

PIP

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‘Both good...

...and bad: it's been quite a year for architecture. No sooner had Steven Holl completed his bold Glasgow School of Art extension, than its world-famous Mackintosh-designed building was ravaged by a fire that left all architects burned. So it was encouraging to see Manchester School of Art appear in the Stirling prize shortlist; continuing to prove that beautiful thoughts come from beautiful places.

Perhaps councils should remember this, for

while we saw another bold office building complete on the City skyline, we were also reminded by the ‘London’s Growing Up!’ show at New London Architecture of the myriad less considered high-rise housing proposals that have planning permission – and which are yet to make their mark not only at high level but, as importantly, at ground. I’d like to think we’d get more spaces like King’s Cross Square which, with its Henry Moore, is rapidly being adopted as a true

public realm by the city, but I realise this is the exception proving true the rule of poor vision from planners and provision from developers.

Back in Manchester, the Whitworth gallery extension is about to complete, creating an urban public forum for art. Such places are as fundamental to civilised life in the city as the cycle of destruction and creation is to the urban architect: we should all just get on with it in 2015.

Jan-Carlos Kucharek, Editor



IWAN BAAH



LEE MAWDSLEY



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Cover image: Photo of washroom door on the Leadenhall building by RSHP, by Lee Mawdsley

Compendium



Yes Sir, I can boogie-board

Bored with constantly specifying top of the range Vola fittings, you're nonchalantly thumbing through this year's Monaco Yacht show brochure when you stumble upon French firm THG's 'Beyond Crystal' range of luxury sanitary ware. Not content with fashioning the taps themselves from Baccarat crystal, THG has integrated LEDs beneath them, so even with all the superyacht windows blacked out, oligarchs can still home in on the vanity unit, using them like landing lights for the Lear jet.

Missed a blue sky?

With the fashion for everyone to dig down rather than build up to create their man caves, spas or subterranean pools, it seems that natural light's going to be in short supply. Unless, of course, you've built in the capacity to install a CoeLux artificial rooflight, illuminating your bunkers in a quite uncanny, naturalistic light. A panel and light create the effect of the infinite space of the sky by placing an LED that mimics sunlight 1m above a flat screen of nanotechnology particles, which emulate the Rayleigh scattering of the earth's atmosphere. Available in three settings – 'Tropics', 'Mediterranean' and 'Northern Europe' – the only questions remaining are: 'How much, and what kind of blue do you do?'



MICHAEL LOOS

Hose springs infernal

Enfant terrible of French art Bertrand Lavier is making his mischievous presence felt outside Zaha Hadid's Serpentine Sackler gallery until October 2015, with the gallery's latest installation – a large-scale fountain made of garden hoses. The artist has been much influenced by Marcel Duchamp's 'Readymades', but opposes the notion of 'indifference' inherent in those works. Lavier presents more culturally attuned pieces: an anvil on a chest of drawers, a Dali lips sofa atop a freezer, and his wonderful 1993 car smash 'Dino' – a write-off Ferrari Dino GT4, which sold last year for over US\$250,000. The fountain was first installed on the parterre of Le Nôtre's Versailles, a context much more loaded perhaps than beside Zaha's parametric awning, but hey-hose...



BERTRAND LAVIER



Copper bottomed

If you ever need to dash to the fire exits of David Chipperfield's Café Royal, don't get distracted by the lovely Copperlight glazing that adorns the hotel corridors' courtyard walls. The delicate art deco framework holding in over 30,000 small 6mm thick glass lights was built by specialist fabricator Gilbert and McCarty, and belies the glazed wall's half hour fire rating. Having managed to generate a lovely, diffuse and safe light, even for a jumpy clientele, the firm has moved to the conversion of Lutyens' Midland Bank in the City, catering to a whole new set of panicky punters.

UPCOMING

Education Estates Manchester, Central, 11-12 November**Lux Live** ExCel, London, 19-20 November**COTAC: Fire and flood in the built environment** The Gallery, Cowcross St, London, 20 November**Sleep Event** Business Design Centre, London, 26-27 November**Eco-Showcase** Various UK locations, to 2 December**Once..twice..three times ablution**

What's the collective noun for a gathering of vanity unit water, soap and dryer faucets? It's a gaggle of geese, so a gurgle? Or a 'douse' of taps perhaps? Whatever it is, British designer Sebastian Conran's been busy coming up with his 'Ribbon' range for Lovair – which bears a striking resemblance to Zaha's Olympic pool diving boards. Maybe it could be a 'Tom tap' or a 'Daley dispenser'? Finishing off with good old 'Air Balding'. Hell – let's just call it a 'splash of Hadids'...

**Carbon fibre bodywork**

Architect Bond Bryan has given Sheffield University's Advanced Manufacturing Research Centre (AMRC) a high tech look, using over 1800m² of Rodeca's 40mm PC 2540-4 wall panels as rainscreen cladding and internal skin. The striking block, used to train young engineers for the energy and aerospace sectors and even Formula One, has been nicknamed 'The Iceberg' by students. The outer Bi-Colour Opal/ Kristall polycarbonate panels on its aluminium support grid have 20-year UV protection, are 200 times tougher than glass and allow up to 66% light transmission. And U-values of 0.36W/m²K cut energy loss by up to 80%.

PHIL GRAYSTON

**Matthew, Mark, Luke and John**

The Bible's parable of the talents confirms that even God likes a bit of good housekeeping, so one assumes he's looking down approvingly on the recently published National Churches Trust Annual Review, which details all its grants for the upkeep of the UK's places of worship – last year awarding over £1.6m of grants to 140 schemes. And it turns out that most of the money went on installing toilets in the churches, which topped the lists of funding requests. The chief exec says they 'allow churches to be more welcoming to worshippers, especially those with young children' – that is, one assumes, until the parents get them into the right primary, after which vacant pews can go begging. Let's hope all that funding adds up to pennies well spent.

**Thinking inside the box**

On the banks of Regent's Canal in London, 30 shipping containers have been converted and upcycled to offer start ups low rents with minimal overheads, in the hope of helping new businesses to thrive in the hip borough of Hackney. Containerville, by design agency and art collective One Another and LeGun, offers desk spaces in the four-desk containers for £320 per month. Go to wearepopup.com for more details.

Putting the 'F' in Arts and Crafts

Set up as a testament to the Arts & Crafts movement's pivotal role in the history of British modernism, Walthamstow's William Morris Gallery, housed in Morris' grade II* listed former home, completed its £3.5m refurbishment at the end of 2012 and won the Art Fund's 'Museum of the Year' award last year. Part of the work included refurbishing eight washrooms. Architect Pringle Richards Sharratt worked with Formica Group's Yunique service to create customised visuals printed on Formica laminate for the walls and partitions – all inspired by the fabrics of the great designer. The result is cubicles that allow users to study the intricacy of Morris' work at exploded scale; and if necessary, at leisure.



MORELEY VON STERNBERG

Domestic Gods

Second Home, a 25,000ft² 'revolutionary workspace for London's creative industries' is opening in Shoreditch this month and is set to be populated, if the PR is anything to go by, with some of the great and the good of London's design community, including Arts Council chair Sir Peter Bazalgette, Rector of the RCA Paul Thompson, David Rowan, editor of *Wired* magazine and even

the former chief economist of Goldman Sachs. With an 'iconic' greenhouse included at the front of the building, it's no surprise the client went to Spanish architect SelgasCano, of sunken glazed 'Office in the Woods' fame, to design it. But with all those egos rattling around in there, it'll be a wonder if someone doesn't end up cracking their head against a glass ceiling.



IWAN BAAH



CRAIG AUCKLAND

Bristol fashion

It looks like the Bristol University campus has evolved a bit with its new Life Sciences building, designed by architect Sheppard Robson. Opened last month by Sir David Attenborough no less, the £56m building is, at 13,500m², the university's biggest construction project to date and is intended to create a world class centre for biological sciences research. Its distinctive Proteus facade,

designed by KME Architectural, has a double skin: an inner sandwich panel watertight layer and an outer aluminium skin cladding the air ducts to the labs. As well as a living wall, it features a 'GroDome' on top of the building which can perfectly recreate tropical conditions. If only it had been around 150 years ago – it would have saved Darwin all that embuggeration on *The Beagle*.



Don't come in No. 9, you're time isn't up

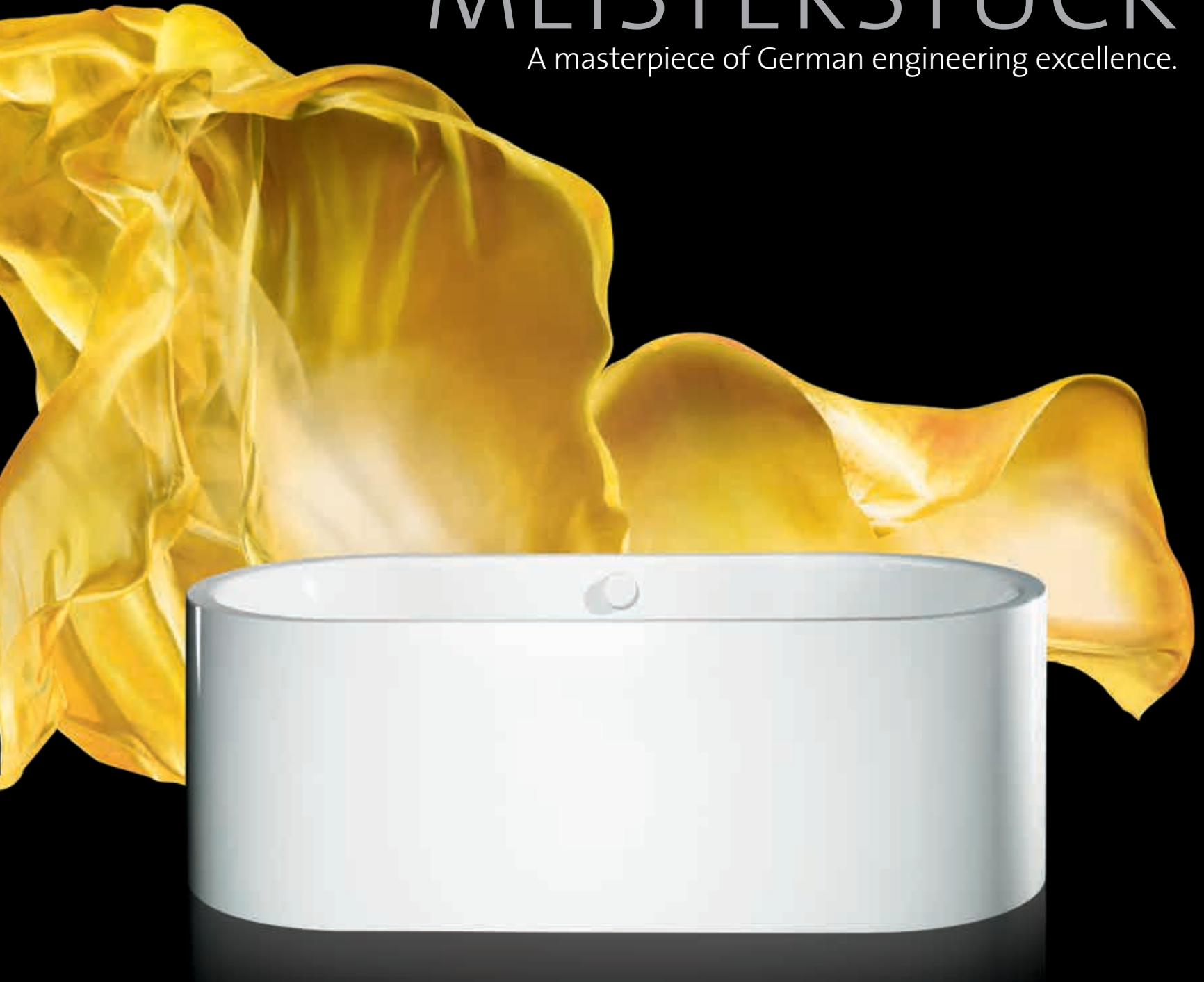
Solar-powered Goboats are now a feature of Copenhagen's harbour since entrepreneurs Carl Kai Rand and Kasper Hojer set up the city's newest start-up earlier this year. The kebony-clad hire boats, which can accommodate up to eight people, have a maximum speed of six knots and can ply the waters of the harbour

before coming back to their similarly-clad terminal building, developed by Gaia Solar, for a recharge. It is hoped that, over time, the silver grey patina that the building will develop will complement the other waterside structures in the harbour – including its Henning Larsen-designed opera house.

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Lux Live 2014

When Le Corbusier called architecture the 'masterly, correct and magnificent play of masses brought together in light', he wasn't wrong – and it's as good a reason as any to justify a day away from the office to see how the industry is helping us to show those masses in their best light.

This year's Lux Live has, on the face of it, got a really interesting seminar programme – 50 hours worth in all – with a number worth attending by architects. The question of 'How much light' is raised on the first day, with a Lighting Talk Live panel looking at 'lux inflation' in the workplace. This is complemented on the second day with a session on how bad lighting might make office spaces unlettable. And if you, like me, find yourself perpetually confounded by the possible permutations of light switching in a simple hotel room, then perhaps the 'Transforming the guest experience' seminar will offer some clarity.

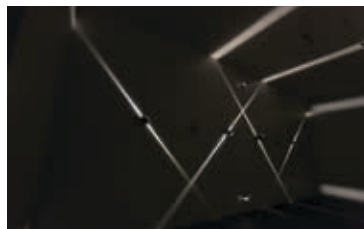
Focusing on the public realm, with Crossrail on the horizon and continuing TfL station upgrades, there's also a timely talk on lighting strategies in underground stations. At street level, meanwhile, the theme continues with a talk on the intriguing concept of luminous paving, allowing even mere mortals the opportunity to step out like Michael Jackson in the 'Billie Jean' video.

The downlight also gets a highlight at the show, with lighting designer John Bullock advising on how to carry out residential developments without even using them. When he's done with that, perhaps he could advise on their use in retail changing rooms, where their narrow beam 'atmospheric' specification has, on more than one occasion, left me standing in front of the mirror looking like Count Dracula in a new pair of strides experiencing the first rays of dawn – NOT a good look... ●

LuxLive runs at ExCel London from 19-20 November 2014. luxlive.co.uk

If you, like me, find yourself perpetually confounded by the possible permutations of light switching in a simple hotel room, perhaps the 'Transforming the guest experience' seminar will offer some clarity

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



iGuzzini

Lighting Container

It's been doing the sustainability thing with its light fittings for a few years, but now iGuzzini is trying to find more sustainable approaches to its marketing too. The firm has built and torn down a number of stands in that time: now say hello to its new marketing device – a 20ft long orange shipping container that it can transport between shows. And being a black box, it offers the firm an ideal environment of total darkness in which to show off its latest graphic lighting product ranges – all marketed as part of a three minute son et lumière.

