

Products in Practice July/August 2014

Extreme spec

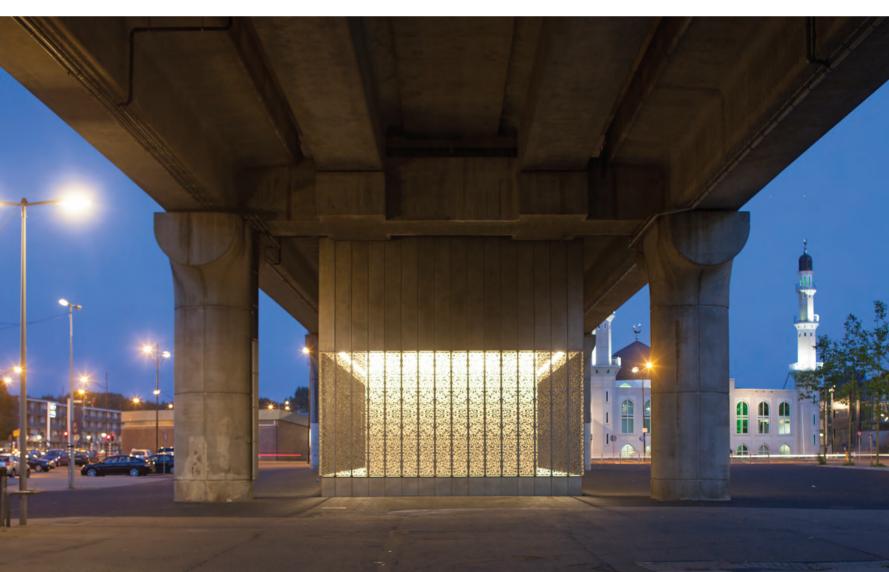
Safety flooring for Eurofighter jets Lighting

Metrostation Kraaiennest, Bijlmermeer, Amsterdam Analysis: Hotels

Rising demand triggers new ways of thinking Roofing

Terminal 2, Heathrow, London Interiors

De Waal Studio, London 36







Yes, we can do it. Armstrong's multi material ceilings portfolio - metal, wood, fabric and mineral provide intelligent, efficient, cost-effective tailored solutions to meet revolutionary, state-of-the art interior project designs.

Hotel Silken Diagonal

A myriad of colours and patterns create a stunning passage through different areas with varying visual requirements.

Grand Hotel Tiffi in Iława

Combining eye-catching elegance, natural beauty and acoustics with wood ceilings.





Judging ...

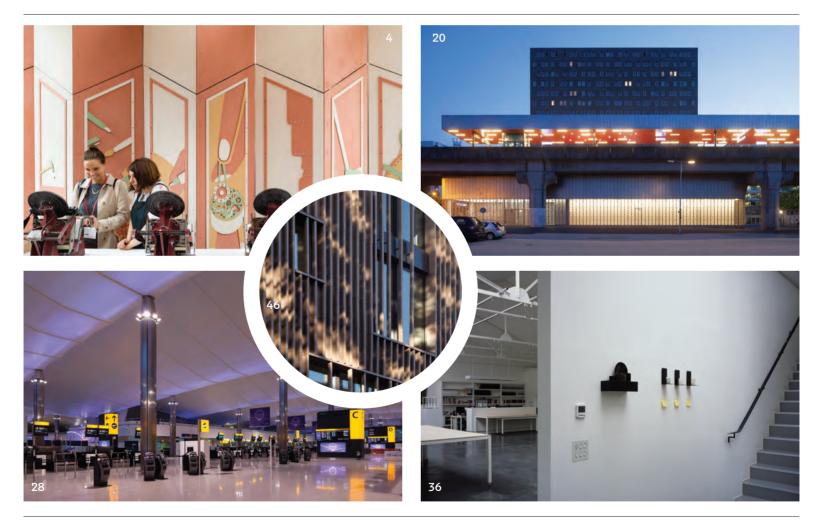
... the Galvanising Association's annual awards, as I have for a few years, we've usually had a clear winner in the architecture category. This year there wasn't, and it felt strange for that. Instead we were presented with mostly commercial schemes dealing in the most obvious and face-value manner, with the common conception of what architects do to buildings to make architecture. Maybe it was my weekend of surprise barbecues and beer taking its toll,

but I found the whole thing mildly depressing.

Thank God then for the winner – a 6m high sculpture of galvanised twigs in a Scottish National Park, an ephemeral object being deconstructed by the elements that surround it. The winner of the engineering category was similarly sublime – a fabricator who had chosen a delicate lattice steel frame structure to create a biomass store on the coast outside Liverpool, whose roof angle was informed by

the angle of repose of the pellets, all covered in a simple, monolithic fabric skin. Its primal form sits on the landscape in dull grey and white to poignantly 'blend into the skyline.'

In these two projects, neither done by architects, and using the basest of materials, the most fundamental of architectural ideas were reified; and I didn't know whether to be inspired by that fact or despair at it. • Jan-Carlos Kucharek, Editor



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Compendium



Scale of destruction

To mark 100 years since the start of World War One, St Paul's Cathedral commissioned artist Jerry Judah's creation of two crosses hanging either side of the nave. Their almost lichen-like growth is in fact scale models of bombed-out buildings, representing the horrific impact of war on cities. 'Bombs expose the private, the personal the intimate,' says Judah. 'The skin of a building ripped away to show lives ended in a single blast.' See these and Bill Viola's 'Martyrs' free Monday-Friday at 11.30am and 2.15pm.

Winning Zincing

Architects hang your heads in shame! It turns out most of the really good projects in 2014's Galvanisers Awards (for which the prize is a very handsome watering can!) were in the engineering category. Artist Rob Mulholland's 6m high sculpture 'Skytower', for a remote park in Scotland, a galvanised structure of steel twigs frozen in the process of being blown away. so resonated with architectonic poetry that the judges blew it into the architecture category to win. This left the engineering field free for a biomass storage facility designed by contractor Total Steelwork that was not only highly delicate, but designed to follow the angle of repose of the sawdust (right). And all covered in a lightweight fabric, like taut skin over bare bones. Bravo!





Odour the top

You have to love Studio Weave's (and RIBAJ's) Maria Smith. Admiring the practice's craft installation 'Smith' at Clerkenwell Design Festival in May, I mentioned that very few buildings had a smell any more. 'Hmm...let's see,' she said, sniffing the laser-cut Marley Equitone walls of Smith. 'Nope,' she noted scientifically, before running off to smell the brick walls of the nearby Order of St John. The installation, meanwhile, underwent its own empirical testing that afternoon by withstanding a deluge – its projecting gargoyle gutters easily channelling water away. It made me think that without asking and answering stupid questions, the charming pastoral-industrial aesthetic of 'Smith' would probably never have come about.

No more growing pains

Anyone with kids will know how quickly they grow when they're young, which might explain why Dutch infant fashion brand Noppies went to SIG Zinc and Copper to clad its main HQ building in Lelystad. For unlike its 'nappy' namesakes, there's no waste in evidence here. SIG's just developed a bespoke cutting service that means all its finishes can now be made to measure, fabricating nonstandard tray and panel to meet the demands of any architect's specification. Now who's feeling like the pampered one?!







Keep Palm and carry on

Given the amount of CO_2 that must have been emitted to build Dubai's famous offshore Palm development, thus playing its own small part in the threatened snapping off of a whole chunk of the west Antarctic ice sheet, it's nice to see the Sofitel Palm Hotel making efforts to offset the inevitable. Not only has it employed world renowned French botanist Patrick Blanc to create a beautiful 'vertical garden' to welcome visitors as they enter the main lobby, but extensive use was made of American Ash to pick up the overriding Polynesian theme of the hotel resort. Residents should enjoy the extensive faux joinery and crafts while they can — if we don't meet our 2050 carbon targets, their indigenous Polynesian equivalents will likely be in the drink by then.

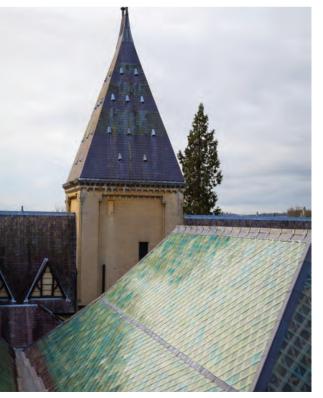


Bodily function

Antony Gormley, the artist obsessed with his own body, has graced us with another version of himself, this time crouched on the new Beaumont Hotel in Mayfair. Not content with just showing us his behind, with 'Room', we have now have the chance to be inside it – if, that is, you've got the £2,500 a night it'll cost you to climb the stair to the bijou, timber-lined luxury of the 4m^2 , 10m high space. I've always thought Gormley was slightly up himself, but I'm mildly surprised to find that, potentially, I could be too!

Glass sealing

If you wanted to see scales in Oxford you've always had to walk through its Museum of Natural History to reach the anthropological oddities of the Pitt Rivers Museum beyond. But you needn't have gone so far. Above your head in the Museum of Natural History's main hall, its Irish architects Deane and Woodward were, back in 1861, making their own scales - 8,500 diamond-shaped glass tiles for its roof. Now, as part of the building's €2m refurbishment, which includes the leaking roof, architect Purcell has used the 500cm² tiles as a template, putting 10mm Pilkington Optifloat clear glass slumped in a ceramic mould to reproduce them – NOT something you'll want to do with the contents of any bell jar in the Pitt Rivers.



Splitting image

Imitation is the sincerest form of flattery, so Karndean flooring is giving a number of global locations a real confidence boost - though not an economic one - with its new collection of Art Select Stones and Woods, copied from those areas' local stones and timbers. Inspiring the firm's 'most intricate and realistic embosses to date', the natural materials on which the imitations are based – and which might be unable to compete with Karndean's competitive pricing – are Italian travertines and marble. Australian slates and Channel Island limestones. Spanish timber flooring firms may also find themselves making increased contributions to the indigenous barrel industry. It's a dog eat dog world out there! Did I just repeat myself?





From Bauhaus to greenhouse

True to the ethos that 'nothing is so good it can't be better', furniture company Thonet has released its classic designs for Mart Stam and Marcel Breuer's tubular steel chairs and tables in. ves. seven colours. But before you join SOB (Save Our Breuers), buy them and get them re-chromed, consider that the firm looked to Bauhaus master Johannes Itten's

colour circle 'as orientation'. Quite what the Mazdaznancult-worshipping vegetarian Expressionist would have made of this we'll never know, but his resistance to Gropius' aesthetics of mass-production prompted his resignation. Perhaps knowing that Breuer's chrome is now being dipped in his 'chocolate brown', revenge is indeed sweet?



Either you're hot or you're not...

There might have been a time when Vogue, using a cheap quilt as an inspiration for a designer radiator, could have made a fauxpas from which the firm, like Ratners, might never recover. But no more – even the likes of FOA and Caruso St John got famous designing buildings that look like the contents of your granny's wardrobe.



