels. We’ve kept the need for artificial lighting to a minimum.”

In the dental school most of the clinics are open-bay containing around 20 chairs each, and offer views across the whole clinic for teaching and assessing students.

Low-energy design

Glazing also forms a crucial element of the low-energy building’s mixed-mode heating and cooling system.

“A combination of mechanical fans and opening windows circulate the air. Windows run up to the structural soffits, featuring openable vents for night time cooling,” says Whittall. “The atrium is key to the building’s low-energy design. Utilising stack ventilation it draws warm air out of the wings which is collected at the top and heat is extracted and recirculated. When the windows are open the mechanical systems shut off so they’re not competing against each other.”

The glazing incorporates interstitial film to reflect UV but allow light through, while the top-lights of the window units feature solar shading to help reduce internal heat build-up, and the bottom opens to enable local environmental control and passive cooling and purging at night.

The soffits comprise exposed concrete slabs absorbing warm air during the day and cool air overnight, and the walls and curtain walling have a high degree of airtightness so that air flow can be accurately controlled. As well as the usual solar PVs on the roof, the building also boasts presence and absence control on lighting.

These features have contributed to achieving a BREEAM ‘Excellent’ rating at

The building is clad in attractive metal sheets, many of which are embossed with a design based on a microscopic view of tooth dentine





The cladding is a mix of powder-coated white and metal sheets, many of which have been embossed with a design based on a microscopic view of tooth dentine

the design stage, which is a prerequisite for all new NHS buildings.

'A healing place'

Much of the car parking is provided out of sight at undercroft level with attractive upward sloping landscaping leading up to the 'woodland walk' running alongside Bourne Brook.

One also designed the external landscaping, creating a planting scheme involving wild meadow grasses to preserve biodiversity, linking into the overall landscape masterplan scheme for the Pebble Mill site. This did not have to be extensive as the building benefits from views of the attractive, mature landscaping dating back to the studio era that lies on edge of the grounds.

Summing up, Whittall comments: "The building is in a beautiful setting in leafy Edgbaston, and enjoys views of both nature and the city skyline. It's a lovely spot to work in, and the surroundings combined with the design of the building make this a healing place that helps to put patients at ease." ■

BIRMINGHAM DENTAL HOSPITAL AND SCHOOL OF DENTISTRY

Architect: One Creative Environments

Landscape architect: One Creative Environments

Structural and civil engineer: One Creative Environments

Interior designer: One Creative Environments

Building services design: CPW

Main contractor: Galliford Try

M&E contractor: Interserve Engineering services

Cladding: Trimo, Qbiss One

Windows and curtain walling: Sapa

Flooring: Solus Ceramics (Monolith range) and Nora (Sentica range)

Doors and Ironmongery: Assa Abloy

Handrails: Delta Balustrades

Lead-lined plasterboard: Midland Lead Ltd

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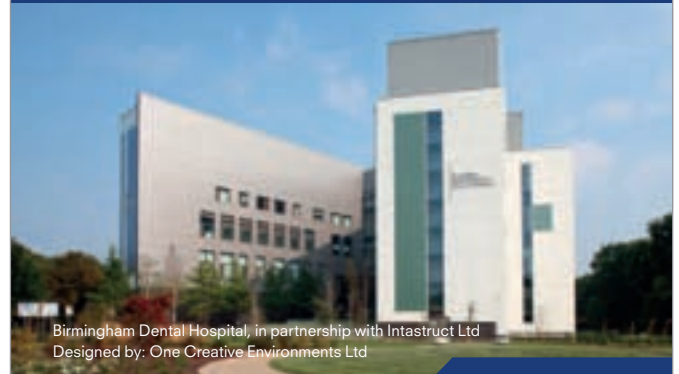
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Powermatic controlled, concealed door closers from **Samuel Heath** have become the preferred choice of clinicians, health estate managers and designers when looking at the construction and improvement of mental health facilities. Designed, engineered and manufactured in the UK, Powermatic door closers meet all relevant fire and accessibility regulations. They are particularly suitable for mental health facilities because they are installed neatly between the door and frame, meaning that they are totally concealed when the door is closed. Powermatic is the perfect choice where anti-ligature and anti-barricade measures need to be taken, and is recommended for use on many proprietary door systems. The absence of surface mounted controls means that when the door is closed, the door closer is out of sight and cannot be used as a point of ligature. Powermatic's concealment also reduces the risk of damage through vandalism and helps to improve the aesthetics of interiors, creating the less institutionalised, more therapeutic environments valued in psychiatric care. For more information please visit the website.

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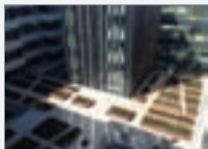
Bostik cures Hope Health Centre's flooring requirements



A range of subfloor preparation and adhesive products from **Bostik** have been chosen by OSS Commercial Flooring Ltd for the development of a new health centre, which serves the communities of Hope and Caergwrle in Flintshire, North-West Wales. Following a technical survey by Bostik, OSS Commercial Flooring selected the company's Screedmaster One Coat Membrane to protect the new floor coverings from subfloor moisture. Bostik's Screedmaster Universal Primer was then applied to the surface membrane, before the Screedmaster Flow and Ultimate smoothing compounds were floated out to a 3mm thickness in various areas of the development. Bostik's Laybond Pressure Sensitive adhesive was then used to adhere the vinyl floor coverings. Bostik's wide product and service offering was therefore a key driver in winning the project. The company's technical team conducted a site visit, including moisture testing, prior to the installation of the new floor. When the Screedmaster One Coat Membrane had cured, a uniform coating of Screedmaster Universal Primer was applied to enhance interaction between the subfloor and the smoothing compound.

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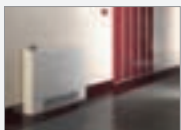


When the Ulster Hospital announced its Phase B Redevelopment Programme, main contractors GRAHAM-Bam Healthcare Partnership (GBHP) appointed Tandragee Roofing to complete the waterproofing and insulation of roofs and podium decks using **Icopal** waterproofing products. The

Icopal's products used resulted in a truly multi-system solution to the buildings' waterproofing and insulation needs. The Ulster Hospital Phase B Redevelopment will provide a new Inpatient Ward Block and a new Acute Services Block. Icopal's products were used throughout.

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**BUILDING
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Regeneration streets

It may be an overused term, but regeneration will be an apt one for a project to replace a troubled inner London estate of 1960s monoliths with a new mixed-tenure landscape of buildings, streets and squares. James Parker spoke to the architect leading the masterplan

The Aylesbury Estate, in Walworth, half a mile south east of Elephant & Castle in central London, is one of the capital's notorious estates. Designed by architect Hans Peter 'Felix' Trenton in 1963 it was part of the boom in monolithic concrete high-rises which time and reputation have not been kind to. The place is a daunting series of horizontal slabs of concrete of up to 14 stories, and expanses of landscaping which now include many mature trees.

Building failures such as dampness from concrete panels leaking and hard to operate tilt/turn windows and security concerns from a lack of lift lobbies are just some of the daily issues that residents face. A major regeneration project now underway will transform the colossal 27 hectare site into a very different looking, and it is hoped more socially cohesive and desirable, new district.

Being led by a firm of architects with strong experience in mixed tenure regeneration schemes, HTA Design, the project's First Development Site (FDS) is a collection of six separate plots designed by three architects – HTA, Mae and Hawkins/Brown – adjacent to Burgess Park at the plan's south west corner (see illustration, left).

Detailed planning was given for the FDS, together with outline planning for the overall masterplan, in April 2015. However delays common to major regeneration projects in progressing to demolition mean that construction of the FDS phases

won't begin until next year.

The new development will (when it completes in 2032) deliver a total of 3500 new homes, half of which Southwark Borough Council has committed to ensuring are affordable. And although there will be less single person dwellings reflecting the client's identified need for more family homes, 6000 more habitable rooms will be created than currently provided, which helps the affordable quota.

The project was instigated by a partnership formed between housing association Notting Hill Housing London Borough of Southwark in 2005. HTA – which has worked successfully with both clients in the past – became involved in 2010 going through a two stage bid with Mae and Hawkins & Brown, as well as Deloitte Real Estate who would go on to prepare the planning applications. In addition WSP led on the environmental impact assessment for the FDS and overall masterplan.

Following HTA's appointment in 2013, David Morton was taken on as an associate in February the following year to run the FDS project, in itself a complex set of buildings. He would also oversee the outline application team for the overall masterplan, working with partner Simon Bayliss.

According to Morton, while there was already a very detailed scheme in place for the full project on his arrival, taking the bid offer to a full planning application by that



September was a tough call. It meant “a process of planning negotiation on both the detailed and outline planning,” and was, as he says with some understatement, “a fairly tight timescale.”

After “a couple of tweaks” to both outline and detailed proposals before resubmission in November the scheme entered committee stage in March 2015. Barratts is in the frame as developer for the private sale elements of the FDS including the towers, however this is yet to be confirmed.

Site geography

The ‘spine’ of the unevenly-shaped master-plan is Thurlow Street to the east, towards Old Kent Road. As well as many residential blocks, the site includes two health centres,

ABOVE

Many of the buildings in the scheme will be clad in brick to achieve both visual variation and consistency across the site

LEFT

One of the planned neighbourhood squares

a school and conservation area at the centre of the plan and runs to East Street at its northern edge. The FDS, technically Phases 1b and c, is bordered at the south western corner of the plan by Phase 1a designed by Levitt Bernstein and completed in 2012. A ‘reserved matters’ planning application has been submitted for a new library and community hub to the north east of the site.

David Morton knows the area well, as he once lived just north of the school. He says



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LEFT

The masterplan makes use of many of the existing mature trees on the estate

this “was part of my attraction to the project. I really enjoyed living there – the sense of proximity to central London – you are very close to the river and I used to walk to work.”

He says that estate agents are now attempting to rebrand what is in some parts a run-down district as the more aspirational-sounding ‘Walworth Village’ – but making “a distinct divide between the pre-existing (Victorian) housing and that which has been demolished and rebuilt.”

Design drivers: a stitch in time

The main design driver for the masterplan is an attempt to provide a varied and rich set of new residential areas with a distinct individual character, in contrast to the impersonal environments currently on offer. Putting the emphasis on reinstating streets plus landscaped squares with in some cases houses with front doors at street level and kitchens at the front would foster greater social interaction. This will “stitch a piece of the city back” into the surrounding streetscape, says Morton; a key driver for HTA.

The approach will be an important change from the current, explicitly contrasting horizontal behemoths which can make those unfamiliar with the area, particularly pedestrians or cyclists, feel alienated. Morton explains: “We were keen to take the surrounding street patterns and look at how to reconnect. The street I used to live on for example, there was a brick wall at the end and a slab building.”

He says that creating new areas which harmonise with the existing fabric doesn’t mean uniformity, and the masterplan introduces ‘character areas’ to ensure this: “Stitching the development into the surroundings is about being able to walk through a neighbourhood and appreciate the richness – there will be changes, but it won’t be presenting you with areas that look strange and which you don’t understand. It was designed as an estate – but we’re making it into a piece of the city.”

This approach is something of a reaction to Southwark Borough’s original Area Action Plan (AAP) which proposed what Morton described as a “big gesture approach” of introducing large-scale landscaped “green fingers” into the development. The design team took the

view that this would reduce connection with the city and proposed a different solution, and one which would ultimately deliver more green space overall.

The more varied and fragmented approach that has been arrived at contrasts with the current design of the estate, which in Morton’s words, is “big blocks, big spaces where the whole thing is the piece.” The new development is not without its tall buildings however, with blocks up to 20 stories planned in the FDS, but they are relatively slim towers.

Morton describes how HTA undertook a study that took a piece of Mayfair (“an area of London very much based on streets and squares,” and overlaid it onto the site: “It was fascinating overlaying that on this site and how you get a real sense of place and how you would navigate the streets and the open spaces. They bring shape and character.”

The masterplan attempts to reduce car parking as part of a key focus on encouraging cycling (which will help towards its BREEAM Communities accreditation). However car parking in a variety of arrangements, along tree-lined streets, has been planned in as part of the urban fabric.

Using trees as a design tool

One of the benefits offered by the existing estate being harnessed by the masterplan is the large number of mature trees, many of which will be retained; a key driver from the AAP. David Morton says that in contrast to the replacement of the nearby Heygate Estate, “where very little tree retention was proposed, and which was a “significant factor in responses against the application,” the design team has used trees extensively to help guide street plans.

“As part of the street and square response we started to look at where we could retain groups of trees and really work with those. This was seen as a good driving point for a good street layout and an opportunity to retain something of the previous estate that was of value, providing ecological benefit.”

