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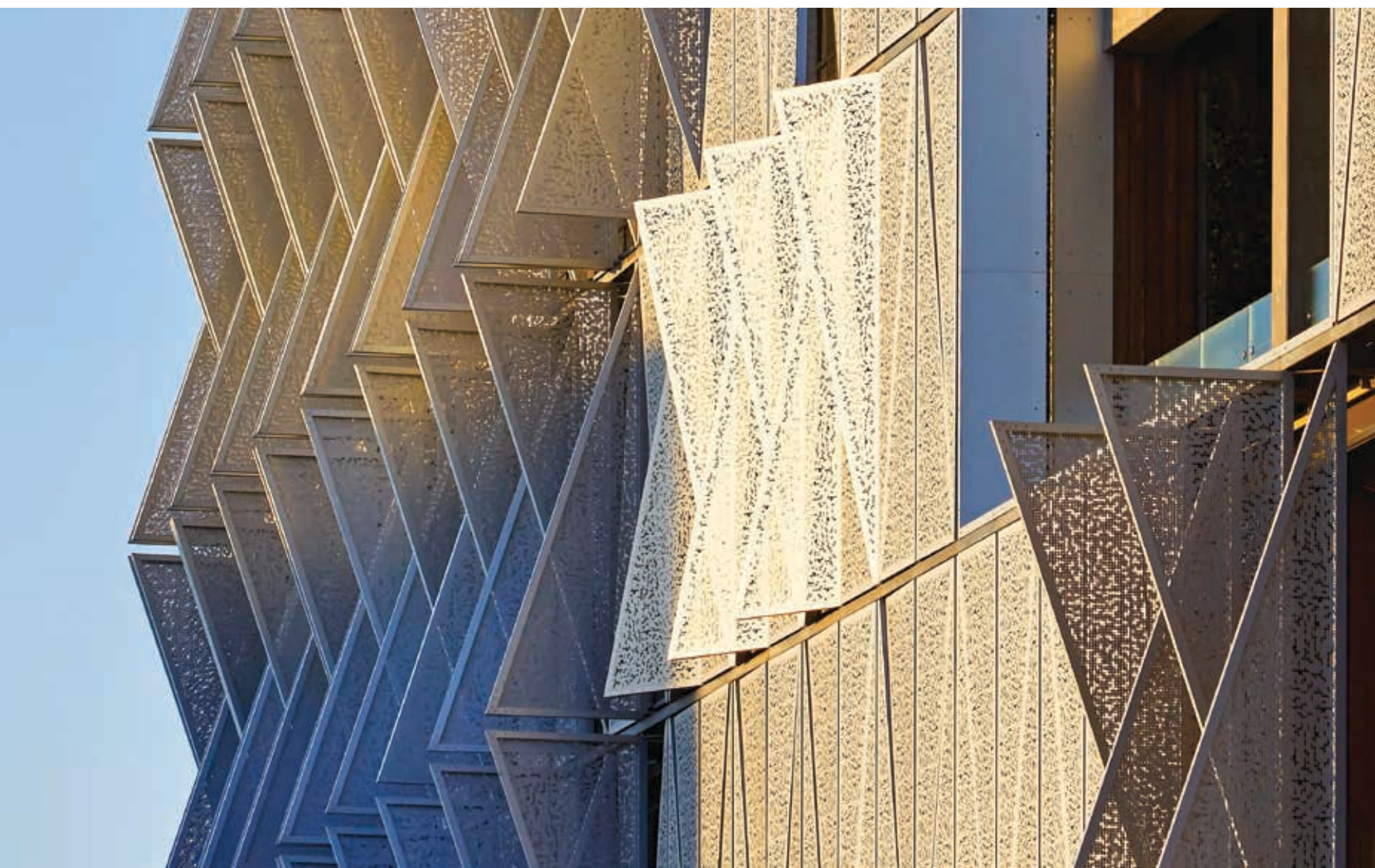
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It feels less...

...about New Year's Day and looking forward and more about looking back with the Housing Bill. No sooner had David Cameron announced that not only is the government going to push the 'voluntary' Right to Buy on Housing Associations (who are charities, not public bodies by the way, with no interest in selling off homes) but they're also looking to force local authorities to emphasise Starter Homes at '80% of market rate', rather than social housing. It is

part of his 'national crusade to get homes built' and to see an end to Generation Rent. Quite how this policy is going to pan out remains to be seen but as no volume housebuilder has any interest in seeing house prices fall, I fail to see how even this carrot this will result in the 200,000 homes a year it's apparently going to generate. But with the average home in England and Wales, according to the latest figures from the Office for National Statistics, being 8.8 times

the typical 2014 salary, the mere availability of a property is something of a moot point. It also flies in the face of the planning system's public duty to create cohesive, mixed communities, not only taking us back before Thatcherite policies but to before Atlee and Bevan - before the establishment of the Welfare State in fact. And 'Generation Buy'? You have to ask yourself, who exactly is buying?
Jan-Carlos Kucharek, Editor



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Cover image: Campus Kolding, Denmark by Henning Larsen Architects. Photograph: Hufton + Crow

Compendium



PAUL WARCHOL

Underground art

Philip Johnson might have felt it fine to live in a greenhouse with his severe modernist home in New Canaan, Connecticut, but it seems he thought differently about his artwork, which he sequestered away in an earth berm bunker set among 16ha of landscape. Based less on Mies and more on Mycenae's Treasury of Atreus, the painting gallery, over time, fell foul of damp ingress. This meant the removal of 50 red coping stones, each weighing up to 650kg, so Kemper Systems could install its Kemperol membrane, allowing Johnson to keep the 'art' in 'earth'.



Port whole

Opened by David Lloyd George in 1922, Edwin Cooper's Port of London Authority HQ at 10 Trinity Square opposite the Tower of London suffered a bit of a pounding in the war, leading to a functionalist 1970s addition behind its imposing wedding cake-like neoclassical façade. While much less extreme than what later happened to Cooper's 1925 Lloyds of London building, Trinity Square is undergoing another radical change – conversion into a luxury hotel, club and residences. VM Zinc has been appointed to bring it all together under one roof with its zinc rainscreen system, adding some glitz to what was formerly just 'blitzed'.

Ham and extrusions

With Ham Yard, Firmdale's eighth London boutique hotel, installing Crittall windows inside and out to give its Boho chic interiors a timeless twist, Crittall says it's seen a trend for internal glazed partitions to give huge spaces a level of intimacy. The hotelier has used them at its two swanky hostelries in New York, where Crittall is also working on Bob Stern's commission for two new residential colleges at Yale University – courtesy, it seems, of a \$250m gift from Forbes List banker Charles Johnson. As Bob steps down as Dean of its School of Architecture in 2016, his \$500m swan song won't complete until well after his retirement.



SIMON BROWN



Heavy water

In a portable world trending towards light and thin, it's refreshing to see something so heavy. Introducing Chesney Architectural's 'stamp sink', a classic sink with a bowl and pedestal that looks like it was ripped straight out of the Roman Forum via Downton Abbey. One thinks floor reinforcement for installation – but then again, any joists robust enough to cope with Lady Mary and maid dragging the corpse of an oversexed Turkish diplomat around at all hours should manage here.



It's all Greek...

Greece might have been accused by the EU central bank of cutting corners when it came to sorting out the tax affairs of its population, but cutting corners to great effect is what London based Greek architect Bureau de Change has been doing with its new furniture range for bespoke brand Efasma, which launched at 100% Design. The firm looked to local skills in joinery to produce its delicate oak and walnut frames, with weaving and basket-making skills used for the cotton rope-bound backs, giving the fine frames rigidity. Chairs engage with a white marble-topped, timber table via triangular, shiny brass-lined recesses cut into its edges, lending art-deco like geometry and detailing to the collection. If God's in the detail here, let's just call him Zeus.

UPCOMING

Education Estates Manchester Central, 10-11 November

Lux Live Excel, London, 18-19 November

Sleep Event Business Design Centre, London, 24-25 November

Eco Showcase Various locations to 3 December



Ones and zeroes...

Ah, the dilemma of choice – something I'm always reminded of when confronted with any number of unexplained hotel shower taps, which usually require one to leap back six feet when accidentally slamming the 'rain effect' full on, thermostat still in the cold position. Designer Barber Osgerby must have been caught out too, as it's come up with the Axor 'One' range, launched in September by Hansgrohe. The central temperature valve defaults at 38°C, while ingenious hand/elbow push plates allow you to switch from the various heads instantaneously. With an 'eco' lever that cuts the flow by half, the design duo calls it a 'binary approach to showering'; a complex term for the fact it's either 'on' or 'off'. But whatever you call it, it brings much needed simplicity back to the fundamental act of bathing.

Moral fibre

Longlisted for this year's Mies van der Rohe Award, Danish architect CEBRA's 'Children's Home for the Future' is a pioneering project for a new type of 24-hour care centre for marginalised children and teenagers, establishing an idea for social care that promotes the facility as four interconnected homes rather than an institution. With pitched roof forms clad externally in wood, intimacy is promoted with Troldekt acoustic panels internally, made of 100% natural wood fibres – a cradle to cradle product whose use is helping teenagers adapt to life in the big wide world.



MIKKEL FROST



EDMUND SUMNER

Shot 'til you drop

Christmas is coming and our inevitable John Lewis reference comes in the form of Chester's new flagship Waitrose store. Broadway Malyan chose Aurubis' Nordic Bronze cladding to give an imperial bent to Emperor Vespasian's old haunt while referencing the area's metalworking heritage. The building's civic sense and scale are compounded as it runs beside the Shropshire Union canal to the 1799 grade II* listed Boughton shot-tower; one of only three remaining in the country and which made lead musket shot for the Napoleonic Wars. A handy segue from the Roman Empire to the French one – via a free coffee for footmen with loyalty cards.

When putsch comes to shove

When is a door not a door? When it's choc-a-block with everything that it needs to become a multi-functioning, responsive part of the elevation, that's when. Centor has created the 'Integrated' range, which offers not just the door but adds to it with inclusive screens, shades and hardware. So now you can control sunlight, privacy and even the unwelcome arrival of insects – all at the push of a finger. And, with its patent pending smooth glide movement, at the flick of another you can open and close it too. Not since the death of punk have two fingers wielded such power.

Double glazing

Sunsquare MD Justin Seldis invited me onto one of his rooflights in London last month to explain the robustness of his glazing products. While walking on glass will always seem a bizarre and unsettling notion to me, it is less disturbing now the firm has a BSI Kitemark accreditation for quality – an apparent first for the rooflight industry. A lot of investment was needed for the extreme testing for air permeability, weather tightness and wind loading. Live loading is obviously specific to each situation but you can't accuse the boss of not putting his, or indeed my, money where his mouth is.



NICHOLAS YARSLLEY



Less is Moor

With so much of the whole world on the move, Suricatta Systems' high tech, easy to erect, temporary shelter is very prescient. The breathable, waterproof, SURI shelter was developed by Spain's Urbana de Exteriores with Alicante University and uses DuPont's Tyvek and Plantex geotextiles. A cavity in its light weight walls can be filled with local materials giving stability and cutting transportation costs; so the Moors, once expelled from Spain as invaders, can now be sheltered by it as refugees.

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Reality check



At regular attendances at MelBim conferences recently I have found a small cross section of the building community doing amazing things with technology.

3D scanning has been around for a while but hasn't really hit mainstream construction. Rather than replace traditional surveying techniques, it is used as a verification tool. My experience with 3D scans has been a painstaking process to rebuild geometry from groups of points, as we have lacked solid translation software and computing power capable of extracting usable surfaces from the point cloud. The service engineering arm of Arup outlined an interesting approach using Lidar scanning to upgrade a mechanical plant level. They started by scanning the existing space to create a point cloud, then extracted sets of points from it to build surface geometry. Next a 3D model of all existing and proposed services was composited and placed in a single virtual reality environment complete with construction notes and specs. After construction a second scan

was taken and the resulting point cloud overlaid with the proposed model for comparison. Errors and omissions in the construction were quickly identified and resolved, and produced an extremely accurate data rich 'as built' model complete with specifications for the facility management team. This approach is a defining moment in building modelling as it will create a single digital file containing the entire specification linked to the appropriate geometry, with sets of proposed and constructed information in a walkable virtual reality environment.

Hansen Yuncken is also blurring the boundary of virtual and real space with iPad tools that allow contractors to view the BIM model from the real world location. Contractors can peel back layers of the building and see specific structure, services and finishes. If a clash is found they can take a photo of the existing conditions, mark up the model view and submit as a detailed RFI back to the design team without leaving their current task, saving itself huge amounts of time. Every element in the virtual

environment contains a unique ID linked directly to a live BIM model. The design team reviews those elements identified in the clash using programs like Informa, which catalogues emails, notes, site photos, reference material and even individual BIM elements in a 3D environment by creating customised searchable attributes, similar to those used by search engines. What is amazing is that once the BIM element is identified, the file and 3D view linked to it will automatically open for the user.