Perfect storm

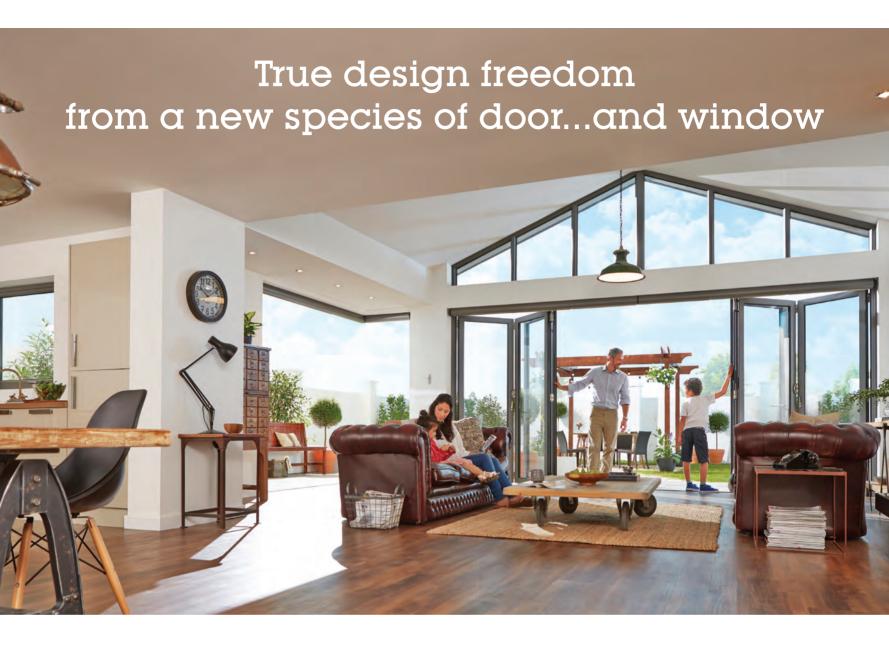
Jeremy Clarkson would say it's all about what's under the bonnet: and on the theme of toilets, beneath its innocuouslooking lid, Toto's new loo boasts 'Tornado Flush' technology, generating a strong whirlpool of water suction that apparently takes no prisoners. 'Press the button and stand well back' after, not before, of course.



The law is an ass

I'm surprised there isn't actually a string of ambulance chasers pursuing cases of disgruntled hotel residents who are claiming scalds as a result of trying to work the flow and temperature controls while standing in their ensuite showers. Perhaps Italian firm CEA bore this thought in

mind when it designed its lovely Regolo stainless steel faucet and mixer. Apparently, one sliding action allows you to control both the flow and the water temperature; meaning that even a Luddite like me can relax in my birthday suit without having to think about a legal one.



That's Original Thinking.

Moving corner posts, a huge range of colours (including any RAL shade)...and now a matching range of bespoke aluminium windows. With Origin's new species of bi-folds the design options are limitless – but that's not all.

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IT/Books 09

Start spot on

There are many definitions of what BIM is. The Evolve Consultancy's is 'Making the right information available, to the right person, at the right time'. This brings me to this month's topic; before you even think about building information modelling, think about 'information use, reuse, and exchange' and how your internal storage and procedures can be improved to maximise this. Follow the three point plan to successful building information management.

Finding information

Before you can use information you have to find it. Does your project have an easily navigable folder structure? Does every project in your company have the same one? They should.

Think about the structure of your folders with regard to the design process and how you need to maintain certain information at certain stages, how the current set can be identified immediately and how work in progress can be differentiated from issued and approved data.

Exchanging information is complex and is one of the first stumbling blocks a company looking to adopt BIM will come up against

Structuring information

The contents of a file are intrinsically linked to the naming convention. It is crucial to differentiate between plans, sections, details, elevations; but also which plan, section etc.

It is important to consider how your model is split into manageable portions so that more than one person at once can work on an area.

Exchanging information

Exchanging information is complex and is one

of the first stumbling blocks a company looking to adopt BIM will come up against. You need to be aware of what your recipients are capable of accepting. If you can pass the model over direct, including its attributes, great; we see this all the time in the steel construction industry. Part of this exercise is to bring these people up to date with what you are able to supply (models, drawings, hyperlinked PDFs, spreadsheets, XML, Word docs even) and how they will be able to use this — and how it relates to other information you have delivered.

Communication is the first step to successful information exchange. The second is recording that release of information so you can track it later. Successful information exchange needs the distribution and receipt to be recorded and archived properly.

If you get these three steps correct, making the right information available, to the right people, at the right time, is much simpler.

Daniel Heselwood is director at BIM consultancy Evolve

Books



Restaurant & Bar Design

Marco Rebora & Julius Wiedemann eds. 2nd edition. Taschen 432p £34.99

In the word 'place setting', one gets a keen sense of the intimate connection between gastronomy and architecture. Indeed, with the rise of places like Quaglino's and The Atlantic Bar & Grill, the theatrical nature of the dining experience became the primary concern, eclipsing the food itself and transgressing into territories that even modernist 'gesamtkunstwerk' such as New York's Four Seasons desisted from straying into. Needless to say, expect a lot of gastroporn in this Taschen coffee table book, pulling together the latest in bar and restaurant design from around the world. Be aware, it's all 'lips' and no 'hips' — with loads of photos sans any of the more challenging details and plans to enable a slower, visual digestion. But if you're hungry for raw ideas, there's plenty of food for thought.



Detail in Contemporary Office Design

Drew Plunkett and Olga Reid eds. Laurence King 192p £40

The notion of work, perhaps driven by the US ethos of never taking any holiday, is increasingly being read through the lens of leisure, accounting for a flowering of 'break out zones' and 'soft spaces' even in the most conservative of offices — perhaps to convince us the two are interchangeable. Burgeoning dot com industries have further fuelled the perception. Cue the latest anthology of images highlighting 42 new office environments from around the globe. Each project gets a plan keyed to images and a detail section or detail, all included on the accompanying CD-ROM. A few projects, informatively, even get construction shots. Madrid firm Selgas Cano's sublime Studio in the Woods even gets an outing, a section showing how this glass display cabinet of industry happily nestles among the leaves.



Reflexive Design

Margitta Buchert ed. Jovis 251p £32

The German language — there's a reason why that culture's stuffed with philosophers — their grammar is such that they just can't help but be highly specific about everything. So it comes as no surprise that publisher Jovis' new book, Reflexive Design, translated directly into English from the page in German opposite, makes for quite a dense read. I'd like to admit it all went over my head, but Alban Janson's 'Fundamental Concepts of Architecture' has a charming simplicity, drawn out (literally!) in pencil. Layout, typography and illustrations are everything here — you're inclined to read purely by the considered nature of the object itself. Even if — as with the histograms of Manuel Scholl's 'Process Formation' — it's likely you won't make sense of it all, it doesn't seem to matter. I'm assuming a triumph of form over content.

Fighter hangars



What: Resin Flooring
Where: RAF Lossiemouth, Scotland

Lossiemouth might be a small village on Scotland's north eastern coast, but the nearby RAF air base that bears its name will forever be synonymous with some of the most significant events of the Second World War – most notably the Dambusters, whose famous 'bouncing bombs' earned RAF Squadron 617 the right to appropriate Louis XV of France's famous dying words 'Après moi, le Deluge' as its motto.

Interestingly, the hangars still in use at the base date from not 1939, but 1945, designed to deal with the Soviet Cold War threat. As part of their refurbishment to make them battle ready for the incoming Typhoon F2 Eurofighters, (transferring from RAF Leuchars) the 4,500m² hangars has are having their concrete floors resurfaced with Sikafloor. The Ministry of Defence gave Forfar, Angus-based Anderson Specialist Contracting a tight month to complete the works on the first — no mean feat, given what had to be done before the new floor was laid.

Coincidentally, this involved another form of mobile ballistics – high velocity ballbearings. 'Before doing anything we needed to

captive blast the floor to remove existing contaminants and expose a concrete surface profile for the new floor to adhere to,' explains ASC's Ian Anderson. This involved running a 700mm wide steel shot machine over the concrete surface. Any larger pits were trowel filled, although Anderson says concrete quality on the 60 year old building was surprisingly good. The Sika finish has two parts – a thick primer (A) and a final finish coat (B), with the primer doing most of the work. 'The primer's a thick application that's a bit like industrial custard,' says Anderson graphically. 'We apply it with an open-cell roller. It rises in peaks when applied and then settles flat.' This was left to cure for a day before the finishing coat was applied. From the initial shot firing of the surface, to the aircraft guide lines being painted on the finished floor, each 1000m² took a week to complete.

The aircraft guide lines took three days to set out, being surveyed and then re-checked to ensure that when the £35m Eurofighters are towed in to be parked diagonally side by side, they have an exact 600mm clearance from one wing tip to the other. With hardware worth that much, and the effort put into ground work, Anderson was keen that they, like the Dambusters, didn't slip up on the parking arrangements. •

TOP GUM

Sika was used for the Lossiemouth project having been tested in the field on other MoD facilities, being both non-slip and, with its gloss finish, easy to clean. 'The key thing is that we provided the non-slip finish without aggregating,' explains Sika northern region sales manager Ronnie Turner, of the general process of introducing aggregate to resin surfaces to give a greater abrasive grip. This aspect was of particular interest to the MoD. 'Their biggest concern is with Flying Object Damage (FOD), and with engines costing up to £1M each, fixing them can mean mega money.' That said, it wasn't mega money to lay the floor. 'We have other products with greater resin levels that provide greater robustness, but Sikafloor-264 Thixo had the right balance of cost-effectiveness and performance,' he adds. And it seems that the balance has worked so far, he concludes, 'The best feedback you can get from the MoD regarding products you've installed for them is no feedback at all.'



Left The Typhoon F2 Eurofighters happily settled on their guidelines.

Above Installing the resin floor was done in 1,000m² areas, each of which took a week.

Sikafloor®-264 Thixo

A two part epoxy textured roller and seal coat, Thixo consists of a coloured textured primer coat suitable for concrete and cement screeds for up to medium heavy wear. It is a seal coat good for car parks, maintenance hangars and wet process areas, offering good chemical, mechanical resistance and slip resistance, and cleanability.

coloured liquid

Hardener Part B —
transparent liquid
Colour range
RAL7030, 7032,
7035

Physical properties:
Compressive
strength 60N/mm²
(EN196-1)

Flexural strength
30N/mm² (EN196)

Resin Part A -

Bond strength up to 1.5N/mm² (ISO4264)
Shore D hardness 76 (DIN 53 50 5)
Abrasion resistance 70mg (DIN 53 10 9)
Concrete substrate must be sound and of min 25N/mm² compressive strength. Repairs to substrate can be carried out using Sikafloor, SikaDur and SikaGard.