Stand F24

iguzzini.co.uk



Radiant lights

Steely Bright

Radiant Architectural lighting has been working with some heady names recently, notably being specified at Zaha Hadid's Heydar Aliyev Centre in Baku, but it doesn't mean it's not keeping its feet at sea level, or indeed, under it. The firm's new 3D Flex 25 IP68 flexible stainless steel lighting was developed for a swimming pool at a 5-star 'prestigious hotel in Paris'. Running around the curved edge and lighting the pool floor, it'll ensure that high society and celebrities can be bathed in the spotlight, even when face down in the water.

Stand D4

radiantlights.co.uk



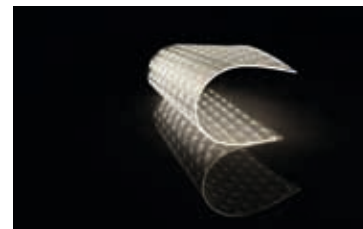
Street lighting

DW Windsor

It seems like street lighting design is in the ascendant, if the latest designs from DW Windsor at the show are anything to go by. Its new compact LED road lantern, optimised for P lighting classes (residential and minor roads) has a elegant look, slim profile and high performance. It will also be showing 'Garda', a bespoke handrail and balustrade system for exterior and interior schemes, which was specified at Foster+Partner's Hydro events facility in Glasgow and named 'Best on Market' by Lux magazine.

Stand D40

dwwindsor.com



Design LED Products

Light Tile

Tired of waiting for the OLED revolution? Design LED's flagship lighting product is a potential OLED killer – lighting you can roll up like a newspaper. The thin, flexible LED light tile has built-in optics giving it uniformity and a consistent beam angle. It has a 90% optical efficiency, is ultra thin, weighs in at 2.5kg/m² and seamlessly joins together for larger areas. This flexibility gives it lots of applications in architecture, retail, shelf lighting and even furniture. Ikea liked it so much that it has bought into the company!

Stand H43

designedproducts.com

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Rob Martin - Architect - Tally Ho Training Centre
Nicol Thomas Architects

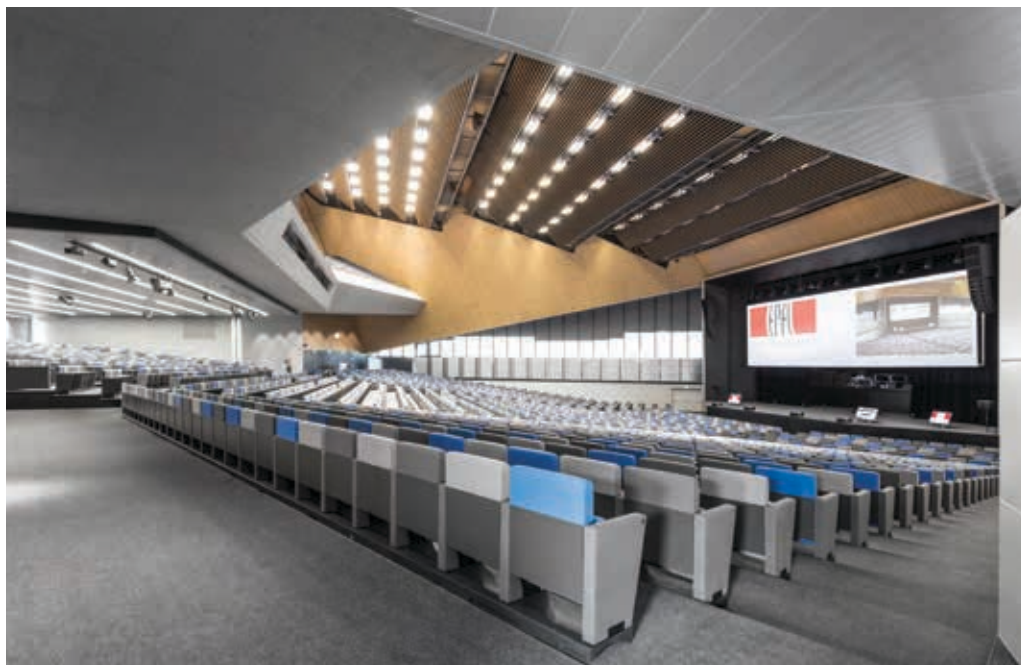


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Flexible space



FERNANDO GUERRA (2)

What: Gala Systems automated seating

Where: Swiss Tech Convention Centre, Lausanne, Switzerland

Opened this May as the latest part of the École Polytechnique Fédérale de Lausanne's campus, the huge €110M Swiss Tech Convention Centre had to work both as a large lecture hall for the EPFL's students, and as a flexible space for private conferences and symposia – an income generator to offset the sizeable initial outlay. As part of that, local architect Richter Dahl Rocha and Associates looked to Gala Systems to help create a 3000-person auditorium whose seating could be subdivided, reconfigured or completely opened out – all within a matter of minutes. The €10m contract, the largest the firm has yet completed, includes both a system of skyfold vertical partitions that can be deployed to divide the space, and an automated platform and seat rotation system installed across the whole floor. This not only allows for a number of raked configurations, but means the lot can be inverted and stored under a perfectly flat floor when not required.

To do it, the design team was involved from initial design stages. 'It depends on the specifics of the project, but the under floor concrete pit

to hold the folding seats and the mechanism is typically 1.6-1.9m,' says Gala project manager Philippe Desmarais. 'The system is driven by a gear system on a sheet metal box sat on a rotating shaft and a gear motor with connective couplings.' Key to the action is the 'Spiralift' device – originally designed as a power lifting actuator for orchestra pits. When a row is raised, seats start to rotate to their deployed positions. Moving into position, the seat rotation assembly is held rigid by a locking torque, which also holds the seat base down on the platform once deployed. The 3000 seats took 10 months in all to install, including a period for fine-tuning the system. The five-year warranty, given the initial outlay, might raise eyebrows, but Desmarais says that with the nature of the mechanism, any problems will manifest itself well before then.

Since the venue opened in May, Desmarais says that on average the space has been reconfigured at least once a day – suggesting that the Swiss Tech Convention Centre is going to be playing musical chairs in its auditorium space for a good time to come. ●

LIKE A DRESS CIRCLE IN A SPIRAL...

Gala Systems' ability to rapidly deploy or hide thousands of seats at a time in events venues is predicated on its patented Spiralift technology. This involves a coiled, flexible, flat steel spring that expands with the insertion of a thin, vertical spiral steel band to create a fully stable column – the size of which is dictated by design geometry and loading demands.

In a typical application, Spiralift columns raise every alternate row of a seating platform with their stable, self-guiding system, making spaces flat or tiered in minutes. Independent rows of permanent seats are hinged to the floor and screwed to steel members supported by the Spiralift device. These columns raise every row of seating with the help of self-guiding hinges, scissors and contact guides. Rows are then configured to any desired step or level using touch screen or hand held controls – with all components designed to ensure the system's rigidity at any point.



Above left The Swiss Tech hall with seating deployed, and (**right**) stowed away.

Below Detail of the Spiralift system beneath the seating platforms.



HUGO DE LA MORENA

Gala Systems Spiralift benefits

- Very compact retracted height
- Remain fixed and level at any point of deployment
- High capacity – any load and platform shape can be accommodated
- Stable and quiet operation
- Can be installed in an existing pit
- Minimal control wiring and low power demand from motor drives
- Long life and minimal maintenance
- Multiple adjacent Spiralift units can be mechanically synchronised

Made



Gert van Bruggen
Vinyl product management & design director



Thomas Eurlings
Product & interior designer

What: Luxury Vinyl Tiles

Where: Forbo, Coevorden, Holland

Forbo Coevorden's Allura luxury vinyl tile (LVT) range, in its trend-setting diversity, is the latest stage in the factory's transformation from one that, since its foundation in the 1970s, concentrated almost wholly on the residential market.

In 2005 the factory decided to move 60% of its business into the commercial retail and hospitality sectors, says product management and design director Gert van Bruggen – a shift that forced a wholesale rethink of its corporate strategy. The business now has over 300 employees – a result of this move and international expansion. Forbo's flooring division has opened a plant in Russia, hoping to net the lion's share of business from a sector still heavily reliant on ceramic tiles and where LVT is still in its infancy.

In the three years since Forbo launched its LVT range, it has produced nearly three million m² of tiles from its Coevorden plant in Holland, with a 40% year-on-year average growth.

In the drive to differentiate itself in a crowded market, developing the Allura range has meant investing heavily not only in new production technology – such as large digital printers, its in-register embossing process – which creates sophisticated and realistic grains on the tiles' surface, and highly accurate ultrasonic cutters – but also in the front end design itself. To this end, young up-and-coming Dutch product and interior designer Thomas Eurlings was brought in to formulate the firm's dramatic new signature range. Keeping full control of the design process meant bringing all the initial experimental production in house as well. Eurlings has a team of designers in a dedicated on-site workshop that engraves the test plates, chooses colours and creates the prototypes that will eventually go on to form the full-scale production range.

With Allura Premium, Eurling's task has been to move away from the traditional stone



Main image Allura Premium's 'Real Buffalo' LVT.

and timber designs that form the body of the vinyl market and create a niche range that appeals to architects' sensibilities, has the potential to be mixed and matched for flexibility, and comes in non-standard tile or plank sizes. Not only that, but the firm has invested in larger 1.5m diameter printing cylinders, which print up to 16 different patterns before repetition occurs. When being fitted out in stores, restaurants or lobby areas, visible repetition could make all the difference to specification.

The emphasis is on depth of colour and contrast, a deliberate move away from the 'natural' looks that make up the firm's core collection. New approaches have seen overprinting of dark colours on traditional timber patterns – creating dramatic zebra stripes, 'bleaching out' timber planks, or giving an ink-washed effect to mimic the trend for staining or oxidation. Perhaps most unusual is the use of digital printing techniques for Allura 'Buffalo', inspired by a piece of horn that had been sitting for years in Eurlings' own home. Photographed, massively enlarged and printed on vinyl that is cut into planks, the effect is intriguing, suggesting a material of natural provenance which is nonetheless unrecognisable. It's also unique to Forbo, a key part of a collection that the firm hopes will maintain the USP that, says van Bruggen, gave it the edge at last year's Euroshop trade event.

The team is excited about future developments, with Eurlings speaking of the possibility of incorporating gold and silver metallic 'highlights' into patterns, and taking cross sections of rock minerals and blowing them up to create supersized crystallised forms with dramatic, rich colourings that mimic those found in nature. Van Bruggen keeps both feet on the ground, talking of the need to invest more in improving production line scaled digital printing techniques but, short of that, as far as the LVT market goes, it seems the sky's the limit. ● This editorial is supported by Forbo Flooring Systems. forbo-flooring.co.uk



1. DIMENSIONALLY STABLE AND 4M WIDE

The Coevorden plant production line allows 4m wide runs of vinyl of 1.1km length. Glass fleece forms the base layer of all the vinyl product made here. This fleece is coated in a liquid vinyl medium that is evenly distributed by a pressure roller compressing it into the fleece. This layer is shrink proof, dimensionally stable and free of folds, and forms the base layer for all the vinyl products.



3. WEAR LAYER, LACQUER AND EMBOSSED

The in-register embossing, carried out by embossing cylinders, is a highly accurate process of building 'grain' into the design in such a way as to recreate the effects of, for example, timber grain, on the tile's surface. Lacquering occurs before the embossing stages to give the tile surface robustness. At the end, the surface is treated with a 'diamond seal' made of polyurethane that is extremely scratch and stain resistant. Residential tiles will have a seal thickness of 0.3mm, with commercial tiles going up to 0.7mm.



5. ULTRASONIC CUTTING

Ultrasonic cutters are blades vibrated at an extremely high frequency to increase the accuracy of the cutting process. This is also computer controlled, so tiles can be cut to any size as either tiles or planks, meaning that Forbo can provide bespoke as well as standard flooring. Ultrasonic cutting guarantees the straightness and squareness of each tile produced.



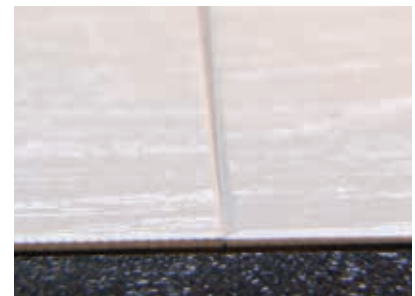
2. LARGE REPEAT DESIGNS

Printing cylinders, which are supplied for all the designs, are up to 1.5m in circumference and can weigh up to 4500kg. Any particular design may pass under a number of cylinders, which apply part of the design layer by layer, using water-based mixing inks. The greater the cylinder diameter, the less repetition occurs in the design. Here, repetition occurs every 16th tile, giving greater design diversity across larger floor areas. At each stage of the process there are constant checks for both quality and colour.



4. SUSTAINABILITY AND RECYCLING

The quality of raw materials is high, accounting for 80% of the total production cost. Forbo has a calendar extrusion technique that allows almost all its waste materials to be recycled: around 5Mkg/y of raw material is directed back into the production. Natural plasticisers are used which removes harmful phthalates from the process, and all inks are solvent free. Exhaust gases from the drying ovens are treated in a fume abatement plant, whose heat is directed back to maintain temperatures in the ovens, reducing the product's effect on the environment.



6. INDIVIDUAL BEVELLING

After the cutting, some planks and tiles are also bevelled (pearlised edges) for an extra realistic effect. The choice to bevel is dictated by the design itself. When it occurs in the natural expression of these materials then Forbo LVT will replicate it. The beveling machine was custom designed and built to order, so as to allow multiple formats to run through and maximise throughput.

Bombay Sapphire Distillery Laverstoke, Hampshire

The famously fragrant gin has a refurbished distillery, and raised a glasshouse or two in the process

Words: Stephen Cousins Photography: Iwan Baan

A heady mix of sensual stimulation and disorientation will confront visitors to the new Bombay Sapphire Distillery in Laverstoke, Hampshire, and not necessarily as a result of quaffing the company's famous dry gin.

The multi-million pound factory complex, designed and masterplanned by Heatherwick Studio, is on an idyllic 2ha old industrial site straddling the River Test near Whitchurch, and involved the transformation and refurbishment of over 40 buildings.

At its centre stand two elegant new waterfall-shaped glass houses, which appear to float

on the river surface, and were designed to give visitors a first hand experience of the 10 exotic plant species, or 'botanicals', used in the distillation, in their native environments.

These innovative self-supporting glass and steel shells, one slightly larger than the other, plunge down from the wall of an adjacent Victorian distillery building, giving visitors inside the impression of standing in a spiralling vortex. That sense of movement is enhanced by the flow of warm air through the spaces – excess heat pumped in from the distillery – which also carries the scent of the exotic plants.

Although evocative of the delirium associated with drinking gin, the glass houses were not conceived under the influence, quips Eliot Posma, project architect at Heatherwick Studio: 'At one stage we were looking to reuse some of the famous blue glass from Bombay Sapphire bottles as part of the interior design, so we requested a few cases of gin so we could do some "experiments" with the glass. I was very excited when a case turned up at the studio, but sadly there were only empty bottles inside.'