These conferences reveal the diverse mix of stakeholders in the BIM world. Architects, engineers, quantity surveyors, manufacturers, contractors and building management teams now have a single file in which to input and coordinate their industry specific data. Instead of searching through files and folders, it is possible for the first time to walk through a virtual space rich with information and extract specifications and data embedded in the geometry. ●

Alan McLean is an architect at Bates Smart Architects in Melbourne

Books



Archi-Graphic – An Infographic Look at Architecture

Frank Jacobus

Laurence King £12.95 PB

I once had a student job in a market research organisation that had a big sign on the wall that said 'Torture the data for long enough and it will eventually confess.' That's what's going on here, with Jacobus connecting obvious and obscure facts around architects and architecture to produce a thoroughly absorbing coffee table book crammed full of fascinating infographics. Here you'll find out exactly why Sauerbruch Hutton is king of colour, an underground map of architects' illicit affairs, that the young Bjarke Ingels is entering the canon of the greats if only for his number of Google page views, and see the total area footprint of the world's biggest architects expressed as a solar cosmology graphic. A perfect stocking filler.



An Architect's Guide to Public Procurement

Fin Garvey

RIBA Publishing £40 PB

Wading through the mire of bureaucracy necessary to be considered for public projects is intimidating and not for the faint-hearted – but the eventual build out and the chance to credibly put your practice out there for future work is fine reward. Garvey's book sets itself the aim of trying to make it easier for the novice to get a handle on a complex process. Gird your loins however – it is not an easy ride. This is an information rich document which, while talking in plain English, finds it hard to mask density behind scant infographics. But stay with it: architect Walter Menteth advised on the book and has argued in the RIBA that recent OJEU procurement changes technically make it easier for small practices to get a foot in the door.



Studio Craft & Technique for Architects

Miriam Delaney & Anne Gorman

Laurence King £19.95 PB

Going through this book is like going back in time; to when we all drew by hand and made physical models. No doubt John Tuomey, who wrote the preface, still does; but one feels he's part of a dying breed. Aimed at students of architecture, descriptions of scalpels, how to set up a drawing board and cut foam are almost laughably quaint but when you think about it go right back to the root of the discipline. The chapter on perspective representation reminds us how we too can think like computers and the one on structural elements reminds me of the joke about an architect challenging an Irish builder to state the difference between a joist and a girder. 'One wrote The Dubliners and the other Faust,' he replies. Similarly, this book is an object lesson in revisiting your assumptions.



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LuxLive

The first thing to note about the upcoming LuxLive event is that, unlike previous years, it's not one but two shows – which should give architects an added reason to visit.

A completely new event, [lightspace dot london](#), seeks to shed some, ahem, light on the subject from a specifically architectural angle, featuring two days of curated content from key designers and artists working in the field today. Here you'll find practitioner and teacher Ben Adams discussing why it's so difficult to get a lighting designer appointed; and Andreas Schulz, lighting designer to a number of big European cultural projects including the MuCEM Marseilles and Frankfurt's Städel Museum. Designer Dean Skira, meanwhile, will link light and landscape, talking on his Cikot Bay project in Croatia, which includes a network of illuminated floating 'jellyfish'. Rogier van der Heide, chief designer at Zumtobel, will expound on his notion of 'Darkitecture', exploring the important role of contrast in contemporary spaces. Given the over-illumination UK

Rogier van der Heide, chief designer at Zumtobel, will expound on his notion of 'Darkitecture', exploring the important role of contrast in contemporary spaces

cities seem to suffer from, this seems particularly prescient. With others looking at how materials react in light, and light's significance to religion, it looks like a stimulating group of speakers, something even Gottfried Semper might have found interesting, so certainly worth popping along to if you're there.

In the main hall it's business as usual with LuxLive. In the three public arenas here, seminars will concentrate more on the technical,

regulation and guidance aspects of the sector. Expect to find events on cutting-edge topics, such as Cisco's explanation of how powering light fittings through Ethernet cables is going to revolutionise lighting control, the state of OLED lighting development and a Dragon's Den looking at innovations like hydrogen powered light and one that claims to run on no energy at all.

The end of the second day will see the annual Lux Awards being dished out to the best examples of lighting in the business, including the winner of the 'Young Lighter of the Year' for research papers on the subject. But before the day one closing party I'm intrigued by the inaugural 'Bad Lighting Awards'; rewarding the most overlit, underlit, shadowy, glary and otherwise generally appalling examples of lighting that can be found from around the country. I've already seen some examples in the press release and, like the ubiquitous rat, they are nearer than you think! ●

LuxLive and lightspace dot london are at ExCel London on 18-19 November 2015

PIP takes a look at a selection of products exhibiting at this year's show



AURORA LIGHTING

Flat panel

Aurora is playing the numbers game with its latest flat panel, which unlike most of its competitors boasts a colour rendering index of 95, rather than around 80. Back in the psychedelic sixties of course this wouldn't have been much of a selling point, as we liked colours and shapes to morph into one another and turn into things that they weren't. It was crazy man!! Now that's embarrassingly yesterday, and we like to know where we are. This is just the ticket to see exactly what's going on.

Stand K6

gb.auroralighting.com



MARL

Quantum dot LED

It's Darth Vader's lightsabre again, left by all those Halloween trick or treaters rampaging through the streets demanding sweets with menaces. Actually, it's no such thing, simply a quantum dot LED light that does, nonetheless, share one very important thing with old Darth's organ: tiny crystals of semiconductor material that work like phosphors in LED lighting, converting blue light to other colours. So when you're going over to the dark side, the Orion QD can create just the mood you need.

Stand K26

leds.co.uk



FAGERHULT

Itzu luminaire

Nowadays, it's pointless to put out a press release for any design that doesn't include either the word 'sustainable' or 'minimalist'. Well, luckily for Fagerhult, the Itzu luminaire is both. So slim and white you can hardly see it, like those waif-like models of yesteryear, but, unlike them, it's healthily sustainable, so that you should barely notice its presence on your electricity bill. And that sustainability has two aspects, as being 'trend neutral', it shouldn't fall out of fashion, like models can.

Stand S24

fagerhult.com



IGUZZINI

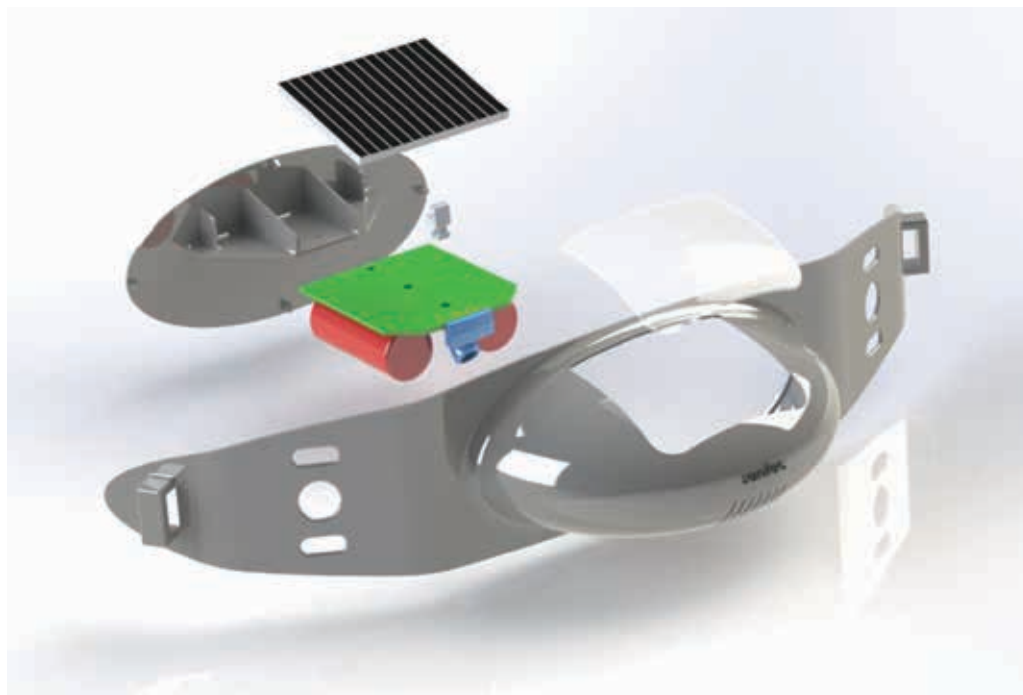
Laser downlight

'Excellent performance in a miniaturised body...' Goodness, there must be so many uses for that enticing phrase... though here we're talking not The Boss but something more illuminating. It might look like an inter galactic capsule, but this is actually the Laser indoor downlight and the 75mm version is the big one – the smallest is a titchy 17mm across. The PR says it decorates rooms discretely (think it means discreetly) and elegantly, but at that size what wouldn't be discreet? Well, certainly not Mr Springsteen.

Stand P15

iguzzini.com

City noise sensor



What: Solar Owl

Where: Warwick University

Scientists remain obsessed with the idea of mapping our cities in ways that go far beyond physical geography. Organisations founded in academia, such as UCL's Centre for Advanced Spatial Analysis, have found potential revenue streams by interpreting urban meta-data visually; their virtual models of carbon monoxide generation, urban heat sinks or people movements are becoming part of the broader understanding of how a city functions.

Solar Owl is part of this bigger-picture thinking. Now undergoing prototype testing, it is the brainchild of PV firm Polysolar, the University of Warwick and Cambridge-based specialist technology consultancy Sentec. The aim is to make it the first commercially viable noise pollution sensor that provides real-time data on outdoor noise levels without requiring maintenance.

With a projected cost of less than \$20 (£13) per unit, and without the need for an external power source, Solar Owl has the potential to provide very detailed information on noise levels over an extended period, allowing us to build a definitive aural map of our cities.

The unit consists of a photovoltaic unit, a sound sensor with a range of up to 200m, and a transmitter. The innovation, says Polysolar chief technology officer Joanna Slota-Newson, is the way the energy management system stores solar power, allowing it to optimise read-outs according to the amount of power available, giving it an almost intuitive flexibility.

'If the energy sensor picks up a reduction in available power it can either decrease the number of readings it sends out by spacing out the time periods it transmits in or it can store the readings over the same period and transmit them at a later time when more power is available,' says Slota-Newson, arguing that this consistency gives the Solar Owl unit its accuracy.

The algorithms controlling the power management, data collection and transmission were developed to keep the system foolproof and maintenance free for at least 10 years. After final testing the team plans to roll them out to the Greater London Authority to monitor sound levels in the capital. To do this on a scale where the information can be useful, units need to be fitted at sufficient density, hence the cost limit. Sentec is now seeking large-scale manufacturers who'll be able to make and supply Solar Owls at the requisite volume and price. ●

THE SOUND OF SILENCER

A 2011 World Health Organisation report 'Burden of disease from environmental noise – Quantification of healthy life years lost in Europe' – claims that long-term exposure to noise may account for 3% of deaths associated with heart disease and stress. The argument is that noise keeps our bodies alert, continually producing stress hormones even when we are sleeping, a factor that can contribute to heart attacks and strokes. At the most quantifiable level noise levels can be linked to broken concentration and reduced academic achievement. 'The point of the smart cities movement is to inform governments and guide future policy and the Solar Owl is part of that thinking,' explains Joanna Slota-Newson. But how invasive is the technology? Does it merely measure sound or record it? This is always an issue that comes up, she says: 'The system isn't designed to pick up voices but measure levels of sound in timed bursts. That said, it could be activated by extremes of sound, such as a gunshot, which might have a relevance in future criminal investigations.'



Above left The Solar Owl is a simple unit that is maintenance free.

Above The campus at Warwick University where Solar Owl prototypes are still undergoing testing ahead of full scale production.



Solar Owl technical spec

3.5V Organic photovoltaic	Energy level evaluated every 24 hours: cautious increase in send rate vs aggressive decrease in send rate at low energy levels
PV size 45mm by 55 mm	30F super-capacitor for energy storage
AIMD-based power management algorithm	
Data send interval 40 seconds	<\$20 (£13) per module



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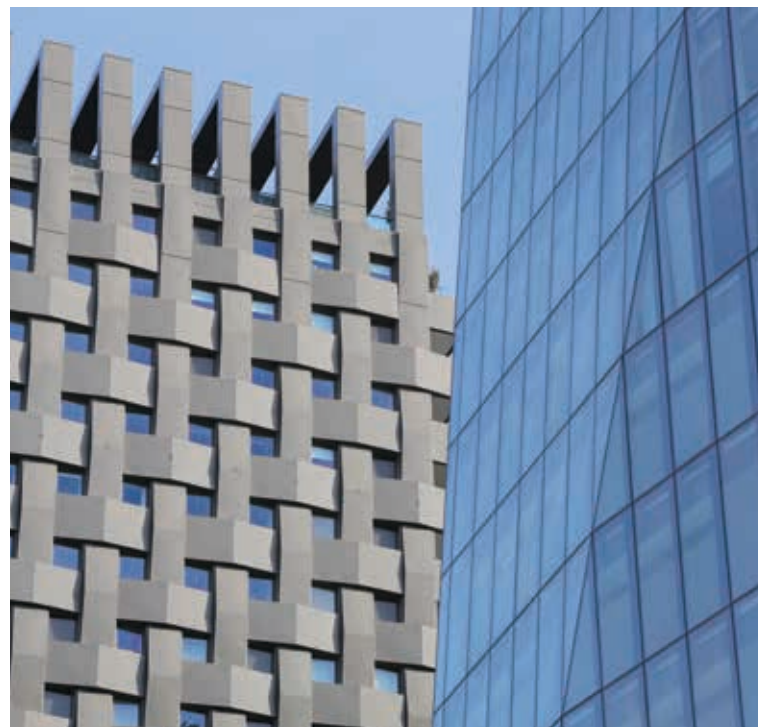
Ted McMullen
Managing director



Ronnie Mills
Technical director



Adrian Doyle
Design office manager



What: McMullen Facades

Where: Moira, Northern Ireland

Rural Northern Ireland is an unlikely place to find a specialist unitised facade manufacturer cladding some of the UK's tallest and largest buildings. Nestled among homesteads and green rolling hills, near the picturesque village of Moira and the royal-blessed town of Hillsborough, a plane flight from many of its projects, McMullen Facades is driven on the global stage by the natty axiom: 'You never have to go east of London for a good facade'.