BAUDER

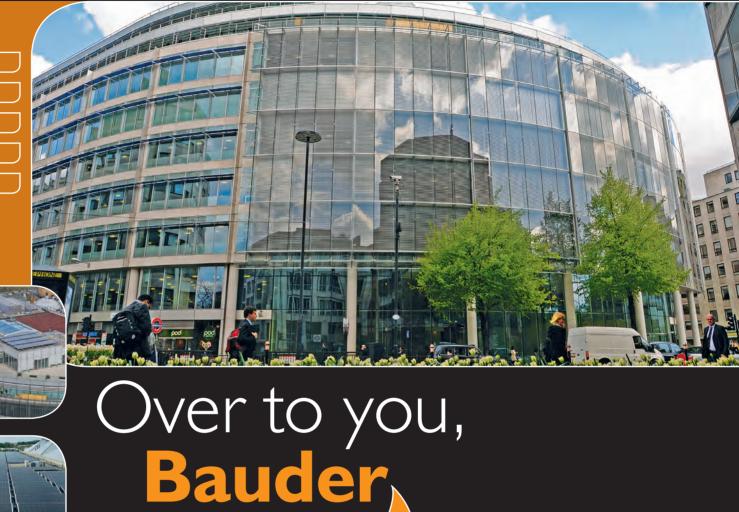
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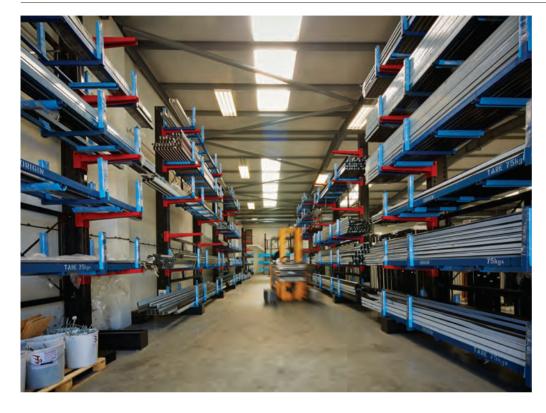
Made



Oliver GingerFactory manager.



Ben BrocklesbySales & marketing manager









What: Origin Global
Where: High Wycombe, Buckinghamshire

It takes a total of 31 people as little as 22 minutes to make a bespoke Origin bi-folding door from aluminium profile to finished product, complete with hinges, handles and 8-point locking system.

This lightning speed, enabled by a move from bench to line based production, ensures that Origin's ambitious pledge of 'your lead times not ours' is more than just sales talk in a sector where lengthy waiting times are common.

Origin's ability to deliver its sliding door fast has helped it grow to a turnover of £13m in 2013, expected to exceed £17m this year. There's much more expansion to come – Origin has just launched a new window product to supplement its bi-folding doors and matching blinds, and is setting up a Florida production base to serve its developing US market.

Origin's growth and international ambitions are all the more notable given the family-run nature of the business. It was set up in

High Wycombe in 2001 by cousins Victoria Brocklesby and Neil Ginger out of the swimming pool business run by their fathers. Finding a lack of high-quality bi-folding doors to complement the pools, they decided to develop and manufacture their own product, selling to trade partners through 95 showrooms and – increasingly – to architects, who specify the doors for residential and leisure sector projects.

'It's a family business. Everything is re-invested,' says sales and marketing manager Ben Brocklesby, Victoria's husband, who joined last year. Her brother Oliver Ginger runs the factory.

'Our USP is speed and quality because only we design and manufacture our own product,' says Brocklesby, adding that this gives the company full control throughout the process. 'We try to be a company that says yes. So if someone has a specific request, we try to make it happen.'

Origin introduced line-based production to increase speed and better cope with times of increased demand — essential given the company's 37% year-on-year growth. Previously, one door was made from start to finish by the same

worker but now it moves through the factory to different specialist teams, ensuring more pairs of eyes on each product. As a result, says Oliver, fewer problems are flagged up during the rigorous quality control at the end of the line.

'It improves flow and quality since so many people check it,' he says.

To ensure a speedy turnaround to meet the zero lead times, Origin keeps $\pm 2m$ worth of factory stock of the 13 most popular colours of aluminium profiles — to make certain they're never caught out by a quick order, says Ben.

'It's essential we keep our guarantee of your lead times not ours,' he says. Stock colours make up 90% of the order book, with white the overwhelming favourite followed by grey. Other standard options include a wood grain finish. Any RAL colour can be supplied, but will take up to three weeks to produce.

The bottom-hung doors are produced to suit each order in multiple leaves, generally up to 10m total width. They have suited the recent popularity of garden rooms and rear kitchen/dining extensions, with options including a

Far left The Origin factory floor which holds £2m of stock to make sure the firm meets its zero lead times pledge.

Left Origin's bi-folding doors were originally developed, as here, to complement the company's pool installations.

corner product that opens up two sides of folding doors. Other selling points are enclosed tracks and safety gasket features to stop trapped finger injuries, U values of 1.3, and a 20 year guarantee.

Origin has refined its machine tools to knock vital minutes off the process and will never, says Oliver Ginger, stop investigating new ways to refine its factory operation and service. Soon factory workers will switch to an iPad-based paperless system.

This dedication to improve befits a company that doesn't believe in standing still.

Not content with its position as a market leader in bi-fold doors, CEO and co-founder Neil Ginger has relocated to Florida to drive its new US operation with hopes of expanding the business up the East Coast. Meanwhile in the UK, Brocklesby expects Origin's new windows arm to match its bi-fold doors sales within just five years, bringing yet more — albeit welcome — production challenges for the High Wycombe factory. • This editorial is supported by Origin Global. bifoldingdoors.co.uk



1. DOORS AND MORE

Origin employs 132 staff at its fast-expanding High Wycombe factory and HQ. The premises are mainly occupied by the production line for its bi-folding door products. Its new windows offer is produced in a bench system, although this is expected to move to a line system as demand grows. All Origin's doors and windows are made with aluminium profiles imported from Spanish supplier Cortizo and powder coated in Birmingham by Vertik-Al.



3. CRIMPING

Two mechanical crimping machines are used to seal the profiles when they are put together to make the frame. First the profiles are prepared with adhesive and cleats inserted into holes in each corner. The profiles are laid on the bench and the cleats slotted together to close the frame before the mechanical crimper seals it, one corner at a time. The crimper has been modified to suit Origin's particular requirements in order to achieve maximum efficiency.



5. OUALITY CONTROL

A team of checkers meticulously inspects each door jamb and door leaf — one checker per door side so that each door is checked by more than one person. These checkers highlight any problems for further scrutiny with a red sticker. Those that pass the test first time are then cleaned and wrapped ready for delivery. Those with stickers are again inspected and any problems resolved. Generally more than 80% are pronounced right first time — an increase of 20% since the new line system was introduced.



2. CUTTING

Once the profiles have been unwrapped and checked for imperfections, they proceed to the cutting station. Here, workers input the order number into the mitre saws which cut the tops, bottoms, tracks, side jambs and sills at a 45 degree angle according to pre-programmed measurements. These then pass over to the two automated CNC machines which insert all necessary holes—such as those that take the hinges, and toe and heel blocks.



4. FIT-OUT & ASSEMBLY

By the time the frame reaches the fit-out and assembly stages all the necessary components are waiting for it to eliminate hold-ups. These include the rib nuts, toe and heel plates, gear box and face plate, hinges. The slave handle is cut to size and all are fitted to ensure the bolts are positioned appropriately on the track. Origin's own brand hinges are selected from racks alongside the workstation. The door leaves are stacked using pads and then hinged together. Seals and locks are added plus beading to match the frames, which uses a measuring device with a memory that records the exact dimensions and feeds this information into a mitre saw, which then cuts the appropriate length.



6. DELIVERY

The completed doors are placed in racks to await pick-up by one of Origin's seven delivery vehicles. They are accompanied by a box of components including handles, magnetic catches and running gears, each set assembled in a special box and photographed to provide a record in case of later query. Origin does not install the glazing in its own products, but runs demonstration classes for fitters and supplies dimensions for the glass for each door and window to its trade partners so glazing can be installed on site.

Metrostation Kraaiennest, Bijlmermeer, Amsterdam

Delicate detail and clever lighting to revive a brutalist station will help reconnect a vast estate to the city

Words: Jan-Carlos Kucharek Photography: Luuk Kramer

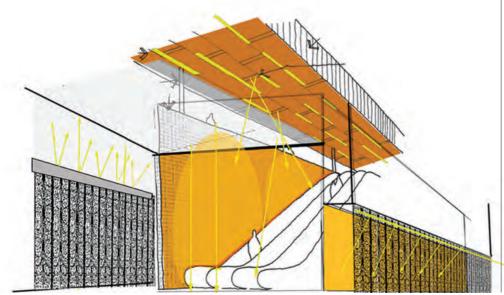
Amid the 1970s concrete brutalism of Amsterdam's Bijlmermeer district, Metrostation Kraaiennest is a delicate surprise. An ornately patterned screen throws filigree shadows to create an ephemeral environment in contrast with the rough and tough neighbourhood surrounding the station.

Maccreanor Lavington won the competition to build the €14m project. Although the priority of the brief was improving the station itself, the architect saw the opportunity to provide a public landmark at the same time, working

with Rotterdam lighting consultant Sjoerd van Beers to create a building that at night serves as a glowing lantern in the market square.

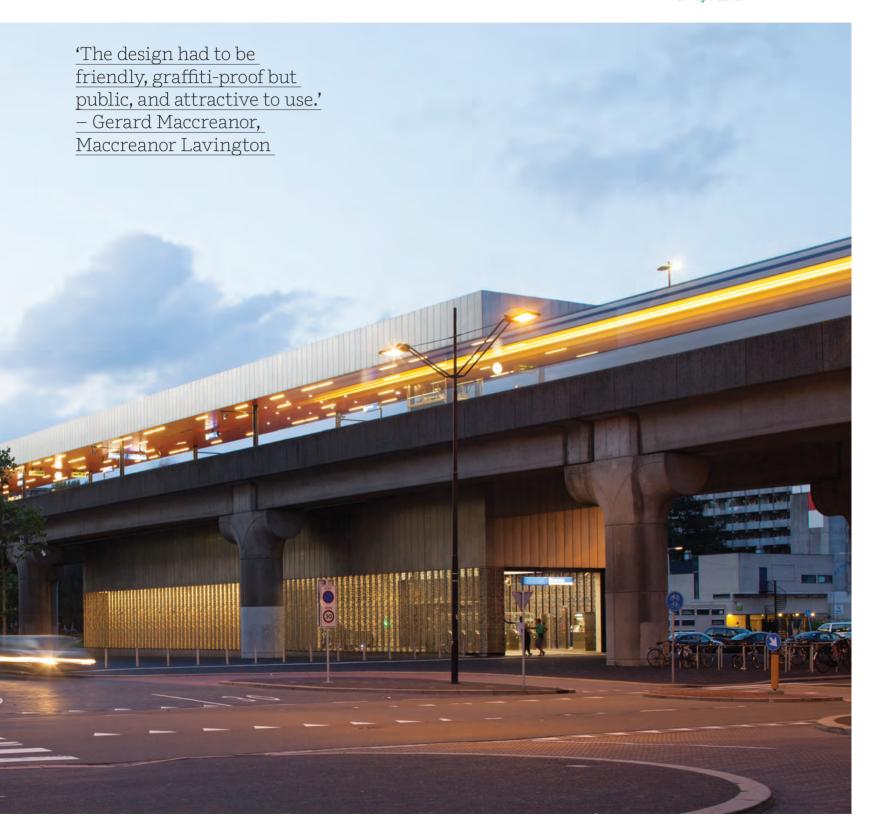
The challenge was to create a less intimidating station environment as part of a redesign to provide disabled access to the elevated platforms which sit some 11m above ground level. To improve functionality, Maccreanor Lavington relocated the 550m² entrance and plant room to front the main street and introduced escalators to the platforms in place of the spiral stairs. The station entrance presented a







Below The station entrance looking east, showing the facade's filigree nature beneath the concrete railway tracks.