The Laverstoke site lies in a conservation area and Site of Special Scientific Interest and dates back to the early 900s, when a corn mill is mentioned in the Domesday Book. The land was developed in the early 1700s when owner Henry Portal began making the paper used to produce bank notes for British Empire, and over the following two centuries it grew into a sprawling industrial complex.

The site had lain derelict for a decade when it was stumbled upon by Bombay Sapphire's branding director, who lived locally and saw the potential to transform it into a state of the art production facility and visitor centre.

Heatherwick's ambitious masterplan involved the demolition of 23 structures, many of them tin outbuildings that had grown like barnacles across the facades of the principal Victorian buildings, and the refurbishment of 21 more, three of them grade II-listed. The River Test, hidden behind ugly high sided concrete banks, was restored and widened in places to reorientate the facility along a central axis.

The heart of the scheme is a reinstated Victorian courtyard where visitors can explore two working distilleries and the two glass houses, which stand on a widened section of river.

'We wanted to open up the factory so people can feel, touch and smell the distillation process,' says Posma. 'Part of that meant

Below Picking up from Paxton. Heatherwick's two botanicals glass houses.

Right The twisting geometries of the glass houses give a heady, delirious effect.







THIS IS NOT A NEW TREND

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Architect: Habib Modara Art & Architecture.





Above Looking down on the complex, set within an SSSI near Laverstoke.

giving them an experience of the ingredients that go into making Bombay Sapphire. Rather than use fibre glass copies of the botanicals, we were keen to use the actual plants, which meant creating two environments, one tropical, one Mediterranean.'

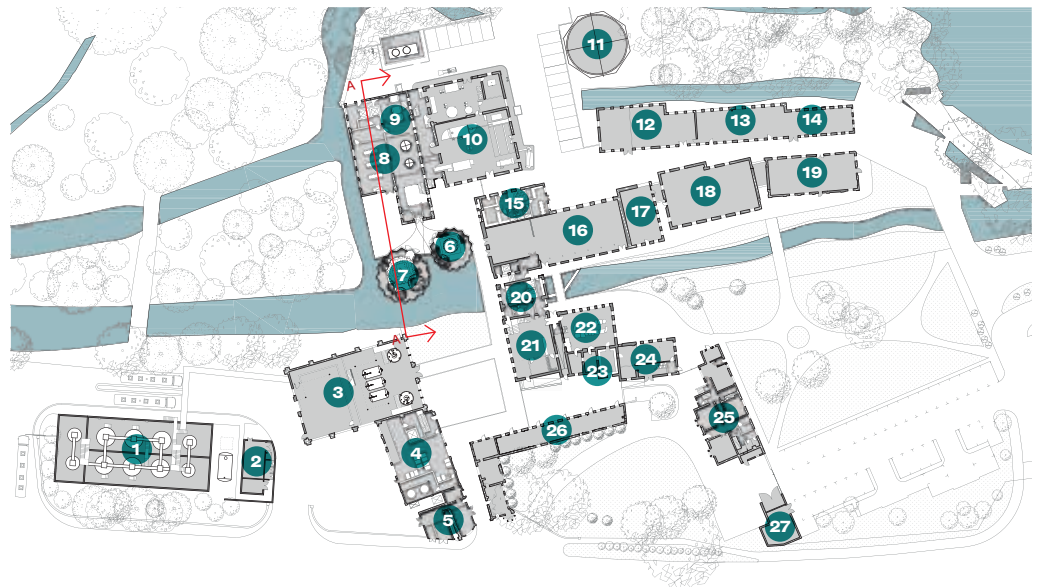
The larger glasshouse, containing plants from a Mediterranean climate, is 15m tall and 12m in diameter; the smaller tropical one is 11m tall and 9m in diameter. Both are made up of vertical steel mullions with a powder-coated bronze surface, separated by glass, and on a raised concrete and steel mesh platform.

Arup engineered the design, which was installed by glazing contractor Bellapart and inspired by the small panes of glass and fine ironwork seen in many Victorian and Edwardian botanical glass houses. Then, the new science of horticulture had driven the creation of the palm house at Kew and the craze for Wardian cases – ornate indoor glasshouses for growing and displaying collections of exotic ferns and orchids.

'We wanted to move back from the current industry trajectory towards bigger and bigger glazing panels with large widely spaced steel framing elements, which is a very different way of achieving transparency,' said Graham Dodd, fellow at Arup.

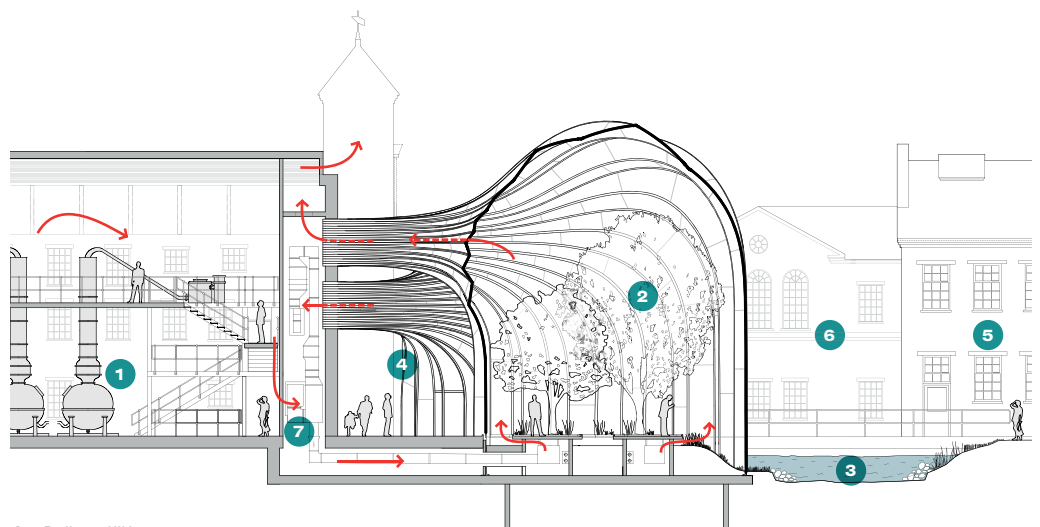
The dramatic flow lines of the mullions were also designed to reflect the movement of warm air through the space, which is waste heat taken from the energy intensive process of distilling gin in copper stills. Heatherwick Studio realised that by storing the heat energy in two large tanks in the Daiken still house building next door it could be drawn into the glasshouses at their base, then rise through the neck and exit through a plenum where the glass

Site plan



- | | | |
|-----------------------------|-------------------|-----------------------------|
| 1 Tank Farm | 10 Energy centre | 19 Café |
| 2 MCC | 11 Sprinkler tank | 20 Laverstoke heritage room |
| 3 India House | 12 Pump house | 21 Entrance hall |
| 4 Botanical store | 13 Storage | 22 Mill Bar |
| 5 Gatehouse | 14 Filter room | 23 Vault |
| 6 Tropical glass house | 15 Facilities | 24 Gift shop |
| 7 Mediterranean glass house | 16 Gallery | 25 Master distiller's house |
| 8 Dry room | 17 Services | 26 Cottages |
| 9 Daiken still house | 18 Restaurant | 27 Coach house |

Section A-A showing air flow through the glass houses



- | |
|--|
| 1 Daiken still house |
| 2 Mediterranean glass house |
| 3 River Test |
| 4 Tropical glass house |
| 5 Laverstoke heritage room |
| 6 Gallery |
| 7 Air ducting from still to glass houses |



Above The geometry emphasises the flow of air through, up and away from the glass houses.



Above The distillery complex looking west, the curved geometry of the glass houses appearing above the original rooftops.

houses connect with the still house. The same system can be used to top up radiators in the visitor centre and forms part of a BREEAM 'Outstanding' rating, the first of its kind for an industrial building and a refurbishment.

Rather than hanging from a separate steel structure, the glazing is arranged in a series of vertical pleats between the steel mullions, creating a stiff shell that gains its strength in a similar way to a folded piece of paper.

'The steel mullions are not strong enough to stand up on their own, they need the weight of the toughened glass in between and the bracing it provides to complete the structural system,' explains Dodd.

Manufacturing the glass was complicated by the fact that it had to curve and twist in different directions as it rises toward the apex. Arup went through a long rationalisation process using Rhino software and specially written script to turn the complex shapes into geometrically simple cylindrical curves, with optimal break lines and joints between different panes, suitable for manufacture.

'Bending toughened glass to a changing radius or twisted shape is not possible with current manufacturing techniques, so the approach was to get it as close to set of cylindrical sections as possible,' says Dodd. Despite this meticulous approach, the team knew there would still be a slight mismatch, so each panel had to

be mechanically cold bent into shape on site before being clamped into position.

There was a further complication: the glass had to be manufactured in as thin a layer as possible to reduce the amount of stress it would experience when being bent on site, but retain enough strength once installed to resist compression loads of up to six tonnes. Once the glass was in place, the panels were silicon sealed and set into position with high strength resin grout.

One weakness associated with vertical pleated structures is the potential for deflection from side loads, particularly wind. This was resolved using a clever detail at the junction between the glass and the foundation. The vertical steel members all sit on 'springs' (thick stainless steel plates profiled on plan to adjust their stiffness) designed to give just the right amount of axial stiffness to stabilise the base of the glasshouse, but not so much that when slight movement occurs it generates damaging forces.

Thicker and stronger panes of glass are used at the base of the structure, so that in flood or heavy rain conditions water can rise up around it without causing damage, potentially also giving visitors a glimpse of the many fresh water trout swimming about in the river. The distillery opened to the public earlier this month, and this is another slightly disorientating effect designed to make visitors feel a little tipsy – though not in the inebriated sense. ●

The glazing is arranged in a series of vertical pleats between the steel mullions, creating a stiff shell that gains its strength in a similar way to a folded piece of paper

Client: Bombay Spirits Company
Designer: Heatherwick Studio
Project manager: Meller
Landscape architect: GWP
Glass house structural engineer: Arup
M&E engineer: Couch Perry Wilkes
Civil and structural engineer: Graham Schofield Associates
Planning consultant: CBRE
Heritage consultant: Giles Quarme associates
Environmental consultant: SKM Enviros
Horticultural advisor: Royal Botanical Gardens, Kew
Process consultant: Alectia
BREEAM assessor: GWP project services

Contractors/suppliers
Glass house contractor: Bellapart ● **Glass supplier:** CRICURSA

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/ RILD - royal devon & exeter hospital



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1 Natura cladding Equitone

Equitone's natura fibre cement material has been used to create this tiramisu style facade on the BREEAM Excellent pathology building at New Cross Hospital in Wolverhampton. That alone is enough to tempt you in, despite the battles over diseases that must rage inside. Of course the word pathology wrongly diverts us to think of a middle aged chap in a polythene jumpsuit crouched over a murdered body, murmuring cause and time of death to a weary senior sweeney, but the medics here might help reconcile us to more routine death as part of the natural process of life.

equitone.co.uk

2 Yorkon Portakabin

I believe that children are our future, teach them well and let them lead the way, show them how to build a maternity unit super fast at North Middlesex University Hospital using Portakabin's Yorkon offsite modules... With 2000 extra births in the area, this new building will be a welcome sight to all those women being rushed through the rendered facade – lit by ribbon windows – to pop out sprogs into the arms of the greatest love of all. But then what? More nurseries, schools, clothes shops... Will Haringey be the cradle of a construction industry rebirth?

yorkon.co.uk

3 Copper cladding Aurubis

Travelodge, the affordable alternative to one-off niche hotels, has treated itself to some special cladding in Walthamstow. While the phone companies are busy replacing copper cabling with something less desirable to the thieves that repeatedly steal it from beneath their manholes, Aurubis's pre-patinated living copper is adding some gloss here, making sure it catches the passer-by's eye in a vibrant Nordic Blue. Let's hope residents don't wake one morning to find that light-fingered 'metal merchants' have stripped it off in the dead of night. They'd have to call the coppers...

aurubis.com

4 Bifold doors Origin

So here I am, sitting in my seven bedroom nouveau-Victorian pad in the leafy suburbs, wondering how to make my proposed kitchen/dining extension better than those of all the neighbours. The doors to the garden – such a headache. Well, here's the answer, Origin's powder-coated aluminium bifolds – so that our candlelight suppers turn this white room into a beacon of light in the black darkness, just like one of Andrew Paul Hayward's 'filling station at night' photos – as seen in the Riba Journal last month. Beat that for neighbourly oneupmanship!

origin-global.com



5
Cladding support system
Nvelope

'But look, the flats, in greyish mantle clad/ Walk o'er the dew of yon high eastward hill...' as the Bard himself might have written of Shakespeare House in London's Hackney, turned from a 'low quality housing block [as the press release more prosaically puts it] into 18 modern apartments'. The transformation was effected using Nvelope's NV1 vertical cladding support systems to clad the block in brick and create a better insulated and more contemporary looking building. And very permanent and solid it looks too, most unlike the ghostly apparition of Hamlet's slain father. nvelope.com

6
Tikana glass
Schott

This scene is definitely in black and white: a Brief Encounter style parting set against the Bauhaus glazing of the Berlin Wall's Palace of Tears. Lashing rain tips over the brim of his hat down the back of his collar, but it is as nothing to the tears flowing down Helga's peachy cheeks; her eyeliner, like her curls, strangely unruffled by the storm. They cling together as a Stazi guard forces them apart. 'Don't take him,' the girl begs, chokingly. 'We must be together! Just as this Tikana glass keeps the Tränenpalast warm and complete, so he does me!' But it's too late, the gate slams shut... schott.com