A competitor to Europe and China's big facade contracting firms and unique in the UK, McMullen's story indicates strong evidence to go west. Based from day one on a model of a design assist service more commonly found in the United States, McMullen Facades prides itself on not having a big sales force/team. In its place, the company has a vast in-house design

and technical team designing and building bespoke facade systems all within its 8500m² site, and an unwavering belief in the power of prefabrication. It is a process which draws people, know-how and components from all over the world to a quiet corner of the country and transforms it into a hive of activity pumping out skyscrapers elsewhere.

Yet with large-scale, high-profile projects including Canary Wharf Crossrail development, Evelyn Grace Academy, NEQ Regents Place and the National Graphene Institute under its belt, and regularly working with architects including Allies & Morrison, Broadway Malyan and Foster + Partners to name a few, McMullen had modest beginnings. Edward McMullen started the business in 1971 as a small glazing company. At the height of the troubles in Northern Ireland there was little investment into new build but a lot of replacement glazing work. The aluminium division started in 1979

when Ted McMullen, the current managing director, joined the firm, and it was a strategic decision to develop the business over the years to be recognised as a firm which could effectively manage ever higher standards and more complex projects, and demonstrate an in-depth understanding of UK standards and legislation.

The company went into unitised systems 15 years ago – a decision based on the belief that manufacturing facades in a factory environment is in the client's interest. It built a factory extension with an overhead crane to handle the units even before it had secured its first project. Ten years ago it added its HQ to the site, showing off its manufacturing capabilities, and extending it almost immediately. In December 2012, the company became part of specialist roofing and cladding contractor Lakesmere, a move which has increased its financial strength and security in a market characterised by companies failing. The merger has enhanced cash

Far left Facades for Foster + Partners' Canary Wharf Crossrail development in London.

Left Basket weave cladding for the Triton building at NEQ Regent's Place, London, designed by Tate Hindle.

McMullen's reserves, and eliminated bank borrowing and a core overdraft.

Now part of a £120m group, McMullen Facades focuses on contracts of between £8m and £20m, working with tier 1 contractors and even able to offer a full building envelope package service through joint ventures with the rest of the Lakesmere Group, which has offices all over the UK. Its emphasis over the coming years is to work with architects early – six to nine months' in advance of the project going to planning – as a means of creating true unitised facade innovation. Its plan is fully backed up with financial and human resource growth strategies, including the training of 6-8 design team graduates every year. It is a strategy that sees this bustling site eyeing up locations for a new, bigger factory for future expansion. ●

This editorial is supported by McMullen Facades Ltd
www.mcmullenfacades.com



1. INTRODUCTION

McMullen has been manufacturing unitised facade panels for more than 15 years. The company's technologically advanced manufacturing facility can process up to 400 a week, depending on the design's complexity. At the moment the factory is focusing on three projects: the 1400-unit project Here East, a conversion of the Olympic Park's media centre by Hawkins\Brown, Leeds Central Square by DLA Design and Tidal Basin, two 25 and 24 storey towers for Carillion designed by CZWG.



3. COMPONENTS

All materials arrive at the factory as ready-made components from McMullen's new 40,000ft² storage facility seven miles away. McMullen's sourcing and supplier team works out which components are needed to construct the design according to quality, time and budget. McMullen works with suppliers from all over the world, including aluminium from Germany, glass from Poland, Spain and Germany, and smaller building components such as brackets from local companies. It also has a specialist purchasing team for components such as brass, copper and stone.



5. COMMUNICATION

Communication is vital on all levels in the drive towards world class manufacturing. Every morning teams meet to discuss targets. Measures and guidelines set by McMullen's research into levels of excellence are continually communicated via team boards (above) and a screen in the factory. This also extends to suppliers. Early communication with the glass supplier for Here East, for example, meant that the patterned frit glass is supplied in the order in which it is needed for the panels, speeding up assembly and construction. The design team is available next door at all times for queries.



2. DESIGN

McMullen's design office, in the building next to the factory, employs 51 people, from facade, structural and thermal engineers, through BIM and 3D specialists, to technical managers and system developers. Design is split into two parts for each project – front end and system design to streamline buildability. Once a project has been assessed, it is assigned a technical manager, senior facade engineer, facade engineers and a structural team. Usually between eight and 15 designers are assigned to each project.



4. ASSEMBLY

Inside the factory are 100 workers, with specialist skills from CNC machinists to quality control technicians on up to eight or nine manufacturing lines. McMullen is inspired by Toyota lean manufacturing methods such as the Kanban system to control the logistical chain and inventory. The factory environment is constantly adapted and updated according to the projects in development. A high volume production (conveyor) system was introduced in May for the Here East project. Each panel is 5.7m by 1.6m and circa 500kg. The conveyor has five stations, splitting tasks into 50-minute sections.



6. TESTING AND DELIVERY

McMullen assures the quality of its products through prototyping and laboratory testing which takes place off site at an accredited UK laboratory. Meanwhile completed panels are sent out for delivery on HGVs almost every day. Here East's panels are being manufactured at a rate of 50 minutes per unit, nine units per day and three deliveries per week. Shipping from Belfast is rapid compared to other European facade manufacturers with either next day for daytime shipping or two days for overnight shipping possible.

Campus Kolding, University of Southern Denmark

Perforated triangular sun screens move throughout the day to control light and heat at Henning Larsen Architects' highly energy efficient building

Words: Stephen Cousins Photographs: Hufton + Crow

Watching a timelapse video of the Campus Kolding building at University Of Southern Denmark (SDU), designed by Henning Larsen Architects, feels like observing the movement of an obscure timepiece engineered by an advanced alien civilisation. As the seasons change and the sun rises and dips in an arc across the sky, the building's three metal facades, made of hundreds of shutters, move in varied patterns like a kaleidoscope of butterflies about to take flight.

Though worthy of a sci-fi novel, the mechanical facade is in fact a form of dynamic solar shading, comprising over 2,000 sensor-controlled perforated aluminium shutters, which adjust to changing daylight and heat levels, and the behaviour of users inside, to create a comfortable working environment.

The system is part of an ambitious environ-

mental strategy involving a range of passive and active systems, designed to cut overall energy demand by 50% compared to buildings of a similar type in Denmark, and reduce annual energy consumption to just 36 kWh/m²/year.

A triangle motif permeates almost every aspect of the 13,700m² building, in which more than 2,500 students study communications, design, linguistics and culture courses, alongside 109 full time staff.

Designed to orientate the building towards three key local landmarks simultaneously – the harbour (Kolding is a major seaport in Southern Denmark), train station and the adjacent river – the triangular plan also reflects the geometry of the site. And by avoiding the need for an orthogonal building, it leaves space for a new plaza, shared with two other educational institutions.

Each of the five storeys divides into a series



Overlooking a nearby river, the south face of the Kolding campus makes full use of its dynamic facade of triangulated panels.



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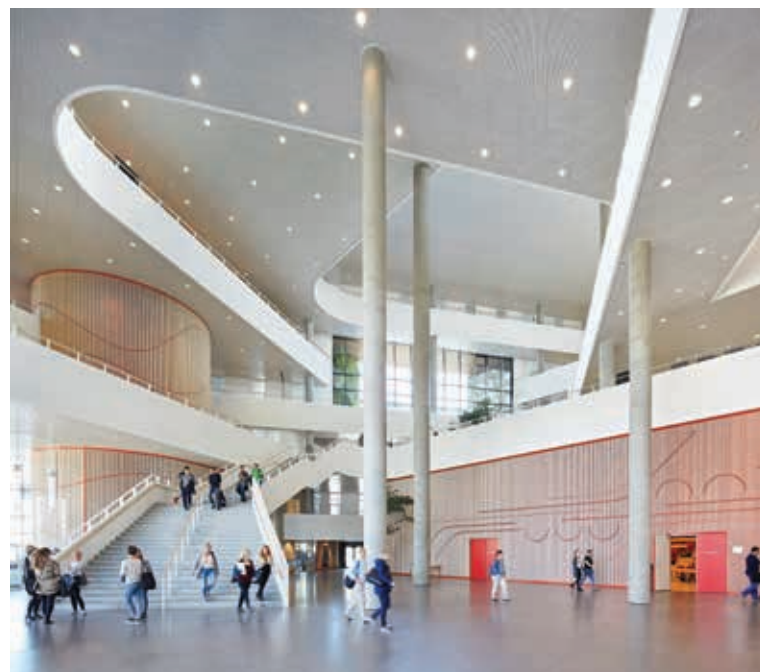
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Top left The geometry of the building responds to the harbour, the nearby river and the train station.

Top right The plan of the facility is complex, changing at every level, creating dramatic atrium circulation spaces in the process.

Bottom left The panels set 600 mm back from the glass facade, creates an access zone for maintenance and cleaning. The effect of the panels is palpable internally.

of smaller equilateral triangles, angled in different directions to define spaces for a ground floor lecture theatre and cafeteria, and classrooms and offices on upper floors.

A five storey atrium is created from triangles cut into floor slabs and offset or rotated by 60° to give the impression that the space twists as it rises towards a triangular skylight. The rotation opens up different vistas from balconies lining the atrium edges, which are used as informal lounge and study areas.

Arranging the shutters of the kinetic facade across a galvanised steel frame that stands apart

from the main building extends the three-sided symphony. The frame projects 600mm from the weathertight main facade and functions as a maintenance service corridor.

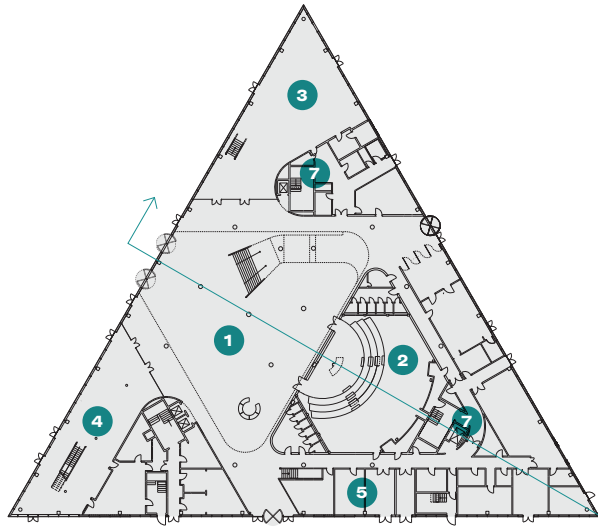
Each of the shutters is either fully movable to an angle of 0-90°, or fixed at a 30°, 60° or 90° angle, depending on location. Shutters on the south and northeast elevations are movable except for those that offer shading to the toilets, two staircases and in front of terraces, where they are fixed to either 30° or 60°. Fewer shutters are installed on the northwest elevation, which has a lower heat load and is used

less in the evenings. They are mainly fixed at 90° to the facade except for over the classrooms.

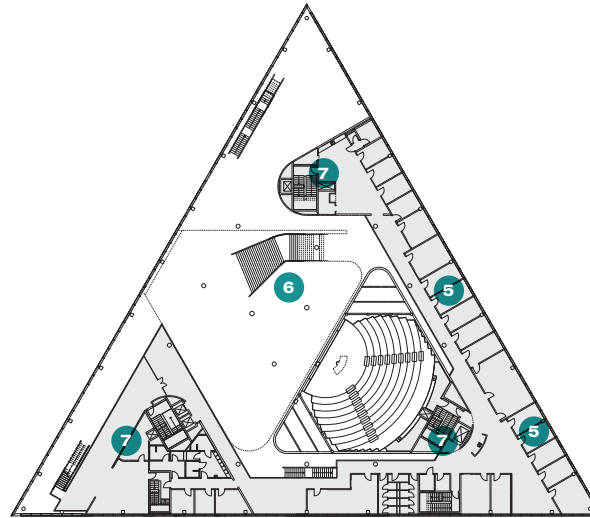
Peter Koch, project manager at Henning Larsen Architects, commented: 'We wanted to create a building that changes throughout the year, becoming more open in the winter time, when there is less daylight, or more closed in late spring, when the sun is low, or at other problematic times of year, in terms of solar control. This reduces the heat load on the building, cutting the cooling requirement and energy consumption.'