Tree retention will be maximised by using some of the existing road layout, and the streets and squares approach will link tree-lined streets to open spaces positioned where clusters of existing trees are located. In some cases buildings have been aligned to ensure that particularly good quality trees are retained, and new trees will be planted throughout the plan, helping to reinforce the street hierarchy, emphasise key routes, and provide continuity across the development.



Stitching the development into the surroundings is about being able to walk through a neighbourhood and appreciate the richness

David Morton





It has been incredibly collaborative and we are working toward something that's mutually beneficial to everyone

David Morton



The First Development Site: tenure-blind design

The First Development Site (Phases 1b and 1c) will provide 830 units, and is in itself an exciting new quarter of the city with a rich mix of tenure and building types in response to the overall plan's drive to knit into the city. It will form the template for other areas of the masterplan, as Morton says: "It sets the tone for the broad strategy of what will happen on Phases 2, 3 and 4."

The overall design approach was to provide a strong and defining perimeter edge to the development along the park, but also a "gentle neighbourhood connection linking the surrounding area with the park." It combines an urban response reminiscent of a mini-Park Lane with its three towers stepping down rapidly to lower density massing of eight, four and three-storey buildings to the north of the FDS.

Six blocks are included – HTA designed four of them, including four and five bedroom houses, for a mix of affordable rent and private sale, with the ratio weighted towards affordable. One of the lower density blocks also has seven one bed flats for residents with learning disabilities, and another has a six-storey building containing a mix of shared ownership flats and maisonettes.

On the higher density Blocks 5 and 6 adjacent to the park are buildings ranging from 18 storey towers to medium rise (5-8 storey) buildings for private sale, sitting cheek by jowl with shared ownership and affordable rent buildings of a similar scale. This follows the AAP's requirement "to get affordable housing to the park edge," explains Morton.

He says that the design attempts to avoid differentiation between the different tenures: "The architecture of the FDS blocks is tenure blind – they are different blocks but they all join up to make a continuous whole. There is greater detailing on some of the affordable rent blocks simply because of where they are on the park edge."

Good quality landscaping is planned throughout, whether first-floor courtyards in the case of the park-edge blocks or back gardens to maisonettes on the lower-density blocks behind. Views out are optimised as are connections to these green spaces.

In terms of their external appearance, the blocks' design features extensive use of brick cladding, partly to enable aesthetic variation while achieving some consistency to link the blocks together visually. Says Morton: "There are some bricks we are

using across different blocks; sometimes it may be about using the same brick with a different tone." There is even talk of using glazed brick on maisonettes.

At the same time the designers are standardising some constructions where possible such as wall and floor build ups across the FDS, "so won't have to reinvent things across the rest of the masterplan," Morton adds.

The provision of a large number of maisonettes in the FDS (70 per cent of which are dual aspect) grouped around streets and green spaces can create a strong community feel, prosaic but crucial issues such as arrangements for locating the proliferating numbers of refuse bins need to be considered. 'Defensible space' in the form of small front gardens is the preferred strategy. HTA has focused intensely on "getting the streetscape right" on the FDS and will be sharing this work with the architects for Phase 2.

Design collaboration

HTA is used to working collaboratively, so working with two other firms on a challenging project such as FDS was home from home, and sharing was beneficial. Morton: "The fact we have different teams within the firm working on different buildings fitted very comfortably within that."

"An architect working on one aspect, for example doing a study on balconies or brickwork could see their design applied across the whole thing. It was a good way of working through some of the design issues." However he says that despite the benefits of design collaboration, the masterplan wanted it to feel like different architects had worked on different buildings to impart richness to the scheme."

He adds: "When we presented to the planners it was always about the scheme, it wasn't about this or that architect."

Conclusion

HTA's David Morton says that this project, from the bid process to the strength of collaboration between clients and the architectural team "has been unlike any other project I've been involved in."

He concludes: "It has been incredibly collaborative and we are working towards something that's mutually beneficial to everyone. It's very different from a lot of development-led projects and has been rewarding. It is a credit to the team that we got such a strong application into planning in such a small window." ■

Salvation Army Housing Association transforming lives

During the 1950s the SAHA (Salvation Army Housing Association) was set up to manage the administration of housing newly retired officers. Since then, the charity has evolved and is dedicated to 'Transforming Lives' of the community.

The Old School in Ashford, Kent, is a Grade II Listed property that provides housing through the SAHA. The buildings required upgrading as the thin cavity double glazed windows were draughty and unable to retain the heat efficiently. Providing a suitable solution for this required some deliberation, as due to the Listed nature of the building the primary windows could not be replaced. However, a solution was found with Selectaglade secondary glazing which is fitted to the room side of the window, is a fully reversible adaptation and is accepted by most heritage bodies for use on Listed buildings.

Numerous windows were shaped with gothic style curves and trefoil, which presented



Selectaglade with an interesting challenge. The use of a 3D digital measuring device allowed the openings to be modelled with precision which enabled the best possible fit for the bespoke designed units. This together with high performance seals helped to virtually eradicate unwanted draughts.

An added benefit of secondary glazing is the reduction of noise ingress. When there is a 100mm cavity between the primary and secondary windows, a sound reduction of about 45dB is achievable.

Over 100 secondary units were installed using five different Selectaglade products, all in the slimline range which are ideal for heritage projects. They introduce minimal sightlines and are designed to be as unobtrusive as possible and virtually unnoticeable from outside.

Selectaglade has a wealth of experience working on all manner of building styles, from Listed to new-build. Established for fifty years and Royal Warrant Holders since 2004, it has an extensive product range to suit most buildings to aid in making them; warmer, quieter and safer.

01727 837271 www.selectaglade.co.uk

Flowcrete presents on polished concrete



At this year's London Build, Flowcrete UK (stand C64) will be giving attendees a sneak peek into its new polished concrete and coloured screeds range as well as showcasing its recently unveiled Comfort Resins collection. Taking place

at the London Olympia from October 26th-27th, London Build provides the capital's construction professionals with the ideal opportunity to catch up on the latest trends, technologies and innovations in the sector. Flowcrete UK will be delivering a presentation during the event.

01270 753 000 www.flowcrete.co.uk

LONDON BUILD STAND NO C64

Architects Datafile website

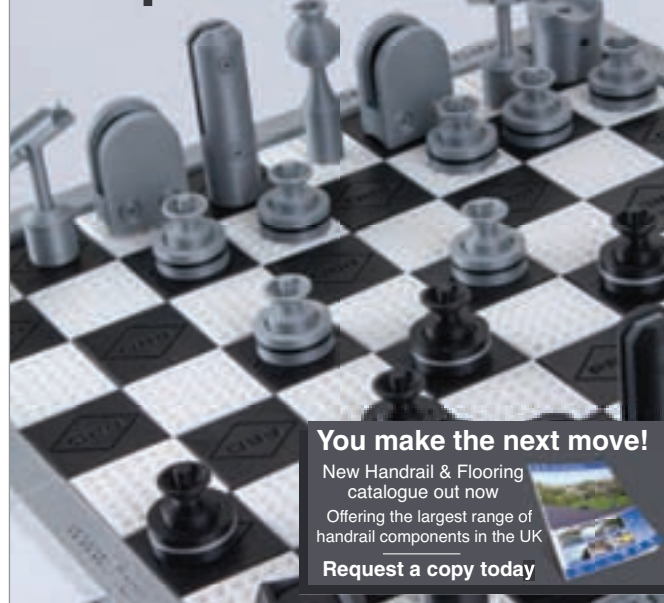


The Architects Datafile (ADF) website is an online provider of past and present products and news items for the architect or specifier. architectsdatafile.co.uk is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they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

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London Build's got construction covered

London Build returns to Olympia for its second year on 26 and 27 October

London Build is a leading construction expo focusing exclusively on construction projects and opportunities in London and the South of England. London Build is attended by thousands of movers and shakers in the UK's construction industry including contractors, developers, architects, local councils, property developers, suppliers, solution providers and more.

The free to attend exhibition will feature a wide range of leading companies working across the construction industry in London, including Balfour Beatty, Bouygues UK, Mercedes, HP, Davlax, TfL, HS2 and Heathrow, among others. The show will also see two days of conference sessions led by the London Chamber of Commerce, Chartered Institute of Building,

Greater London Authority, Crossrail, Battersea Power Station and many more.

In addition, London Build is launching a wide range of fantastic features, including an official Pecha Kucha night in The Architects Hub and dedicated zones for sustainability sponsored by the Carbon Trust, and Skills Development supported by the CITB.

Tickets to the show are limited – visit www.londonbuildexpo.com today to secure your free pass



OTHER FEATURES OF THE EXPO INCLUDE:

- Conference sessions giving insight and case studies of the latest projects and investment opportunities across the capital, including top level speakers from the Greater London Authority, LCCI, Balfour Beatty, Transport for London, Lendlease, Peabody, Foster and Partners and Heathrow Airport to name a few.
- CPD Accredited Workshop floors providing 30+ hours of CPD training from a wide range of industry experts.
- A 200 booth exhibition featuring a wide and fascinating range of leading international solution providers, suppliers and project developers.
- Multiple zones and feature areas including: the Architects Hub, Skills Hub, Tools & Tradesmen Show, Infrastructure Zone plus much more.

- The Housing Summit including panel discussions and case studies of London's major housing and regeneration products.
- The BIM Summit featuring The BIM VIP Networking Lunch and conference sessions discussing BIM implementation, achievements and expectations for BIM Level 2.
- The Sustainability Summit with discussions into government initiatives for supporting sustainability in the built environment, sustainable materials, technology and best practice, and the future of sustainability in the built environment – what comes next?
- The Civil Engineering & Infrastructure Summit, giving insight to London's major infrastructure development plans and the future of engineering.
- The Health & Safety Summit discussing the latest in CDM, technology and best

practice, occupational health, the latest legislation and more.

- VIP Luncheon and Meet the Buyer sessions providing face-to-face meetings with a wide range of VIP attendees from leading contractors, architects, local councils, housing associations and developers (please note, attendance to Meet the Buyer sessions is limited to exhibitors only).
- The London Construction Awards and Jimmy Carr comedy evening – a prestigious Gala Dinner that features London's leading construction awards ceremony with world-class entertainment (tickets still available for purchase).
- The construction industry's first-ever and very own Oktoberfest Beer Festival – network, unwind and have fun!
- Huge amounts of entertainment, competitions and prize give-aways.

State of the art drainage solutions from JDP



JDP will offer visitors to the London Build Show the latest in world-class drainage solutions. Axedo is a state-of-the-art inspection chamber system, which is fast, versatile and provides a safer option than concrete. As an alternative to concrete chambers, the use of Axedo plastic chambers can lead to savings in installation time of up to 50 per cent. In addition, Axedo includes plastic chambers, which can be used for deeper installation depths, offering non-man entry access as defined in the requirements of Sewers for Adoption (SfA7). Unlike concrete chambers, which will require a much larger excavation, Axedo chambers are lighter allowing for quicker and easier installation, without the need for heavy lifting equipment, and enabling a reduction in vehicle movements on site. Providing the best practice and latest in integrated SuDS drainage systems, RAINBOX® Attenuation Solutions offer the full flexibility to create bespoke or hybrid solutions to minimise the risk to localised flooding. The RAINBOX® system includes Lite, Medium and Heavy load grades to suit almost any application.

0800 195 1212 www.jdpipes.co.uk

LONDON BUILD STAND NO C81

New Yeoman Shield products added NBS National BIM Library



With a selection of products already available from the NBS National BIM Library **Yeoman Shield** have now added their New Guardian Handrail range to the information website. Utilizing BIM allows the client a clear understanding and visualisation of the building to be constructed, offering intelligent information on demand whilst helping to control building costs as well as giving an insight to future running costs as well. As of April this year all centrally procured public sector projects will require the implementation of BIM at Level 2. "Developed for use in public buildings such as hospitals and schools it was the sensible route to add the new Yeoman Shield Guardian Handrail range to our listing on the NBS National BIM Library. This will make comprehensive yet easily obtained 3D model information available to clients wishing to specify our products." Explained Yeoman Shield's Marketing Manager, Sally Moores. Yeoman Shield look forward to increasing their contribution to the NBS National BIM library but in the meantime authored products can be found by going to the NBS website or Yeoman Shield website.

0113 279 5854 www.yeomanshield.com

Racking solutions revisited



Autumn 2016 sees the re-launch of **Simpson-Strong-Tie's** unique racking solution for timber frame structures – new products, improved performance and increased availability. Since the launch of Strong-Portal and Strong-Wall, more than 400 timber framed homes have benefitted from increased build flexibility in terms of wider openings, yet with none of the issues surrounding racking resistance that goes with them. The updated range features the all new Steel Strong-Portal, which can be attached to adjacent timber studs with ease, the Steel Strong-Wall has been modified to give increased performance and like the Steel Strong-Portal, can be integrated into a standard timber frame design. Steel Strong-Portal comes in two sections to create a reinforced opening up to 3.6m wide – useful for garages, patio doors for example. The Steel Strong-Wall is a single panel which can be added to a structure to reinforce the structure. Both are available as kits with all of the necessary fastenings and adhesives to complete the installation. The new catalogue '*Racking Solutions for Timber Frame Buildings*' is available from Simpson Strong-Tie on request and can be downloaded from the website.