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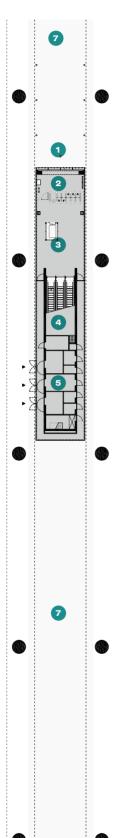
Lighting 17

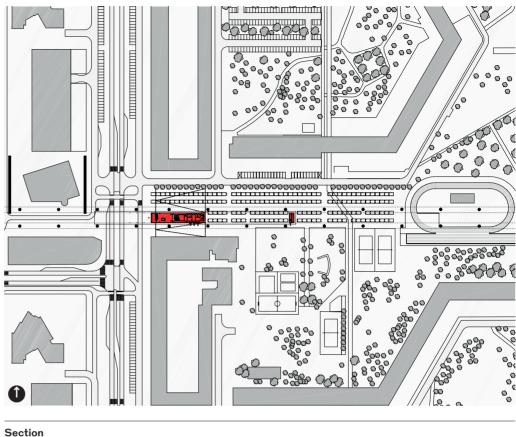
Ground floor plan

Site plan

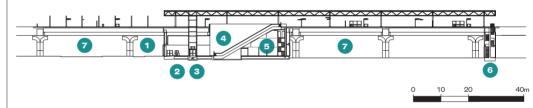
Key to drawings

- Entrance with closing screen
- 2 Automatic gates
- 3 Access lift to platform level
- 4 Escalators to platform level
- 5 Service zone
- 6 Access stair to platform
- 7 Railway undercroft





Section



particular conundrum — while the architect wanted it to be more welcoming to passengers, it couldn't be too attractive to rough sleepers, especially as the station was unmanned. Nor could it be susceptible to vandalism.

'Making sure we designed the graffiti out of the project was primary,' says director Gerard Maccreanor, adding that this was a major problem throughout the area.

'The design had to be friendly, graffiti-proof but public, and attractive to use.'

The solution of a patterned stainless steel screen addressed all these issues in one go by creating shadows with sunlight by day and artificial light by night to make an entrance animated by shadow. Despite its attractiveness, the screen ensured that the station was unappealing to both rough sleepers and graffiti artists alike by removing both protection from the wind and an expansive canvas to work on at

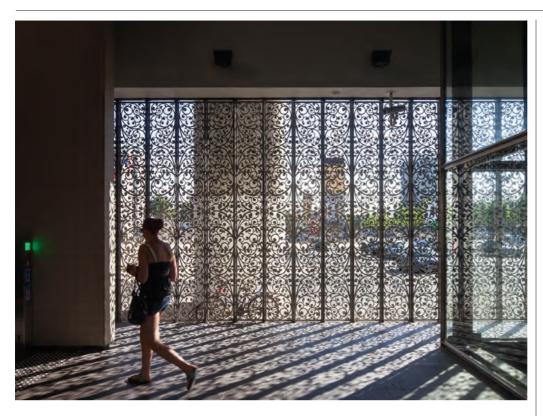
the same time. The entrance is also lined with ceramic wall and floor tiles.

While the lightness of the screen contrasts with the heaviness of the station structure, its pattern and the resulting shadows give it more visual weight than a lightweight canopy.

'It softens the environment enormously. By daytime and night it's a very warm, rich building,' says Maccreanor. 'Somehow it makes the surrounding area a public space.'

The screen forms the outer walls of the station at ground floor level and clads the nearby small escape stairs building – also situated beneath the elevated tracks – on all sides. Stainless steel panels flank the rest of the elevation at upper level, as well as the 1,015m² canopy above the elevated tracks, creating a material unity between the two levels.

Within the station the first challenge for the lighting, according to Sjoerd van



Above By day the lighting effects are reversed, with sunlight creating a delicate shadow pattern on the station's floor.

Beers of lighting consultant Beersnielsen Lichtontwerpers, was to convince the client to look not only at the technical light requirements, but also to take into account the qualities of the space and architecture – and to consider how these could be experienced during the evening and at night.

The solution was to use the space of the station entrance as a 'lamp shade', with the white stucco ceiling acting as a reflector for the indirect lighting (Bega 8558 ceramic discharge lamps) so that visitors can experience the full height of the 7.5m space.

On the other side of the station Beersnielsen Lichtontwerpers used Norka T8 fixtures to light the 4m high wall behind the stainless steel panels so it lights up like a lampion at night.

To avoid fixing lighting to the 11.8m high escalator walls leading up to the platforms, the designers used narrow beam ceramic discharge

lamps with enough reach to illuminate the base of the escalators. On the platform, the aim was to highlight the red soffits of the canopy but avoid ending up with two parallel lines of lighting. Instead, Beersnielsen Lichtontwerpers used an irregular pattern of Norka T8 fixtures, intensifying the pattern around the escalators by using Selux's M125 by 90 railway cassettes.

The metro improvement project follows a continuing regeneration programme to bring back a traditional street pattern in the area instead of the large-scale housing blocks of the 1970s, and reconnect the Bijlmermeer area to the rest of the city.

Maccreanor hopes the project will create more of a civic presence in the same way that Charles Holden's stations did on the outer reaches of the London Underground. Used by more than 100,000 residents, it has proved popular locally and remained free from graffiti.

LIGHT CONDUCTOR

Maccreanor Lavington swiftly settled on the idea of a perforated screen after briefly considering using ceramic tiles. Stainless steel was the only viable material for the screen since it was both robust and easy to clean. When creating the pattern, the practice was careful to avoid cultural references since the community is very diverse. Instead the end result – an adaptation of a pattern spotted on a chateau gate – is influenced by French baroque while resonating with the Islamic tradition for decorative screens.

Trials were conducted to ensure the filigree pattern would retain its structural rigidity. These included a test panel installed at the station with the sign 'kick me' inviting rough treatment. The design also had to be anti-climb and without scope for children to get their heads stuck.

The screen was laser cut by Strukton
Bouw from 5mm thick stainless steel in panels
measuring 4m by 515mm. These are fixed back
to a stainless steel frame attached in turn to the
floor and the main concrete structure.

Client Dienst Infrastructuur Verkeer Vervoer

Architect Maccreanor Lavington Architects

Contractor Strukton Bouw **Structural engineer** Ingenieursbureau Amsterdam

M&E enginner Arcadis
Lighting consultant Sjoerd van Beers,
Beersnielsen Lichtontwerpers

Suppliers

Steel screen design Strukton Bonw • Ceramic tiles Mosa • Lighting Bega, Norka, Selux • Roof company Trespa

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1 Underscore iGuzzini

Underscore, this strange little blob from iGuzzini, casts a super thin but intense line of light, defining walls as it steps round them without diluting the darkness. Perfect for those 1970s parties where touching was the primary means of communication - nothing is quite visible but you don't bump in to things. It would have been handy at that youthful drama club which began with 10 minutes of wandering around in the dark: when you bumped into someone you had to feel them all over to 'discover' who they were. It's the place that made Tim from The Office the success he is today. iguzzini.co.uk

Wireflow

Barcelona-based Vibia has a new line in lights, Wireflow from designer Arik Levy. Remember Edward McClachlan's 1970s tales of Simon in the Land of Chalk Drawings? This week Simon wanders into an unusually sophisticated but grey world where elegant wire chandeliers emit pinpricks of light. Simon uses his chalks to create a vibrant scene around them and a wild party starts: Gaudi arrives and Simon draws him the blueprint for the Sagrada Familia, the Pinker Tones take the floor and hysteria mounts. Luckily, Arik Levy turns up with a rubber. vibia.com

3 Beacon LEDs Concord

God looked down on the pretty mediaeval church of St Mary the Virgin Church in Cottingham, Yorkshire, and said, Let there be light, and there was light. Well, I'm sure he would have done had he known how Concord would improve the place by installing its Beacon LED high output lamps. With a 50,000 hour lifespan, they have revealed architectural details and gilded angels that had all but disappeared in the shadows. Interestingly, there are 10 versions of the 'light' line in various bibles, almost all differentiated just by punctuation. Hallelujah, Lynne Truss, salvation is nigh! concord-lighting.com

4 H-Profil lights Spectral

It seems Charles Holden designed his iconic London Underground stations thinking of Hades, the descent from heavenly light down the escalator to hell. Well, that certainly resonates with the poor commuter, daily crossing the mind-wiping Stix. Brighter thoughts drove those who chose Spectral's futuristic H-Profil lights to update Holden's Bristol Central Library, who had cost and energy efficient ideals in mind. London Uni's Senate House, another Holden triumph, was used in the film of Orwell's 1984, but his ability to evoke the dark side has no place in enlightened Bristol. spectral-lighting.co.uk









5 Media presentations Bright White

Picture the scene: hoards of English and Scotsmen, battle cries, warpaint, funny hats and a ball. Yes, it's the regular sporting re-enactment of the Scots' finest hour - the Battle of Bannockburn, when Robert the Bruce smote dead Henry de Bohun to launch England's rout. Reiach + Hall's Bannockburn Visitor Centre, replete with Bright White's 3D visualisation technology, offers therapy for this sad condition: an even more realistic enactment of the scene. Will putting a console user before so many hostile archers finally rid Scots shoulders of the anti-colonial chip? brightwhiteltd.co.uk

6 Parscan Erco

A famous magazine designer once said the best design is the one you don't notice, it simply helps the reader enjoy the subject it covers. The minimalist Parscan LED spotlight does just this, retreating into the background to illuminate objects for easy viewing. Rotating and tilting to focus the beam precisely, its uses must be endless. Aside from lighting the obvious displays of art, merchandise or unwelcome burglar/ salesman on your doorstep, think what the secret police or Bond villain Goldfinger could do with it. Forget the metal-melting laser: Vee haf vays of mekking you talk! erco.com

Oculus spotlights Precision Lighting

Those lucky young things at Highgate School in select north London. Conversion of a grade II listed building into a modern library and performance/meeting space includes a perimeter gallery and Precision Lighting's Oculus spotlights and Basis Track. Those chandeliers are cleverer than they look, able to move up and down as required. Think of the possibilities: rather than waste time on books, budding gymnasts could surely practice balancing on those thin gallery rails and, judging the timing well, leap onto a descending light as it passes. So many uses in one school hall! precisionlighting.co.uk

8 Eclipse Astro

The most memorable thing about the solar eclipse of August 1999, viewed from a Devon hilltop with various hippies, swampies, and stargazers, was the way the birds stopped singing as the sudden dusk fell. Astro's serene lunar-like addition to your living room matches the experience in most ways except the silence, but that could be a bonus to insist on inflicting on the kids when they're fighting over whose turn it is to use the wall as a whiteboard, or indeed when the old man's getting worked up about Paxman or Suarez. That's if you'd sully this room with a TV. astrolighting.co.uk

Costed

Jonathan White of Gleeds Research and Development, looks at lighting costs

Good lighting enhances the quality of a space and is a significant contributor to creating an appropriate atmosphere. Both artificial and natural light must be of a high standard if occupants are to be satisfied. Colour and brightness, interaction with surface colours, patterns and reflectances are all important aspects.