7
Kalwall
Structura

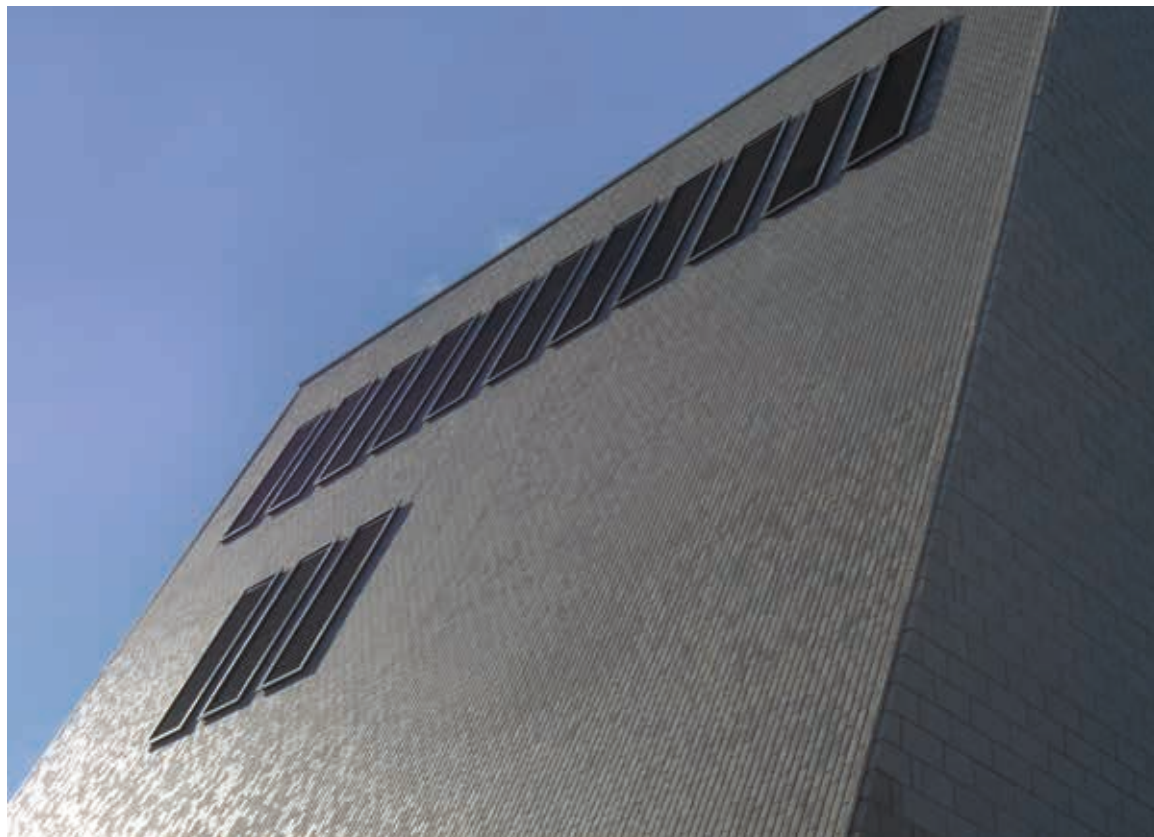
Kalwall clads the bridge linking the old and new buildings of Birmingham's Queen Elizabeth Hospital – highly insulated, self cleaning and admitting diffuse daylight without glare for patients, medical staff and visitors moving between the two wings. And it's perfect for younger visitors who, tiring of accounts of the removal of cousin Wesley's forehead tattoo, or Gran's ingrowing toenail procedure, can melt away from the bedside to practise skidding on their wheely trainers along that shiny floor, clearly able to see their course but invisible to any authority outside. structura-uk.com/kalwall

8
Vitra Pivot door
IQ Glass

The oversized pivoting glass doors on this building are perfect for the English, following as they do the principles of cricket. So with the Vitra Pivot door, when you're out, you feel you're in, and when you're back in, you're out, thanks to the slim aluminium frame and flush threshold detail. They are very tall, for those with a long leg, wide to admit anyone going for a run out, and give excellent views of the outfielders. You can have six, four or a single – any number in fact – so if you are stumped for how to mark the boundary of a room, these are quite a catch. Er, is this becoming a silly point? iqglassuk.com

Façades - TM have got it covered

Local context was key to the design of the façade at Exeter University's Research Innovation Learning Development Centre (RILD).



The building sits on the site of a former quarry. Architect PM Devereux picked up on the stone reference, designing the RILD to look like a stone rising from the earth. Rough at the base, as it moves up, the stone becomes more polished and clean, as though carved out of the unfinished boulder. Even some of the larger boulders that existed on the site before have been kept, to help give a greater sense of stone as a raw material.

Although the quarry was known

for its red stone, the architect decided to match the colour and texture of the materials used to those in the town. It wanted something that would match the memory and history of the buildings around it. John Wissinger, principal designer at PM Devereux, gained inspiration by walking around Exeter, and looking at the local buildings to see how much stone played a part in them.

To find the right cladding material, PM Devereux met with

Taylor Maxwell (TM), to discuss what it wanted to achieve and what materials would help it do this. TM was dedicated to finding the right materials within the budget of the project. They met in the TM showroom, where the architect could touch the materials and see how the colours of product worked together. Wissinger says: 'It was like a children's toy room for architects.'

From there they took samples to the site and held them against existing buildings on the university

Below left Corium brick cladding fixed in a vertical orientation and on a pitched angle.



Above Rows of profiled steel sections are fixed to the vertical support structure. The brick tiles are then clipped into place prior to the application of mortar.



Left Corium brick cladding used on balcony and soffit areas.



Left Three different finishes of architectural masonry.

campus and houses in the area. 'We probably got some weird looks for the residents,' laughs Wissinger.

They also tested how the colour of the material would change, when it got wet, to ensure that the desired effect could be achieved throughout the life of the building. In the end Taylor Maxwell helped PM Devereux settle on the Forticrete line of stone as the preferred method to achieve the different textures that were needed for the lower part of the building.

The upper part of the building needed something that would provide a sharp edge to help define it from the Forticrete base, while matching the desired context. Taylor Maxwell provided the solution with the Corium brick cladding product – whose darker colour gave the impression that the top half had been sheared off.

CORIUM also offers a vertical option as well as a standard horizontal brick finish. In addition to this, the design required the

façade to be pitched at an angle. Both these design characteristics were achievable using the CORIUM system, which comprises genuine brick tiles, specially designed to fix mechanically to a HPS200 galvanised steel backing section. These sections are mounted onto the vertical or horizontal backing structure and the brick tiles are then clipped into place. As well as being mounted on an angle CORIUM was used overhead to create soffits and ceilings around the balcony areas.

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Why system building adds up

There are many myths about pre-fabricated school design, but it is the best way to tackle the chronic shortage of places

Words: Holly Porter



MORLEY VON STERNBERG

A perfect storm is gathering in education: former minister Michael Gove's purdah on building spending between 2010 and 2013 in response to the recession, combined with the birth rate peak hitting school age, has caused a massive shortage of school places. Almost half of England's school districts will have more primary pupils than places within two years, with some areas facing a 20% shortfall by 2015.

This crisis of space and spending, combined with Gove's hard wired disdain for architecture, and the Education Funding Agency's (EFA) minimum space standards, has significantly affected the architectural form schools are taking. The construction industry is moving towards standardised education buildings. Why? Because they can be delivered more quickly, cheaply and at higher quality than traditional methods at a time of great need.

Standardised design is a divisive subject. It was a central recommendation of Sebastian James' government-commissioned review into schools procurement. But the government

Above Surface to Air's George Spicer Primary School for Enfield Council, fabricated using off-site construction.

backed out of a commitment to develop detailed standardised designs in favour of publishing basic design guidance in 2012. Standardisation essentially means pre-fabrication, which is politically problematic as to voters it conjures up images of disastrous 1970s social housing blocks. However, modern pre-fabrication techniques could not be further from this. Standardised space can be flexible, high-quality, have a 60+ years life expectancy and good aesthetic values. Sorry Michael.

Impact of standardisation

The main players in the mainstream, standardised, pre-fabricated design market have

without doubt studied the car industry closely. Each company in the sector has developed its own building equivalent to the 'basic chassis'. These range from the prescriptive – such as Willmott Dixon's Sunesis model which has been built in Bradford, Weston-on-Super-mare and Bedford (defining building form, materials, classroom sizes etc) – to flat-pack kit of parts models such as Laing O'Rourke's concrete system (used at Dagenham Park) or KLH's timber system, to volumetric pre-fabrication models such as Portakabin (our client) which include Cambourne in Cambridge, City Farm in Barking and Dagenham and six primary schools in Enfield.

So does standardisation dumb down the design process? Like anything in construction, it depends on the quality of the toolkit that the manufacturers and their designers have developed. It certainly changes the design process. Designers are required to align their process to manufacturing, not RIBA stages. This means some information is required quickly up front that isn't normally – window sizes, basic grid dimensions, while other data can come much later – partitions and spatial arrangement.

A criticism levelled at pre-fabricated schools is that designs can stagnate and not evolve quickly enough. Here again, we can look at comparisons with the car industry. The manufacturing processes and kit that go into to pre-fabrication of any product, school or car, are immensely costly, so clearly making changes to core design principles is like turning a large battleship. However, high volume output is key to keeping the price point low and allowing product development. High value cars such as Aston Martin, Jaguar and Porsche, with low volume outputs, have designs that last for a decade. Mid to low value brands such as Ford and Fiat have high volume outputs, and change designs almost yearly as they have a significant throughput on the production line. Effectively, you produce a new design every X thousand units.

Uptake and market penetration mean a manufacturer – of cars or buildings – can keep the price low and continue product development.

Pre-fabricated designs, particularly with the price point challenge and basic need requirements in the education sector, are a no brainer. However, architects working with toolkits conceptually take on a different role – that of curator and facilitator working with a kit of parts rather than a blank sheet of paper.

The best school solutions can often be a combination of mixed construction techniques, where standardised volumetric modular space is used for the classroom wings with traditional construction for the large connecting spaces. However, the client can end up paying two sets of preliminary costs – one to the ‘main contractor’ (who may not be a modular specialist) applying its prelims to 100% of the works (when it is in reality only building 30%), and the modular supplier that is providing 70% of the work and has its own prelims too.

Procurement routes

Procuring a standardised, pre-fabricated building is straightforward – there are basically three main routes: OJEU, frameworks and LEP partnerships. Design and build is common for standardised pre-fabricated designs, as the competing contractors will tend to want to work with specialist teams that understand their building product at detailed design level.

The OJEU route is popular with local authority procurement lawyers, as it is safe and paperwork rich. The client can write a detailed brief of its requirements, and it gets a full and open set of responses from the widest possible market. However, with tight budgets and quick design programmes, the time and costs associated with OJEU often preclude this route.

Frameworks have lots of options and are a much more common route for clients – from local authorities to academy trusts.

The Modular Building Systems framework (previously the GPS framework) is purely for modular construction providers: it has three contractors. Tendering takes the form of a mini competition for the works based on capacity, ability, resource and the team. A lot of work is starting to be put through this route. It's quick and cost effective for clients who know what they want, and how they want it built.

The Scape framework has two main contractors that deliver education projects (they are selected through a separate tender process) – one deals with minor work and one with major. Although it is easy to access, there are concerns that there is effectively no choice of main contractor for the client accessing the framework. It's popular with local authorities as it is seen as safe, but it's not always the most cost



Above Edmonton County School by Surface to Air. The new secondary school science and general teaching block has been developed alongside Willmott Dixon construction.

effective way to procure.

Hot off the press is the new EFA framework which came out in September this year and looks pretty accessible and good – our client ARK Academies has just procured a building through it. It has a mini tender period similar to the modular building systems framework.

Another route is through Local Education Partnerships – a long term relationship between the local authority and a core contractor delivery partner. The LEP formation involves extended bidding which looks at design approach, capability supply chain etc. However, once set up, it can be relatively quick. The pros of an LEP are that the contractor is in a long term relationship and embedded in the local authority teams, so will not be looking for short term gains. However, it depends on the quality of the team and the risk is that contractors become complacent as there is no competitive element.

Architect's role

The role of the architect on any of these procurement routes is completely set by the commissioning client. The architect can either be selected by the client and novated to the contractor, or appointed directly by the contractor. To access either of route architects need to tender for local authorities design services frameworks (Newham Framework has just

closed) and/or contractors supply chain lists.

Since 2010 it has been a buyers' market for education buildings. Contractors were loaded with immense risk at sometimes impossible pricepoints. There were some pretty catastrophic business crashes and burns. But with improved market conditions in all sectors, the tide is turning to favour suppliers. Now money is becoming available and with a plethora of work coming through, contractors' appetite for risk appears to be reducing.

We have heard of large invitations to tender from the EFA being turned down by contractors due to unclear briefs, unrealistic programmes and price points. The industry predicts a massive rise in contractors' rates over the next five years – who are desperately trying to claw back their losses from the recession. Interestingly too, with the growth in other sectors, we are hearing that more and more contractors (particularly interiors teams) are declining D&B jobs and returning to traditional contract approach – its lower risk and higher profit.

We are entering a new cycle of schools procurement as we come out of recession, with a massive need for facilities to be built quickly (at an extremely low build price point – £1113/m² required by the EFA). High-volume, pre-fabricated design is key to delivering this. ●

Holly Porter is founder director of Surface to Air

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Armstrong Ceilings help show military museum in the best possible light

A new, purpose-built home for a military museum has made unusual use of Armstrong Ceilings.

The new £2.3million Soldiers of Oxfordshire Museum features 29 of Armstrong's 1800mm x 2400mm Axiom Knife Edge aluminium canopies with Tegular 2 metal tiles under the exposed concrete soffits throughout the display and office areas.

But in this case, the main runners of the standalone canopy - an easily-relocatable modular system designed to create ceiling "clouds" for acoustically-challenged or exposed structure spaces - have been specially adapted to carry recessed spot lights to meet the museum's requirement for illumination at any point within the gallery space.

Armstrong's technical department worked with Oxford Architects to adapt the standard components to allow the ceiling canopy design to incorporate lighting tracks into the main runners without the need for bespoke fabrication. Specialist sub-contractor Berkeley Integra then produced a sample raft complete with the lighting installation.

Oxford Architects have used Armstrong Ceilings system for the past 30 years and specified the Axiom canopies to meet the visual design requirements of the museum, a charitable trust colloquially known as SOFO.

The practice's Brian Mortimer said: "They provide an acoustic and lighting base, and incorporate the display lighting. As the museum required the potential to have spot lighting anywhere in the gallery space, plug-in lighting tracks were required to maintain building flexibility, even under the ceiling rafts."

The ultra microperforated metal 600mm x

600mm Tegular 2 tile perforations are practically invisible miniature holes less than 0.5mm in diameter. Incident sound waves are absorbed without the need for any acoustic infill. They are also manufactured from 30% recycled content and feature 83% light reflectance.

The museum moved from the Defence Logistics Organisation in Caversfield to The Oxfordshire Museum in the centre of Woodstock where it had previously held temporary exhibitions of its extensive collection of military and other artefacts, documents and medals representing a significant aspect of military and social history in Oxfordshire.

Its purpose-built, concrete-framed 824m² home replaces an under-used single-storey modular building at the north end of the site within Woodstock Conservation Area but clever detailing and use of a simple palette of natural materials including a green roof has enabled the new three-storey building to blend into the site.

It incorporates a multi-function orientation space called "The Briefing Room" that can be used for meeting and entertainment space, an audio visual display room or for temporary exhibitions.

The layout of the new building locates archive space in the rear sub-level area, with public exhibition and social spaces at ground floor. The first floor is designed with voids to allow ground-floor galleries the facility to take large, vertically-orientated exhibits which were previously not possible to accommodate.

To view additional project images, visit www.armstrong-ceilings.co.uk/projectgallery.



Above Armstrong Axiom Knife Edge canopy with ultra microperforated metal Tegular 2 tiles.

Right The ceiling canopy design incorporates lighting tracks into the main runners without the need for bespoke fabrication.