01827 155600 www.strongtie.co.uk

BIM (Revit) files now available



Luceco has recently launched a suite of BIM Files created in Revit, covering their range of commercial LED luminaires. This now enables their clients to download the information they require to aid the design process and create Building Models.

Building Information Modelling (BIM) is a collaborative way of working intended to increase the speed of the construction industry, using digital technologies. BIM uses product data and a three-dimensional computer model that can be used for effective management of information throughout a project lifecycle.

01952 238 100 www.luceco.com

Terraxx takes the pressure



Efficient protection and drainage for basements and flat roofs is offered by the high density polyethylene Terraxx range from **Delta Membrane Systems**, which is featured in a brochure from the company. The brochure shows how the two-ply sheet is a highly efficient protection and drainage system, and offers an 'all-round' solution for applications

on compression-resistant substrates. Those reading the brochure will be able to find the full specifications for the Delta Terraxx product, along with a list of accessories to make the application process easier.

01992 523523 www.deltamembranes.com

An introduction to the Topseal GRP systems...

A Topseal roof represents the pinnacle of GRP roofing technology, guaranteed to last a generation, designed to last a life time.

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Our vast knowledge and years of experience, along with our choice of high quality materials and trusted installers make us the ideal option for when you replace your flat roofing.

Topseal is widely used for a variety of domestic, commercial and industrial

applications. Our system is cold applied without the need for heat or flames, and cures within an hour of installation making it much quicker than many other liquid applied systems and coatings.

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Kingspan OPTIM-R at the museum



Over 320m² of the Kingspan OPTIM-R Flooring System has been installed to provide outstanding thermal performance as part of a spectacular new museum in the market town of Hitchin. The Kingspan OPTIM-R Flooring System was specified for the project by Buttress Architects.

Kingspan OPTIM-R panels feature a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope. This allows them to achieve thermal conductivities as low as 0.007 W/m.K, up to five times better than commonly used insulation products.

01544 387 384 www.kingspaninsulation.co.uk

Sika-Trocal checks in at Edinburgh



With speed and ease of installation crucial at the conversion of an old office building in Edinburgh into a new Premier Inn, over 1,500m² of Sika-Trocal Type S provided the perfect roofing solution to keep the multi-million pound project on track. The 2mm thick Trocal S membrane was

mechanically fixed using Sika-Trocal's innovative laminated metal disc system. This system sees the membrane and insulation mechanically fixed to the roof in a single process, ensuring a fast installation minimising components required and reducing overall project costs.

01707 394444 www.sika.co.uk

Schöck and Thorp team up for HOOLA precast balconies

A new twin tower glass-clad landmark building – the 'HOOLA' – now dominates Tidal Basin Road in East London, gateway to the Royal Victoria Docks area. The £80m development has transformed a brownfield site into two rippling 23 and 24 storey glass towers; offering 360 apartments with a mix of studios, one, two and three-bedroom units. The buildings are super-insulated, with the concrete frame acting as a heat sink – absorbing heat on warm days and releasing it back into apartments when it cools. Unsurprisingly, a critical design requirement was the avoidance of any risk of thermal bridging at the many concrete-to-concrete balcony connectivity points. Highly efficient structural thermal breaks were required throughout and the preferred solution was the Schöck Isokorb type K for cantilever balconies. With its innovative HTE pressure-bearing module, the unit provides extremely high thermal resistance and transfers bending

moment, stress and shear forces.

The balconies on the HOOLA are all precast in a reconstituted Portland Stone Concrete and thermal break suppliers Schöck had to work closely with specialists Thorp Precast of Newcastle-under-Lyme. Luke Smerdon-White, Technical Director at Thorp: “The balcony detailing was complex. We had to design, manufacture and deliver 1410 precast concrete balcony sections, which then had to be cast integrally with the in-situ concrete structure. The design and detailing coordination was taken from the 2D consultant’s information, which we converted into 3D Tekla modelling”.

In addition to concrete-to-concrete capability, the Schöck Isokorb range provides totally verifiable solutions for concrete-to-steel, steel-to-steel – and even a maintenance free alternative to wrapped parapets. All solutions meet full compliance with the relevant UK building regulations and offer BBA Certification and LABC Registration. The



requirement that the temperature factor used to indicate condensation risk (the fRsi value), in residential buildings, must be equal to or greater than 0.75 is comfortably met by incorporating the Isokorb. It also complies with the Government Standard Assessment Procedure, SAP 2012, concerning CO₂ emissions from buildings and respectively heat losses through non-repeating thermal bridges.

01865 290 890 www.schoeck.co.uk

Senior shines light on buried treasures



After being confined to darkness for decades, the once abandoned Waverley Arches in Edinburgh have been given a new lease of life – and copious amounts of daylight – thanks to an ambitious restoration programme and new glazing package from Senior Architectural Systems.

The once boarded up arches have been opened up by the use of Senior’s extensive range of aluminium glazing solutions. Each of the units feature Senior’s thermally enhanced SF52 aluminium curtain walling, SPW600e windows and robust SD commercial doors.

info@seniorarchitectural.co.uk

A. Proctor Group sponsors project



The A. Proctor Group has co-sponsored an exciting new community project in Dalmarnock to work in collaboration with local children at Baltic Street Adventure Playground (BSAP) to construct a wikihouse in their playground. The timber frame building will provide the children with an indoor play area for when the weather restricts playing outside. Wraptite-SA airtight

membrane was donated by the A. Proctor Group to ensure that the wikihouse could be made weathertight and provides breathable water resistant protection for the timber structure.

01250 872261 www.proctorgroup.com

Guides to architectural solutions

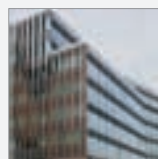


Advice on specifying framing and sliding solutions for architectural glazing is contained within two new brochures from leading aluminium systems supplier Kawneer. Well-illustrated throughout, the new A4 brochures feature a wide range of product detail drawings and applications guidance as well as useful product selectors, product and performance data and project case studies. The 20-page framing systems brochure gives a complete overview of

Kawneer’s entire framing systems range.

01928 502500 www.kawneer.co.uk

Making a ripple in Reading



One Forbury Place in Reading is a speculative office development, owned by M&G Real Estate, which has a particularly distinctive exterior, thanks to a custom solar shading and screening solution, courtesy of Levolux. As a world-leading solar shading and screening specialist, Levolux was approached to design,

supply and install a custom solar shading solution, comprising a combination of horizontal and vertical twisted fins. Based on Levolux’s popular Infiniti Fin system, each series of horizontal Fins appears continuous, extending more than 55 metres across the building.

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Understanding underlays is the key to performance

Innovation in roofing underlays has helped tackle issues in cold-pitched roofs, but specifiers should know what they see on the outside is not always what they get in terms of performance. ADF reports

The quest to achieve a truly ventilation-free cold pitched roof has continued for years across the construction industry.

But nowadays reputable roofing contractors and leading housing developers such as Bellway, Bovis Homes and Crest Nicholson, backed by the National House-Building Council (NHBC) and independent industry research have come to the realisation that some underlays perform at an exceptional level and provide a failsafe option without the need for additional ventilation.

Air and moisture control

In response to the problems caused by the UK's large demand for the construction of cold pitched roofs and the drive towards increasing thermal performance requirements, manufacturers have developed a range of solutions.

One such issue is fuelled by the tendency to place additional insulation above the ceiling joists which subsequently leads to an increased risk of condensation in the roof space. In an effort to combat this problem, the industry has developed a series of breathable membranes designed to be installed over the rafters as roof underlay in order to allow the vapour to escape.

The majority of these membranes were vapour permeable but airtight, working rather like a weatherproof jacket. This means that despite being water resistant, such membranes did not completely prevent condensation within the roof space and additional ventilation had to be introduced in order to allow air to circulate.

Recognising this issue, about 20 years ago A. Proctor developed a solution called Roofshield – a pitched roof underlay designed to be both air and vapour permeable.

Not all roofing underlays are the same

Developed in response to the issues, there are generally two types of technological solutions which have been available to specifiers: vapour permeable but airtight solutions based on film laminated polypropylene technology, or a vapour and air permeable version alleviating the need for additional ventilation.

Iain Fairnington, technical director of the A. Proctor Group, explains: "Roofing underlays come in all manner of different colours, but it's what you can't see that does most of the work – the middle layer." He adds: "While the colour of the top surface or underside is useful for identification, it is irrelevant in terms of performance. This middle layer can be likened to the same robustness as normal kitchen cling film, and needs the protection of the sandwich construction to make this suitable and fit for purpose in a pitched roof."

"Taking a microscopic view of the middle layer clarifies the difference between an air permeable membrane (Fig. 1) and an airtight underlay (Fig. 2). The difference between air permeability and air tightness is fundamental to the products performance and use."

Fairnington highlights: "In a traditional UK cold pitched roof construction, the large cold void above the horizontal insulation requires the quick release of vapour laden air that is reaching its dew point and potentially causing damaging condensation. Roofshield is certified by the BBA and accepted by the NHBC for use without ventilation or a VCL in even these most demanding circumstances. This is particularly advantageous in refurbishments where the installation of the VCL can lead to owners or tenants having to move out if



Fig 1. Microscopic view of air permeable Roofshield membrane

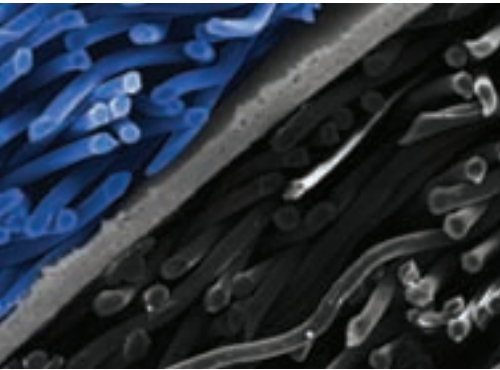


Fig 2. Microscopic view of airtight underlay

a non-ventilated roof strategy is adopted.”

As for airtight membranes, Fairnington explains the building physics around why their limited vapour permeability means condensation can still occur: “If you have a big cold roof space and a sudden drop in temperature, you want to have air movement.” He adds, “People assumed that because they were installing a vapour permeable membrane, they didn’t need to ventilate their roof – but in certain circumstances moisture levels were too high or temperatures too low to allow the vapour to permeate without condensing.”

By contrast, a high performance vapour and air permeable membrane has a far higher degree of vapour and air permeability and will still perform in conditions where airtight alternatives fail.

Crucial findings

Between 2001 and 2004, independent research on a cross-industry basis was carried out with Glasgow Caledonian University. The Partners in Innovation study was conducted to establish a consensus on whether it was still necessary to ventilate

“Roofing underlays come in different colours, but it’s what you can’t see that does the work”

Iain Fairnington

buildings where vapour permeable membranes were installed.

The study revealed the crucial finding that when a roof was unventilated while an air and vapour permeable underlay was used, this would further reduce and inhibit the formation of condensation on the underlay. This contributed to the NHBC making a statement in their Technical Extra bulletin Issue 6 that independently certified air and vapour permeable underlays could be used without additional ridge ventilation in cold roofs.

The evidence is clear for architects, house builders and contractors looking for a high performance, fail-safe roof that is cost effective – some air and vapour permeable underlays are in a class of their own.

Wallbarn Protecto-board



Wallbarn Protecto-board is the ideal product for flat roofing systems and is used to protect bituminous waterproofing membranes from mechanical damage during construction, protection from other trades and against abrasion and punctures. It is installed directly onto bituminous sheet membranes, hot melt and built-up membranes to give assurance against damage. Made from recycled fibres with at least 75 per cent bitumen content, it is strong, durable and will not absorb water. It is extremely versatile and can be used as a recovery board, avoiding the need to take up existing surfaces before laying a new waterproofing membrane. It can be torch bonded to compatible membranes, spot bonded or taped and is useful as either a temporary protection or a permanent part of the waterproofing system. It is lightweight and easy to handle and is suitable for vertical surfaces where it will protect the membrane from ground settlement in the case of backfill.

For more information please visit the website and search for “Protecto-board”.