He continued: 'The fact the moveable

Ground floor plan

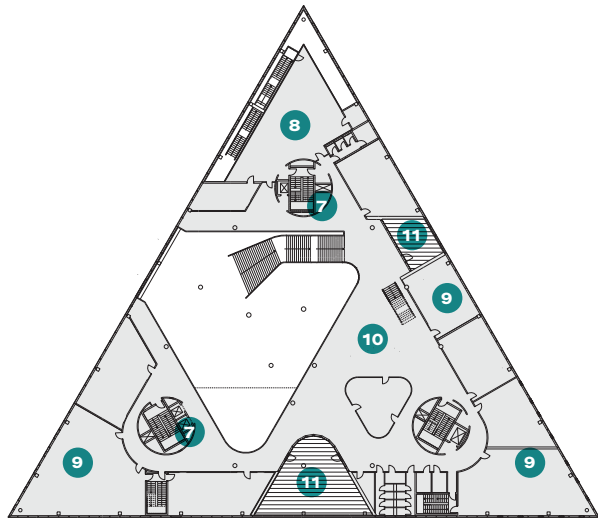


First floor plan



- 1 Foyer
- 2 Auditorium
- 3 Library
- 4 Canteen
- 5 Administration offices
- 6 Atrium above
- 7 Service core/access stairs
- 8 Study hall
- 9 Class rooms
- 10 Atrium lobby area
- 11 Terrace

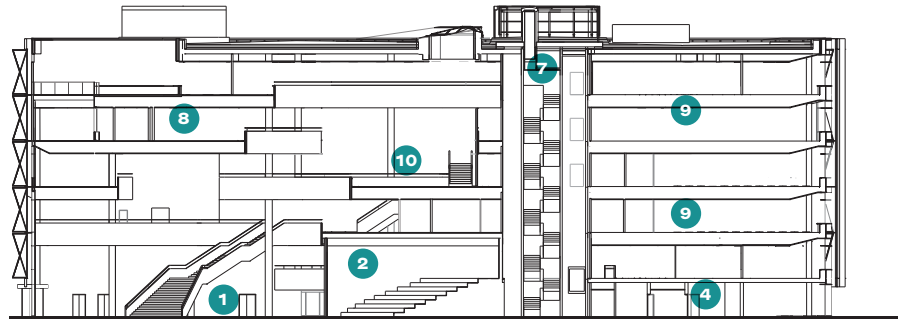
Second floor plan



0 5 10 20m



Section



0 5 10 20m

elements can stand at any position from 0-90° creates a rather varied expression on the façade, so we decided to introduce the fixed shutters to underline this expression.'

Sensors positioned around the building monitor internal heat and light levels and feed the data into a central building management system. The BMS triggers small electric motors, hidden at the base of each shutter, or between pairs of adjacent shutters, moving them to fully open, closed or positions in between. Although the shutters are controlled by electric motors, energy consumption is minimal as they move gradually and remain in one position for several hours at a time, says Koch.

In the classrooms, users can manually override the shades, a measure intended to increase their sense of control over the environment. However the extent of user control must be limited in use to reduce the impact on the building's overall energy consumption.

Even fully closed shutters admit a controlled amount of natural light through a pattern of keyholes punctured through the aluminium. Many are linked together to create openings resembling amoeba or bacterial growth.

'The shutter system had to seal the building off from the sun, but be transparent enough to allow students to see the surrounding area, and people outside to see activities going on inside

the school, at least during darker times of the day, when the lights are on,' said Koch.

A number of shutters on the plaza elevation form part of an artwork by German artist Tobias Rehberger, themed on time and emphasising the building's dynamic, seasonal nature. Shutters in three colours close or open to indicate 1 minute, 10 minute or 60 minute intervals making it possible to work out the time of day.

Campus Kolding is the first university building in Denmark to meet stringent energy consumption demands described in 2015 building regulations and includes a range of other innovative sustainable technologies.

The building functions as a live research

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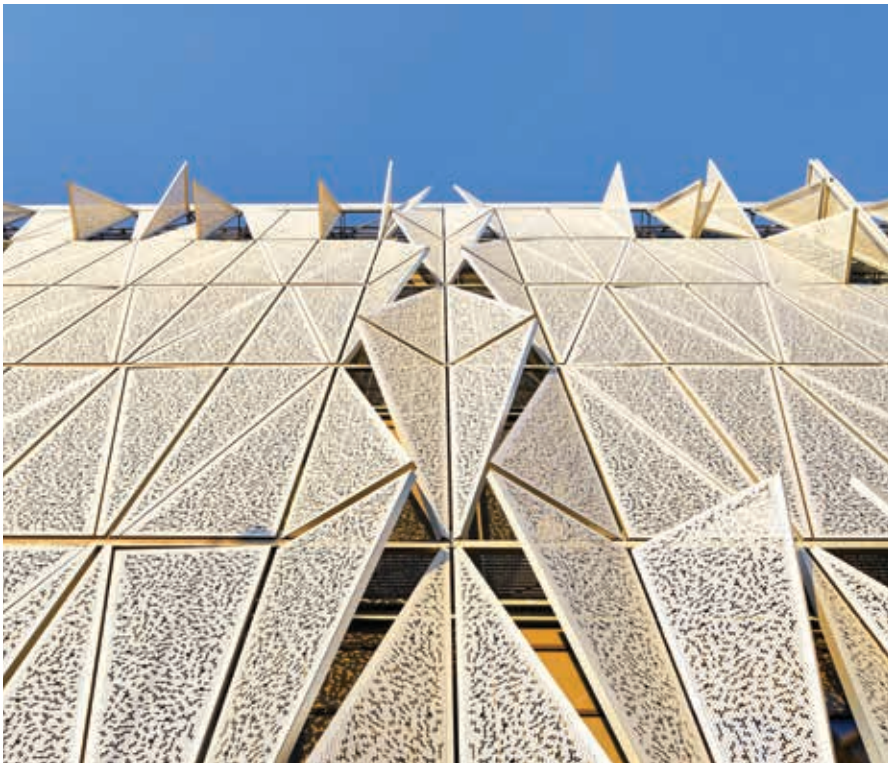
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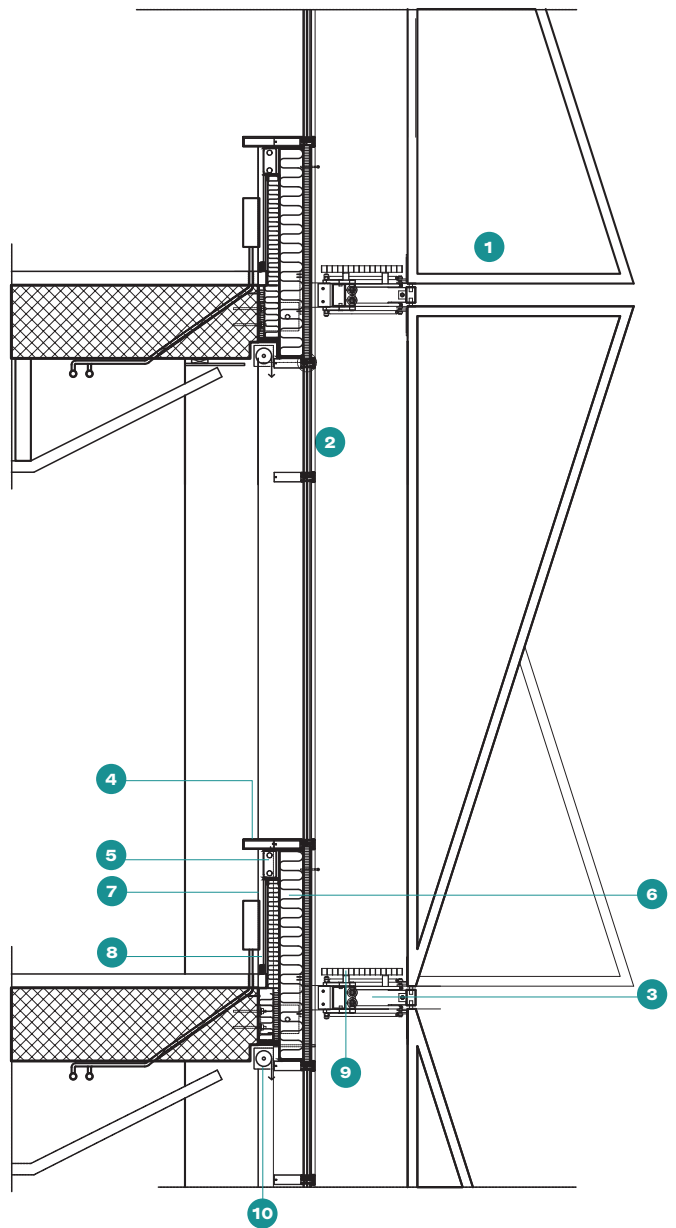
an etex company



Responding to the sunlight, Henning Larsen's moving facade creates a butterfly effect for the building.

- 1 Perforated triangular aluminium sheets fixed to aluminium frame
- 2 Triple glazed, sealed, toughened glass units
- 3 Rotating triangular panels fixed to galvanised steel frame, connected back to slab via 'Isokorb' brackets
- 4 Window cill
- 5 Cable channel
- 6 Mineral wool insulation in vapour proof steel chamber
- 7 2 x 13mm gypsum board as internal lining
- 8 Steel back plate
- 9 Galvanised safety grille on all gangway grates on facade
- 10 Recessed roller blind unit

Detail section through glazed facade and external screen framework



project into the effects of increasing concrete surface area on thermal mass. The undersides of concrete slabs in classrooms have cast-in rows of ridges, designed to boost their surface area and generate a 16% gain in thermal mass capacity, reducing the building's cooling requirement. Results of this research are still being assessed.

Installing vacuum insulation on the backs of the windows enhanced the thermal performance of the facade, explained Koch: 'Although it was expensive, we calculated that its performance was 10 times better than traditional insulation and it massively increased the

available floor areas. The technology has not previously been used in Denmark's building industry, but it is safe and can be easily integrated into a facade system.'

Campus Kolding's roof is installed with a 400m² solar PV array and a 20m² solar thermal array. The building also plugs into an aquifer thermal energy storage system, comprising two 25m-deep groundwater wells, designed to provide a renewable source of heating or cooling, depending on the time of year. It's another example of how this advanced sustainable building is able to react to the changing seasons and daily cycles of light, dark and heat. ●

Architect Henning Larsen Architects

Client The Danish University and Property Agency

Contractor Jorton Aarhus, Denmark

Structural engineer Orbicon

Landscape architect Kristine Jensens Tugnestue

Suppliers

Outdoor areas Hansson og Knudsen APS ●

Shell contractor EMR ● **Interior contractor**

Jorton ● **Facade contractor** ET – Alufacader ●

Facade elements RMIG ● **Installation contractor**

Brønnum ● **Kitchen contractor** KEN

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1
Glass extension
IQ Glass

We are all open to new things here. That's a given. But how about being open to old things? Jeremy Corbyn hopes you are, as must the owners of Shenfield Mill, who thanks to IQ Glass have added this glitzy extension to their home. If this frameless corner opening onto a slice of traditional Berkshire countryside, convinces you to open your dusty wallet, then blow off those cobwebs and splash out on the automated sliding door, frameless rooflight and aluminium bi-fold doors as well – and let light from the ancient sun and moon flood the rest of your house.

iqglassuk.com



2

2
Cladding panels
Neolith

I guess these panels are like the Paleo Diet (if you remember that – so 2013!) as they also are made from naturally occurring ingredients that the more adventurous of our ancestors might have happened upon when, perhaps, taking a break from the hunting and gathering. Did they get breaks? Clays, feldspar, silica and natural mineral oxides. If Fresh and Wild sold cladding, this is what they would sell, people. It's stain-resistant, impervious to chemicals, and the ones on this Dutch hospital are dichroic. Very new New Stone Age.

neolith.com



3

3
Chameleon facades
Rockpanel

The rainbow is, of course, a sign of forgiveness. So will residents of Collyhurst estate, northeast of Manchester, some 'of the most deprived communities in the country,' feel more favoured by the Powers That Be following the addition of Rockpanel Chameleon facade cladding – 'a beacon of regeneration' – as part of a renovation to their sixties tower block home? The prism effect comes from a crystal layer, and the surface changes colour depending which angle you look at it from. Those residents might of course be wondering where the crock of gold is hidden.

rockpanel.co.uk

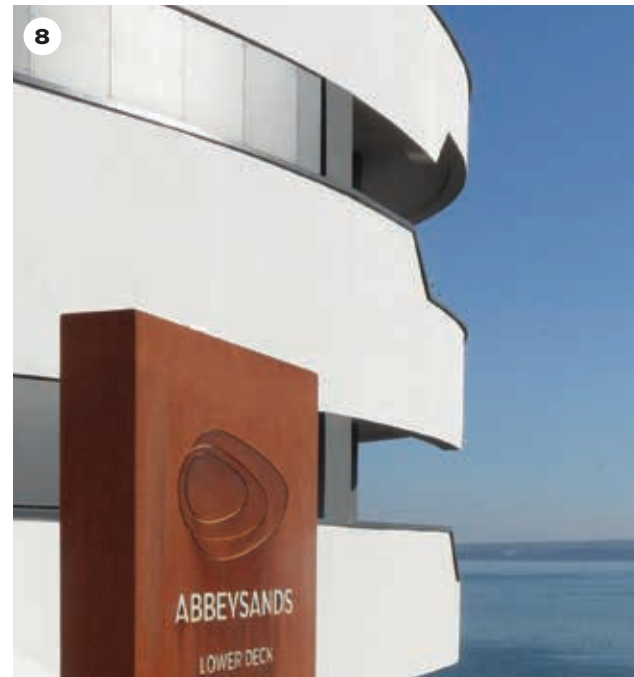


4

4
Roof tiles
Laumans

See? Coloured clay is a thing. Here at the Highfields Humanities College project in Blackpool, Bracknell Roofing hung 30,000 Laumans glazed interlocking tiles on a building. With two elevations of 80m by 10m and another 60m by 10m that's miles of tiles, and fewer smiles (I'd imagine) until it was done. Especially given the fact that the team had to do an actual tile jigsaw and create the aqua-to-green fade from architect's drawings. Something like a butterfly's wings, the tiles' colourful bluebottle tones help carry the body of the beast.

laumans.de



5
Roof tile
Redland

Am I ascending or is this house sinking? It's like when you're in a train and the one next door leaves but it feels like you're off instead. Anyway, I'm sure they used a decent groundworks contractor, because the curiously named Plain House in Surrey just sold for £2.5m. The eco-efficient house, which creates a certain percentage of its own energy, is roofed with Redland's Rosemary Clay Craftsman tiles – yet I don't think they are heavy enough to drive it into the sod. Can't be so sure about the six bedrooms, five bathrooms or home cinema though.

monier.co.uk

6
Optiwhite glass panels
Pilkington

If I've learned anything from 20 years of the Antiques Roadshow, it's that a Clarice Cliff tea set is the easiest objet d'art to spot (give or take the odd Moorcroft vase). These glass panels on Stoke-on-Trent's City Council building, where Cliff was born and worked, reference her deco colour palette – green, blue, red, yellow and white – but a country cottage with blue trees would have had more semiotic oomph. Ceramic might also have been more appropriate, but, they say, the glass – including Pilkington's Optiwhite low-iron glass on the outer pane – let the colour shine more brightly.