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ARMSTRONG IS FLUSH ABOUT ITS NEW AXIOM RANGE

Leading interior systems provider Armstrong Ceilings has enhanced its Axiom range and launched a new brochure introducing the full range of aluminium solutions. Armstrong's Axiom solutions provide an aesthetic finish for wall-to-wall and discontinuous ceiling installations, meeting the requirements of contemporary specifications by giving architects and interior designers the ability to create attractive and functional ceiling features quickly and cost-effectively, using pre-engineered aluminium trims, transitions and profiles, and in the case of discontinuous ceilings, canopies.

The refreshed range incorporates a totally new sub-range of Blind Boxes to allow full and clean integration from wall to any ceiling system, whether it is to disguise blinds and feature lighting or just a shadow line visual solution. With slide-in accessories, the Blind Box provides a neat integrated finish with plasterboard, metal, mineral fibre or wood tile ceilings that is capable of saving 75% of costs in drywall material and labour.

In addition, Axiom transitions provide a seamless conversion between plasterboard and suspended ceilings, while Axiom profiles help with ceiling level changes, floating ceiling construction and lighting integration. Axiom canopies provide a discontinuous ceiling portfolio delivered as a simple sub-structure kit that is available in different dimensions.

Axiom perimeter solutions are quick and easy to install using standard grid and tile combinations to ensure crisp edge details and smooth connections every time, regardless of whether the solution is straight or curved, wall-to-wall or floating "clouds". Trims, profiles, blind boxes and accessories are available on next-day delivery and in two standard colours with a full range of accessories, they can also be customised with bespoke colours, cuts, curving and finishes, and come with a 30-year system guarantee when used wall-to-wall with a complete Armstrong system solution.

Commercial washrooms

The smallest room is wielding unexpected influence on building design and fitout

Words: Pamela Buxton

Can a great loo seal the deal on a big city let? Developers and architects are certainly upping their game on the smallest room in response to increased expectations from the market.

At the Leadenhall Building, Maurice Brennan of Rogers Stirk Harbour + Partners says the naturally-lit washrooms are the best the practice has ever designed for commercial offices, and they certainly feature prominently on the hoardings outside; developer British Land obviously thinks they're a selling point and with more than half the space let already, they are probably right.

Developers have more than ever to think about for such small spaces as washrooms become valuable marketing assets rather than neutral facilities: Are superloos with integral sinks the answer? Should washrooms be unisex as is the fashion in Europe? How much prefabrication is possible? Where should the showers go? Should taps be sensor-activated? Dryers or hand towels? What about maintenance? And of course they have to look great too.

'Quality has gone up massively... Having the wrong person making decisions on washrooms can be a game changer,' says Phil Sullivan, senior projects director at Argent, who says the rising popularity of cycling has prompted a new focus on more and better showers and bike-related facilities. 'Expectations for the quality and specification of washroom spaces is rising, and good architects now respond by thinking themselves into the lifestyle of the future occupier, including the journey to work.'

Washrooms are becoming a key expression of the building aesthetic.

'Loos are an important part of the building. It's where you come very close to the building fabric around you. They are a very intimate, personal space and you can't just change the level of quality from the rest of the building aesthetic,' says Benjamin Lesser, development manager at Derwent London. 'For us the whole experience from street to desk – lobbies, lifts and loos – has equal focus and attention to create the right impression of quality that lifts the spirits.' He adds that Derwent favours the unusual and looks to architects and designers for inspiration to lift washrooms out of the ordinary. Make, for example, is working on a design for it where lighting indicates whether a cubicle is occupied.

'It's the small touches that make the difference,' he says.

From a practical point of view, Derwent is looking for durability – kit should last 5-10 years – and, crucially, unobtrusive ease of access for cleaning, maintenance and re-fitting.

For major new builds, prefabrication – whether with bespoke or standard units – is increasingly in demand.

'It's definitely the way the trend is going to modularise everything, especially in the high volume commercial market,' says Dougie McGowan, who installed the washrooms at 10 Brock Street and now runs Modular Interiors. As well as ensuring close quality control prefabrication saves 30-40% labour time on site, he estimates.

Washrooms aren't immune to trends. Superloos are increasingly common but there is still a demand for these to be gender segregated.



Below Washrooms in the Leadenhall tower by RSHP: a bringing together of natural light, building structure and bespoke fittings sublimating the washroom to an embodiment of the value of the whole development.



'The world is full of people who'll judge how good a place is by the toilet'

'Feedback is really mixed on whether people prefer a superloo or a more conventional arrangement. I do think that women in particular want loos badged male or female,' says Argent's Phil Harrison.

Showers are a more pressing issue for developers, both on the lower levels and on the main office floors.

'With the next generation of offices we're building flexibility for tenants to bolt on additional washroom or shower facilities to the end of the core, or use it for office space or meeting rooms,' says Harrison.

This is also the case at Leadenhall, where tenants have the scope to introduce extra shower rooms on the office floors in addition to the generous provision in the basement. Showers are by far the most common extra requirement on top of the basic fit-out, adds Ian Cowell, head of design at JLL's fit-out business Tetris. He agrees that clients favour gender-segregated facilities and that washroom expectations and standards in general are increasing.

'The world is full of people who'll judge how good a place is by the toilet.' He puts particular emphasis on ease of cleaning and sufficient, but not too harsh, lighting.

While agents are sometimes accused of encouraging conservative attitudes to such spaces, times and tastes are evidently changing as demonstrated in Leadenhall's naturally lit washrooms. Their popularity with tenants could well have a knock-on effect, hopes RSHP's Brennan.

'We'd like to think this will begin to change perceptions and some of the early advice given by letting agents in the future.'

A photograph of a modern bathroom interior. On the left, a white pedestal sink sits on a dark, reflective vanity unit. A tall, rectangular mirror with a thin frame is mounted on the wall above the sink. To the right of the sink, several bottles of toiletries are arranged on the vanity. In the foreground, a white armchair with a wooden frame and a stack of folded grey towels sits on a light-colored wooden floor. In the background, a tall, white, sculptural object stands against the wall. The overall aesthetic is clean, minimalist, and contemporary.

A genuine Starck.
The bathroom by
Philippe Starck.

Design by Philippe Starck

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LEADENHALL BUILDING**Architect:** Rogers Stirk Harbour + Partners**Client:** British Land

The washrooms at Leadenhall are the most prefabricated RSHP has ever built. Contractor Laing O'Rourke encouraged the design team to maximise prefabrication throughout and this extended to the modular 10.6m by 3m washrooms, which were factory made in cassettes by Ruddy right down to the installation of sensor-activated taps, sinks and pipework, before being embedded in the main services in situ.

Male and female washrooms are arranged alongside the lift shafts on the north core, moving with the shafts themselves through the building. They share the same zone as the lift lobbies – except on the transfer floors – and the same finishes. These include Domus porcelain tiling on the floors and, above, the expressed yellow-painted steel floor structure and bespoke iGuzzini shades. To admit as much natural daylight as possible, the washrooms have mainly translucent outer walls through the use of a semi transparent interlayer and a blue (male) or red (female) frit. Those at the ends of the lobbies have slots of clear glazing to give great views.

Lifts are visible as moving shadows where they pass just 45mm away from

the translucent washroom walls. Facilities vary according to their position in the plan with scope for up to six cubicles. Each pod component is 2.4m high with widths of 90cm (cubicle), 70cm (urinal) and 60cm (basin). These square sinks were custom made by Ideal Standard in the profile of the Leadenhall building with smooth undersides and no plug or overflow. Where fewer sinks are needed, these are replaced by flat 'blanks' without basins, that act as handy shelves. Panels below the sink swivel to give access to the bins and soap dispenser. Behind the mirrors is access to the paper towel dispenser. A cleaner's cupboard and sink are concealed behind another locked mirror unit. There is scope to change configuration and finishes easily if a future tenant wanted to, with no disruption to the fabric of the building.

Cubicles have white lacquer doors and white laminate interiors with a back-painted glass rear panel. Jasper Morrison designed the pans and urinals for Ideal Standard.

'Loos are a very strong selling point for buildings. The fact there's daylight is quite unique,' claims RSHP's Maurice Brennan.

Now everyone can get a bit of the Leadenhall vibe – Ideal Standard has decided to manufacture the sink for its regular ranges.

Right RSHP's

Leadenhall tower: prefabricated toilet modules in red and blue are a key feature of the north service core elevation.



Left Wilkinson Eyre's Brick Street. High spec, pared back symphony of Corian and dichroics.

10 BROCK STREET, REGENT'S PLACE, LONDON**Architect:** Wilkinson Eyre**Client:** British Land

Wilkinson Eyre's design of the washrooms at 10 Brock Street offices picks up on the iridescent character of its facade.

'We wanted to take that theme back into the washrooms,' says senior architect Melissa Clinch, adding that the firm aimed to flow the aesthetic of the other communal spaces through into the washrooms.

Often, she says, there isn't much scope to be creative in these spaces with clients reluctant to move away from the typical round basin with two taps. But much more was possible at 10 Brock Street, where a full-size mock-up was used to test design and installation of the prefabricated washroom.

'For a commercial developer, toilets are an asset, so it was prepared to spend the money to do the mock-up. Otherwise, if you couldn't test it, you'd have to take a more conservative approach,' says Clinch.

Instead, the architect introduced square sinks within a glacier white Corian vanity unit which, she says, resembles a sugar mouse in

its slight translucency. This is combined with the dichroic splashback, which forms the main feature of the washroom and was the subject of particularly close attention. Clinch says they spent a lot of effort making sure the right amount of light came through by trying different combinations of layers and back-painting. The final solution was back painted glass with a layer of dichroic film and a layer of acid-etched clear glass on top.

Dichroic panels are used behind the Villeroy & Boch basins, on the flush panels in the cubicles and above the urinals as well as in the disabled toilets. They lend a rare splash of colour to the otherwise whites and grey palette. Cubicle doors are lacquered with a white high gloss finish. Two shades of textured ceramic floor tiling are used – white beneath the vanity counter and grey elsewhere. Taps are by Hansgrohe with a custom brushed nickel finish and sensor control. 'It's all tones of white – some glossy, some frosty,' she says.

One male and one female shower cubicle are provided within the main washrooms, as well as in the basement, where there are a further seven near the cycle store.

BUCKLEY BUILDING, CLERKENWELL, LONDON

Architect: Buckley Gray Yeoman

Developer: Derwent London

Buckley Gray Yeoman created new washrooms with cast concrete troughs as part of a retrofit of the 1930s Buckley Building for Derwent London, which fully let the offices within six months.

This industrial flavour gives a consistent aesthetic throughout the six-floor building.

'The bespoke cast troughs pick up on the cast concrete in reception and other areas of the building and slopes back so that water disappears down the back, and you can't see the trap,' says director Matt Yeoman.

Towers and soap dispensers are concealed beneath the mirrors, with provision to install driers instead if required. Bins are incorporated into either end of the troughs, which were made by Lowinfo. Sensor-operated taps, now generally the norm in commercial washrooms, are by Dolphin Dispensers.

Cubicles opposite the trough are by Thrislington Cubicles, with white lacquered doors and white laminate interior. Although new build washrooms are increasingly prefabricated, the retrofit didn't allow it.

According to Yeoman, the design level has been raised considerably for these spaces: 'Generally standards are improving massively not only in male and female washrooms but in showers and ancillary facilities such as lockers, which weren't ever in office buildings before. Everyone wants a gym quality to their washrooms.'



Left Buckley Gray Yeoman's concrete troughs and restrained palette of materials reflects the slightly industrial aesthetic of the original brick building in Clerkenwell.

ONE SOUTHAMPTON STREET, LONDON

Architect: John Robertson Architects

Client: Aviva Investors

Unisex superloos provided a space-saving washroom solution in John Robertson Architects' refurbishment of an eight-storey end of terrace office on the corner of The Strand.

JRA extensively reworked the 1920s building, removing a central lightwell and repositioning the core into the middle. With a tight typical floor place of 315m² NIA, four unisex superloos including one disabled cubicle were installed near the core on each floor, with standard units measuring 1.90m wide and 1.57 deep. This saved space by needing only one access corridor, and also by the reduced provision required for unisex facilities.

According to JRA associate Charlotte

Mockridge, one of the main priorities for unisex superloos was privacy, with full height to slab cubicle walls. Fittings are an Ideal Standard toilet set into a back-painted glass wall with stainless steel skirtings, and a solid surface counter with integral basin and concealed stainless steel trap. This bespoke item was mocked-up to test dimensions and drainage.

'We wanted something very sleek and crisp. It's shallow but gives you the illusion of space,' she says.

Each cubicle has a different accent colour inside to contrast with the white and grey access corridor.

'Superloos give the feeling of a boutique hotel rather than an office, which some of the developers like. But we're still doing a lot that is more traditional. It's a nice option to have,' she concludes.

Right John Robertson Architects' superloos: Space, privacy and finish that evokes boutique hotel rather than commercial office.