0208 916 2222 www.wallbarn.com

Axter showcase pioneering system FORCE DALLE at Victory Pier, Gillingham



Axter is proud to provide the waterproofing for Berkeley Homes’ prestigious Victory Pier, an award winning development in Gillingham comprising one, two and three bedroom apartments overlooking the River Medway. The development provides ample amenity space with green podium areas, balconies and terraces, creating luxury waterside living. Axter specified their pioneering FORCE DALLE system, a hybrid structural waterproofing system combining the proven benefits of hot melt with advanced bituminous membrane technology. Due to its versatility, FORCE DALLE offers a range of choices for designers and can be used in all roof construction types (warm, inverted, cold), on all structural decks (concrete, metal, timber) and can be combined with all roof finishes (green, brown, blue). The system was installed by Tilbury Contracts, approved Axtershield Installer, following the key steps: Prepare, Prime and Torch. Installation is quick and simple, and the result is a robust, reliable waterproofing system that is guaranteed for a minimum of 20 years. See how good working relationships, skills and expertise made waterproofing Victory Pier a success.

01473 724056 www.axter.co.uk

Kemperol membranes put Piccadilly Gate's roofs back on track

Three roofs of one of Manchester's most iconic office buildings have been refurbished with an overlay of Kemperol liquid membranes from Kemper System.

Piccadilly Gate is home to various Government departments including Education, Ofsted and Highways England.

The 125,000sqft building adjacent to Manchester Piccadilly Station was refurbished in a £25 million BREEAM 'Excellent' scheme in 2010. Issues with the integrity of the roof had continually plagued the building with leaks, resulting in unsightly staining to the suspended ceilings within. Consequently, the decision was taken to overlay the existing single ply roofing membranes on levels ten, four and three with a cold-applied liquid system from Kemper System.

Roofing contractor, Castle Roofing, was appointed to carry out the works and selected Kemper System's solvent-free Kemperol



2K-PUR as the most appropriate solution for the level ten roof.

The level four roof is above the building's record-breaking extra-long escalators and leaks from two water outlets had caused staining of the suspended ceiling. This roof was also refurbished as an overlay system, using Kemper System's Kemperol V210.

Having cleaned and prepared the existing

roof surface, Castle Contractors applied a primer before applying the resin in a single wet-on-wet process in which the resin is first applied to the substrate; reinforcement fleece is then laid directly on to the wet resin, immediately followed by more resin on top.

This ensures complete saturation of the reinforcement fleece. Once cured, the resin forms a seamless, elastomeric waterproof membrane that cannot delaminate, is UV stable and bonds directly to the substrate.

For the green roof on level three, Castle Roofing carried out the refurbishment in two sections, removing half the green roof medium and installing Kemperol V210 onto the existing surface as an overlay before replacing it and lifting the second section so that the new roofing membrane could be installed. The second section was then re-instated, completing the programme.

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Flat roof manufacturer Bauder extends BIM library

Following the arrival of the UK government's BIM mandate back in April, which requires all centrally procured public sector building projects to be BIM Level 2 compliant, flat roof manufacturer Bauder has extended its BIM offering with the creation of 19 new waterproofing system objects that are available now for free download on its website.

The launch of Bauder's new generic BIM models means its comprehensive library now includes objects for its bituminous, single ply, cold liquid applied, hot melt and green roof system options, which can easily be dropped into 3D models and plans. This allows architects, designers, specifiers and contractors to easily access and share all of the object information needed at the concept and design stage of a project. All of these BIM objects are available in Revit format, which according to

NBS' 2016 National BIM Report is by far the most popular tool used for producing drawings. In order to ensure that your BIM object meets the exact requirements of your building you will need to register your project with Bauder, who can in turn provide you

with all the necessary technical support and resources.

Bauder's Technical Director Nigel Blacklock commented: "A lot of the ideals that BIM is based upon, such as promoting the use of quality, long-lasting materials that deliver life-time value and getting things done properly first time on a project, align with our own principals as a market-leading manufacturer of flat roofing products. As a result, we will continue to invest our time and resources into BIM in order to extend our offering, as we see it as an integral part of the future of the built environment both in the public and private sector."

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


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Rolled Lead Sheet manual launched



The Lead Sheet Association has launched a newly updated version of its Rolled Lead Sheet Manual – the biggest revamp in recent years. The 2016 edition contains many improved drawings, a better layout and clearer tables to ensure all users get the best out of Rolled Lead Sheet. There is also a new ventilation section – ensuring you get the ventilation correct in a range of circumstances. The new Manual is available online as an e-Book and also as a printed copy. The printed version is £45 plus postage and packing with free online access. The online version is £35. info@leadsheet.co.uk

Sto helps create new Premier Inn



The use of an eye-catching rainscreen facade solution from Sto has created the focal point for a major new £12 million refurbishment project in London. StoVentec glass was used to remodel the exterior of a disused 1960s office building, which was converted into a 163-room Premier Inn hotel in the largest glass rainscreen project that Sto has ever completed in the UK. StoVentec Glass provides many different benefits. Apart from the ability to create this type of bespoke glass panel finish and bring design ideas to life, it creates a ventilated cavity, while also delivering highly efficient insulation performance. 0141 892 8000 www.sto.de

Knauf's Regal receives planning assent



Proposing the Regal range of colours – developed by Knauf for its Presto render range – has enabled Cavanna Homes to work closely with South Hams District Council's planning department to achieve a pleasing external aesthetic at its Origins development, set in the heart of Devon. Developed to simplify what can be a difficult design decision, the Regal range is restricted to 16 colours that are most readily accepted by most UK planners. Resulting from extensive research and development, Presto offers a scratch render specifically devised for the UK climate and housing stock. 01795 424499 www.knauf.co.uk

Green VMZINC for Cotswold Dutch barn



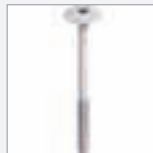
The Dutch Barn at Mill Farm, Ewen is an exciting Cotswold Revival scheme combining a blend of rural architecture and efficient, eco-friendly design. Daniel Stewart Architectural Services specified a curved roof to follow the building's original contours with a VMZINC single and double lock standing seam system in PIGMENTO Green. In addition to high insulation, triple-glazing and an air source heat pump the property also boasts its own private metered supply of freshly filtered spring water pumped into an underground water tank. 01992 822288 www.vmpzinc.co.uk

New residential building gets treatment



Sheffield-based architectural panel manufacturer Panel Systems has supplied Trespa-faced insulated panels to a new development of apartments for charity, St Wildfrid's, which supports homeless, vulnerable and socially excluded adults. The three storey development close to Sheffield city centre comprises 20 self-contained flats, with 60m² of Elegant Oak woodgrain Trespa panels supplied by Panel Systems to integrate with its aluminium glazing system. Panel Systems manufactured the panels with a rigid insulated core, providing a high level of insulation for the building. mail@panelsystems.co.uk

SoffitLiner with mechanical fixings



SoffitLiner, the weather-resistant panel range that is designed to insulate an exposed concrete soffit, is now available from Panel Systems as a complete package with mechanical fixings supplied, if required. The company responded to demand from contractors for a complete solution, which includes the insulated panel, produced to standard or bespoke sizes and the accompanying fixings. The SoffitLiner range comprises three products, all of which are manufactured from 6mm Class '0' fibre cement facing board that is factory bonded to high-performance insulation. sales@panelsystems.co.uk

Western Red Cedar Trim Boards help to create a architectural home...



Western Red Cedar Trim Boards have always been immensely popular with Landscapers and Garden Designers building stunning slatted screen fences however they are a perfect option for cladding purposes too. The crisp, clean lines and warm colour tones of Cedar make this product blend in beautifully with natural surroundings as well as contrasting nicely with man-made materials such as slate, render and glass panels. Etc Urban recently completed a residential project in Southwest London that transformed an out-dated and un-renovated 1970s bungalow into a visually striking 21st century home. Silva Timber's Western Red Cedar 19 x 38mm Trim Boards were used extensively on the exterior of the property. By using Western Red Cedar rather than a man made material, the home was given much warmth and character. The defined horizontal lines give the structure a strong urban presence. The versatility of Western Red Cedar is demonstrated in this project; being used for cladding, fencing as well as a custom built gate. 01514 953111 www.silvatimber.co.uk

Living in former warehouses



Blairderry Road forms part of an urban block defined by four local roads. To the east, the character is of mixed use buildings including residential, local retail, offices and shops and services located along the length of Streatham Hill. The previous use of the site as warehousing was not appropriate in this location. The buildings were of poor quality and did not sit comfortably, particularly with the residential buildings to the west.

The complex is a pre-dominantly residential development rising to six storeys on a semi-derelict site to the west of Streatham Hill, which provides residential dwellings and commercial floor-space. The development forms a key part of the regeneration master plan for Streatham District Centre.

The modern complex offers just 11 stylish one, two and three-bedroom apartments in a vibrant new community. Epitomising urban living in a dynamic south London location, the complex combines the traditional yellow brickwork with ALUCOBOND® naturAL Zinc.

Streatham is considered to be one of London's most culturally diverse suburbs, attracting people from all walks of life. The architectural combination of traditional and modern materials is a true reflection of the masterplan chosen for the district.

Paul Herbert, Specification Manager
Richard Geater, Sales Manager
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Fabricator/installer:	FGF/ MIB
Year of construction:	2014
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Direct or diffused – the importance of asking your client what kind of daylighting they require



Mark Winstanley, National Specification Manager at Hambleside Danelaw

The role of natural daylight in the energy efficient operation of buildings has been the subject of much discussion for years. Most Specifiers apply a ‘rule of thumb’, 10 per cent or 15 per cent of floor area, that’s been accepted wisdom throughout their careers, but does that still stand up to scrutiny? More recently, and particularly with the advent of more sophisticated building modelling systems like IES, the industry has begun to focus more on the quality and type of light rather than the simple percentage.

When Mark Winstanley, National Specification Manager for Hambleside Danelaw decided to transfer his 25 years of experience in roofing and cladding to the field of rooflights, he was surprised at the specification process for Industrial rooflights:

“Looking at this element of a roof to some extent with ‘new eyes’ it has amazed me that the most basic question often isn’t asked. So consequently a pivotal performance requirement frequently isn’t mentioned.”

Armed with a bank of data from a physical testing regime at the National Physical Laboratory, Winstanley spoke to Architects, ME, SBEM and BREEAM consultants about the complexities of the performance of rooflights. He aimed to explain how the key performance criteria of light transmission, g-value, U-value, non-fragility and embodied carbon interact and combine to produce the optimum rooflight specification for the client. The surprise was that almost every specifier Winstanley spoke to simply assumed that they would automatically be getting evenly distributed uniform internal illumination.

“Most people asked ‘why would I want anything else?’ but generally – and certainly in industrial buildings - this assumption is not reflected in the final performance specification. It struck me that many specifiers were simply not clear on how to specify the uniformly distributed daylight they expect to see in their completed project.”



direct light



diffused light

Keen to understand why this should be the case, Winstanley concluded that some rooflight manufacturers themselves are partly to blame for the lack of understanding. He found that the industry focus on simply showing light transmission percentages offered by different types of rooflights can divert attention away from a much more important issue – the quality of the light delivered into the building.

“Percentage seemed to be the main point of discussion for clients, Specifiers and manufacturers. In our own CPD Seminar ‘Low Carbon GRP Daylight Solutions for the Metal Building Envelope’ we talk about

the percentage of light transmission, lots of Architects were telling me at these sessions that they cover this in their specifications already. And, to a certain extent, that’s fine but in terms of the quality of illumination levels within the building, however, it misses the key point. The really important thing is not how much light is allowed through an opening, it is how it is distributed when it’s delivered into the building”

Those of you in the know on this subject are aware that this is not particularly new in the field of rooflight performance and daylight planning. The question is: Why is it so important now?

Winstanley believes a clearer understanding of this question is required to comply with increasingly sophisticated performance and environmental targets

BS5427:2016 “Code of Practice for the use of Profiled Sheet for Roof and Wall Cladding on Buildings” makes specific mention of the value of diffused, rather than direct light:-

Looking at this element of a roof to some extent with ‘new eyes’ it has amazed me that the most basic question often isn’t asked

“Rooflight layout and area should be designed to provide the best internal illumination levels.”

“The distribution of daylight within a building should also ensure that there are no dark areas and no direct solar glare; use of diffusing rather than transparent rooflights is recommended for this reason.”

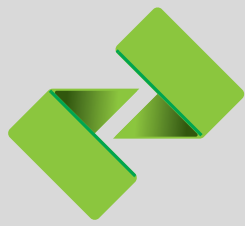
Designers understand that the most important function of a rooflight is to let daylight into a building, but they are assuming that this automatically gives them evenly distributed uniform light. It doesn’t. If they want diffused light – and after all, in Mark Winstanley’s experience, that is what they expect - then they need to clearly specify it. The benefits of daylight are well established, but another key consideration is the visual comfort of building occupants.

“In these days of system guarantees, it’s important to ensure that manufacturers respect your wishes rather than offer a product that may meet or even exceed the light transmission requirement but fails to deliver an evenly distributed uniform light. Equally, if the requirement is for direct pools of light with glare, dark areas and shadow then specify a transparent rooflight that delivers direct light.