7
Facade system
Technal

The Technal team must have been guided by angles as it created this sloped glazing for Pegasus Academy at Whitehorse Manor, Surrey. They glazed a new nursery, six new classrooms, an enlarged hall, and a new entrance and administrative areas that link the two existing buildings where angles had previously feared to go. The corner edges were particularly hard to detail and success hinged on the angle eyes looking just right. The Academy has won several awards, including a RIBA London gong, but I'm sure there was nothing oblique in the judging process.

technal.co.uk

8
StoTherm insulation
STO

Perfect day for a murder, what? Surely I can't be the only one imagining breaking glass, spine-chilling screams, and the sound of patent leather evening shoes echoing through this Agatha Christie-style development on the English Riviera. Whodunnit? Not Berthold Lubetkin, or any domesticated international modernist, but living architect, Kay Elliott. The art deco balconies owe their long, sweeping curves to the StoTherm Classic external wall insulation, which should also cope with exposure to the sea just 6m away. Easily close enough to chuck a bloodied candlestick in.

sto.co.uk



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Is there too much freedom in schools?

Neighbourhood schools, created by parents, sounded a great plan for people power. But funding shortages, red tape and powerful trusts have soured the dream

Words: Josephine Smit

Five hundred more free schools in five years: that was the pledge that prime minister David Cameron made in the run up to the May general election. By September he was taking the first step towards meeting that manifesto commitment, launching the next wave of 18 new free schools in a flourish of ideological rhetoric.

We are now well and truly in an age of austerity in state school design, development and refurbishment, and delivery approaches, stakeholders and buildings have changed significantly. Architects have adapted to a delivery environment dominated by the Department for Education's Education Funding Agency (EFA), whose influence extends from budgets to the output specifications that essentially form the design brief. But five years after Michael Gove's Academies Act shifted control of schools away from local authorities and paved the way for

free schools, the sector is still evolving.

The government's January 2015 census of schools and pupils in England notes that at the start of this year almost one in three pupils – more than 2.7m – was being taught in the 4722 academies and free schools that now exist. With all schools, especially the best performing ones, now invited to convert to academy status, more than 60% of state-funded secondary schools and more than 15% of primaries are either academies or the newly-established free schools.

If the prime minister sticks by his pledge, the number of free schools looks set to more than double by 2020. The Conservative government

Below Hillview School for Girls, the first Optimum School to be delivered using the approach.

also expanded the remit of the approach this autumn, allowing free school applications to include nurseries as part of their bids.

To date, more than 250 new free schools have opened their doors, and a further 116 are destined to open in 2016 or after. Most of the upcoming schools will be in London boroughs where pressure on school places is most keenly felt. Outside London, key areas for free school development include the central region of Northamptonshire, Hertfordshire and Bedfordshire, as well as Bristol and Birmingham.

Rise and rise of the education trust

But the latest tranche of 18 new free schools named in September is significantly down on the 48 announced in March and includes no parent-proposer bids. Far from giving parents free rein to establish schools in their neighbourhood, the legislation has presented education trusts with a business opportunity, resulting in networks of academies and new free schools that rival local education authorities in size.

The EFA's constraints have put the emphasis on education, so if trusts want facilities that go beyond the basics, the onus is on them to find the funds. Some do find ways to do that, albeit fairly modestly. 'We have schools where we have put in more funding than the norm, but there has to be an added value for that, like greater flexibility from having wider corridors,' says Ged Mitchell, head of estates and facilities at Bright Futures Educational Trust (BFET).

Altrincham-based BFET operates nine schools across its area, a mix of existing and newly developed facilities. It has two very different primary projects in the pipeline in Manchester: the new build Rushbrook Primary and the upgrading of Stanley Grove. Both are being delivered through the Priority School Building Programme in a batch led by contractor Interserve, working with JM Architects.

Rushbrook, due to open in 2016, will benefit from sharing facilities with adjacent schools plus some supplementary funding from Manchester City Council. 'The council is adding more value for access and security measures. This is a school that will be prominent in the public realm and will be used by the community,' explains Mitchell. Stanley Grove is centred on a Victorian Board School which must be retained. 'We're still in discussions about how much work



will be done to the Victorian building – there will be architectural details we won't want to remove because the school has a history, but if we want something we have to find the money.'

Adding value

Ask parents, education providers and architects how they would describe the learning environments that are being created through this process and they use words like adequate and basic. Slashing the school build budget from £2000/m² to £1100/m² was intended to raise standardisation and focus on functionality. 'When the budget is that tight everything has to work as hard as possible. Ultimately a classroom is a classroom, so we work very hard on the communal and linking spaces to make them as dynamic and inspirational as possible,' says Caroline Mayes, divisional director at Stride Treglown.

'The industry has risen to the challenges set by government,' says Helen Taylor, practice director at Scott Brownrigg. She highlights how the industry has engaged with the government's aspiration to see greater standardisation in school design: Scott Brownrigg and Galliford Try have developed one such standardised approach, Optimum Schools. However, that particular aspiration seems to be diminishing as the realities of school development are confronted, adds Taylor: 'We have seen some standardised approaches, but not copycat schools because schools are too individual.'

But irrespective of school type and procurement route, the EFA's influence leaves trusts and architects feeling that they have relatively little influence over the delivery of schools, particularly free schools. That lack of connection

between designer and end user could mean opportunities to add value are being lost. 'We accept there's no more money, but would like more flexibility in how we use the school area,' says Taylor. 'The Optimum Schools approach minimises circulation, accepting for example that some of it could be external. But it's hard to make that work when you are not working with an end user. How does the EFA decide who wants an internal or external corridor?'

Taylor says the EFA seems to have tightened rather than lessened its grip on the process in the last five years. 'We've become separated from the end users. That's a shame as we have lost the opportunity to innovate and look at specific community needs. That lack of connection at a community level is causing some projects to trip in planning and can create delays. We could be helping to make things happen faster.'

If only...

The difference that a connection with the client can make is evident in the University of Birmingham School, which opened in September. The country's first secondary university training school, it is a learning community combining educational research, teacher training and the education of pupils from very

'We've become separated from the end users... so have lost the opportunity to innovate and look at specific community needs'

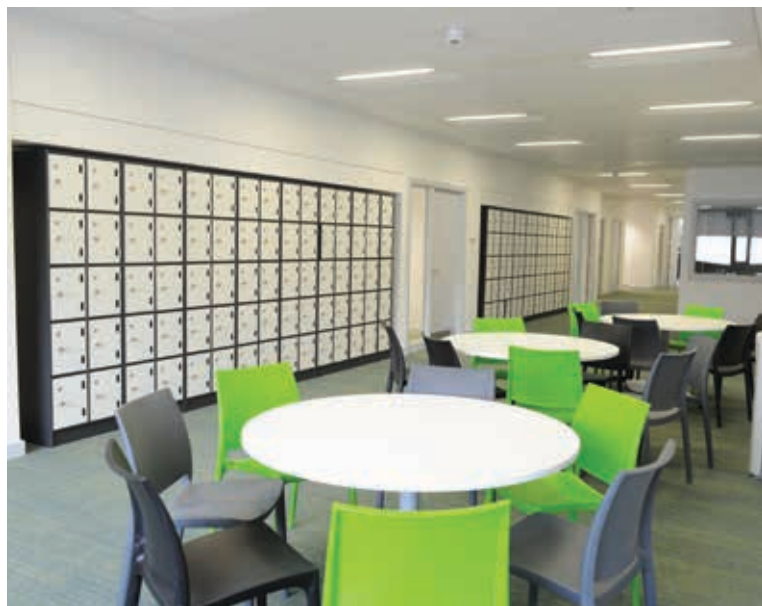
different backgrounds. The school was created to a brief by the director of the university's school of education, with the advice of an educationalist. Designer Associated Architects worked with 15 specially developed educational quality indicators that included such aspirations as: 'The design promotes a social confidence and accessibility of staff with pupils'. As Simon Shakespeare, senior project manager for estates at the university, says: 'It's a one-off. The process we went through was quite different to most.'

Shakespeare is more used to delivering university buildings than schools, so how did he find working with the EFA? 'Some processes with regard to the design meetings and signing off the design are quite regimented and disciplined. It was good as it maintained the standard at production stage,' he says.

The university injected an extra £3m into the project, and the architect praises its leadership in delivering this exemplar. The extra funding has bought space, says Richard Perry, director of Associated Architects: 'It's still very efficient. We have classroom clusters but have more social space'. Corridors are 4m wide instead of 2.1m, classrooms and laboratories are larger than average at 50m² and 90m² respectively, the shared dining space mixes students and staff – not only for surveillance but to create a university-style refectory – and there are no staff rooms.

Not all the innovations on this project carry a cost premium. Some – like mixing pupils and teaching staff – could be applied more broadly in schools with smaller budgets, says Perry. 'It's a greater challenge, but we are now in the frame of mind of identifying what's important in the teaching environment. Austerity has focused minds.' ●

Associated Architects used educational quality indicators in its design of University of Birmingham School.



WHATEVER HAPPENED TO PARENT POWER?

Parent proposers seem to be fast disappearing from the free school scene, and it's not hard to see why. Architects working with parent groups tell of carrying out feasibility studies for a succession of prospective sites that get lost to deep-pocketed developers. They are usually existing buildings and can require significant upgrading.

When a parent group in leafy Wokingham bid to the Department for Education in 2012 to open a free school in a local former private school, the prospect seemed straightforward. 'We thought, it's a school already so how hard can it be?' says Helen Thorndyke, parent founder of Evendons Primary School Trust. 'We didn't realise we were in for a four-year project.'

The group, which included an architect, worked with ECE Architecture on the conversion, with the school opening in 2014 with 98 pupils, four refurbished classrooms and the office team housed in a portable building. A year later it has a further three usable classrooms, but two more years of work lie ahead. As the school buildings are a mix of 19th century originals – not listed but registered as a community asset – and later additions, conversion is phased and complex.

Parents have given significant amounts of their free time to progress the project amid numerous difficulties with the delivery process. Now half way through, the project still demands time and has its frustrations, not least the fact that it is considered temporary until the whole project is complete. 'It means that we can't have things like acoustic panels in the hall or even proper fencing around the site for two to three years,' says Thorndyke.

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Lifting the curtain on kitchen design

Cooking has become theatre as restaurants reveal their kitchens to make eating out more of an experience for diners

Words: Pamela Buxton

Over the last decade, the line between back-of-house and front-of-house in restaurant kitchens has not so much as blurred as disappeared with the popularity of visible, usually open, kitchens. In tandem with the rise of the celebrity chef, cooking has become theatre with diners positioned – in the case of the chefs' tables sometimes quite literally – on the front row of the cooking stage. At the Claudio Silvestrin-designed Oblix in the Shard, for example, diners even enter through the kitchen.

The implications for restaurant and kitchen design have been considerable, as previously purely functional kitchens embrace aesthetics as well, and the restaurant experience itself becomes oriented towards the visibility of the kitchen as well as the dishes prepared there.

According to Marco Rebora, founder of the Restaurant & Bar Design Awards, seeing the ingredients and how they are cooked is now a key part of eating out. 'The kitchen is so integral to the whole experience... Restaurants are so much more competitive. Anything that makes it more exciting as an experience helps.'

This theatre and excitement is the new norm, with open theatre kitchens a 'fantastic' way of adding to the overall restaurant vibe, according to Rob Angell of hospitality design

specialist Robert Angell Design International, which has designed for chefs including Marcus Wareing and Angela Hartnett. 'The theatre of cooking – flames, fire, sizzle – is great,' he says. 'The style of dining has changed so much over the last 10 years. Now the barriers between chef and restaurant are broken down. Chefs want to be seen and people want to see them.'

Kitchen design is a highly specialist endeavour, with a great deal at stake given the huge disruption any later retrofit would entail.

'It's a very risky thing to get wrong because it's the engine of the business,' says Rebora.