In the work environment lighting requirements are determined by:

• Visual comfort, where workers have a feeling

of well-being. This also indirectly contributes to higher productivity and quality of work

- Visual performance, enabling workers to perform their visual tasks, even under difficult circumstances and during longer periods
- Safety.

The requirement for energy-efficient lighting is driven by several factors, including: availability of usable natural light; specific building use; management, cleaning and

500W/1,000W

maintenance regimes; choice of lamp and luminaire; heat gains and losses through glazed areas; the required extent of personal and overriding control (particularly glare management).

Consideration needs to be given to all factors in order to maximise the economic and environmental benefits. It is worth noting that good controls are among the most cost-effective energy measures, and are vital to both energy efficiency and amenity.

£190-£230/£230-£290

The rates stated below represent a guide to lighting costs and are current as at Q2 2014. No allowance is made for sundry costs or related preliminaries costs. VAT is excluded. All-in rates for lighting points

Cost for lighting points including rose and wireways in PVC ca	able £per point
Domestic properties	£40-£45
Industrial and commercial properties	£50-£60
Cost of lighting points including rose and wireways in LSF cable	,
excl luminaires, industrial and commercial properties	£65-£75
Luminaires — fluorescent internal	£ per unit
Batten type	
600mm twin, 18W	£25-£35
1200mm single/twin, 36W £3	0-£45/£40-£55
1800mm single/twin, 70W £5	0-£60/£65-£80
Opal diffuser	
600mm twin, 18W	£45-£55
1200mm single/twin, 36W £5	0-£60/£60-£80
1800mm single/twin, 70W £6	5-£75/£75-£90
Surface mounted linear fluorescent; T8 lamp; high frequency of	control gear; low
brightness; 65° cut-off; including wedge style louvre	
600mm twin, 18W	£40-£55
1200mm single/twin, 36W	0-£60/£60-£70
1800mm single/twin, 70W £5	0-£65/£65-£80
Modular lighting; recessed high frequency control gear, low be	rightness, 65° cut
off; wedge style louvre; fitted to exposed T grid suspended ceil	ling
600 x 600mm; 3 x 18W T8 lamps	£75-£95
600 x 1200mm; 4 x 36W T8 lamps	£100-£125
600 x 600mm; 3 x 14W T5 lamps	£100-£115
Ceiling recessed asymmetric compact fluorescent downlighter	r; high frequency

control gear; TCD lamp in 200mm dia. luminaire; for wall-washing application

1 x 18W/26W / 2 x 18W £200-£230 / £210-£235

Wall mounted compact fluorescent uplighter; high frequency control gear; TCL lamp in 300mm x 600 luminaire

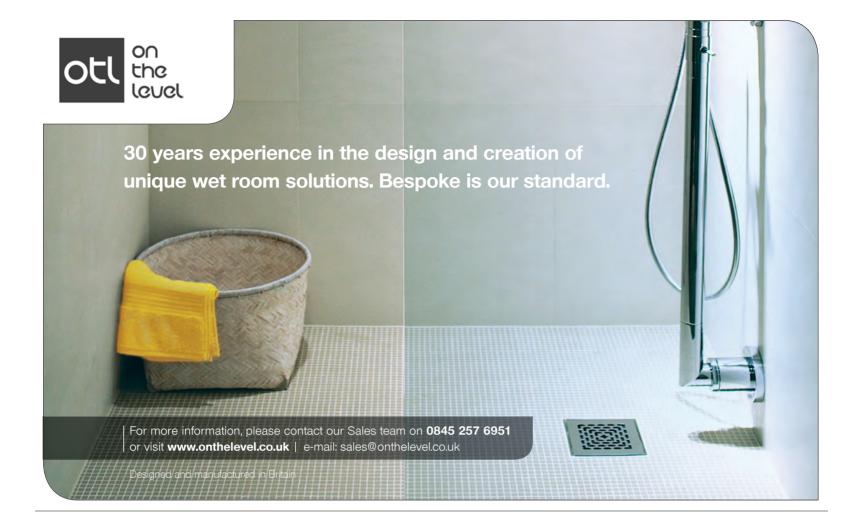
2 x 36W/40W £300-£350

Suspended linear fluorescent; T5 lamp; high frequency control gear; low brightness; 650 cut off; 30% uplight, 70% downlight; including wedge style louvre

1 x 50W **£210-£230**

Semi-recessed architectural linear fluorescent; T5 lamp; high frequency control gear; low brightness; delivers direct, ceiling and graduated wall washing illumination

	£ per point
600 x 600mm; 2 x 24W T8 lamps / 4 x 14W T8 lamps	£170-£200/£190-£230
500 x 500mm/600 x 600mm: 2 x 24W	£160-£200
Downlighter, recessed; low voltage; mirror reflecto	or with white/chrome bezel;
dimmable transformer, for dichroic lamps	
85mm diameter x 20/50W	£30-£45
118mm diameter x 50W	£40-£55
165mm diameter x 100W	£125-£150
LED lighting	
Typical LED downlight up to 50W	£100-£135
Recessed LED office luminaire 40W	£210-£260
Lighting track	£ per m
25A, steel trunking, low voltage, copper conductor	rs, couplers and supports
Three circuit / 1200mm single	£30-£40/£40-£60
High/low bay luminaires	£ per point
Compact discharge; aluminium reflector	
150W/250W	£105-£135
400W	£110-£140
Sealed discharge; aluminium reflector	
150W/250W	£250-£300
400W	£315-£36
Flameproof to IIA/IIB, I.P. 64; aluminium body	
600mm single/ 1200mm twin, 18W	£420-£550
1800mm single/twin 70W	£550-£680
Luminaires — external	
Floodlight, enclosed high performance discharge lig	ht, reflector, toughened glass
100W/150W; 250W	£130-£200; £235-£290
Bollard lighting	
Bollard lighting fitting 26W TC-D 3500k inc cont	rol gear, all internal wiring,
interconnections, earthing and 25 m of 2.5 mm² thre	e core XLPE/SWA/LSF cable
Approximate installed price excl builder's work in cor	nnection £940-£1,05 0
Outdoor flood lighting	
Wall mounted with tungsten halogen lamp, mountin	g bracket, wire guard and all
internal wiring and containment, fixed to brickwork	or concrete and connected

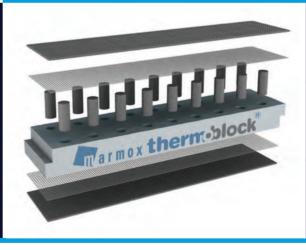




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Hotels and leisure 25

Rooms in demand

As demand for hotel rooms rockets, new ways of thinking are needed to please both customer and planner

Words: Stephen Cousins



MES NEW

The hotels sector is on the brink of an economic boom as a rise in tourism and business travel and the UK's continued emergence from recession drive up room rates and trigger a new wave of construction.

Average daily room rates (ADR) in London are forecast to rise to a record £142 during 2014, up 3.4% on last year, with 83% occupancy, the highest level since the 1990s, according to the latest figures from PriceWaterhouseCoopers (PwC). In the regions, ADR is expected to rise 2% this year to over £60, the highest since 2008, with occupancy also set to rise by 0.9% to 73%.

Hotel construction is ramping up to meet this demand. In the London area 25 are under construction, adding roughly 3,500 rooms to the city's stock, and a further 266 have detailed

Above Jestico + Whiles' W Hotel – exploiting Leicester Square's 24-hour culture.

planning permission up to 2017, according to London & Partners, the official promotional body for the capital. A further 8,200 rooms are due to come onstream in the regions during 2014, up 1.8% on the long term trend, says PwC.

'Increased development activity is a result of general market upturn, the UK economy is improving, people have more money, and banks are lending to the right investors,' says Nuno Galvao Pinto, senior vice president in the hotels and hospitality team at real estate firm JLL.

'There is also a lot of foreign money coming in, particularly from Asian and US investors, and the lack of London sites means it is spilling into cities like Manchester, Birmingham or Newcastle, which were previously less popular.'

Notable schemes supported by foreign investment include the massive One Nine Elms mixed-use development due to be built on the south bank of the Thames, acquired last year by Chinese firm Dalian Wanda, which will feature the first 5-star hotel built in London by a Chinese firm. Asia-Pacific's leading hotel brand, Hong Kong-based Shangri-La Group, opened a branch inside the Shard at London Bridge last year, designed by Dexter Moren Associates. And later in 2014, US hotel chain Gansevoort will bring to site its first hotel outside the States, in Shoreditch, also designed by Dexter Moren.

'We're seeing more opportunities outside London, with projects under way in Manchester and Aderdeen and opportunities in Southampton and Bournemouth,' says Jacqui Kirk, director of business development at the practice. 'We also designed Leeds' tallest hotel, the 14 storey Hilton Leeds Arena, which is on site.'

In Birmingham, the HS2 rail project is unlocking strategic sites, ripe for hotel developments. And in London, schemes are springing up across areas that have not traditionally included hotel accommodation, such as Shoreditch and Stratford, with a significant amount of new stock on the budget side as low-cost chains look to widen their offer. Developments are also growing around planned Crossrail stations.

The budget sector is outperforming the mid-range, boutique and luxury hotel sectors across the country, as business and leisure travellers continue to seek out competitive rates. Significantly, Premier Inn announced late last year that it planned to build an impressive 170 new hotels in the UK by 2018.

Below Visualisation of a capsule room in Premier Inns' new Hub hotel, soon to complete in London's trendy St Martin's Lane.