This isn’t a case of the world according to Hambleside Danelaw, if it was I’d be talking about our unique low embodied carbon solutions. It’s much more basic than that; this relates to the material the rooflights are made from. GRP offers diffused evenly distributed uniform light in its basic form. Its use as a daylight solution automatically contributes to designing out glare at no additional cost.

It’s a simple specification point, but it’s often missed – ask your clients what kind of internal illumination they want, direct or diffused, and then specify it! Don’t let someone else make that decision for you.”

01327 701900 www.hambleside-danelaw.co.uk



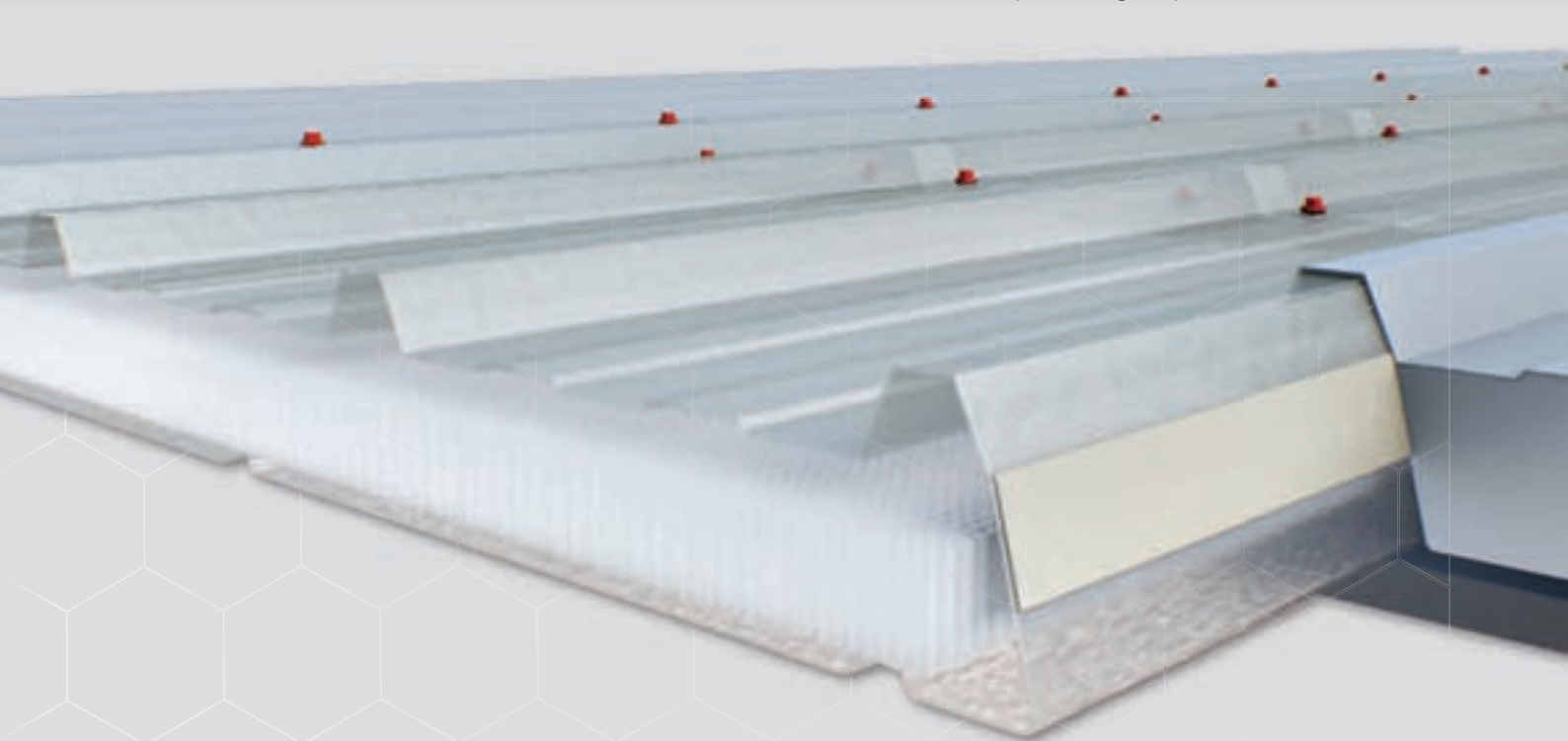
ZENON

RETHINKING THE ROOFLIGHT

Responding to customer feedback and the increasing demands of today's metal roofing and cladding envelope professionals, the design team at Hambleside Danelaw are pleased to unveil a package of improvements to the company's composite panel rooflight following the launch of their new Zenon range.

These improvements address key installation issues and can deliver a range of benefits to the metal building envelope, including:

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Rooflights



Providing students with a clear vision

GEZE UK has given Tyneside students a brand new outlook on life – by supplying more than 100 windows systems for a new state-of-the-art science and technology centre.

The STEM – Science, Technology, Engineering and Maths – building is part of a £14.5 million redevelopment of the Thorp Academy, in Ryton.

The standalone development – one of five buildings on the campus, houses 11 science labs, 11 maths and two ICT rooms as well as two seminar rooms and a dining room to cater for the whole school. There are also new engineering and technology rooms, a construction area where building and related trades are taught, two food technology rooms and a textile room.

With such a practical learning environment, it was vital that the building benefited from optimum natural light and ventilation. This is why GEZE's OL Line openers and operators were specified – to maximise functionality with



a window arrangement that incorporates key safety features for use in schools.

OL Line systems with winding openers were fitted to all of the top opening sections of all windows throughout the three-storey building. These were positioned over a fixed middle section and a bottom opener with manual handles.

Kaz Spiewakowski, managing director of GEZE UK, said that he was proud that GEZE products were used within a development

which provided such excellent facilities for young people.

"It is imperative that the functionality and safety of window systems are a high priority and the OL Line provides the versatility needed in just this situation."

The STEM building was the first school development in a batch of seven schools in the North East to be completed by Sir Robert McAlpine. The construction company won the contract which was funded by the Government's Priority Schools Building Programme. The windows within all the schools share the same design DNA and have the same configuration.

The STEM building has an engineering suite which has been equipped with more than £30,000 worth of CNC milling machinery provided by a local charity trust, The Reece Foundation, that promotes local engineering and manufacturing in the region.

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A historic flour mill in Ramsgate has been transformed into luxury apartments with Crittall Windows meeting the strict requirements of local planners. The building was designed by EW Pugin. The structure survived heavy bombing in the locality during WWII and there are still air

raid tunnels situated beneath the mill, provided as protection for its workers. When a redevelopment of the site – combining restoration of the old with adjacent new build – was mooted local planners were keen to protect the historic nature of the original structures.

01376 530800 www.crittall-windows.co.uk

Senior secures largest PURE® order



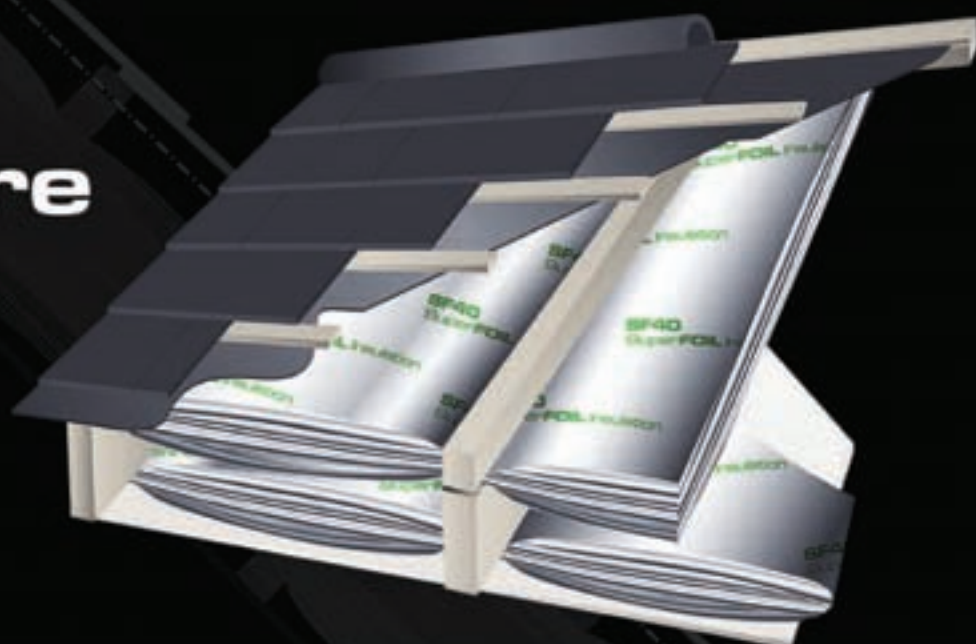
Senior Architectural Systems has secured its largest order to date for its thermally efficient PURE aluminium window system after being selected by main contractor John Sisk & Son and fabricator Elite Aluminium Systems to deliver the full fenestration package as part of a £1.8m

contract for a major new residential scheme in Manchester. Senior's patented PURE® aluminium windows, which offer some of the lowest U-values available on the UK market, will become a key feature of developer Manchester Life's latest phase of 302 new rental homes.

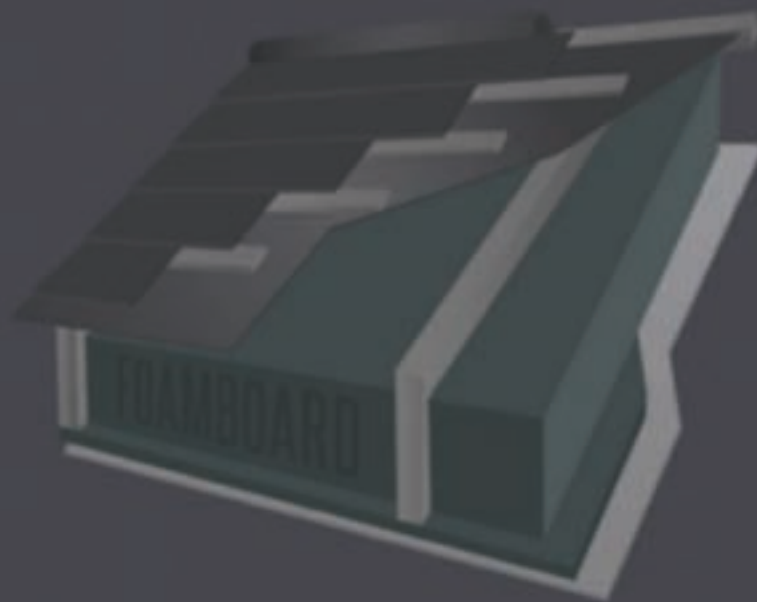
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DRICON is backed by extensive independent certification and is the only BBA certified fire retardant treatment for timber. In addition, it holds Wood Protection Association (WPA) Approved status.

NON-COM Exterior is the only fire retardant impregnation treatment accepted by the NHBC for exterior timber cladding. The treatment is also a WPA Approved status product.

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Kingspan to receive Green Guide rating



Kingspan Kooltherm FM Pipe Insulation has become the first system to be evaluated under the BRE's new Green Guide ratings table and methodology for pipe insulation. The new approach has been specifically designed to provide a more accurate

assessment of the environmental impact of pipe insulation in-situ. The Kingspan Kooltherm FM Pipe Insulation system products received highest possible summary ratings of between A and A+. The new methodology means pipe insulation can no longer be assessed against the Green Guide ratings table for flat board insulation.

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Kingspan Insulation achieves BES 6001



Kingspan Insulation is once again taking the lead on responsible business practices as its TEK and OPTIM-R product ranges became the first in their respective classes to achieve 'Very Good' BES 6001: Responsible Sourcing of Construction Products certification. The

certificate covers all Kingspan OPTIM-R products manufactured at the Herefordshire site and Kingspan TEK panels produced at the facility in North Yorkshire. During the certification process, BRE Global also confirmed that the Kingspan Kooltherm, KoolDuct and Therma product ranges have retained their 'Excellent' ratings.

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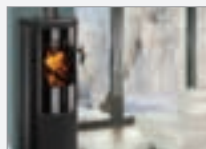
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AET adds energy saving heat meters



Leading provider of Under Floor Air Conditioning systems, AET announce an exclusive distribution deal with Italian based DAE Energia and introduce their latest energy saving product range featuring heat metering solutions for residential and commercial applications. The range consists of single and

twin plated, wall or floor mounted units with associated controls. Of particular interest is the SND Ultrasonic Heat Meter for heating and cooling measurement in residential applications. The unit adopts the latest technology to guarantee high quality and long term stability.