HUFTON + CROW (2)

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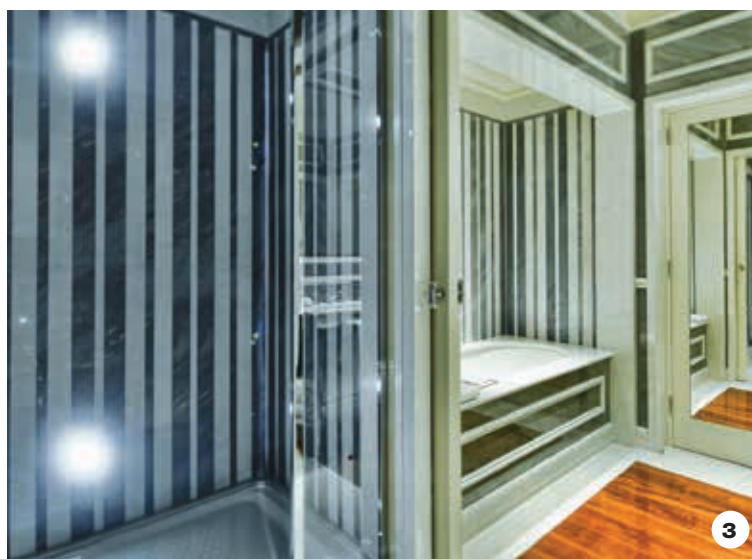
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1 Iconica doors Washroom

When it came to fitting out the washrooms in the Shard, what could anyone do but go for the Iconica range of cubicle doors? Obviously the overused icon word is heavily applied to London's pointiest building, but in the context of loos one does wonder how it fits with the moniker's actually spiritual meaning. Perhaps it is an expression of cleanliness being next to godliness, which might account for the height, Dyson Airblade taps and Corian vanities, but don't the admittedly dramatic vibrant red cubicle doors evoke a more fiery aspect of the Bible? washroom.co.uk

2 Memoria sanitaryware Vitra

It seems that the importance of the public washroom has reached such heights that what was once dismissed as the smallest room must now be the most sophisticated element of a building. Take this desirable space – it looks just like the latest metropolitan restaurant, with muted lighting, central plant decoration and spacious yet intimate place settings. As it turns out those 'plates' are Memoria basins, their 'sleek, clean lines' designed to 'wow discerning guests'. Is Vitra on the way to plugging a gap in the party events market? vitra.co.uk

3 Bathroom furniture Kaldewei

Here's a glass maze with a difference – each time you take a wrong turn you are treated to either a refreshing shower or a relaxing bath... Only kidding! In fact, it is a sumptuous bathroom fitted out by Kaldewei at the upmarket JK Place Roma in Italy. Top quality furniture – the Classic Duo bath for shared bathing and Conoflat shower surfaces – offers absorbing ablution solutions while German design promises 'superior quality and cost effectiveness'. It's a bathroom of a different stripe, but it should certainly keep amorous co-bathers in line. kaldewei.com

4 Glass walling DR Services

DR Services reports that its internal glazed walls are used by interior designers and top end contractors to fit out washrooms and pools in hotels, restaurants, spas and corporate HQs with a practical and elegant look. The added advantage of course is that if the mirrors are overloaded with beautiful people, users can check their tie is straight or whether their lippy needs refreshing with a surreptitious glance in the gleaming surface as they pass. On the other hand, nurturing that iridescent sparkle might hike the polishing bill a bit. drservices.co.uk



4



5



6



7



8

5
Mike Pro accessories
Crosswater

You know, the marvellous thing about this job is that you are constantly learning something new. This morning's revelation, courtesy of the Crosswater PR team, is that 'More than just a finishing touch, [bathroom] accessories are useful, providing space for soap, toiletries, towels and toothbrushes'. And there was me thinking the towel rail was just for decoration. So is the Mike Pro, which comes in chrome or brushed steel to sustain its finishing-touch status, really a function-follows-form loos-ian accessory? And does that funky wallpaper have a purpose too? crosswater.co.uk

6
Kitchen design
Lida Cucina

Those on a low income, look away now. Lida Cucina's dream design has won a 'best kitchen over £50k' award, and once you've regained breath from the £75,000 price tag you must admit it looks pretty swanky. Installed in a new London home, its top-of-the-range appliances are set among curves for intimacy, grey oak and grey lacquer for light, and composite stone worktops of Okite banco. The house is built round a protected oak tree, making the kitchen sound like an engineered mirror of the old English stalwart outside. These guys really are livin' la lida local! lidacucina.co.uk

7
Kitchen furniture
Doca UK

Now here's a cook's kitchen – looks fab whatever mess you're making in it and enough ovens to roast several animals at once. Why does anyone need eight ovens?! Although... just a minute, that's a mirror backsplash isn't it? Clever, those Doca bods, making the kitchen twice as marvellous as it already is with a bit of mirror magic that Sir John Soane would have been proud of. As you might have guessed, this is a bit of central London culinary luxury, but there's no reason why these furnitures and finishes shouldn't inspire anyone fitting out their semi in Surbiton. docauk.com

8
Cocos Plus towel warmer
Vasco

All these top notch kitchens bring to mind their antithesis – Frank Zappa's Dangerous Kitchen, obvs – and this seems to be the ultimate example of the distance from the Mother of Invention's torrid domesticity. Unexpectedly though, it turns out that we are looking at this room because of the compact Cocos Plus towel rail, described by Vasco's product manager as 'a real heat-cannon'. To be candid, bearing in mind the truths buried in Frank's ode to a kitchen, could anyone really bring themselves to hang a grotty tea towel in this unrealistically pristine cuisine? vasco.eu

Costed

AECOM associate David Holmes provides an overview of rates for kitchen and bathroom fixtures and fittings

Kitchens and bathrooms are the most difficult products to provide general cost information for because of the very wide range in product specifications and the variable quantity of units likely to be fitted.

Many factors help make a good kitchen, based on usability and functionality.

Usability involves the design for the end user and ergonomic risks. Look for hazards to avoid such as placing fittings in a way that force

users into awkward postures.

Functionality covers planning and layout to ensure kitchen tasks become more efficient. In a house all residents use the kitchen, from the least to the most able, the shortest to the tallest.

The kitchen costs below allow for volume manufacture units, rather than handmade one-off cabinets.

Water saving is one of the major drivers for bathroom fittings design. Dual flush toilets are

virtually standard for all WC suites on the market today, reducing water use to an average of just 3 litres per flush. This can save up to 50% compared to standard single flush toilets.

Water saving measures are being fitted to taps and mixers to limit water flow, and many now offer click technology to adjust flow rates manually. Bath design has reduced capacities to below 150 litres, a 35% saving compared with standard size baths. ●

The following rates are based on a UK average and represent typical prices at 2014 Q3. Please note prices can be significantly higher depending on specification.

KITCHENS	Range £
All-in rates	
Typical all-in rates for residential market – volume housing to mid-range level, include units, worktop, sink and taps. Not including white goods	
One bedroom flat (5 cabinets)	£1800 -£2200
Two bedroom house/flat (6 cabinets)	£3400 -£4300
Three bedroom house (8 cabinets)	£6500-£8200
Four bedroom house with utility room (12 cabinets)	£10,000-£15,000
Middle range specification (NB dimensions are approximate to indicate the approximate size of units)	
Standard sized unframed units. Veneered particle board cabinet construction, 600 mm deep for floor mounted units and 300 mm deep for wall mounted units	
High gloss finish, floor standing units, 500 mm wide, each	£250 -£340
High gloss finish, floor standing units, 1000 mm wide, each	£325-£450
Solid timber doors, wall mounted, 500 mm wide units	£420-£600
Solid timber doors, wall mounted units, 1000 mm wide units	£540-£800
Upper middle range specification	
Standard size framed units. Solid timber cabinet construction with Birch ply or similar; 600mm deep for floor mounted units, 300mm deep for wall mounted	
Solid hardwood timber door, floor standing units, 500 mm wide	£580-£720
Solid hardwood timber doors, floor standing units, 1000 mm wide	£750-£900
Solid timber doors, wall mounted, 500 mm wide units	£620-£800
Solid timber doors, wall mounted units, 1000 mm wide units	£800-£1000
Door upgrades (applies to hardwood door rates)	
Hardwood doors, eg Oak, Ash	20%
Premium hardwood, eg Walnut	30%
Hand painting	25%
Worktops – generally up to 40 mm thick (per metre run)	
Granite	£160-£200

	Range £
Quartz	£185-£230
Composite	£100-£150
Solid timber	£180-£250
Laminate	£80-£115
BATHROOMS	
Sanitary ware – mid range	
Low level WC, vitreous china pan	£265-£320
Wall urinal, vitreous china	£220-£265
Bath, pressed steel enamelled	£550-£670
Shower tray, glazed fireclay	£410-£500
Shower enclosure, hinged door and side panel	£450-£650
Hand wash basin, glazed fireclay	£150-£180
Sanitary ware – high range	
Wall mounted WC	£650-£750
Wall mounted hand wash basin	£320-£400
Bath, freestanding, waterfall inlet filler	£1450-£1800
Shower door, bespoke, hinged door and side panel	£1000-£1800
Taps	
Waterfall style basin filler, chrome finish, each	£75-£150
Waterfall style bath filler, chrome finish, each	£110-£180
Single kitchen single lever mixer tap, each	£80-£125
Kitchen pull out tap (pull out spray), chrome finish, each	£140-£250
Concussive basin self-closing taps, chrome, pair	£100-£250
Hydro taps (zip taps), each	£2500-£3000
Accessories	
Heated towel rails, 600 mm wide, standard chrome finish, each	£75-£140
Heated towel rails, 600 mm wide, designer stainless steel, each	£275-£350
Electric towel rail, 600 mm wide, standard, each	£125-£175

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Victoria Beckham store, Dover St

Farshid Moussavi's design for the new shop in London is complex, beautifully detailed and, like fashion, all about the surface

Words: Jan-Carlos Kucharek

Thankfully, it's not often an architect makes it onto the Daily Mail website, but when the architect is designing the new store for Victoria Beckham on London's achingly fashionable Dover St, the story was a shoo-in. Designer Farshid Moussavi won't be drawn on why, from a shortlist of three firms, it was her practice that was appointed, although you sense some truth in the Mail's assertion that with Moussavi regularly turning up on site in designer heels, VB might have seen in her a kindred spirit of glamour.

Moussavi's intervention has completely re-interpreted the space behind the generous late Georgian facade onto Dover Street, and here it's all about the staircase and triangular voids, which interestingly force you to move counter-intuitively through the space. Entering through a not totally satisfying concrete sliding door in a glass wall, you traverse a polished, poured concrete floor. But you are funnelled away from the grand concrete stairs ahead to a far corner, forced round by a cut in the slab

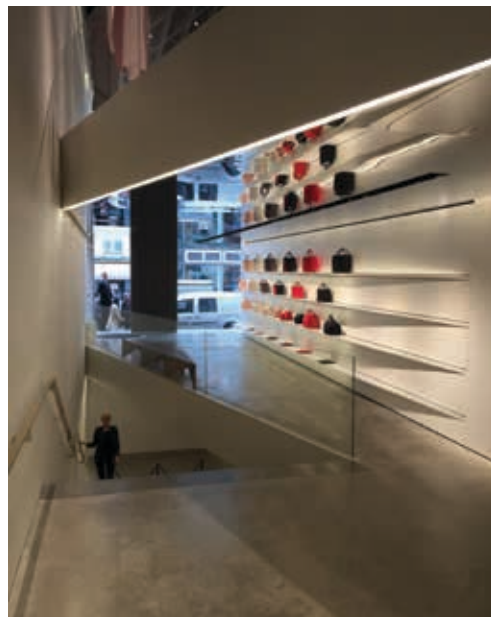
to the basement below. You are led to a narrow space that extends to the full depth of the shop where you can access the stair, but this too effectively reduces in width as you ascend – interfered with as it rises by the first floor slab crossing its path, rendering it narrower at the higher level. The moves are confusing, but for such an ostensibly simple space, quite thrilling.

'It's an immersive experience, surrounding you and involving you in its complex inter-relation of spaces,' says Moussavi on the phone to me from America. 'As you move through it, you are reflected and become the subject.' You don't say. The first floor slab soffit is reflected in highly polished stainless steel, as are walls and cabinets.

Expressed as abutting panels, invisibly fixed, reflections are almost continuous – it must have been a nightmare to achieve. Moussavi says this simplicity and attention to detail was part of the brand aesthetic, with: 'no fuss, but meaning a lot more care.' Reflections are relieved by the changing rooms at the rear

which are clad in a slightly unnerving and chromatic greenbottle hue.

The piece de resistance is reserved for those ascending the staircase where the complex cross-hatched diagonals of an aluminium, concrete-clad fin ceiling are revealed. Formed of pre-fabricated sections, its drama is accentuated by the mirror stainless on the walls and columns which shifts the geometry in reflection, dematerialising them in the process. Stretching the full length of the shop, it apes the delicacy of fishnet stockings, but as if subjected to some gargantuan perverse haptic inversion. It seems like an awful lot of structure attributed to the perfunctory aim of 'hiding the plant, acting as a lighting track and incorporating runs for the display of chain hangers for clothes'. You get the feeling it's Moussavi's favourite move in a space replete with contradictory interventions. And this is the ultimate illusion – a ceiling that's decadent, outrageous, all substance but really only about surface. Vive la mode! ●



Far left The first floor slab eats into the space of the staircase.

Left Movement through the simple space is intriguingly counter-intuitive.

Below The concrete-clad ceiling suggests gravity, weight and purpose for what is really a suspended ceiling.

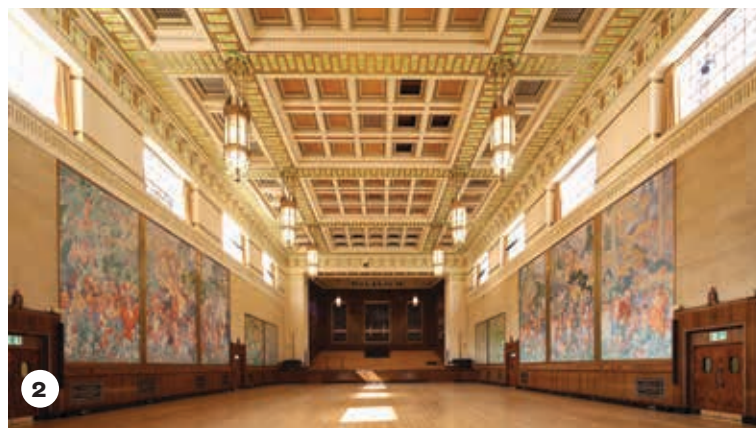


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1
Internal walling
Akurawall

Newly formed Akurawall Group has sent out this image to demonstrate its flexible acoustic wall system. And very handy it looks too, dividing this large multifunctional white space into its component parts with colour matching to make the change almost invisible. It's a bit like watching golf – cameras panning a white ball flying through a white sky. The question bothering me is: with everything so white, won't you lose all perspective and keep bumping into things: 'Oops, who put that wall there?' Nothing that a bit of maroon flock wallpaper can't sort it out... akurawall.co.uk



2
Colour matching paint
Johnstone's

The unexpurgated version of Alice in Wonderland includes a scene where Alice, chasing a rarebit through a municipal hall, has had too much cake to squeeze through the tiny doors in the wainscott. As she peers out of the window her head bumps the ceiling. 'My, what marvellous colour matching,' she declares, 'Only Johnstone's paints could have done this job. It's like their refurb of Brangwyn Hall's ceiling in Swansea Guildhall.' But before she can look further a speaking gavel jumps up and bops her on the head. 'Curiouser and curiouser,' she yawns, 'I was here in Swansea all along.' johnstonestrade.com



3
Lighting
Concord

Howick Hall in Northumberland, its recently refurbished entrance lit by Concord's Beacon Muse and Stadium Evo 2 spotlight luminaires, is best known as home to the Earl Grey of fragrant tea fame. Now open to the general public, its café will surely excel in its range and presentation of the cup that cheers. As prime minister, the second Earl also oversaw the abolition of slavery and the passing into law of the Reform Act. Such enlightenment deserves the best lamps money can buy, so Concord's illumination of the info boards can only be applauded. concord-lighting.com



4
Acoustic ceiling
Knauf

Where there's people there's noise, so when Manchester Library and Town Hall Extension was refurbished it called in Knauf to install its Cleaneo Akustik acoustic suspended ceiling system to keep things quiet. What a haven of calm and subdued taste it looks! If only someone could persuade the neighbours to use them: think of all the crying babies, screaming children, shouting teenagers and rowing adults it could absorb, not to mention the sports round-up, Slayer riffs and Saw VII that you really could do without seeping through the party walls. knauf.co.uk