'Budget hotel developments are attractive because they are simpler to build, and there are fewer constraints in terms of where you can site them,' says JLL's Galvao Pinto. 'But when you move up to the higher level you need to attract a higher room rate to support an investment, and a higher rate constrains you to city centres, major business locations, or airports where there is less opportunity to build.'

The budget sector is moving towards smaller 'cabin-style' bedrooms, with clean basic finishes and more focus on the hotel experience, with free wi-fi, connections for handheld devices, a comfortable bed, quality shower and branded outlets for food and drink inside the hotel.

An example of where things might be going is Hub by Premier Inn, due to open in St Martins Lane central London in September. This 'space efficient' hotel will feature 11.4m² rooms, with a desk that slides into the wall, luggage storage under the bed, a large flat screen TV and power shower. Guests will check in using their smart phone and then use it to control the room's lighting and temperature, and control the TV or radio. A similar product will be provided by the Moxy hotel brand, recently set up by Marriott Hotels to cater to 'millennial global nomads'—tech-savvy travellers on a budget, who want fairly standard bedrooms with high-speed internet, communal spaces and remote check-in.

'Hostels are also breaking into the budget hotel market, providing trendy accommodation for travellers aged 16 to 50. Generator is an example, with branches across Europe expanding quite quickly,' says Niall Canning, JLL director in the hotels and hospitality building and construction team. 'Many major hotel brands have already launched lower value market brands, viewing this as a significant area of growth.'

A lack of suitable development sites, particularly in London, has meant 4- or 5-star luxury hotels are increasingly focused on refurbishments or change of use conversions. One such is the iconic Admiralty Arch on the Mall, which will be turned into a 5-star hotel, plus flats and a private members' club as part of a government drive to sell off some of its estate.

Many would argue that architects have a responsibility to re-use buildings, in line with pressing sustainability requirements, and it takes a certain type of creativity to envision how existing room layouts, service and circulation routes can be adapted to create a functional,



Guests will check in using their smart phone and then use it to control the room's lighting and temperature, and control the TV or radio

comfortable and economically sound hotel.

'The good thing is hotels require only a limited variation between rooms, so they can work for almost any building type, from offices to public buildings, we even helped convert a disused listed prison (and former castle) in Oxford to create the Malmaison Hotel for the Trevor Osborne Property Group,' says James Dilley, head of interior design at Jestico + Whiles.

Architect 3DReid has built its reputation on breathing new life into existing buildings and its hotel refurbishments have revolved around estate or resort properties, such as Turnberry in Scotland, the listed Cameron House on Loch Lomond for luxury brand DeVere Deluxe and the Belfry Hotel in the West Midlands, after its recent acquisition by US owner KSL Capital.

'Post recession, there is a lot of distressed property coming onto the market that can be repurposed for hotel use,' says Mark Bruce, hotels divisional director at 3DReid. 'Architects well versed in hotel operations, with a strong understanding of different standards and guest expectations, can craft vibrant and enticing places to stay that work efficiently from an operational perspective and commercially. As with KSL, there are newcomers to the market,

often from overseas, with the capital and vision to take whole portfolios or individual trophy assets and turn them into something special.'

Competition for city development sites is fierce, particularly when hotels are up against residential schemes, which typically generate more value per square foot and satisfy council requirements for new housing. Having a good architect on board can make or break a hotel project when it comes to feasibility assessments.

'We work with developer clients, preparing feasibility studies. Often we go in with an aspiration for a hotel or a residential scheme, and the one that stacks up financially is the one they go for,' says Dexter Moren's Kirk. 'An interesting sector is residential serviced apartments [flats used as quasi hotel accommodation by business and leisure visitors for periods of less than 90 days] which straddle the two sectors.'

Dexter Moren is developing an extended-stay concept hotel in Whitechapel as part of a £16m mixed-use development due to open next year. The Urban Villa will offer 220 bedrooms with flexible self-catering facilities and Manhattan loft-style common areas.

Extended-stay is one of the fastest growing hotel sectors in the US and Asia and the hybrid of hotel and serviced apartment block has lower overheads for the operator and better occupancy rates, because business clients stay during the week and tourists can check in at weekends.

'We have seen a lot more imagination by developers in their interpretation of the C1 Use Class for hotels, hence the emerging trend for serviced apartments,' adds Galvao Pinto.

Councils and planners generally look on hotels favourably when they are part of mixeduse developments and some schemes require the C1 Use Class to help generate employment and revitalise areas. 'In terms of design, we're seeing hotel schemes with much more emphasis on externally-facing restaurants and bars to help create social activity at street level and attract interest from locals,' says Galvao Pinto.

An example is the recently-completed 10 storey W Hotel on Leicester Square in London, by Jestico + Whiles, in a mixed use scheme of residential accommodation, leisure facilities and ground floor retail space and restaurant. 'It was a difficult location architecturally and in planning terms, but it had that vitality to exploit the 24-hour bustling location,' concludes Dilley. 'It was the right place for a hotel.'



Terminal 2 Heathrow

It's the roof that makes a splash at Heathrow's latest building, its wave-like form lapping the runway edge

Words: Jan-Carlos Kucharek Images: James Newton

If you think that artist Richard Wilson's aluminium sculpture Slipstream, hanging in the entrance court of the new £2.5bn Heathrow Terminal 2, is the building's pièce de résistance, then you might want to direct your eyes a little further to the skies. The 70m long sculpture springing off the forecourt's columns might be a frozen representation of the twisting acrobatics of a stunt plane, but there are other, no less complex gymnastics on the terminal's 50,000m² roof. From an aircraft window, a repeating form of aluminium waves ripple over the whole surface of the new Queen's Terminal, seeming to lap gently across a quarter of what is one of the world's busiest airports.

For architect Luis Vidal, appointed by Heathrow's Spanish owner Ferrovial to take up the terminal design where the Foster+Partners masterplan left off, Terminal 2, which opened last month and will handle 20m passengers a year, has the latest version of a roofing strategy that the firm's been developing for the last 10 years. This is the first UK building for Vidal, who studied and qualified here, but its curving steel roof structure form has been seen in other of the firm's airports – notably Zaragoza, Reus and A Coruña in Spain. 'At these airports, the curves aren't capricious, they have a function,' Vidal explains, emphasising that this is about



more than wilful formalism. 'Obviously the arch is perfect to bridge large spans, but it also does something else – pull north light deep into the building, mitigate solar gain and drastically reduce the cooling load of the building, especially in a climate like Spain's. But at Heathrow there's a third reason. We wanted the wavy form to be a core part of intuitive wayfinding for the terminal.' The firm was keen to make it a component of this strategy. 'We want the travellers's ense of this to be subliminal without recourse, if possible, to signage or clumsy spatial moves,' he adds. In this way, Vidal says, users can move fluidly from check-in areas, through security and into the international departure lounge (IDL) subtley guided by the roof.

This undulating steel and glazed wave form crowns a five storey, roughly square floor plate of 200m by 220m, providing in total almost 200,000m² of terminal area. This is divided into an 18m by 18m steel structural grid on the customer-facing levels, reducing to a 9m by 9m concrete grid at lower servicing areas. Both these grid dimensions are optimised with respect to security areas equipment and baggage handling machinery. Central structural columns are 356mm in diameter, increasing to 610mm at the perimeter. Vidal explains that the final construction approach was very

Right Terminal 2 entrance courtyard looking east. Richard Wilson's 'Slipstream' sculpture is integrated into the design by the roof and makes a big deal of both arrivals and departures.

Left Looking south, the fabric's soffit of T2 appears as gentle waves lit by hidden light.





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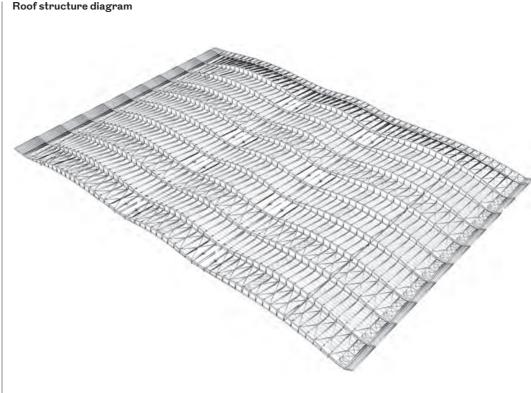
Roofing 31

Roof lighting: Day

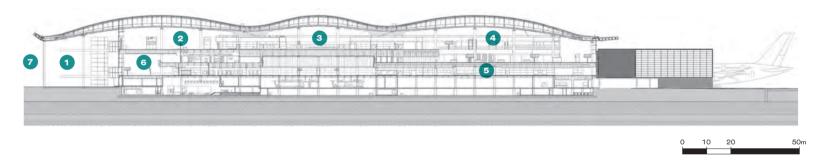


Roof lighting: Night





West-east section



- Triple height entrance courtyard
- 2 International check-in
- 3 Security zone
- 4 International departure lounge
- 5 Service level of baggage reclaim
- 6 International arrivals hall
- 7 Access to drop-off and parking

Detail at column/bullnose/rooflight interface

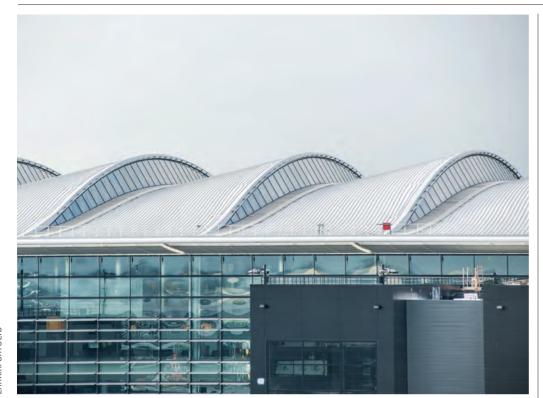


much dictated by existing site constraints, which affected logistics. The terminal's maximum height was dictated by the visual line of the control tower and its need to see the tail fins of taxiing aircraft. Also, London Underground's Piccadilly Line runs just a few metres below the surface, and there was the proximity of Terminals 1 and 3 to consider. Vidal says all these constraints pushed the design team towards 'making the structure work hard for us' and adopting, as much as possible, a pre-fabricated approach. 'That meant all the structural elements, even service cores and M&E, were effectively brought here in small pieces, bolted together and erected on site,' he says.

The 5,000t roof structure is constructed from 18m long curved sections creating enormous Vierendeel trusses that form three curved sections running east to west along the length of the terminal. As the depth increases along

the length to 4.5m, the space between the elements is filled with clerestory glazing forming the north rooflights. Trusses, bearing on their steel structural columns, are linked via 1m deep secondary trusses spaced at 4.5m centres, which are in turn cross-braced to give the whole structure lateral and torsional rigidity. Inclined supports come off the lower chord of the Vierendeel truss to bear the north south lateral loads; the rooflight glazing follows the geometry of these inclined bracing supports.