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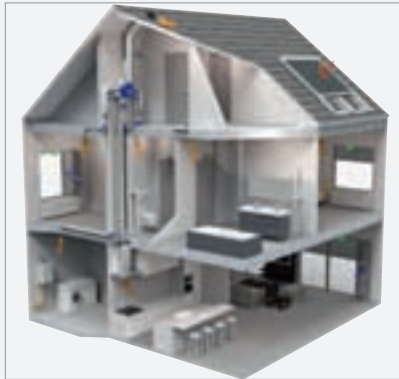
Demand-controlled ventilation by Renson®

For several years, Renson has been developing very successful ventilation systems. Its demand-controlled ventilation system with the Healthbox® ensures the house is optimally ventilated, according to the resident's activities. This ventilation system really can help homes reduce their energy consumption whilst creating a healthy indoor environment.

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the kitchen, bathroom, toilet or any other room where the polluted air is extracted, the user only sees an aluminium design vent. The fan is calibrated fully automatically and regulates itself so as to achieve the exact extraction capacity for each room. This avoids the risk of adjustment errors, thereby ensuring a properly working ventilation system with a

proper flow rate in each room. This automatic calibration also leads to significant time savings, as installation takes only a couple of minutes.

Renson in Maidstone: strong in customised solutions

Renson is a trendsetter in ventilation, solar shading and terrace covers. Since 1909 the company has developed and manufactured innovative products and solutions, which improve the living conditions of people and at the same time cut energy costs – Creating healthy spaces!

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efficient and designed to easily pass the strict Eco Design 2022 regulations that will ensure all stoves sold are clean, efficient and environmentally friendly. The Classic version offers a more traditional look to the current modern looking Purevision™.

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

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Rarely can we say that a new product, changes the face of interior design for professionals in the commercial world. However with MATCH, that statement is entirely true. This new designer panel range from Vicaima removes the limitations experienced with more commonly used decorative finishes and allows limitless design possibilities with multiple applications ranging from wall panels to furniture. MATCH is a revolutionary decorative panel that uses innovative H2P technology and advanced production processes to create tailor-made graphic or pictorial solutions directly onto veneered and other base layers. In this way a collection of decor elements can be brought together to create synergy to a theme or chosen style. The combination between the composition of the product and the advanced manufacturing technology used with the surface materials, allows Vicaima to achieve unparalleled results. These new MATCH panels have been designed to provide a flexible answer to a broad scope of commercial project requirements.

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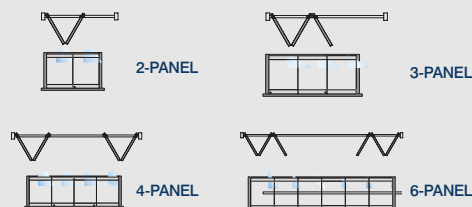
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The smart approach to MVHR

MVHR is widely specified to deliver internal air quality required in increasingly airtight new dwellings, however as John Kelly at Airflow Developments explains, the next step to efficiency is to integrate smart, internet-capable systems

Pressure for all new buildings to be low energy, plus the requirement for more affordable living developments as well as low-cost eco homes – allied to an increased desire from homeowners to be greener and reduce energy bills – is driving greater insulation and increasingly hermetic sealing of buildings.

Whether a building is earmarked for domestic private housing or social housing, architects will be focused on the need to provide effective ventilation to counteract reduced air infiltration rates. This is because a sealed building is more susceptible to damp, mould and condensation, especially in areas such as kitchens and bathrooms where higher levels of heat and moisture are generated through activities such as cooking and bathing.

Without effective ventilation the building fabric can deteriorate leading to costly and time-consuming repair work. It can also pose potentially serious health problems for homeowners. We spend more than 90 per cent of our time indoors and when you consider the average adult requires 15,000 litres of clean air every day, you begin to see how crucial effective ventilation solutions are to extract stale and polluted air and providing fresh, healthy air to occupants.

Mechanical Ventilation with Heat Recovery (MVHR) is a solution to the problem, continuously preheating the incoming cool supply air using heat from outgoing exhaust air. Heat which would otherwise be expelled is therefore put to use, thanks to a heat exchanger. In some cases,

this technology can achieve upwards of 90 per cent thermal efficiency.

Smart control

It has been estimated that 41 per cent of UK homeowners currently have some form of connected technology installed in their home; by 2020 it is predicted every household will contain an average of 10 connected devices.

This, plus homeowners becoming more energy aware means that smart ventilation systems capable of allowing real-time monitoring and control of indoor air environments via a computer or portable device – at home or on the move – are becoming a wise specification choice.

The integration of smart ventilation can help homeowners reduce energy consumption and maximise indoor air quality. Units designed with different profiles to choose from offer users the ability to program the units according to their personal routines and preferences. Setting ventilation to 'Away' during workdays will ensure the unit recognises the decreased levels of CO₂ and avoid unnecessary heat recovery and ventilation into the premises – reducing energy costs and wastage.

Some smart MVHR units also have the option to install two external switches. This allows one switch to be set to 'Boost' profile within a kitchen or bathroom to accommodate for fluctuating indoor atmospheres, and another can be programmed to alternate between 'Home' and 'Away' profiles – saving energy simultaneously.

Architects should also expect internet-capable MVHR systems to be designed with an integrated humidity sensor that monitors the humidity level of the dwelling and automatically adjusts the ventilation to an optimal level.

Specifying a unit that incorporates frost protection so the unit does not freeze in the winter, and a 100 per cent effective summer



Smart ventilation can help homeowners reduce energy consumption and maximise indoor air quality

We spend more than 90 per cent of our time indoors and the average adult requires 15,000 litres of clean air every day

**PICTURED**

MVHR unit supplying fresh air and extracting exhaust air

bypass mechanism so that the dwelling does not overheat during the summer, are also essential features. It is advisable to choose a ventilation system that includes a 100 per cent effective bypass mechanism to ensure the MVHR unit reduces solar gain by guaranteeing that the supply air is never warmed unnecessarily by the hot extract air passing through the heat recovery core.

As our buildings become increasingly tightly sealed and properly insulated it is only reasonable to assert that noise from the outside will permeate less. This means the noise output of ventilation systems will become more noticeable to clients. Therefore it is also important to specify ventilation units that incorporate low energy/noise EC fans and a thick insulation casing to significantly decrease noise levels. High-performance ducting can also help reduce noise by up to 29 dB and ensure zero leakage of incoming and outgoing air.

Advice for architects

Those responsible for planning ventilation in any building and wishing to take advantage of the latest energy recovery and interactive technology should

always seek advice from reputable manufacturers to help specify the most effective solution. Specialist firms will be able to examine the size and type of the building and look at where an architect is planning to have ventilation installed to suggest how each dwelling can optimise air quality – and which system will ensure the right rate of air extraction per room.

Effective control of the chosen ventilation system is an absolute prerequisite for an energy efficient dwelling. Without controls that are correctly set up (as well as understood and used by end-users) maximum efficiency can never be achieved. Giving homeowners the ease and accessibility to simply register their smart ventilation unit to the Cloud and control air flow settings via a computer, mobile or fixed controller is one route to success. Not only will this mitigate energy wastage and improve air quality – but also help contribute to a better quality of life.

John Kelly is marketing manager at Airflow Developments

**Luceco lights The Central Mall**

The Central Mall is one of the major shopping destinations in Khalifa City, Abu Dhabi. Luceco supplied a full LED lighting solution package for the project, the main product was the LED Indus linkable high output linear luminaire, offering 50,000 hours of maintenance free operation. The Hypermarket and branded showrooms at The Central Mall will be the first Shopping Mall in Abu Dhabi to be fully equipped with LED lighting, providing significant operational benefits including reduced carbon emissions and operational costs, improved energy efficiency and no maintenance requirements. The contract to supply The Central Mall in Khalifa City, Abu Dhabi confirms Luceco's position as a leading LED lighting solutions supplier in the UAE, as well as representing a milestone as the first Shopping Mall in Abu Dhabi to be fully equipped with LED lighting technology.

01952 238 100 www.luceco.com

Over 18 years of experience

A well-managed ventilation system helps avoid mould formation on walls and ensures that you, your family, friends or colleagues breathe cleaner, fresher air. There are three popular types of ventilation technologies, heat recovery systems, positive input ventilation and extract ventilation.

With over 18 years of professional experience in the trade, ESS Ventilation is a reputable provider of ventilation systems, and can offer excellent solutions for mould and condensation removal as well. We serve South London and the South East.

info@essllp.co.uk

Colour flooring for creative interiors

Polyflor has recently announced the launch of Bloc PUR, a vibrant collection of solid colour sheet flooring in a broad spectrum of 16 enticing colours. Designed to provide either a subtle backdrop or a bold, modern statement in the retail, leisure and commercial sectors, Bloc PUR is a high performance heterogeneous sheet floor-covering with a textured matt finish. Developed

after feedback from the marketplace revealed a desire for a much sought after plain decoration flooring, Bloc features an innovative, fully pigmented, homogeneous 0.7mm wear layer of pure colour.

0161 767 1111 www.polyflor.com

The finishing touch

The difference between something good and something great is attention to detail. When careful consideration has been made to the sanitary-ware, taps, shower, lighting and the tile or stone covering in a kitchen or bathroom, why leave the tile profiles to chance when a palette of designs and hundreds of options for finishes, textures, materials and colours, are available with Schlüter-PROFILES. The full range offers an ideal combination of functionality and design solutions, suitable for both residential and commercial projects.

2016 has seen the introduction of Schlüter-TRENDLINE which is a range of textured finishes applied to the Schlüter-QUADEC, -RONDEC and -JOLLY profile families. There are a variety of on-trend textured colours available to complement tiles in greige and concrete with beiges and greys right through to rustic-brown for wood and graphite metal finishes.

Also new for this year, the Schlüter-DESIGNBASE-SL decorative skirting range has been expanded, offering an option to



include a channel to run cables through. Schlüter-DESIGNBASE-CQ allows cables to be hidden, and is available in matt white and anodised and stainless steel effect aluminium finishes for a sleek alternative to skirting boards. Also in the range is Schlüter-DESIGNBASE-QD an option when combined with Schlüter-LIPROTEC-ES LED strips, provides skirting light, it can also be used for borders within a wall.

Edge Profiles for Floors: Schlüter-SCHIENE, the original finishing threshold strip or diminishing profile, finishes tiled surfaces and protects the outer edges of ceramic and natural stone floor coverings. The threshold strips, or diminishing profiles, of the

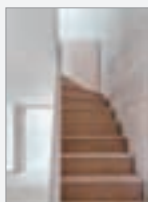
Schlüter-RENO series create a smooth transition between adjoining floor coverings of different heights, protecting the exposed tile edge.

Wall Corners and Edge Profiles: The profiles of the series Schlüter-JOLLY, Schlüter-RONDEC, and Schlüter-QUADEC create a highly durable and decorative finishing for wall coverings and skirtings made of tile and natural stone. Create designer accents using the range of profiles in conjunction with the decorative Schlüter-DESIGNLINE and Schlüter-QUADEC-FS border profiles.

Stair Nosing Profiles: The edges of stairs are exposed to heavy mechanical stresses and represent a high risk for injuries. Because of their slip-resistant design and excellent visibility, Schlüter-TREP profiles improve safety and offer DDA compliance and protection. They can also be combined with Schlüter-LIPROTEC illuminated profiles to add decorative visuals for unique designs on stairs, steps and plinth edges.

01530 813396 www.tileprofiles.co.uk

Reeve Wood is stepping up



Another step in the right direction, Reeve Wood can match floors, doors and of course stairs, to create consistency through any scheme. Reeve's bespoke flooring products don't stop at ground level, completing your scheme with stairs. Some of the projects Reeve Wood have worked on have matched each staircase perfectly with the floors are available on the company website. Reeve Wood's friends at Pure Collection are laying Oak

Chevron Parquet at their new store in Shrewsbury, while in the Philippines Kurt Geiger are laying Bandsawn Oak.

01553 776 835 www.reevewood.com

Automating the welding process



The process of heat welding for vinyl floor coverings has been used for many years and is considered a crucial factor in the durability and longevity of the flooring surface. However, welding will only benefit vinyl floor coverings if carried out properly. A common reason for seam failure is improper workmanship. A solution is the MINIFLOOR from

Welwyn Tool Group which is a highly innovative drive unit which converts an existing hand welder into an automatic welding machine. By doing so it increases the performance of the welding project with a higher welding speed and a more consistent weld finish.

info@welwyntoolgroup.com

Aspecta announces new UK partnership

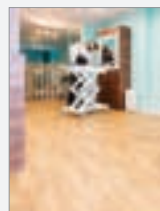


Global LVT specialist ASPECTA has a new UK distributor – Chroma Global Flooring Solutions, who will now be adding ASPECTA's three ranges of LVT to its portfolio. The innovative, modular multilayer ASPECTA TEN followed on from the expansive ASPECTA

FIVE. These two collections will shortly be joined by the aesthetically stunning ASPECTA ONE. All three were created by an internationally renowned design team and feature highly engineered products. The whole portfolio is extremely durable and easy to maintain, and is consequently ideal for all built environments with high footfall.