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Flooring

KARDEAN YO! Sushi picks Da Vinci Australian Walnut for Ken High St floor



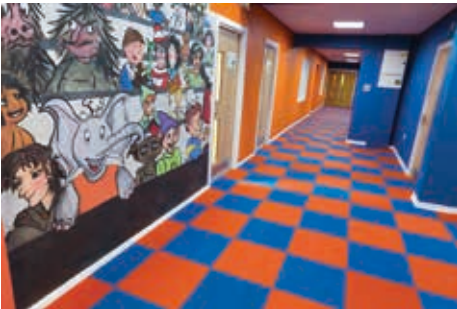
The original conveyor belt sushi bar restaurant, YO! Sushi, has specified the UK's market leader in luxury vinyl flooring, Kardean Designflooring, in place of real wood at various outlets. At its latest restaurant, in London's Kensington High Street, the chain has specified Kardean's Da Vinci Australian Walnut (RP41) in all walkways and individual restaurant booths. Its deep chocolatey tones and ebony lowlights create a rich backdrop in key areas. www.kardean.com

FLOWCRETE Scottish use of resin floors confirms their reliability



Flowcrete UK has a long history of working with public sector bodies and is able to bring its expertise to bear on all sorts of new build and refurbishment projects. The diverse variety of its adaptable and customisable screeds and resin flooring systems means it can supply floors tailored to the individual demands of each site. For example, Flowcrete's hard-wearing and resilient floors are in use at fire service facilities across Scotland, including the fire station and training centre at Edinburgh Airport. www.flowcrete.co.uk

HECKMONDWIKE Creative carpet put a spring in primary pupils' steps



Pupils at a primary school in Croydon, London, are guaranteed a bright start to their day after Supacord fibre bonded carpet and tiles from Heckmondwike FB were specified for the school's classrooms, nursery, library, corridors and stairs. Available in 42 colours, Supacord is renowned in the education sector, where as well as aesthetics, floor coverings need to withstand heavy wear and tear. The flooring also has a BRE Global A+ environmental rating for use in school buildings, offices and retail outlets. www.heckmondwike-fb.co.uk

ADDAGRIP Craftsmanship and technology create PU Floor Green Line



Addagrip, the leading resin bound and bonded surfacing manufacturer, has teamed up with Netherlands based Flowresin Group to launch a stunning new range of interior flooring called PU Floor Green Line. The seamless floor collection combines traditional craftsmanship and modern technology to create a unique, durable flooring product that can be tailored to suit individual requirements. www.addagrip.co.uk

SIKA Monotop produces top grade repair at Cambridge University refurb



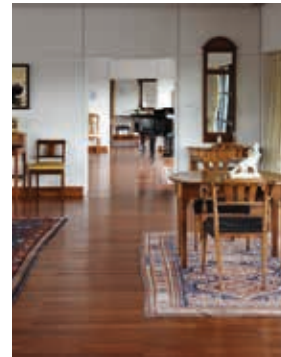
In a conservation area at the University of Cambridge, global building product manufacturer Sika has supplied a comprehensive concrete repair and corrosion inhibitor system – fully compliant with BS EN 1504 standards – to return five aging buildings to the highest standards of aesthetics, performance and weather resistance. Sika Monotop – a cementitious one-component system consisting of polymer modified mortars – was used to make primary repairs to protect the concrete frame. www.sikaconstruction.co.uk

ALTRO First class bathrooms for the University of Melbourne



Altro has delivered integrated flooring and wall cladding for Ormond College at the University of Melbourne. The college needed practical, easily maintained flooring and wall cladding for new bathroom installations. It selected Altro Aquarius™ safety flooring to provide a slip-resistant surface in wet and dry, shoe and barefoot environments, and Altro Whiterock™ cladding for the ensuite walls, which is impact resistant and removes the need to worry about repairs to grout, cracks or chips. www.altro.com

JUNCKERS Strong in Satin lacquer renews Danish Embassy floors



Junckers professional lacquer has been used to restore the floor at the Danish Embassy in London to its former glory. The existing solid wood floor was sanded back and refinished with four coats of Junckers Strong in Satin finish for a durable, subtle sheen. Junckers Strong is a water based, 100% polyurethane hard wearing lacquer which leaves a low odour and is NMP free. www.junckers.co.uk

NORA Award winning school settles on noraplan stone flooring



Nora® flooring solutions has installed over 2500m² of its noraplan stone floor covering at Lady Eleanor Holles School in Hampton, Middlesex. Specified for its versatility, noraplan stone has been installed in many areas including the art department, which has won a RIBA London Award. Chosen for its durability, excellent slip resistance and ease of maintenance, noraplan stone is now available in a refreshed colour palette and a smooth surface version. www.nora.com/uk

Kitchens & Bathrooms

SPECFLUE New range of eco cookers for the UK market



Specflue, a leading supplier of flue systems, wood burning stoves and renewable heat products, is launching a new range of pellet cookers. Manufactured by JCorradi through MCZ, one of the first companies in Europe to introduce pellet technology, the NEOS pellet cookers will be distributed solely by Specflue in the UK. The cooker comes with all the practical benefits of pellet stoves and boilers. It is controllable and can be set to turn on and off as required by the user. www.specflue.com

AQATA Bespoke frameless shower screen boosts sense of space and light



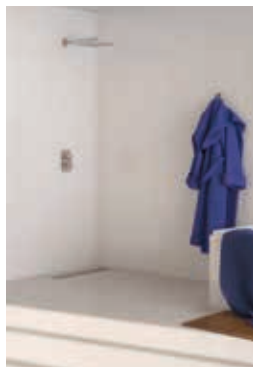
Aqata has launched a new bespoke frameless shower screen, increasing its line-up of bespoke, made to measure showering solutions for 2014. Characterised by spans of stunning frameless glass, the screen offers the ultimate in minimal styling and is ideal for contemporary wet room style interiors. Distinctively frameless, it is secured to the wall and ceiling (if required) by high quality polished chrome brackets, removing the need for wall profiles entirely. www.aqata.co.uk

FRANKE Athena tap ticks the style, quality and cost boxes



Franke's Athena kitchen mixer tap, part of its best-selling Pro-Value range, is an excellent mid range product which provides access to Franke's renowned quality and design at highly competitive price points. The bi-flow Athena comes in an elegant and timeless swan neck design. Finished in polished chrome or smooth silksteel, it is 349mm high and has a spout reach of 194mm, and overall handle width of 144mm. With ceramic cartridges, it has a hot flow rate of 5 litres/min at 0.3 bar. www.franke.co.uk

MULTIKWIK Bathroom drainage that covers all the bases



Multikwik now offers a complete range of shower and wet room drainage solutions – from feature-packed shower gullies through continuous channel drainage to sophisticated linear drainage. All combine modern design and easy installation features that will make the range the logical choice for specifiers and installers alike. The Linnum range includes a choice of grate designs in stainless steel and glass and comes in three lengths – 650mm, 750mm, and 950mm. multikwik.com

ON THE LEVEL Bespoke wetrooms that can help turn ideas into reality



With 30 years experience, On The Level is the UK's leading manufacturer of concealed wet floor formers and is the only manufacturer that can produce bespoke solutions in any size or shape. The formers are precision engineered in 24mm birch ply, so are extremely strong but light and easy to handle, and can be readily shaped on site and screwed into position. Dictating the gradient of the tiled floor, which allows water to drain and avoids pools of water gathering, On The Level trays are guaranteed for 25 years. www.onthelevel.co.uk

SHOWERWALL Stylish stone look at an affordable price



Rustic Travertine, one of six new additions to Showerwall's waterproof laminate wall panelling system, reflects the latest trend for stones and granites in neutral colours in bathrooms without the price-tag, providing an easy-installation, easy maintenance alternative to tiles. Rustic Travertine mirrors the look of real stone but as a laminate panel is lightweight and easy to cut and install. Unlike real stone, Rustic Travertine does not need re-treating and can be cleaned with normal bathroom products. www.showerwall.co.uk

BUSHBOARD Nuance panels: water-impervious, lightweight and easy to install



Bushboard's Nuance range of bathroom laminate wall panels are ideal for domestic and commercial bathrooms being lightweight to handle and easy to install, as well as offering a 100% waterproof product that's backed by a 15 year guarantee. The panels feature a patented polyurethane core board that ensures they are totally water-impervious, with a surface that cope with busy usage, while being easy to clean. Nuance also requires no extrusions for installation, the slim postformed edges giving a neater finish. www.bushboard.co.uk

WASHROOM Precision engineering enhances City washrooms



In the recent refurbishment of the City of London's 62 Threadneedle Street, Washroom installed new male and female WCs on four levels of the building. Its full height Alto WC cubicle doors, designed for complete privacy, were finished with a striking wood effect engineered veneer. Silver grains highlighted the dark wood tone to complement the molten silver tiles and other features in the washroom. Also included were floating trough vanities in white Silestone. www.washroom.co.uk

Doors & Windows

DR SERVICES New edge seals win on performance and aesthetics



Achieving the ultimate in aesthetics and performance, two new edge seals from DR Services offer major advances in design. The glass lip and glass lip slide seals are a quick and almost invisible – but effective and easily adjustable – means of filling the gaps at the junctions of glass doors and walls. They are ideal for retrofitting in almost all glass installations, including shop fronts and shower enclosures. Both seals are made from transparent coextruded thermoplastic and can be used on glass 8-14 mm thick.

www.drservices.co.uk

INTASTOP Niche manufacturer joins the BIM revolution



Leading manufacturer of door and wall protection, Intastop, has joined BIM's product portfolio, allowing users to access its products. BIM subscribers wanting door and wall protection can now include products from the niche manufacturer in their design specification. Initially, BIM subscribers will be able to specify Intastop Aluminium Door Edge Guards which are fire rated, PVC-u Door Edge Guards which are fire rated and non fire rated, Impact Protection Sheet and Continuous Geared Hinges.

www.intastop.com

LOMAX & WOOD Doors and windows complete Victorian restoration



Timber casement and sliding sash windows, along with French doorsets, from the celebrated Lomax + Wood Kensington & Chelsea collection have been specified by architect MSJ Associates in the sensitive restoration of a dilapidated Victorian brick building, Dover House at Waterloo in London. Around 65 timber casement windows, French doorsets and traditional box cords and weights sash windows were used in the complex scheme, all of which feature an ovolo moulding.

www.lomaxwood.co.uk

TREMCO Helping achieve BREEAM and Passivhaus performance in practice



It is well known that properties often fail to achieve their design performance standards in practice. So specifiers will be reassured to learn that manufacturer of sealants and other construction products, Tremco Illbruck, supplies expanding weather-strips and compatible sealants to counter cold-bridging and help achieve very low levels of air leakage in order to meet Passivhaus or near-to-zero carbon standards, as well as the top levels of BREEAM.

www.tremco-illbruck.co.uk

GEZE Slimchain scoops top design award



An innovative chain drive from GEZE has been recognised for its exceptional design at the Universal Design Awards 2014. The versatile Slimchain window drive was launched in the UK by GEZE UK last year and is suitable for both natural ventilation and in smoke and heat extraction systems. It is part of GEZE's range of window drives, which share a uniform, discreet design and innovative Smartfix installation system. The aesthetically-pleasing, discreet Slimchain has a broad range of applications.

www.geze.co.uk

SCHOTT Restoration glass that replicates a historically authentic look



TIKANA® restoration glass imitates Bauhaus style and the classical modern. International technology group Schott offers a wide variety of architectural glasses for use in restoration work. The many different glasses are manufactured using the traditional Fourcalt process and made to resemble window glass from different eras. Thanks to its differentiated range of materials, the company supplies glasses that meet the requirements of monument preservationists, building owners and users.

www.schott.com

RUNDUM MEIR High quality exterior doors for any application



Rundum Meir specialises in high quality, standard and custom-made exterior door systems in materials including solid timber, copper, aluminium, bronze and glass. In plan the doors can be curved, straight or even wavy. This bespoke side sectional patinated brass door was fitted to match the external facade of a new house in central London. Rundum doors have been used on listed buildings, award-winning new builds, conceptual architecture, refurbishments and a high profile passive house.

www.rundumuk.co.uk

MUMFORD & WOOD The only choice for 16th century rectory renovation



Conservation™ timber windows and doors by Mumford & Wood have been architecturally specified in the restoration of a 16th century private home in the Breckland area of rural Norfolk. Double glazed Conservation box sash windows have been installed on a new extension and six co-ordinating side hung casement windows are also featured. A Conservation French doorset with fixed glazed side panels bathes the hall with light and gives access to the gardens.

www.mumfordwood.com

Cladding

KINGSPAN Kingspan TEK® takes to the great outdoors



The Kingspan TEK® Building System has been erected in a matter of weeks by SIPs@Clays LLP, forming the walls and roof of a new dormitory building and activity centre at the Laches Wood Outdoor Education Centre near Wolverhampton. The system comprises structural insulated panels which were factory cut to the project's individual plans. This bespoke design service, featured on all Kingspan TEK® projects, ensured a straightforward, fast-track installation with minimal on-site adjustments and waste.

www.kingspantek.co.uk

STO Reading Station upgrade has a heart of glass



Over 1,200m² of StoVentec Glass cladding has been used in the dramatic upgrade and refurbishment of Reading Station. Specified by Grimshaw Architects, the product combines a high quality aesthetic with a robust and easy to maintain surface that was straightforward to retrofit to the existing concrete structure. The visual appearance – smoky grey – was the starting point, while the mechanical fixing required by the StoVentec system was simple to use.

www.sto.co.uk

ANCON Software makes designing wall-to-slab joints simple



Ancon's new software simplifies design of its award-winning KSN Anchor rebar continuity system in wall to slab construction joints, providing safer, faster concrete connections on site. Ancon's internally-threaded KSN Anchors replace re-bend continuity boxes that require bars to be straightened by the physical force of site workers. Instead, KSN Anchors are cast into the wall ready to accept virtually any length of Bartec parallel threaded rebar, easily accommodating the longer EC2 lap lengths.

www.ancon.co.uk/KSN

CEMBRIT Metro and Stockholm cladding cloak sustainable homes



Cembrit Metro cladding has been installed on a mixed use development in Camden, London, to provide a decorative finish to complement the surrounding brickwork. Approximately 500m² of Stockholm cladding has helped the building achieve an accredited sustainability status. Architect AHMM specified the cladding with the design plan of the brickwork 'peeling back' at the corners of the envelope, revealing a contrasting palette of glazing and cladding.

www.cembrit.co.uk

VM ZINC Engraved facade launched in response to architects' feedback



VMZINC has pioneered a new development with Azengar®, the first rolled zinc facade and roofing material to be engraved. Its subtle yet distinctive surface has a matt appearance which is unaffected by fingerprints and so ideal for both exterior and interior use. It is pigment-free, manufactured using an entirely new process and produced in 0.7mm, 0.8mm and 1.0mm thicknesses. It is the lightest shade of zinc available and unlike pre-weathered shades, its engraving causes delicate variations in light refraction.

www.vmpzinc.co.uk

REYNAERS Systems take to the water at Greenwich wharf scheme



Reynaers Aluminium has supplied a range of architectural aluminium systems to a prestigious riverside apartment, office and retail development in Greenwich. A key feature of the scheme, which comprises five blocks and a tower, is the incorporation of lower blocks into the retained, grade II listed brick facade of the former marine boiler factory, Paynes & Borthwick Wharf. Reynaers supplied CW 50 curtain walling, and CS 77 and CS 38-SL windows which are both thermally improved.