According to the firm, the effect of the wash of natural daylight is very different to that experienced at other terminals where roofs are more solid, punctuated by openings. Here, the 18m northern skylights not only provide good daylight across the whole floor plate and reduce contrast ratios, but also produce an evenly lit soffit surface. For this, a key decision ensured that all air handling services were



concentrated in the cabins via their service risers, obviating the need for these to interfere visually with the soffit. Luis Vidal partner on T2, Oscar Torrejón, says early aircraft inspired the internal aesthetic of the roof: the firm took the concept of their fabric wings and translated it to a taut white material stretched along the surface of the secondary trusses. The effect this has on the roof soffit is a fundamental aspect of the design, detailed so that north light bleeds into the interstitial 1m structural zone and creates the translucent soffit effect, producing 'an essential feature for the visual comfort of the terminal user,' says Torrejón. The translucent soffit below helps to spread, diffuse and reflect light into the space, softening the contrast between the roof light and the surface below it.

This was more difficult than you might think. Luis Vidal Architects worked with lighting designer Studio Fractal, which had consulted on the lighting for T4, on both a strategic overview of lighting for all of T2 as well as the detail design of LED lighting fitted in the secondary structure zone, above the fabric ceiling. The key is the relationship of the bullnose of the fabric soffit with the structural beams. This, explains Studio Fractal senior partner Tim Downey, is manifested by the steel columns that pierce the fabric membrane slightly back from this edge to engage with the beams. 'The trick was to try and dematerialise the structure, to give the roof lightness, and the lighting, we think, achieves that. Over 1,800 LED strip light fittings were run within this bullnose, hiding the fittings themselves,' he says.

For maintenance purposes, LEDs are mounted on a sliding mechanism around a cocking pin and can be changed if necessary. With the fabric very translucent, partially the result of more perforations to give it better acoustic qualities, and the LED strong point sources, they used an opal perspex diffuser along the bottom edge. This directs light up rather than down, softening the illumination effect. Downey saying there is a dark edge at the bullnose but light bleeds across the surface sufficiently well to have a subtle effect even here. And it's not just white light -all fixtures are connected to a computer sensor that monitors the natural light outside and emulates the light colour internally with the LEDs, producing a constantly modulating surface that changes subtly from dawn until dusk. 'The roof soffit changes colour according to the time of day and at any time might look solid or transparent,' says Downey. 'It's a fantastic effect.'

How the new Queen's Terminal stands up design-wise against the more dramatic Terminal 5 remains to be seen – T2, the designers concede, has less of a 'wow' factor, being more understated. Whether the roof design creates an intuitive intelligibility for the user only time will tell, but with two very different and dramatic aspects, depending on which way you look at it, there's no denying that the design has produced a striking effect that allows light, both natural and artificial, to pour deep into the building plan in strange and unexpected ways. Not only that, but it was, Vidal concludes, vital to earning this usually profligate typology its BREEAM Excellent certification. •



Above left 50,000 m² of Kalzip profile roof cladding make up the external look of the terminal. Note the latchways giving access to the glass for maintenance.

Above LED fixtures at the column head deliberately dapple light across the terminal floor rather than creating blanket luminance.

Client Heathrow

Architect Luis Vidal Architects

Concept engineering OT Ferrovial Agroman **Structure engineering** FhecorCG proyectos/ Merebrook

Mechanical engineering (for Ferrovial)

Solventa/Immodo/Carma/Euroestudios

Mechanical engineering and acoustics (UK

Mechanical engineering and acoustics (UK)
Hoare Lea Consulting

Quantity surveyor Davis Langdon Schumann Smith/ Gleeds

Fire strategy Warrington Fire Research Access and maintenance Reef Associates Baggage Siemens-Vanderlande Lighting Studio Fractal

Suppliers

Steel structure fabricator WSSL (Watson Steel)
• Fabric roof supplier Taiyo Europe • Aluminium profile roof Kalzip by Lakesmere • Clerestory and external facade glazing Inasus • Roof lighting Northlights by Lakesmere • Floor tiling Vetters • ETFE panels Taiyo Europe • Column casing supplier CMF



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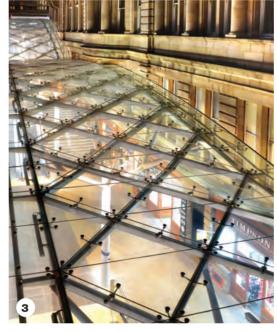
Rosemary Clay Craftsman tiles take kerb appeal to new heights. With subtle texturing, random distortion and varied hanging length, they combine the character and beauty of traditional handmade clay with the strength and attributes of a brand new tile. When fitted in accordance with our SpecMaster service, we'll guarantee the whole roof for 15 years. Take a closer look at www.redland.co.uk



Specified









1 Membranes and PV panels Bauder

It looks like there's a strict disciplinary regime at Roundwood School in Harpenden, where Roald Dahl's Miss Trunchbull has updated her iron maiden for the 21st century. Once miscreants have been stretched on these rooftop racks, they pass through the glasshouse behind to enter the torture chamber in the interrogation block for thumbscrews and death by chocolate cake. Shame really - under a liberal leader this roof would have supplied the school with renewable energy: Bauder laying 5,200m² of bitumen and sorting out the non-intrusive PV panels. bauder.co.uk

2 Noxite

When it comes to environmental policy, Copenhagen fully deserves its ever-ready 'wonderful' prefix, being recognised as one of the most environmentally friendly cities in the world and named European Green City 2014. The Danish capital might not be quite ready to dump air travel, the bane of true sustainablists, but its airport does arrange take-off and landings over the sea to minimise noise pollution, and now Icopal has installed 200,000m² of Noxite CO2 depolluting bitumen on its roof. So from Mother Earth's point of view, Danny Kaye's friendly old girl of a town is friendlier still. icopal.co.uk

Covered walkway Glassolutions

When we Scots say 'Windy city' we're not talking about Chicago, home to Al Capone, the Sears Tower and the first ferris wheel. We're thinking of that battle with the elements when we try to negotiate the steps leaving Waverley Station in Edinburgh - a more genteel spot altogether, associated with the inventors of Harry Potter, the telephone and the world's oldest floral clock. But a clear and stylish structure has sprung up to shelter passengers, helped by Glassolutions' stylish use of Stadip Securit safety glass. 'Wingardium Leviosa', as the station master must have said. glassolutions.co.uk

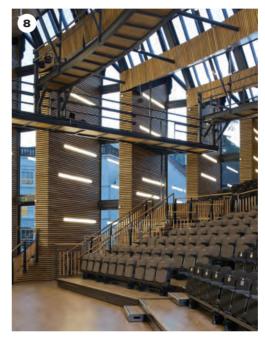
4 Tiles Marley Eternit

The marketing team at Marley Eternit should be on everyone's list of party invites – they really know how to make the most of things. The firm's new large format interlocking clay roof tiles – Maxima and Melodie – sound like an east European contestant for Eurovision, while the picture looks like a cross between a power station in a Stephen King movie and a Moroccan citadel. As for all those young dudes in the publicity department, well they've certainly rolled away the stone this time. In fact, there's a rockabilly party on Saturday night, are you gonna be there...? marleyeternit.co.uk









5 Slimline rooflight Vitral

Vitral's A98 rooflight is a thing of mystery, though like all good undercover agents it might not look it. This unassuming pane, says the accompanying press release is, like an iPad, part of 'a revolution in performance', being ultra slim, containing a concealed opening mechanism and bringing unexpected levels of light to the dark recesses of reactionary gloom. The Sendero Luminoso of roofing elements, the A98 is delivered to site prefabricated and fully sealed to ensure consistent quality and performance. Those are the details: now eat this message. vitral.co.uk

6 Insulation Actis

It's the celebrity nightmare – a wardrobe malfunction as the paparazzi lurk, ready to pounce when the veil of glamour slips to reveal the 'circle of shame' beneath the perfect image. Buildings aren't immune, as this undignified shot of a cottage roof, cruelly caught in its underwear and no makeup, shows. It will dazzle again once it's back in its antiquated tiles but for now it's just like us – although this thermal refit by insulation firm Actis means it will be great to snuggle up in. But sexy and I know it? Not in the construction equivalent of bloomers and a knitted vest it ain't.

 $insulation\hbox{-actis.} com$

Hardwearing walkway BriggsAmasco

As a child I imagined that by the millennium all urban transport would be airborne, with lanes on top of each other as well as side by side. We'd be teleporting like Trekkies, and walking up walls and over rooftops to avoid the endless steps of a high-rise world. Well, at least the city rooftop is in the ascendant (get it?!), and this little sister to the Shard, a titchy 17 storeys high, is ready to be trod a fair few of the users of adjacent London Bridge Station – as fitted by BriggsAmasco with IKO PermaTEC Hot Melt, IKO Polimar seamless waterproofing systems and granite paving.

briggsamasco.co.uk

8 Cladding Wicona

This month's Call my Bluff word is Yarm: a discordant cry indicating stupefied exhaustion; a mediaeval measure of distance between objects of chivalrous love; or the imperceptible wriggle that propels the determined to the front of a seething crowd. Strangely enough, it's also the name of a town that recently demanded its right to be part of Yorkshire, and which used Wicona's glazing to create a giant pergola effect for the new drama space at Yarm School. Admitting plenty of natural light, the Wictec 50 aluminium system also helps teachers keep an eye on pupils. wicona.co.uk

Edmund de Waal studio, London

Detail and serenity characterise the studio of an artist who majors in intricacy

Words: Jan-Carlos Kucharek Photography: Hélène Binet

You can imagine that it would be hard to design the working studio and library of an internationally famous ceramic artist who is also an acclaimed author. Add to that the theme of his bestselling book- the 264 Japanese tiny handcarved netsuke that he inherited from his uncle — suggesting obsession with the tiniest of details, and you might build a picture of a perfect storm of unreasonable client demands.

But it's a challenge that DSDHA seemed happy to take on, or else it was a case of 'better the devil you know', as the firm had worked on artist Edmund de Waal's first studio in Tulse Hill 10 years before. Here, at his new studio in West Norwood, the firm was charged again with designing a working pottery and kiln, as well as creating a generous gallery-type space where de Waal could experiment with his ceramic installations, and a library and study space for his writing. Two former light industrial units,

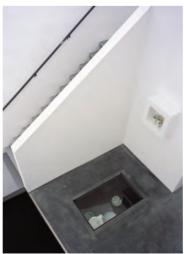
a warehouse and a two storey office, have been connected to form de Waal's new studio, with the idea of retaining the character of the existing buildings while inserting new floors and cutting through others to create spatial complexity for the studio's various activities.