020 7251 6996 www.chroma.im

Polyflor's Forest fx is perfect for paws



High performance wood effect sheet vinyl flooring from Polyflor's Forest fx PUR collection was recently chosen to help create a stylish interior for pampered pets at Glamour Pooch Dog Spa and Day Care in Freckleton. The concept for this retail interior was created by Beverley Wood Design, a creative consultancy service based in Lytham St Anne's. Forest fx PUR vinyl flooring in the

Rustic Oak shade was installed by the client's flooring contractors in the reception and dog grooming areas.

0161 767 1111 www.polyflor.com

French flair...



Tarare lies just 35km from Lyon in the south eastern corner of France. It's where Gerflor manufacture their Tarasafe range of vinyl safety flooring. The factory sits in 20 hectares which houses the production facility and the holding areas for stock. Tarasafe

is a hugely popular choice for a host of environments; education, healthcare, leisure, hospitality, housing and in any applications that require slip resistance to be maintained. The manufacturing process for Tarasafe safety flooring in Tarare is born out of years of research and product adjustment to offer a product that delivers on all fronts.

01926 622600 www.gerflor.co.uk

Polyflor launches Camaro collection



Polyflor, a UK's commercial and residential vinyl flooring specialist, is proud to announce the launch of the brand new Camaro PUR luxury vinyl tile collection designed for the home. The updated Camaro domestic flooring range includes 30 stunning, authentically reproduced wood and stone effects which live up to the level of beautiful

design and high performance that flooring contractors and customers alike have come to expect from the Camaro brand. Polyflor's experienced product designers have hand selected a collection of 18 wood designs and 12 stone effects for the new Camaro collection.

0161 767 1111 www.polyflor.com

Saniflo extends Kinedo Moonlight range



Saniflo has further extended its range of prestigious Kinedo shower cubicles to include a quadrant version of its popular model, Moonlight. Previously only available as a corner unit, the extremely versatile design can be fitted with any shower, allowing for complete customisation and integration into any bathroom, whether traditional or contemporary. With its understated elegance and neutral styling, the Moonlight features a brushed aluminium effect panel that can be easily drilled for any fixings. The sleek shower cubicle is easy to install and maintain, available in one size of 900mm x 900mm.

020 8842 0033 www.saniflo.co.uk

Bathroom solutions from Taplanes Ltd



Taplanes Ltd provide pre-fabricated Shower cubicle and bathroom pod solutions to a variety of end users throughout the UK. With a strong client base including Universities, Schools, Housing Associations and Hotels, Taplanes pre-formed shower enclosures overcome the inherent problems associated with conventional bathroom areas. The pre-fabricated structure provides many advantages over traditional building methods delivering significant long-term benefits.

admin@taplanes.co.uk

Dolphin launches Clerkenwell showroom

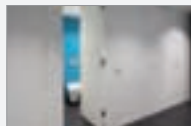


Dolphin Solutions, a leading washroom products provider, has opened the doors to its new Clerkenwell showroom. This latest studio showcases Dolphin's multiple ranges in a stylish and inspiring environment, providing visitors with insights into complementary products and their

capabilities. With products ranging from the durable Excel range, which is manufactured at the company's Bodiam site, to the behind mirror Alavo system, Dolphin's innovative washroom solutions make the company a supplier of choice for many architects.

01424 202224 www.dolphinsolutions.co.uk

Alto FENIX provides fashionable finish



Washroom Washroom's innovative new Alto FENIX toilet cubicles have been used to create a striking design statement for a leading fashion retailer's new regional office. Washroom's new Alto FENIX cubicles form a central part of the washroom design by

providing a unique super matt surface. Manufactured from FENIX NTM using the latest nanotechnology, the Alto FENIX toilet cubicle is soft to touch, thermally self-healing, scratch resistant, hydro repellent and has enhanced anti-bacterial properties, making it ideal for washrooms where a luxury, high performance finish is required.

sales@washroom.co.uk

Safetytread - pioneers of anti-slip stairnosings

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

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

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

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





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Laidlaw unlocks the door to design



For high performance and innovative design for multiple settings, the renowned Orbis series from Laidlaw Architectural Ironmongery provides the ideal solution. Now relaunched, renamed, and supplemented with new products, the popular Orbis collection offers the same superlative

quality that customers expect. The collection includes a wide range of handles, locks and closers. And to assure safety and performance, every element is tested to the latest BS EN standards. Orbis 500 is ideally suited to the contract market.

01902 600400 www.laidlaw.co.uk

neaco featured at winning scheme



neaco's contemporary balustrade has contributed to an award-winning development at the new Barker's Furniture Store in Northallerton. Designed by SP&Architects, the store won Best commercial building/scheme in the North & East Yorkshire region at Local Authority Building Control (LABC) Building Excellence Awards 2016. Nigel Peacock of SP&Architects said: "We are very pleased with the excellent aesthetic of neaco's balustrade which contributed significantly to the urban industrial themed interior design."

sales@neaco.co.uk

ROCKFON's strength and resilience

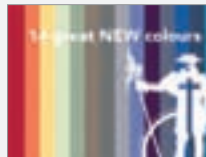


ROCKFON were appointed to provide acoustic ceiling solutions for a major refurbishment programme for the British Army Reserve. ROCKFON outperformed its competitors on both aesthetics and acoustic performance. The ROCKFON

Blanka® dB42 ceiling was chosen to provide outstanding acoustic control in the drill hall. The hall's original interior was fitted with highly reverberant hard surfaces, which created an uncomfortable acoustic environment for the reservists. ROCKFON Blanka dB42 ceiling tiles are 40mm thick and offer Class A sound absorption.

0208 222 7457 www.rockfon.co.uk

Great new colours from Yeoman Shield



To celebrate their 50th anniversary Yeoman Shield has added 14 brilliant shades to its colour palette, giving you even greater choice! Reflecting changes in modern design, the extra on-trend colours ensure your decor up-to-date. Now there are 48 colours to choose from, so whether its' education, healthcare, industry, leisure or retail, Yeoman Shield have a comprehensive spectrum of colours to match your needs. All colours are offered in our standard finishes and can be selected for any of Yeoman Shield's protection products.

0113 279 5854 www.yeomanshield.com

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01902 600400 www.laidlaw.co.uk

Securikey works the room



Securikey, has made innovative modifications to its range of Modulprim security rooms. The Modulprim is a bespoke modular vault solution for both new builds and existing buildings and is a convenient and cost effective method of adding a high

security strong-room to a building. The Modulprim offers a complete storage facility for money, documents and pharmaceuticals and is adaptable to most building specifications, even those with limited space or those located on upper floors. Securikey's Modulprim components have now been adapted to provide further options.

www.securikey.co.uk

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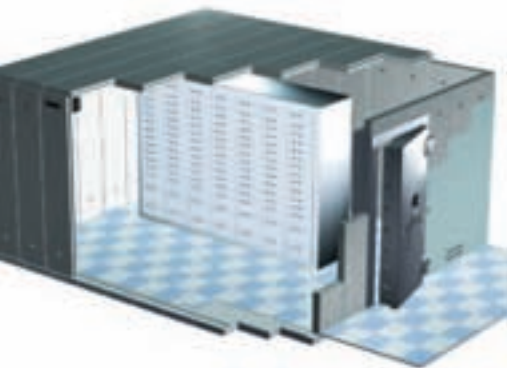
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Offering a completely bespoke, on-site-assembled security room to fit an allocated space, they are increasingly specified by companies looking for extra space with added security

The power of vaults

Jeremy Cassady of Securikey looks at how modular vault systems can provide an effective, easy-to-install bespoke system for high security applications

When clients are storing expensive equipment and valuables, sensitive documents and drugs or chemicals, the risks are extremely high, both in terms of goods being stolen and also the safety of those tasked with transporting and storing them.

A number of factors, such as the value/sensitivity of the merchandise and insurers' requirements, will dictate the type of storage facilities required, and often a vault is the recommended suggestion. It should have the capacity to be integrated with the intruder alarm system, as well as offering a time delay lock, CCTV coverage and limited access with codes being split between staff members.

In order to secure appropriate storage facilities that meet requirements, architects and building planners have a choice. They can commission their own building from scratch, which is costly and time consuming, and a suitable site will also need to be found that will meet all of the logistical requirements. Another option is to hire suitable premises; but finding the right facility to meet very specific needs in the best location can also be very time-consuming.

Made-to-measure security

An effective way to avoid these issues is to install a modular vault. Offering a completely bespoke, on-site-assembled security room to fit an allocated space, they are increasingly specified by companies looking for extra space with added security, as they not only offer a high security option, they are also relatively quick and easy to install and provide a controlled environment. They can be included in the original plans for a building as a dedicated strong room or added later if required.

Offering a five-sided solution if necessary for maximum security and installation flexibility, the individual components of

each modular vault are manufactured off-site to fit the precise specification required by the customer or specifier, which can be in either a new or existing building. The measurements and precise requirements will have been set during a comprehensive survey before being delivered to site as individual panels and welded securely into place.

Customised furnishing such as cabinets and rack systems allow effective stock management systems to be put in place. Security deposit lockers not only offer additional security with high quality aluminium construction, but can be made bespoke to maximise use of space. A variety of different locks can be selected for the door depending on the level of security identified following an initial risk assessment.

To ensure optimum security at high risk events, such as the retrieval and putting away of stock, and to prevent opportunists from walking in and grabbing items, custom-sized grill gates can be installed in the wall so authorised personnel can pass items through to their colleagues from the inside while the door remains firmly closed.

As staff may be spending time inside a modular vault, there is the option of integrating certified airing, ventilation and alarm systems throughout the vault room via customised openings in the walls and door. This also means the perfect storage environment in terms of temperature and humidity can be provided, and enables alarms to be being rigged to precise requirements.

Specifiers are advised to ensure systems comply with European security standard EN1143-1; in addition, the vault should be validated by an independent testing house such as the VdS in Germany to prove it meets stringent criteria to resist attack.

Jeremy Cassady is managing director of Securikey

Res-Lock tilt and turn restrictors



J. Banks are highlighting their unique Res-Lok Concealed Locking Tilt and Turn Restrictor, which has been specifically designed to provide an effective yet unobtrusive safety solution for tilt and turn window systems. The robust stainless steel and zinc diecast construction of the

Res-Lok T&T offers an easy to install and simple to operate design that incorporates a fully auto locking and auto engagement mechanism, together with a dedicated key release for added safety. It is designed for all Aluminium, PVCu and Timber window systems.

01902 864863 www.jbanks.co.uk

Laidlaw Security Systems



With safety being a priority in any building or development, it's crucial to get an integrated system in place that provides what is required. It's why Laidlaw, a trusted name among architectural suppliers, now offers a comprehensive range of security systems, featuring robust,

future-proof products, including the latest Orbis door access control, biometric readers, CCTV and tailgate/people counting devices that are ideal for a wide range of settings – from military buildings to retail environments and residential to educational buildings.

01902 600400 www.laidlaw.co.uk

Kee Klamp® expands its range

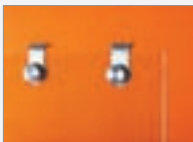


Kee Safety, a leading global supplier of safety railing systems, has expanded its Kee Klamp® range with the introduction of 12 new types of tubular fittings. Designed for installation on steeper gradients, the new slope fittings offer builders and specifiers an aesthetically pleasing option. The latest addition to the Kee Klamp® portfolio is an extension to the current

range of slope fittings. The new components have been designed to enhance the building of guardrail along staircases and ramps, particularly when the slope is greater than 30 degrees.

sales@keesafety.com

Pyroguard launches improved solution



Fire resistant glazing manufacturer Pyroguard has launched its improved Smokeguard solution with new stainless steel brackets. A new brochure accompanies the launch, which provides a greater depth of technical specification information than ever before. Smokeguard is a glass barrier

solution which can help to direct smoke as part of a smoke control system and keep toxic fumes at bay long enough to allow members of the public to exit the building safely, minimising the risk of smoke inhalation, injury and death.