According to Stephen Arnold, director of food service designer Humble Arnold Associates, the key to successful kitchen design is teamwork between the architect, interior designer and expert food service design consultant, who will design everything beyond the 'pass' – the counter where the plate is finalised before being taken to the table. This includes the interrelation of kitchen areas and specification of the specialist equipment. 'Everyone has to be completely committed to having a common quality,' said Arnold, who is working on kitchens and food service for André Balazs' new restaurant and hotel, designed by Archer Humphryes, at the former Camden Town Hall annex.

Above Kitchen activity is clearly visible from the street in Wagamama's new restaurant at Uxbridge, designed by Black Sheep.



'Now the barriers between chef and restaurant are broken down. Chefs want to be seen and people want to see them'



GARETH GARDNER

Such a commitment is more of a challenge in the open kitchen era, since the need to embrace the experience of the diner means giving more attention to the fit-out of visible kitchen areas and, in some cases, more input from restaurant designers in the finishes, lighting and detailing in the kitchen to 'blend' the transition between it and the restaurant.

Throughout, the kitchen design is tailored to the chef's preferences and the style of cooking – he or she will generally determine the length of the 'cookline' hot food preparation area.

In commercial kitchens, the classic sink-cooker-fridge triangle principle of domestic kitchen design is irrelevant. Instead, says food service design expert Ken Winch of SeftonHornWinch, who has designed kitchens for Alan Yau including Hakkasan and Busaba Eathai as well as Heston Blumenthal and Tate Modern, it's all about the flow from goods received through to the various storages, preparation, cooking, assembly at 'the pass' and service, and then wash-up and refuse, and the appropriate adjacencies within these. In particular, the distance between waiting staff depositing soiled crockery and picking up newly prepared plates must be minimized. Everything is determined by flow, function and operational



TOUGH FOOD

Above Chefs are prominent in the open kitchen at Roka Aldwych in central London, designed by Claudio Silvestrin Architects.



Left Designed by B3, Canto Corvino in London's Spitalfields uses the kitchen to help create the desired restaurant ambience. **Below** Open kitchens for Jamie's Italian at More London, designed by Stiff + Trevillion Architects.

efficiency through attention to ergonomic design, says Arnold. Over-generous aisle spaces, for example, would be avoided so chefs don't have to go too far to access what they need.

According to Angell, the degree to which kitchens become front of house depends very much on the chef, the food offer and the style of cooking. Most like to be visible to diners – some behind glass – adding personality to the space and creating a point of interest.

'Where you put the kitchen in relation to the seating is key. It works well if you can see it when you come in, and people walking past can see it from the outside as well,' says Richard Blandy, a director of Stiff + Trevillion, which has designed for Rick Stein, Jamie Oliver and Villandry. 'Seeing some action is quite a big draw.'

Wagamama's new restaurant concept for example, designed by Black Sheep, puts the kitchen right at the front of the restaurant overlooking the street – an area that could otherwise have been a prime dining area.

'The whole point is to be as transparent and

open as possible. People are seeing skilled chefs on show – the whole theatrical act,' says Black Sheep founder Tim Mutton, adding that this has enabled Wagamama to emphasise the freshly-prepared nature of its menu. 'The challenge is to make sure you get the level of theatre and activity right and don't end up with dead zones with people just standing around.'

Similarly at Canto Corvino, a new Italian restaurant designed by B3 in London's Spitalfields, the client was happy to put the kitchen in the ground floor rather than the basement to benefit from the atmosphere it added.

Kitchen activity with all its drama, noise and smells is embraced as a driving point of the design according to Sally Williams, associate of hospitality specialist Design LSM.

'It's unusual not to see some part of the cooking now,' she says. 'People have been educating themselves about food more over the last 10-15 years and are interested to see what happens.'

This is more of a challenge for restaurants on multi levels or constrained sites. Getting some

of the kitchen buzz throughout might result in a vertical kitchen arrangement. At Design LSM's Burger & Lobster in London's Threadneedle Street, for example, a prep kitchen animates the mezzanine and is linked to the main kitchen on the ground floor by dumb waiters.

Kitchen areas surrounded by diners can be more problematic because of the difficulties of servicing them when they are separated from the umbilical cord of the kitchen back of house. 'Front of house is always joined to back-of-house. You don't want to see refuse going out or the dirty washing,' says Stiff + Trevillion's Blandy.

The open kitchen is in reality a partial illusion. According to Blandy, it's a brave restaurateur who'll let you see everything. 'We'll hide all back of house that isn't worth seeing and keep just the cookline, which is generally what people want to see,' he says.

'Protecting sight lines is critical. Only expose what's worth exposing,' adds Arnold & Humble's Stephen Arnold, who prefers open kitchens with a cookline position where the



KILIAN O'SULLIVAN/VIEW

'Where you put the kitchen in relation to the seating is key. Seeing some action is quite a big draw'

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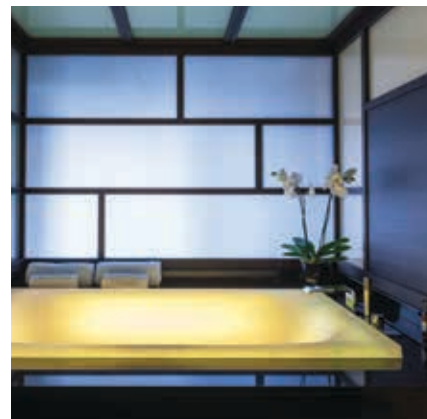


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Ablution absolution

In Japan, the bathroom is so much more than somewhere to wash. Toto's technology and design style make an experience out of the every day



GARETH GARDNER

Left Toto Neorest collection.

Above Toto's patented warm water washing wand.

Above right Toto Luminist bath at The May Fair Hotel.

In Japanese culture, the bathroom is a place not just for cleansing but for relaxation and regeneration. Toto is Japan's leading producer of sanitary ware: it is a name that has been synonymous with the advancement of bathroom culture since its creation in 1917. Its technological innovations and high quality have made Toto an iconic and much-loved brand in Japan, with more than 70 percent of the market. It has been producing the Washlet – a WC with integrated warm water washing function – for 35 years, selling 40 million to date. The latest iterations of this signature product feature patented technologies unique to Toto, such as Pre-mist, ewater+ and Actilight.

THREE-WAY HYGIENE

Even the most basic Toto WC has three technologies that make it the most hygienic on the market: ultra-smooth CeFiONtect glaze

that reduces the accumulation of bacteria and waste; a rimless bowl that is easy to access, easy to clean and leaves dirt nowhere to hide; and a triple-jet Tornado Flush that quietly and efficiently washes the bowl. In a recent independent test carried out by SBZ, Germany, the Toto SG came top out of 32 different rimless WC pans tested for flushing efficiency. These innovations increase hygiene while decreasing cleaning time, and all at a very competitive price.

UNIQUE TECHNOLOGIES

Toto has introduced a Pre-mist function to all its Washlets. Before use, the Washlet mists the bowl with water, to help prevent waste adhering. Additionally, several Washlet models now use ewater+; regular tap water which has been electrolysed to give it a slightly acidic pH value, which actively kills bacteria. After the toilet

has been flushed, the Washlet automatically sprays the bowl with electrolysed water to remove any remaining bacteria. The combined effect of the Tornado Flush and ewater+ keeps the toilet bowl far cleaner over time, while the electrolysed water is environmentally friendly and can be returned to the water cycle. In addition to using ewater+, Toto's Washlet range also features sensor-based lids that open and close automatically, heated seats with memory settings for two people and energy-saving mode, a deodoriser to absorb unpleasant odours and warm air dryer. Some models even flush automatically.

BATHROOM COLLECTIONS

Toto has a full range of bathroom products, from WCs and Washlets to washbasins, taps, baths, showers, hand dryers and furniture. Its ceramic washbasins have extra

smooth CeFiONtect glaze to help secure better hygiene, while its composite material Luminist boasts a unique, velvet-touch, semi-translucent surface with a soothing glow. Hand-held and overhead showers have multiple function settings, from the indulgent Water Pillar to the invigorating Gyrostream. All Toto Washlets, showers and taps are designed to be water saving. ●

TOTO

London Concept Showroom
140–142 St. John Street
London EC1V 4UA
Tel: 020 7831 7544
www.gb.toto.com

MING TANG-EVANS



Left Ippodo at Canary Wharf, designed by Stiff + Trevillion Architects.

Below B3's Kitchen Table in Fitzrovia, central London, gives diners front row seats to see the chef at work in the kitchen.

chef is facing out to the customer.

Generally, only exciting, more visually-alluring tasks are showcased such as the grid-dle or maybe the prep area, with the unsightly and unexciting bits – pot wash, glass wash and deliveries – almost always hidden. Views of the kitchen floor, and often of the chefs actually plating up, are generally avoided with the help of the strategically-placed pass counter.

Open kitchens bring their own design challenges. As well maintaining flows from on-show to back-of-house areas, the food service designer is balancing the increased emphasis on aesthetics with the logistics of power inlets, lighting, ventilation requirements, hygiene and fire safety measures.

Although some kitchen designs will make a virtue of the traditionally utilitarian stainless steel kitchen equipment, many will bring elements of the overall design into the kitchen,

whether it be cladding for the cooking hoods or extra detailing where the restaurant meets the cooking realm. Always, however, any surfaces must be sealed, heat resistant and easy to clean, leading to the popularity of stainless steel as well as granite, marble and solid surfaces such as Corian. 'Blending' the restaurant into the kitchen is crucial. Sometimes stainless steel is coloured to suit the overall interior aesthetic and ceramic tiles added to rear walls.

'We always want to get away from stark stainless steel environments,' says B3's Bithrey, adding that particular attention is paid to the styling of the canopy.

Lighting is one of the main challenges, since the bright light requirements of most kitchens is at odds with the dimmer restaurant ambience. One solution, according to Angell, is to have more directional task lighting with the light sources lowered and shielded to avoid

over-brightness in the seating area. Light colour is another issue, with a potential clash between the warmth of the dining area and harsher white tones in the kitchen.

Those working in restaurant design see no sign of a reverse of the open kitchen trend.

'This style is very relaxed and informal which reflects the way we are increasingly living and socialising,' says Angell.

'I think people now are accustomed to wanting to see what's going on. It's up to the brands to demonstrate how good they are,' adds Mutton.

'I don't think it's a trend that'll end. We'll all be challenging our clients to do something more inventive,' predicts B3's Mark Bithrey.

Again and again, the analogy is that of restaurants – and their kitchens – as theatres.

'We're creating a stage in which the actors play their part. They just happen to be chefs,' says Ken Winch. ●



Lighting is one of the main challenges, since the bright light requirements of most kitchens is at odds with the dimmer restaurant ambience

Specified



2



1



3



4

1 Behind mirror plug-and-play Dolphin

Unfortunately, none of the icons on this mirror takes a selfie, let alone applies a filter that makes your skin look soft as silk and pings it hopefully to a prospective love-match in Angel. And swiping away at the glass won't help. Though perhaps we expect too much of screen-like objects these days. But this clever system from Dolphin does everything one needs to disinfect, dampen and dry the hands, only it's concealed behind the glass, from infrared sensor taps and foam soap systems, to high-speed low-energy hand dryers. Duck face!

dolphinalavo.com

2 Neos pellet cooker Specflue

BBQ-wives, this is fantastic! Specflue is launching the biomass pellet-fuelled Neos cooker, which practically guarantees your man will leap forth to prepare the supper after a long afternoon of loss adjusting. It's hasta la vista to pasta now, because every evening he'll return with a perfectly marinated venison carcass slung over his shoulder, ready to fire up the glimmering beast. And if he forgets to order the pellets that fuel it, don't worry! You can always rustle something up yourself in the accompanying electric oven. It's all good, darling.

specflue.com

3 Steelart sinks and worktops Blanco

If you are considering spending more time with your children while developing a new skill set, have you thought about the home lab bench? Surely learning about the wonders of science together would be more satisfying than listening to the screech of bow over violin string, or watching yet another wobbly ballet routine. You'll need a surface resistant to scratches, finger and water marks, running water and a large table. A Steelart Durinox industrial finish sink from Blanco would be a great investment for a lifetime of happy memories.

blanco.co.uk

4 P3 Comforts vanity basin Duravit

As you get older (Me? I'm not getting older), you need a bit of extra space to put the expensive bottles, tubes and canisters you have bought to vainly combat the increasing ruination of middle age. This basin, from Duravit's P3 Comforts range, has ample space for you to mix up a thick paste of Moose Musk Essence Day Cream (£46 from Selfridges), Gentian Oh! De Vie Eye Saver (£54, Harvey Nicks) and Polycell Tiling Fix and Grout (£4.99, Wickes) and smother your fizog with it. Or, if you've a better way to enjoy its 'sensuous and practical design', feel free. Because you're worth it.

duravit.co.uk



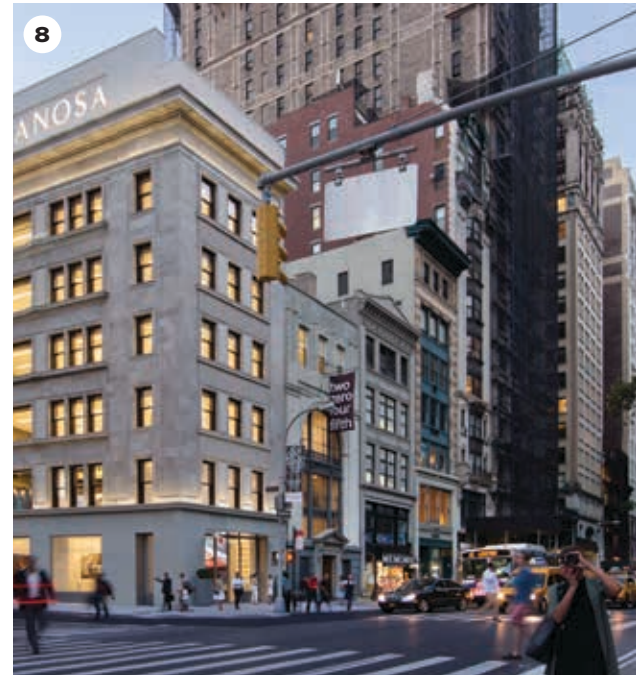
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7