www.reynaers.com

ALSECCO Lithodecor takes Airtec facade systems under its banner



Airtec Stone and Airtec Glass ventilated rainscreen facade systems have been rebranded under the Lithodecor banner. Airtec systems have been manufactured by Lithodecor for over 20 years and marketed alongside alsecco's insulated facade systems. The rebranding to Lithodecor allows the specific technical and design aspects of the systems to be highlighted more clearly and give more impetus to this innovative, specialist stand-alone range.

www.lithodecor.co.uk

CD (UK) Corian cladding offers looks and longevity



DuPont™ Corian® was used to create the sparkling modern look of this extension to a family dwelling near York. Corian rainscreen cladding is not only highly effective but also decorative. It is a creative and versatile material which can be used not only to design a highly visual finish, but is also a cladding which will look new and clean for many years.

www.cd.ukltd.co.uk

Interiors

BOSS DESIGN Stylish stacking chair from Paul Brooks



A collaboration between eminent office furniture designer Paul Brooks and Boss Design has produced Zandi, a multi-purpose stacking chair. Suitable for cafés and dining areas, the compact and comfortable chair is ideal where space is at a premium as it conveniently stacks away when not in use. Zandi is available with plastic seat and back or with an upholstered seat and plastic back. Complete with a chrome frame, this non-arm version comes in various colours to provide maximum visual impact. www.boss-design.com

LYNDON Maya chair by Mark Gabbertas unveiled



Lyndon Design, the leading manufacturer of upholstered handcrafted furniture for commercial interiors, has again collaborated with award-winning furniture designer Mark Gabbertas, to unveil Maya. A distinctive tub-style chair that exudes comfort and style while retaining a strong and clearly defined form, Maya is ideal for a variety of interiors, including both formal and informal spaces. With a choice of two back heights, Maya is compact and can provide a sense of privacy or sociability. www.lyndon.co.uk

SPECTRAL LIGHTING Puma travels at the speed of light with Spectral Blade



The interior design scheme of the new Puma HQ in London is the concept of 'Light Speed'. This concept is conveyed in by light streaks throughout its interior and graphic elements. Blade LED panels by Spectral Lighting were specified in the corporate colours of red, black and grey to match the Puma branding. BLADE is manufactured from a sound reflective material so as well as acoustic benefits, the panels have added a striking visual element and – containing LEDs – save money. www.spectral-lighting.co.uk

LG HAUSYS Life Sciences Hub goes for Hi-Macs for inspiring setting



To design and fit out the Life Sciences Hub Wales in Cardiff Bay, Paramount Interiors' highly bespoke designs and hi-tech materials included the flexible solid surface Hi-Macs® – a natural stone set in an acrylic matrix – that can be visually seamlessly joined and thermo-formed into practically any three dimensional shape. The reception area includes a polished stone and Hi-Macs toffee brown welcome desk, as well as 'scaled-up' test tubes and back-lit panelling. www.himacs.eu

General

LAZENBY Discovered by EuroDisney and inspiring award-winning design



LBMVARCHITECTS

Euro Disney Paris discovered the aesthetic beauty of Lazenby's iconic visual concrete over 20 years ago. Today Lazenby continues to embody a spirit of imagination, creativity and master craftsmanship. As a market leader and industry innovator, Lazenby turns architectural dreams into award winning realities – for example this award winning interior by LBMV architects. Samples are available on request once plans are well under way. Showroom visits by appointment. www.lazenby.co.uk

NORBORD Smarter sites with SterlingOSB hoardings



In today's brand-heavy world, contractors need their sites to project the best possible image – and the launch of Norbord's SterlingOSB Sitecoat has made that easier. Oriented Strand Board, or OSB, has long been the preferred material for site hoardings. Sitecoat's factory-applied coating fills and smooths the surface ready for paint or site graphics to be applied, making it even quicker to install. It is easily fixed via standard woodworking and is made from square-edged, moisture resistant OSB3. www.norbord.co.uk

ALUK Let the sun shine in: Award winning home uses AluK building systems



Architect AR Design Studio specified AluK's aluminium building systems for the 4Views residential project in Winchester, which won the Sunday Times British Home Awards 2014 'One-off House or Extension' category. AluK window and door systems enhance views over the South Downs, and help keep the owners' home safe. AluK's BSC94 (duo rail) and BSC94 (triple track) sliding door system, as well as 58BW ST (duo rail) steel replacement window system, were used on the scheme. www.aluk.co.uk

RURAL ENERGY New heavy duty Herz biomass boiler launched



Leading biomass provider Rural Energy has partnered with Herz, the premier Austrian boiler manufacturer, to develop the Herz Firematic 199kW HD. Designed for energy intensive applications such as poultry farms and leisure centres, the design is based on the popular Firematic 199kW model. With the same reliable grate and boiler design, this heavy duty version has a larger body and combustion chamber to deliver increased water volume and overall heating capacity. www.ruralenergy.co.uk

DUPONT TYVEK £50k WikiHouse uses FireCurb breather membrane

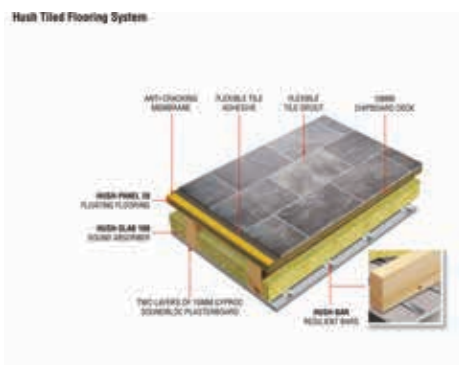
Forward-thinking construction requires pioneering solutions. That's why DuPont™ Tyvek® FireCurb™ – an innovative breather membrane designed with both safety and sustainability in mind – was chosen for rapid installation at WikiHouse4.0. Led by Arup, The Building Centre and Zero Zero Architects, this became the world's first open source two-storey house, the basics of which can be assembled within days for under £50,000.

www.FlameRetardant.tyvek.com

JOHN BRASH Citideck brings back the lake in Wicksteed Park revival

A £2m renovation has brought Wicksteed Park in Kettering, Northamptonshire, back to the original vision of its founder. The fully restored lake, one of the park's key historic features, used over 4,500 linear metres of JB CitiDeck to form the decking for the bridges, floating pontoon, a pier and a boardwalk. The creation of the boardwalk and pontoon, by Walcon Marine, enables access to the far area of the lake while the footbridge, created by CTS Bridges, links to the arboretum.

www.johnbrash.co.uk

HUSH A quiet solution to tiling over acoustic flooring

Movement in a floor system can cause tile grout and adhesive to crack; in extreme cases tiles can even tent, pop out and break up. Hush Acoustics works with partners to form systems to prevent these problems, using anti-crack membranes, movement joints, flexible adhesives and grouts in conjunction with Hush acoustic flooring systems. Hush provides NBS Specifications as they detail our preferred solution to installing tiled floor finishes with Hush Floating Flooring.

www.hushacoustics.co.uk

TWYFORD New e200 range saves space without compromising style

Twyford has launched the e200 space-saving range of sanitaryware and furniture, with smart design and clever features to bring bigger-bathroom benefits to compact spaces. A 320mm corner handrinse basin and 500mm corner washbasin make the best use of corner spaces, and short projection, offset washbasins provide a useful shelf feature. A square design, compact, wall-hung toilet maximises space and features Twyford's Flushwise water-saving technology.

www.twyfordbathrooms.com

STRUCTURA Kalwall at night

Architects are familiar with the highly insulating Kalwall translucent system and its intense quality of diffused daylight which makes interiors so stunning. Blackburn College, designed by DLA Architecture, shows here what the unique cladding looks like in reverse at night. As well as new build, Kalwall is increasingly specified for the refurbishment of cladding or rooflights on aged buildings.

www.structura-uk.com/kalwall

ROCKPANEL Extra fire safety meets design with FS-Xtra grade facades

New advanced features on the FS-Xtra grade from Rockpanel combine high levels of fire safety with the broadest range of aesthetic finishes and RAL colours available from a single manufacturer. Established for their durability, versatility and variety, standard 'Durable' and 'Xtreme' boards already achieve European fire rating B-s2, d0. On an aluminium or steel supporting structure and fixed with blind rivets, premium 'FS-Xtra' boards meet European fire class A2-s1, d0, and can be rated non-combustible.

www.rockpanel.co.uk/fsxtra

GEBERIT Flush innovation at the very lightest of touches

Geberit's most revolutionary and innovative flush system yet, the Sigma70, features new Dual Hydraulic Servo technology. Geberit is pioneering new technology with its latest flush plate, while its beautiful design fits seamlessly into the contemporary bathroom. Made of a single piece of glass or stainless steel for a minimalist finish, Sigma70 uses patented hydraulic and pneumatic power to activate the flush, which is triggered by the very lightest of touches by the user.

www.geberit.co.uk

SENIOR ARCHITECTURAL Hybrid systems aid sustainable Dublin design

The multi-award winning Airfield Evolution building in Dublin, Ireland, which has a whole host of environmentally friendly features, has benefited from Senior Architectural Systems' fully recyclable timber and aluminium Hybrid curtain walling, door and window systems. Senior's Hybrid Series 3 curtain walling was installed along with Hybrid Series 1 casement tilt and turn windows, plus Hybrid's sliding folding doors, lift and slide doors and swing doors.

www.seniorarchitectural.co.uk

Sign Up

Teresa Borsuk, executive director at Pollard Thomas Edwards, gives us three of her specification favourites.

FRESHFIELD LANE BRICK

It took over 50 samples, numerous colour studies and nine on-site panels to agree a palette for four new Ceres apartment blocks in the Cambridge CB1 regeneration area. Conservation and design required a darker brick, Freshfield Lane's Selected Dark Facing, which helped emphasise the blocks against the surrounding buff brick buildings. As the light changes, the textured walls transform from grey, through red to smoky brown. This detailing, combined with the rhythm of window openings and balconies, helped create a play of texture, light and shadow to animate each facade.

www.brickability.co.uk

TECU BRONZE CLADDING

Barking's restored Granary building is a fusion of old and new, combining the preserved historic features of the old brick warehouse with a contemporary new extension designed to create a dramatic statement and dynamic contrast. The new building was inspired by the gabled form of the original and its TECU bronze cladding is a striking modern material based on tradition. An alloy of copper and tin, it imbues a warm reddish brown colour, which will develop distinctively through weathering, forming the tarnished patina more slowly than traditional copper.

www.kme.com/en/tecubronze

GRP DORMER WINDOW SURROUNDS

The Avenue is a 76-home development in Saffron Walden incorporating extruded vernacular forms with a restricted palette of traditional materials and contemporary details. Elevations maximise light and views, while large, simple openings and bay features take their cues from the agricultural tradition. GRP roof dormers provide a nod to the traditional building form, but are pre-moulded as single volumes off-site, making them quick to install with very neat profiles, clean lines and consistent colour.

www.wessexbps.co.uk

...Sign Off

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

HORSES FOR QUARTZES

Pampered racehorses seem to be getting above themselves. Worktop manufacturer Granite Transformations has worked with coach builder Oakley to produce granite, quartz and glass chip surfaces for its luxury mobile horse boxes, which 'include power shower, dishwasher and satellite TV with cinema surround sound'. Could these trucks have human quarters too? Apparently 'White Star recycled glass is Oakley's most popular finish'. And despite being regularly assaulted with tea making by those iron-shod hooves, whatever the odds on the horse, it's good to know that ongoing works won't be a dead cert for the Granite team.

CLIFFHANGER

'We live on a blighted one.' So said Hardy's tragic heroine 'Tess', when her niece asked upon what star we lived. Tess gets her grim comeuppance at Stonehenge, which was always the point for Hardy. But he had a brighter side, taking his first true love to Clavell Tower folly on Dorset's Jurassic Coast, to stare out at a horizon, and steal kisses running around its Tuscan base. Life imitating art, the 11m high folly was blighted too, subsiding as the cliffs eroded until it nigh on fell to be dashed against the rocks below. The Landmark Trust luckily stepped in, moving it stone by stone to safety, and a marked Hardy skulked off to Casterbridge. The End.

BATHROOM BAUHAUS

The 2014 'Construction Rocks' event – bands all from the industry – was won by 'The Macenaries', beating off 'Blood, Sweete & Tears' and the slightly eyebrow-raising 'Tender Package' (formerly the 'Pre-Tenders'), from Assael Architecture. Meanwhile, the less 'Rock and Roll' of us might want to enter Twyford's 'Bathroom Singer of the Year', whose proceeds go to Children in Need. X-Factor architects who 'really wanna sing' just log onto the site and upload their 90-second clip belting it out in the bath for a chance to get to the final on 8 November and win £1000. Remember, stick to RIBA's Code of Conduct – and no bum notes.

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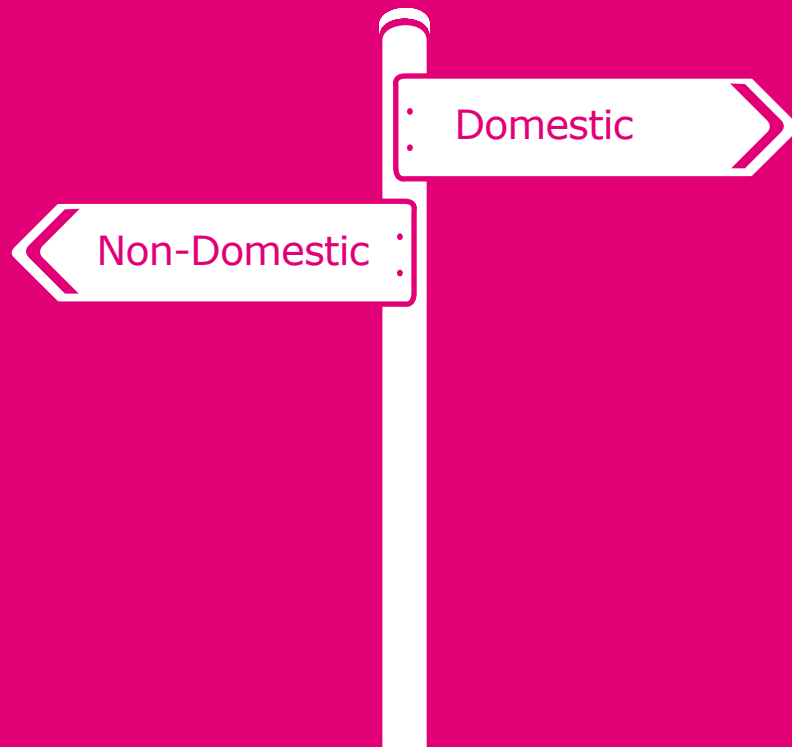
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insulatingbritain.co.uk

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