01942 710 721 www.pyroguard.eu

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vast experience in supplying and installing specialist glass. Knowing what a challenging task it can be to identify the right type of glass for your project, we can help you with your specialist glass needs by providing the right information and resources you need.

info@fireglassuk.com

Charcon materials used in London



Charcon has successfully collaborated on a top London residential project, praised within the industry as an example of exemplary design. Trafalgar Place in Elephant & Castle, part of a wider £1.5 billion, 28 acre regeneration scheme to upgrade and reconnect Elephant & Castle,

saw an office block converted into 235 homes. Charcon was consulted to recommend 3,500m² of hard landscaping options that would establish a strong relationship between the green spaces of both the private communal and public areas and the adjacent buildings.

landscaping@aggregate.com

Solarlux contributes to Best Show Garden at RHS Tatton Park Flower Show



Solarlux glass elements have contributed to the 'Best Show Garden' at this year's RHS Tatton Park Flower Show. Show garden 'Through The Looking Glass' was designed by Pip Probert from Outer Spaces and made stunning use of a Solarlux Atrium Plus glass room, independent sliding doors as well as the Solarlux Atrium Careé freestanding glass house provided by Spectrum Architectural Glazing Ltd. Pip's award winning show garden illustrated how modern glazing elements can be embedded in nature. The use of the Solarlux Careé freestanding glass house in particular, demonstrated how glazing solutions can be used to permit year round garden use and enjoyment, eliminating the boundaries between inside and outside and framing special garden spaces. The space, designed for a large family, was split across two levels and provided a contemporary and stylish formal garden and a more unusual informal space. The Solarlux glass rooms provided shelter from inclement weather and also opened up to become a covered outdoor space. Sculptural arches framed moving glass walls, which changed the view within and provided seclusion and individual spaces for the family.

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New BAL external tiling technology protects G7 venue

In 2005 a 20-hour fire destroyed large parts of Elmau Castle near Garmisch-Partenkirchen in Germany. The fire was so severe that four million litres of water were used to put out the flames. However thanks to the efforts of the owners, the luxury hotel was rebuilt in time for the G7 summit to show it in all its glory – as well as the completion of the new Elmau Castle Retreat. Gutjahr System Technology for external tiling, now available from BAL – the UK's market-leader in full tiling solution – played a vital role in protecting the balconies and terraces of both hotels.

On 7 and 8 June 2015 when David Cameron, Angela Merkel, Barack Obama and the other leaders of the seven leading industrial nations strolled around Elmau Castle, memories of the great fire had long been forgotten as the castle emerged like a Phoenix from the ashes.

Following the fire, castle owner Dietmar Muller-Elmau invested around €40million to rebuild the listed building. Together with architect Christoph Sattler, a cousin of Mr Muller-Elmau and grandson of the original builder of 1914, and a team of other architects and designers, a concept was developed for a modern spa hotel within the ancient walls. The result was a modern, five-star superior luxury. It is now one of the "Leading Hotels of the World".

In March 2015, the additional Elmau Castle Retreat was opened 150m west of the castle hidden in the hillside. From the balconies and terraces of the new building, the politicians of the G7 summit were presented with a breath-taking view of the nearby Wetterstein Mountains.

Natural Stone for balconies and terraces

As part of the renovation it was proposed to cover the balconies and terraces with Brazilian quartzite tiles. For six months contractors worked at the castle – up to 45 men at peak times – to complete the tiling.

Rising to 1,000 metres above sea level, the castle faces extreme weather conditions including cold winters, excessive rain fall and variable temperatures. Since the natural stone specified is particularly sensitive, precautions were necessary to protect it from ugly efflorescence and water staining.

Experts recognised this in advance and so specified the AquaDrain EK drainage system for external tiling – now available from BAL.

AquaDrain EK is a passive capillary surface drainage matting, designed for the installation of natural stone, tiles and slabs on drainage mortar on balconies, terraces and roof terraces.

The combination of drainage mortar and drainage mat is recommended by the German Natural Stone Association in its literature. This is because studies have shown that the drainage capacity of drainage mortar on its own is not enough and can cause problems with the installation of drain grates.

The AquaDrain EK drainage mat channels water effectively away from the surface, avoiding any damage. Ventilation underneath also ensure the lining dries faster, while the mesh fabric remains permanently permeable to water without permitting the entry of mortar or cement which could block the capillary system.

Comfortable transitions from inside to outside

A crucial part of the re-build was the transition from the balconies and terraces to the interior of Elmau Castle. German regulations state that



transitions between interior and exterior tiling should be at least 150mm, to prevent water running behind the seal and entering the interior. However due to the architectural approach of the luxury hotel, this was impractical, requiring a solution only Gutjahr could fulfil.

With special drain grates made of stainless steel, transitions were reduced to a more convenient 50mm, while still meeting building regulations and at the same time ensuring interiors are kept dry. Thanks to the AquaDrain drain grates, water is captured at the transitions and directed into the attached surface drainage mat and away from the balcony or terrace.

AquaDrain drain grates are extremely flexible being height adjustable and easy to cut to length on site.

Eight years without damage

Six years after the re-opening of Elmau Castle, construction began on the second hotel.

"The balconies and terraces of the parent venue were still in perfect condition," said Ralph Johan, Gutjahr Managing Director.

"Therefore, the client decided to protect the exterior of the new Elmau Castle Retreat with the Gutjahr System Technology."

No sooner said than done: on 400 square meters of terraces, Brazilian quartzite was also protected against the elements with AquaDrain EK.

Gutjahr System Technology from BAL

Gutjahr System Technology from BAL represents drainage, ventilating and uncoupling solutions for balconies, patios, terraces and on facades and interiors.

Its innovative technology helps protect external installation from frost damage, staining and water damage.

For more than 25 years, BAL's sister company Gutjahr have developed long-lasting trouble-free coverings even on problem substrates throughout Europe from prestigious projects including Amsterdam Library, The Palace of Hambach, and the Weimar National Theatre, to small domestic projects.

Now available to order, Gutjahr system technology represents a breakthrough in the UK market for simple, safe and strong solutions for outdoor tiling installations and provides a complete system for all products required for external tiling, from market-leaders BAL.

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Changing the urban landscape for the mobile generation

People have become glued to their mobile devices, but is the urban landscape well-suited to swathes of distracted walkers? Jonathan Goss of Townscape Products explores how the streetscape is being adapted to make it safer

Picture the scene: an endless stream of pedestrian commuters weaving amongst each other down a city centre street, their faces dimly illuminated by their handheld devices – a daily occurrence we are all too familiar with. Occasionally we witness an absent-minded pedestrian collide with an unassuming item of street furniture – they look around in embarrassment, we try our best to hide our laughter and life goes on.

To add to this, the fusion of virtual and real worlds with the launch of apps such as Pokémon Go has raised real safety concerns as people worldwide become so engrossed in gaming that they are completely unaware of their surroundings, causing many more embarrassing and even dangerous collisions. So is the streetscape prepared for this new breed of pedestrians?

A landscape that communicates

Although handheld technology is seemingly a hindrance when it comes to oblivious pedestrians dodging static obstacles that line the streetscape, technology on the ground is already evolving, transforming street furniture from ordinary to intelligent.

Could street furniture become so advanced that it communicates warnings of upcoming bins and bollards to a phone? Modern upgrades to the streetscape could be a sign of such things to come.

Last year, it was announced that the UK's first 'smart' Wi-Fi pavement was to be installed in Chesham, Buckinghamshire by Virgin Media. With street furniture offering a signal up to maximum speeds of 166 Mbps, this would provide around 21,000 people with unlimited free Wi-Fi up to 80 m away.

More recently, Hull City Council has



awarded local business Connexin a 10-year contract to deliver 50 MB of free Wi-Fi to users across the city each day through the use of street furniture.

As the streets and indeed items of street furniture become more high-tech, they could provide a means of alerting pedestrians to upcoming dangers.

Preoccupied pedestrians not only face injury through collisions with street furniture, but risk serious accidents with vehicles, cyclists and motorcyclists. In one example of a municipality attempting to

A Graphic Concrete art wall created for Kirkby-in-Ashfield town centre

combat this, road signs in Stockholm are already warning pedestrians to pay attention and look up from their smartphones.

Solar bollards

Designed to illuminate public footpaths and dimly lit areas, the solispost bollard, powered by UV light, provides two lighting levels – a continual low level



The solispot bollard emits a brighter light as pedestrians approach

illumination after dark automatically activates a brighter light as a person approaches the bollard meaning it is sure to alert even the most absent-minded of mobile users.

While solar bollards provide a visual warning for pedestrians at night, this could translate to other items of street furniture that alert pedestrians during the day.

Positive distractions

It is no wonder that residents of towns and cities faced with the same concrete dominated streetscape choose to look at their screens. The challenge for designers is how can we adapt the landscape and make it engaging so that people take notice? For example, if road signs and illuminating bollards fail to grab the public's attention, an art wall is sure to do the trick.

As councils face a constant battle with graffiti, products such as Graphic Concrete – a technology producing prefabricated concrete surfaces – can provide a non-invasive piece of artwork that all residents can appreciate.

The patented technology allows for

almost any pattern or design to be used on the membrane and then embossed onto a concrete facade of any size, meaning the potential to create a striking piece of artwork that enhances any public building or area is limitless.

Designed to make a huge visual impact, art walls could help lift the appearance of the environment and encourage pedestrians to appreciate the urban landscape.

A changing streetscape

We anticipate that the solution to the dangers, which are especially acute in the age of Pokémon Go, will most likely be solved by technology that works in two ways. First, through app updates and also through the development of more high-tech street furniture that communicates with apps and smartphones.

Progress is inevitable, so it will be interesting to see how technology solves the problems it has caused for our relationship with the urban environment.

Jonathan Goss is managing director of Townscape Products

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Hauraton drainage channels used at Maritime Transport HQ

The Maritime Transport Limited new £5 million headquarters in Felixstowe has received the accolade of “Winner-Design (Non residential)” at the Suffolk Coastal Quality of Place awards held in October 2015. Designed by Architects, Wincer Kievenaar, the Maritime Headquarters office provides an impressive gateway to Felixstowe Port.

The Headquarters extensive car park, set with composite grey blocks is drained by 98 metres of Hauraton RECYFIX® PLUS 150 channels fitted with Class C250, HEELSAFE ductile iron gratings. A further 47 metres of RECYFIX® PLUS 100 channels were also installed in other locations on site.

The RECYFIX® PLUS channel unit is made of tough, virtually unbreakable recycled polypropylene (PP) formulated to be very resistant to daily temperature fluctuations from frost conditions to strong sunlight, including the Ultra Violet (UV) spectrum. The



channel unit also features galvanised steel top edges which house the ductile iron gratings.

Complying with the requirements of EN 1433, the PP is given its UV resistance by adding just sufficient carbon black as a stabiliser so that the structural strength of the material is unaffected and a consistent appearance is maintained. The PP is also naturally resistant to de-icing salt.

Ken Burgess, Hauraton's Project Manager comments; “The main contractor, E.L. Construction Limited liked the product for its ease of installation, each RECYFIX® PLUS 150 one metre unit, complete with its grating only weighs 12.8 kg, so its easy to position and robust enough to withstand building site conditions”.

Technical information for all the RECYFIX® ranges, showing sizing and installation details, is available digitally on the website – LANDSCAPING tab, as is a video “Why is RECYFIX® break-proof”.

01582 501 380 www.hauraton.co.uk.

Jeckells' keeps pupils in the shade



Jeckells' the Sailmakers has recently installed three tensioned canopies over outside learning areas at Icknield School in Letchworth. Working closely with architects, Wilby & Burnett, Jeckells fabricated the canopies, sourced the stainless steel posts with red post

bumpers and organised full installation to fit in with the school's demanding schedule. Ferrari Soltis 86 premium mesh material was used due to its strength and durability. In recent years Jeckells has built up a reputation for the design and manufacture of quality shade sails with an almost unlimited degree of versatility in design and colour.

mark@jeckells.co.uk

Learn about the benefits of landscaping



Surfacing specialists, The Bituchem Group, is offering architects and specifiers the opportunity to receive a free, informative presentation on the features and benefits of hard-landscaping materials. The company has created the presentation as part of its customer service ethos in order to update and educate industry professionals on the latest hard-landscaping and surfacing technologies and solutions. The presentations are hosted by Bituchem's Marketing Manager, Mark Stott, who has been delivering the presentations to architect practices and other companies for the past year.

mark@bituchem.com

Firestone provides lining for funky gibbon habitat



The gibbons at Twycross Zoo are enjoying the freedom of a new habitat thanks to a design featuring four islands surrounded by a perimeter moat using an EPDM lining membrane from Firestone Building Products. Firestone supplied its PondGard™ EPDM lining membrane through UK distributor, Gordon Low Products, for the project and the lining was installed by specialist contractor, Turtle Productions Ltd. To ensure that the PondGard EPDM lining matched the exact contours of the moat, Firestone supported Turtle Productions with calculations for cutting and laying the membrane to optimise the use of materials and minimise joins. Turtle Productions laid a geotextile membrane onto the moat surface to create a cushioned surface between the ground and the pond lining. The PondGard EPDM lining was then laid in sections and each section was spliced together using Firestone's QuickSeam™ Splice Tape with a 150mm overlap at each lap to improve practical installation of the QuickSeam Tape by limiting the risk of contamination in the splice area. The completed lining was allowed to settle during the filling process and the Gibbons have now moved into their new home.

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