6



8

5 Quartz worktops Caesarstone

As everyone knows, most of us Londoners are squeezed nine to a room, desperately trying to stay within earshot of the Old Street Roundabout, the place where Trends are born – and we must have 'em fresh, regular and improbable. However, some country folks have enough space to house Chris Boardman, his chums and an opposing team of cyclists competing in time trials. Why shouldn't they also specify these softly glowing, non-porous quartz worktops from Caesarstone in a variety of natural colours? Not good to crash land on but very good for a spread.

caesarstone.co.uk

6 Wall hung toilet Geberit

Leaving this luxurious marbled throne at London's new Fitzroy Place, with the reassuring sound of Geberit's dual-flush touchless plate technology in your ears, might put you in mind of the comparable fate of the Middlesex Hospital, which once stood on the site. The loss of the 1928 building with its huge portico, one of the last in the Edwardian style, was quite a shock to local residents – although luckily the replacement buildings are pretty classy. And the hospital's neo-Romanesque chapel still clings on at the heart of the site, a dogged vestige.

geberit.co.uk

7 Memoria toilet Vitra

The Brits aren't short of euphemisms for, er, visiting the 'smallest room', but they tend to lack elegance. There is a suburban, censorious tang to most of them. 'Answering the call of nature', 'seeing a man about a dog', 'putting some of my thoughts to paper...' they are all a bit doily-and-lounge, aren't they? But with the advent of Vitra's new egg-shaped Memoria toilet, gentrification of the function finally becomes possible. 'I'm just off to incubate,' you can tell your flatmates or family. And when you get back you can tell 'em you cracked it.

uk.vitra.com

8 New showroom Porcelanosa

Hey, you! Yes, you in the little black dress! Who you photographing? I'm the snapper, and I'm just trying to do my job in peace, taking photos of Foster's gargantuan new Porcelanosa showroom in midtown Manhattan, trying to avoid the cabs and, frankly, you aren't making it any easier. You're making aesthetic capital from my predicament and your gaze is objectifying me, like I'm some Helmut Newton model. Voyeuristic! You cannot both photograph and act. To photograph is to fetishise. Dammit, where are my watercolours?

porcelanosa.com/gb

Private house, Oxford

A pair of Victorian semi-detached houses in the university city become a home, in a contextually modern makeover

Words: Jan-Carlos Kucharek Photography: Tim Crocker

In a quirk of an age-old funding gap, Oxford University's Worcester College, added to in fits and starts by the likes of Hawksmoor, James Wyatt and William Burges, still retains, as the south side of its main quad, a row of medieval workers cottages, even now functioning as a working part of the college.

Perhaps it's the humble domestic origins of the institution that found them amenable to releasing for sale some of their residential estate, until recently used as student housing. No doubt sold to plug some present-day funding gap, the upside is that it released a pair of Victorian semi-detached homes for snapping up by a London couple and their three children, quitting the city for a more sedentary life in the university city.

London architect Delvendahl Martin had a six year old relationship with the client, borne of the fruitless task of helping find them a suitable home in the capital, and were retained by

them to look at the wholesale knock-through and Change of Use of this former HMO into a large single family home to accommodate their growing needs. The result reifies the houses' conventional brick rear extensions and introduces a new, formally distinct block of living accommodation between them, picked out in a plum coloured Kolumba brick, to produce a garden elevation of contextual modernism and compelling symmetry.

The main internal move has been to create a generous, first floor family living area, accessed both from the existing hall staircase at the front of the house and from a new reclaimed brick stair at the rear – the latter, with a huge sheet of glazing above letting the daylight pour in, now being habitually used by the family. The living area, overlooking the garden forms the focus of the home, its oak board floors unifying the space. Deep anodised aluminium fins on the huge window to the garden meanwhile

offer reciprocal privacy for the family and their neighbours.

Here too is the biggest indulgence in the home; the staircase to the second floor, running against the grain of the houses, passing through the buildings exactly where the party wall would have been. In line with a client's desire for simple material expression, this luxury has instead been manifested in stained birch ply, a box-like form that leads to the second floor bedrooms – the openness on both levels only made possible through the fitting of a sprinkler system and hidden doors that close in the event of a fire.

Balustrades, handrails, handles and light fittings are bespoke and have been designed by the architects in natural materials to complement the owners' desire for a warm interior look. They prove to be details that have been brought through consistently from outside to in, from one house to another. ●



Left The garden elevation extends both houses' rear extensions and builds between them to form one of striking, postmodern symmetry.

Opposite page, clockwise from top The brick back stair snatched views of the garden. The birch ply staircase to bedroom level: humble materials, reified. Ensuite bathroom with bath lengthways into the dormer. The living area runs across both houses – the stair defiantly crossing the party wall line.



Specified



1 Acrylic stone Hi-Macs

In this transformation of a disused office into a little house, the staircase is so dominant that the project is dubbed by Hi-Macs, provider of the undulatingly fluid Alpine White acrylic stone banister, 'a staircase with rooms'. Setting aside how fit those steps are going to keep the inhabitants, it's a romantic idea, like living in a lighthouse, perhaps even allowing a vivid imagination to mistake the roar of distant traffic for pounding waves on the rocks below. On the other hand, the fitout looks rather more luxurious, and the lighting bill should be far more manageable.

himacs.eu

2 Tubeline ceilings SAS International

One consolation in the dismal British winter is the prospect of escaping in early January on a long haul flight to the sun. And after the vulgar excesses of a commercial Christmas, a bit of calm culture would be welcome too. Look no further, then, than Kolkata, where even the airport offers poetry above motion. For thanks to SAS International, the humdrum baggage carousel here chugs along beneath a huge abstract reference to the writing of the mighty Rabindranath Tagore. Using 60,000m² of System 750 Tubeline, it could write the script for a warm week of wellbeing.

sasintgroup.com

3 Colour of the year Dulux

What does this Cherished Gold room tell you? Someone's bolthole, perhaps, but what of the mood? Is it autumnal, Keats' close-bosom'd friend of the maturing sun? Imperial, a la Chinese emperors? Opulence, even degeneracy, of Versailles? Venerable like a golden ager or forward looking in the manner of African hopes in the earth and what it contains? Dulux, linking future and past in its colour of the year, should be able to answer these questions and more at ColourFutures 16, its event mapping colour trends under the theme of Look Both Ways. Fashionistas take note.

duluxtradepaintexpert.co.uk

4 High pressure laminate Abet Laminati

A wise architect once imparted to me a tip for the subordinates that design the loos on great schemes: remember the old rhyme about three old ladies getting locked in a cubicle from Monday to Saturday... make it a place you'd actually like to linger in. Clearly this is what Abet Laminati had in mind when it supplied these cubicles for East End Homes' central London HQ: high pressure laminate in the Legni News range of woodgrain effects to make any occupant feel pampered – whether they're in there for a No 1 moment or the full working week...

abetuk.com

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Making new waves **Armstrong Ceilings**

Armstrong Ceilings has an industry first with the launch of Optima Baffles Curves to enhance its range of rectangular ones. In two standard sizes, the mineral Optima curved baffles feature all the benefits of the traditional rectangular baffles, but with the added twist of a waveform edge which allows designers to create a fresh and calming aesthetic without compromising acoustic performance. www.armstrong-ceilings.co.uk



Dramatic design creates space **British Spirals & Castings**

A 16th century home in Suffolk has been given a contemporary twist thanks to a stunning cast aluminium spiral stair by British Spirals & Castings. The grade II listed property was originally a dairy then brewhouse, before being converted. After visiting British Spiral, which handcrafts all its stairs in the UK, the client opted for the modern art deco range for a simple, stylish finish. www.britishsc.co.uk



Low and slinky **Carron Phoenix**

Designed with gentle curves and simple lines, Carron Phoenix's Adelphi stainless steel sink combines a fashionably low-profile design for semi-flush mount looks, with easy installation. Enhancing the style and quality feel of a kitchen Adelphi has a low, flat profile edge that sits just 1.8mm on the surface. It's compatible with all surfaces and is especially popular with laminate. www.carron.com



The heat rises **Zehnder**

Zehnder has unveiled its improved trench heater, the Zehnder Terraline. Tested to industry standards, the new Zehnder Terraline UN model offers fast response times and a high heat output to ensure a comfortable indoor climate. Suitable on buildings from small residential to large commercial, the Zehnder Terraline is made to measure and provides an elegant alternative to freestanding radiators. www.zehnder.co.uk



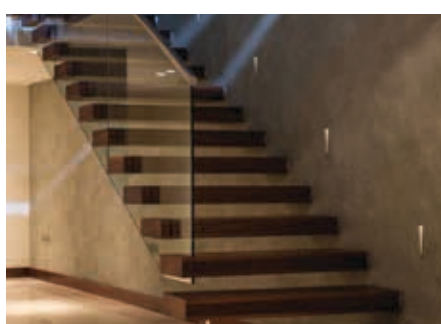
Film set **David Clouting**

Revitalise walls using Interior Film, a self-adhesive decorative film, from David Clouting. Manufactured by LG Hausys, Interior Film can be applied to almost any room surface, enabling walls, doors, furniture, skirting and architrave to be quickly transformed with minimum disruption and cost. Interior Film provides the perfect finish, even to curved or complex shapes. www.davidclouting.co.uk



Unique self-adjusting task chair **Boss Design**

Designed for flexible working, Mea is a new classic-look task chair combining luxurious upholstery with comfort and ergonomics. Incorporating a weight-balance synchro mechanism for dynamic support; Mea assists flexible working by reducing user adjustments, while working as a sophisticated conference chair for longer meetings. Available in high-back or mid-back. www.boss-design.com



Defying the odds, floating staircases **Canal Engineering**

The interior of this multi-million pound house features three matching cantilever staircases with American walnut timber and low iron and glass balustrades throughout the property. The unique solid walnut box treads were manufactured longer than normal so an end piece could be made out of the tread. This allows the wood grain to 'flow' through the glass. www.canal.eu.com



Blinded by the scale **Hunter Douglas**

Faber Blinds is helping inspire landscape professionals at the RHS Hyde Hall's new £3m Learning Centre. The firm, part of Hunter Douglas, has supplied the 1800 FTS system, an efficient, flexible motorised tensioned rooflight blind. The blinds can be used for large or small windows, but the system has been specifically designed for glazing covering an area up to 4000 x 6000 mm. www.hunterdouglas.co.uk



A Perla of an offer for specifiers **Armstrong Ceilings**

Armstrong Ceilings has relaunched its popular Perla portfolio to offer specifiers a simplified but improved contemporary laminated range which is also Cradle to Cradle certified. The improved Perla range includes best-in-class fully-painted edges for additional aesthetics and durability, a new MicroLook 90 edge detail for an improved fit as well as a consistent 8mm reveal throughout the range. www.armstrong-ceilings.co.uk



Lighting up the washroom **Kemmlit**

NiUU is a high specification cubicle system designed for washrooms in the public, leisure, hotel and commercial sectors that provides clean lines, smooth surfaces, rebated doors, innovative 'floating effect' leg constructions, various design options and heights. The rod grip handle with integrated LED 'occupied' display is a notable feature. www.kemmlituk.com



Flowing and seamless with soft corners Duravit

P3 Comforts is a bathroom range that modifies simple geometric forms to render them aesthetically calming and comfortable to use. The design has a raised tap platform on the basin and bath which separates wet and dry areas, and provides generous space for storage. Basins and baths appear almost rimless with maximised interiors for volume and movement.
www.duravit.co.uk



Access for all becomes a breeze GEZE

Even the largest of doors can be opened with ease, providing access to all, thanks to the launch of the new Powerturn drive by GEZE UK. Powerturn is an automatic swing door drive that can be used manually with a new smart swing function. At just 7cm high, the drive can be mounted on the door or transom and used on doors with a leaf weight of up to 600kg or leaf width up to 1600mm.
www.geze.co.uk



Brighter than a button Hansgrohe

Following its launch in September, Axor presents its first all-in-one interactive shower control – a masterpiece of intuition, a confident, and yet unobtrusive statement. Easy and intuitive, it is based on conscious interaction: multiple shower outlets can be activated separately or at once by tapping control paddles with the finger, back of the hand, or even elbow. It's a focal point for the senses.
www.hansgrohe.co.uk



Slimline facade is Passivhaus certified Schueco

Schueco's continuing drive to combine the slimmest face-widths with the highest thermal performance is shown by the UK launch of the FWS 35 PD Panorama Design system. This innovative aluminium facade has a uniquely slim face-width of 35mm, yet the SI version is certified by the Passivhaus Institute with a Ucw value of 0.79 W/m²K.
www.schueco.com



Adding the extra sparkle IDS

Responding to market demand for sparkle finishes, IDS has added two finishes, Red Sparkle and Purple Sparkle, to its Basix PVC panelling for ceilings and walls. Basix offers an easy to install, value-led alternative to tiling and laminate that delivers design flexibility and performance. Basix now offers 20 options including marble, flecked and woodgrain, with high gloss and matt textures.
www.idsurfaces.co.uk



A tour de force in Leicester Senior Architectural

Products from Senior Architectural Systems have been selected for use on four new schools as part of Leicester City Council's ambitious £350m Building Schools for the Future scheme. Working with Aedas, Acorn Aluminium has installed Senior's thermally-efficient SCW+ curtain wall, SPW600/E windows and SD commercial doors system at numerous schools and colleges.
www.seniorarchitectural.co.uk



Warm to touch washbasins Keramag Design

Two new Varicor solid surface luxury washbasins in the Xeno² collection - the 1400mm and 1600mm basins - were launched at 100% Design. Achieving a high-end aesthetic, the basins are precision crafted from 12mm solid surface in a free-flowing design that is elegant and contemporary, while the ultra-smooth matt surface is warm to touch and easy to clean.
www.keramagdesign.com



Authentic windows SWA

Working alongside the main contractor, Steel Window Association member The Cotswold Casement Company has, to date, refurbished the windows in seven buildings of RAF Bicester, base for Bomber Command during the Second World War and now home to Bicester Heritage, the UK's first centre for historic motoring and aviation.
www.steel-window-association.co.uk



Smart solutions for pocket bathrooms Twyford

Twyford has added three slim-line mirror cabinets to its popular e100 range which match the collection's new vanity units. The stylish cabinets are available now and are backed by a two-year guarantee. The cabinets are designed with features to optimise storage within a space-saving footprint, while offering a quality product at entry-level pricing.
www.twyfordbathrooms.com



Think security, think Document Q Mumford & Wood

Mumford & Wood Conservation sliding sash windows are now SBD certificated to meet Approved Document Q – Security. Recognised as Britain's leading manufacturer of high performance, tried and tested timber windows and doors, Conservation sash windows now carry additional security features that meet the requirements of Document Q Building Regulations.
www.mumfordwood.com



Protection at its best Gerflor

Gerflor SPM offers a comprehensive range of wall and door protection, corner protectors and handrails in a range of finishes. SPM products provide protection for all education applications and industrial facilities, including clean rooms/controlled environments and the pharmaceutical sector. The range also offers the highest levels of protection for high traffic areas many building types.

www.gerflor.co.uk



New Taralay Impression Control - Safety by Design Gerflor

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www.gerflor.co.uk



High grade drain grates Harmer

Nottingham Kayak Club has one of the first UK installations of this innovative range of Harmer's stainless steel floor drains. Vertical mini floor drains - manufactured from recycled 304 grade stainless steel. Each is fitted with 200mm grates to provide a seamless finish alongside the 200mm floor tiles used in the club changing rooms. The drain gives excellent corrosion resistance, and high flow rate.

www.harmerdrainage.co.uk



Gold for cobble garden Natural Paving

Natural Paving Products (UK) Pewter Cobbles have been incorporated into a gold medal-winning garden at the RHS Tatton Park Flower Show 2015. New for 2015, the Pewter Cobbles are a contemporary mix of grey sandstone with occasional hints of soft brown tones. Available in three sizes that can be mixed to create an appealing non-uniform effect.

www.naturalpaving.co.uk



At home with wood Polyflor

The homely wood effect Expona Design luxury vinyl tiles in Light Elm have been installed the Belong Warrington care village. It was installed in the bistro, reception area, corridors and exercise studio. This grey toned wood design features authentic swirled grain detail and a textured surface emboss for added realism. Its 3.0mm gauge and 0.7mm wear layer means that this range is ideal for high traffic spaces.

www.polyflor.com



Foundation for beautiful thinking Interface

As part of its campaign to lay 'A Foundation for Beautiful Thinking', global modular flooring manufacturer, Interface, has unveiled three global collections influenced by nature's ability to inspire and energise. Equal Measure, Narratives and Near & Far embrace biophilic design to stunning effect, using subtle, natural analogues to create restorative spaces to facilitate beautiful work.

www.beautifulthinkers.com



Learn about tiling protection Schluter-Systems

This underflooring solutions expert is offering architects the chance to keep up to date with the latest in tiling protection with the launch of four CPD seminars. Topics include Integrated Solutions for Wetrooms with Tile and Stone Coverings; Movement Joints and Uncoupling Membranes for Tile and Stone Coverings; Modular Underfloor Heating Systems for Tile and Stone Coverings. Ref: RICPD11

www.schluter.co.uk



Keeping it clean for salmon Hydro International

Aberdeen's new International Business Park, next to the City's International Airport, is delivering a best-practice sustainable drainage scheme using filtration and bioretention technologies from Hydro International to meet strict planning and pollutant removal criteria. Many SuDS components are in the 31,000m² first phase to help protect the River Dee, a well-known salmon river.

www.hydro-int.com



Contemplating a sealed floor? Fila

The basalt of this Garden of Contemplation at the Canadian Museum for Human Rights, in Winnipeg is protected by VOC-free FILAFOB ECO. It protects without altering the distinct charcoal tone or forming a surface film. The ready-to-use solution is designed for the safe treatment of polished and unpolished stone and concrete and protects against oil and water based stains.

www.filasolutions.com



Flooring that doesn't have to try hard to score high nora

In 2013, nora systems installed 1,000m² of its norament Satura tiles, in a bespoke subtle hammer surface design in the changing rooms and concourse of Twickenham Stadium, providing its rugby players and guests with a resilient and hard wearing flooring, nora rubber floors are perfect for high footfall venues as it is exceptionally quiet underfoot thanks to its shock-absorbing effect.

www.nora.co.uk



Long-lasting roof Bauder

The library roof at Queen Mary University of London had been leaking. Bauder proposed stripping the existing 2,000m² roof covering to the structural metal deck and replacing it with a high quality bituminous system, BTRS. This is capable of withstanding permanently sited loads of up to 2000Kg/m² and has a life expectancy of 40 years plus. It also has PVs on top.

www.bauder.co.uk



Demonstrating cladding Structura

Leeds College of Building wanted to promote modern materials and construction methods. Fuse Studios specified materials to make for an educational demonstration in its own right including the diffused daylighting Kalwall cladding and roofing system. This system limits external views while admitting high levels of diffused daylight without shadows and glare or the stark contrasts of light and shade.

www.structura-uk.com/kalwall



Cembrit hits the heights with FC Ridges Cembrit

Stocking and fitting the correct ridges for fibre cement roofs is simple with Cembrit's comprehensive range. The ridges are lighter in weight and easy to cut and fix, qualities which make them superior to the commonly used mortar bedded, concrete or clay alternatives. Being dry fixed, installation is not dependent on the correct mortar mix, nor waiting for dry weather.

www.cembrit.co.uk



Turning waste to fuel Hargassner

Fencing timber and garden product manufacturers, Fountain Timber, has turned a headache into heating by using its offcuts as fuel for two new, state-of-the-art Hargassner UK biomass boilers. The HSV200 models installed include a fully refractory-lined high-temperature combustion chamber, automatic ash level indication and a lambda sensor with fuel quality detection.

www.hargassner.uk.com



Rodeca helps set a template for new school buildings Rodeca

Transparent rainscreen cladding from Rodeca has been used on an 'innovative, sustainable and economical' template for new school buildings. Rodeca's 60mm PC 2560-12 wall panels in Kristall finish were specified for the front elevation of a £1.1million new sixth form centre at Graveney School in Tooting, south-west London.

www.rodeca.co.uk



Architects respond to the Rooflight Company survey Rooflight Company

Our recent survey of architects in the conservation sector is an in-depth enquiry into attitudes to authenticity, considering traditional and modern alternatives in period buildings. From the survey 52% of architects said they believed an authentic appearance should be the priority. Download the full report from our website.

www.therooflightcompany.co.uk/conservation-report-2015



BBA certified slates Cembrit

Cembrit holds five highly sought after BBA Certificates for its fibre cement slate range, ensuring that whichever system is chosen, architects can be confident in the specified product. To achieve this status, Cembrit's fibre cement slates completed a comprehensive testing process and successfully met all the requirements set out by the BBA.

www.cembrit.co.uk



Ideal material for pioneering community project Norbord

Norbord's SterlingOSB has been given a starring role in a new community project in the heart of Brixton, south London. The Pop Brixton project by architect Carl Turner makes extensive use of former shipping containers. SterlingOSB is used in the majority of these containers to line the walls and floors, as well as being used in other structures throughout the scheme.

www.norbord.co.uk



Helping specify for success British Gypsum

The British Gypsum White Book System Selector enables designers and specifiers to quickly identify solutions to meet project requirements, and download all related documentation, including BIM and .dwg CAD files. Originally launched in 2014, the tool has recently been further developed to give an improved way to specify the best solutions.

www.british-gypsum.com/white-book-system-selector



Often imitated, never equalled Tremco illbruck

Contractors and consultants should not believe that all impregnated foam products are essentially the same. Tremco illbruck can reference real life testing of products in a variety of climates and situations going back more than 20 years for our top-selling TP600 (formerly Compriband 600) product. Third party testing is rigorous and we work closely with the architect to specify a solution, as well as on site on sealing and bonding.

www.tremco-illbruck.co.uk

Sign Up

Mat Barnes associate at Studio 54 Architects, gives us three of his specification favourites



WESTERN RED CEDAR

For the new house on Elfort Rd, an 'urban cabin' on a constrained brownfield site between existing terraced housing, we used a limited palette of materials, chosen for their suitability, robustness and beauty. Western Red Cedar was used for joinery items, windows and doors, and for wall cladding (both internal and external) and fencing. Cedar is an extremely versatile, hard wearing softwood with a fine grain and naturally rich colours, that resists shrinkage, warping and twisting. We coated the external joinery with Osmo UV protection oil so that the rich warm tones would not fade.

tbrewer.co.uk/



INSULATED CONCRETE FORMWORK

We have been exploring use of Insulated Concrete Formwork (ICF) for our infill housing schemes for Peabody. Planning restrictions dictated a brick finish so we coupled an ICF system with carefully procured brick slips. The advantages are numerous: it provides a singular structural system which can deal with corner openings and cantilevers; it avoids expensive structural thermal connections with a thermal line on both sides of the structural core; on site, it gets watertight faster and its inherent air-tightness cuts the need to tape material joints.

nudura.com/divisions/nudura-products/icf-series



INTERNAL DOUGLAS FIR PLYWOOD CLADDING

We specified fire rated plywood on a commercial project linked to industrial workshops in Turnham Green. Plywood resonates with the history of timber manufacture and retains an industrial aesthetic. Douglas fir plywood wall panels have a highly functional robust surface for fixing/hanging, and their warm colour contrasts with internal fair faced concrete and plasterboard surfaces. The panels are supplied treated with fire retardant to a UK rating Class 3, enabling us to meet functional and aesthetic requirements and the fire safety regulations.

alsfordtimber.com/sheet-materials/plywood/fire-rated-plywood.html

...Sign Off

Jan-Carlos Kucharek enjoys three of this issue's out-takes



BUTTERFLIES...

Sick of specifying cheap white plastic switch plates for your residential designs? Perhaps it's time to switch – literally! Meljac – 'the leading French name in upscale switches' (as if there'd be a lot to choose from) – has launched the Prestige collection of electric switch plates studded with semi-precious stones to bring cachet to your three-way. Mother-of-Pearl, Lapis Lazuli, Malachite, you name it... if it took 10 million years of geo-thermal activity to form, these 'lapidary craftsmen' can pop it on your socket. Our favourite is the Labradorite butterfly switch plate, a stake driven through its tiny insect heart by a silver dimmer spigot. How about that for the devil in the detail?



... BEEES...

Hives are often used as an analogy for the hierarchies of our society, what with their workers, drones and queens, but it's a symbol of commercial endeavour too now, with German supermarket Aldi installing eight hives outside its HQ in Atherstone, Warwickshire. And as bee populations decline so their value is increasing – 30,000 of them and three queens were nicked from a farm in Anglesey only this summer. Cue Hadrian Technology boss Gary Trotter's installation of CCTV cameras – not only to keep an eye on the hives but allowing live feed of their antics to a giant screen in Aldi's reception. It's not Big Brother, but with its honeycomb, it's infinitely more wholesome.



... AND PARTY ANIMALS

Time was when a foray by supermodel Kate Moss to the Cotswolds would end with her stumbling out of Babington House private members' club. But it seems she has a nose for design too. Yep, for a mere £2.5m you can experience the 'Barnhouse' – luxurious, plush interiors inspired by her jetset lifestyle at luxury developer Yoo's 'The Lakes'. Enjoy her mirrored stainless four-poster bed atop deep pile shaggy carpet, fur throws, TV cabinet with silver thunderbolt – homage to Bowie – and works by famous artist friends. You'll have missed her 'The Beautiful and the Damned' birthday party, but for another £2.5m, ask her nicely and she might just throw one in...

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RIBA Journal
www.ribajournal.com
 Published for the Royal Institute of British Architects by RIBA Enterprises Ltd
 Registered Office: The Old Post Office, St Nicholas Street, Newcastle upon Tyne NE1 1RH. Registered in England 978271
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 Printed by Acorn Web Offset Ltd in association with Logical Connections
 ISSN 1463-9505 © RIBA 2009



A picture of a finished floor being walked over would be nice, but our advice at this stage would be better.



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