In line with the Japanese pottery that so inspires de Waal, the architect has stripped everything back to its core elements. Walls have been reduced to brick and mortar and whitewashed. Similarly, the roof soffit, its purlins hidden, has been reduced to a simple planar form, by default revealing the delicacy of its fine steel trusses. Fluorescent lights set in clear Perspex tubes run in line, tautly stretched across the space; while at the staircase a black steel flat of a handrail projects from the wall to draw you to the upper levels. Counterpointing this tabula rasa of whiteness, a highly polished but dark poured concrete floor picks up on the

north light that pours in from above through translucent frosted rooflights.

DSDHA had to work at different scales here. Gallery spaces are voluminous, while firing areas meet the space criteria that kilns demand, and up on a small mezzanine overlooking the glazing area right under the roof, a little hidden in the shadows, sits a potter's wheel. Perched alongside his simple wooden stool, it reminds you of a stall in a Japanese onsen bath house - de Waal's 'intimate area'. Quite how all this production-line order sits with the intrinsically messy nature of the craft perhaps evokes the work of the artist himself. But I am most intrigued by the glass covered vitrine set into the floor of the entrance hall, within which de Waal's stick thin vessels sit like broken vertebrae revealed in an archaeological dig. A memento mori – it's a gentle reminder that we are all mere porcelain.





Left The lower level studies area looking east.

Right The entrance hall with the ceramic vitrine set into the concrete floor.

Opposite De Waal's pottery space, hidden in the mezzanine above the glazing area.

Client: Edmund de Waal Architect: DSDHA Structural engineer: Price & Myers Services engineer: Skelly & Couch Quantity surveyor: Stockdale Contractor: BRAC Contracts



Specified









Anti-bacterial paint Johnstone's Paint

The fad for the internal street gets ever closer to the actual outdoor original – at Bristol's Southmead Hospital it even appears to have a live hedge. Perhaps eventually whole jungles will fill such atria - Palm House meets A+E. How therapeutic that verdant outlook from the bed could be! They could add parrots and monkeys even. Luckily Johnstone's Microbarr anti-bacterial acrylic matt paint could be used, as here, to help keep the place germ free, although - splendid though it is in Bristol – it might need a stronger potion for the creepy crawlies in the palm house. johnstonestrade.com

2 Oak flooring Havwoods

I don't know about you but when someone says grade II listed derelict barn transformed into comfortable family home, it's not this sort of image that settles warmly in my mind. It's one distinctly less, well, clinical. Thank heavens then for Havwoods' 260mm wide, character grade oak which is fitted on all first floor level and selected walls, and the original rafters of course. It's clearly someone's dream home and impressively finished, but why not just build new? It's like ordering the omelette and chips in a curry house - you're in the wrong place. havwoods.co.uk

3 Heradesign panels Knauf

Hit TV show Waterloo Road is back in primary guise, with new characters and a brand new Passivehaus school. In this scene, a whispered conversation is held over the internal balcony, made possible by the acoustic quality of Knauf's Heradesign sustainable wood-wool ceiling tiles. Tyler: Goin' my way darlin? Nadine: Get real! Tyler: I got some goss. Nadine: Yeah, right. Tyler: Come down! I'll show ya what's in me blue folder. Nadine: I'm goin' for an e-ciggie in the biomass boiler room. An' if that's the spec for them shelves - get a life! Me an' Shaz are doing the ceiling. Loser! knaufamf.co.uk

4 Aluminium ceilings Hunter Douglas

This aluminium ceiling panel system for Amsterdam's metro surprisingly boasts high sound absorbing qualities as well as good light reflectance – useful because, as the press release helpfully points out, 'Underground stations have a shortage of natural daylight'. Ah, that explains a lot. Anyway, that shiny finish and pristine look sets this station up for a scene from one of those Bourne-style life-and-death chase movies: lots of opportunity to run up the down escalator, hide by pressing yourself against a pillar, throw bins in your villain's path... It's just oddly short on crowds. hunterdouglas.co.uk







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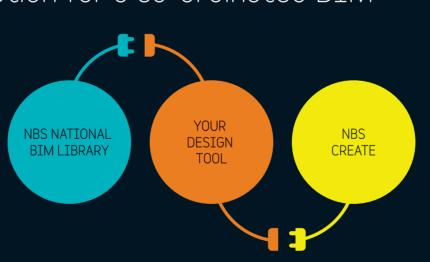








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Lighting & Flooring

ESSE-CI Slimline luminaire is a Bright idea for all sorts of lighting needs



Bright, an innovative collection of luminaires, has a sleek, minimal profile. Performance is guaranteed with CRI>90 LED technology and technical, with outputs of 2000 to 4000 lumens per metre in a choice of colour temperatures, including dynamic tuneable white (3000K to 6000K). Bright can be used for retail, commercial, healthcare or educational projects, mounted direct, suspended, or recessed in ceilings or walls. Continuous mounting and integrated spotlights are also possible. www.esse-ci.com

ASTRO Soft and contemporary Orpheus marks the spot



As seen at Light + Building in Frankfurt, Orpheus brings a soft, organic vet contemporary look to Astro's growing range of marker lights. Suitable for any space, but particularly bathrooms, Orpheus stands out because the light it emits shines down the wall. 'The cone of light from Orpheus is an integral and important element of its design,' says design director James Bassant. Measuring just 70 mm by 70 mm, this IP 65 LED luminaire is available in either white or chrome finish. www.astrolighting.co.uk

CONCORD Stylish luminaires used in advertising agency's office revamp



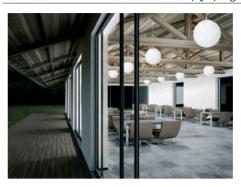
The London offices of leading advertising agency BBH have recently been transformed by architect Urban Salon. As part of the project, the London-based designer revamped the lighting scheme using a range of stylish Concord luminaires to enhance the interior design while also making use of available daylight. Concord Beacon LED spotlights $have \, been \, in stalled \, around \, the \,$ edge of the central atrium while powerful Lytelab spotlights illuminate its acoustic baffles. www.concord-lighting.com

ALTRO Specially developed dementia-friendly coverings at Salisbury hospital



A package of Altro floors and walls has been used to create an optimum environment of safety, calmness and wellbeing for dementia patients on a general ward at Salisbury District Hospital. Altro has developed product ranges and colours specifically for use with people who have dementia, through close co-operation with the University of Stirling's Dementia Services Development Centre. www.altro.com

LUCIS LIGHTING Diadem includes 3-ply opal glass for top green credentials



Lucis Lighting's new Diadem collection is available in both hand-blown opal, 3-ply glass in sizes from 300mm to 600mm in diameter, and in durable polvethylene in sizes up to 1000mm. Both offer LED and conventional light sources. Glass is known to be a sustainable, fully recyclable material, but 3-ply opal glass also increases light transmission (up to 80%), helping designers and engineers meet the stringent demands of Building Regulations and BREEAM. www.lucis.eu

ROOFLIGHT Bringing natural light and air into Beccles Health Centre



Beccles Health Centre has used $be spoke\,triangular\,roof lights$ from the Rooflight Company to $admit\,ventilation\,and\,natural$ light to an extension. Richard Bassett of LSI Architects said: 'The Rooflight Company is unique in its ability to design bespoke triangular rooflights which allow electric actuation and appear frameless from the inside. We arevery pleased with the installation and its integration into the geometry and natural ventilation strategy of the extension.' www.therooflightcompany.co.uk

FORBO Marmoleum tiles bring fun and colour to the school day



When Darland High School had an interior update, Wrexham Council sought flooring that had pleasing aesthetics, was hardwearing, and offered pupils a healthy, safe environment. They specified the Flotex and Marmoleum products from Forbo Flooring, which boasts outstanding performance across a range of finishes. Smokey grey $tiles in the {\it corridors} \, were \, broken$ up with black and coloured clusters to inject a fun fee land reflect the school house groups. forbo-flooring.co.uk/education

JUNCKERS Rustic look adds character to solid hardwood floor



Junckers new Saw Mill Oak is a solid hardwood floor with the rustic look and feel of an aged floor. The rough, irregular transverse lines created by a band saw add character to the wood, with a patina that will only improve with age and usage. Saw Mill Oak is made of solid hardwood oak in either a 22mm board or a 20.5mm wide board plank. The floor is delivered untreated with a choice of on-site finishing treatments available. www.junckers.co.uk

Roofing

ALUTEC Evoke is in for the long term at St Michael's primary school



Thanks to the expert support of its technical team and the long-term durability of its products. Alutec's rainwater and eaves systems have been installed in a major refurbishment at St Michael's primary school in Southfields, London. Made from highly durable composite aluminium. Evoke is a low maintenance, long lasting alternative to timber, sheet aluminium or plastic eaves systems. Featuring a unique nano self-cleaning coat, it has a life expectancy of 50 years or more and is fully recyclable. www.marlevalutec.co.uk

IKO Waterproofing enables winter gardens and roof terraces high above the city



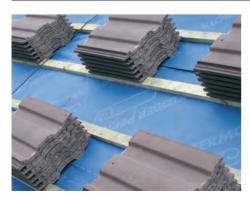
IKO has provided 4000m² of primary waterproofing to naturally ventilated winter gardens and a landscaped roof terrace at 'The Place', a 17 storey corporate HQ in London's new commercial area, London Bridge Quarter, IKO's PermaTEC Hot Melt system and Polimar seamless waterproofing systems were specified for the roof terrace, delivering long performance and guaranteed waterproofing integrity while meeting the project's stylish aesthetics. www.ikogroup.co.uk

SIKA SARNAFIL Waterproofing for 12,000m2 warehouse is four weeks early



A Sika Sarnafil waterproofing system was the perfect fit for Farnborough's new 12,000m2 Costco warehouse. The size of the project and the quick installation time required resulted in the specification of the Sika Sarnafil S327-18EL membrane in Light Grey. Ideal for the job, the system is formulated for direct exposure to weather and is produced with integral polyester scrim reinforcement for high strength. The project was completed in six weeks-four weeks early. www.sarnafil.co.uk

KLOBER Air-open Permo air underlay surpasses NHBC performance criteria



Klober's Permo air roofing underlay offers exceptional breathability due to its water vapour transmission sd-value of 2736 g/m²/day and water vapour resistance of 0.08 MNs/g. Being air-open, the material is approved for use by the NHBC without the need for supporting $high \, level \, ventilation \, to \, prevent$ condensation forming in the roof space during a building's critical dry out period. It is suitable for both cold and warm roof installations. www.klober.co.uk

APL Rainscreen system speeds in to match Ferrari's style and quality



Architectural Profiles Ltd was commissioned to produce this Rainscreen facade for Ferrari, It specified not only outstanding performance in energy saving, durability and longevity, but critically had also to provide levels of elegance and detailing excellence that would sit happily alongside the Ferrari name and logo. Architectural profiles, whose motto is 'Masters of the metal envelope' used an APL Slimwall Rainscreen system for the project, fabricated in Smoke Silver Alucobond. www.archprof.co.uk

SIKA Mobile app hastens survey findings and spec production



Sika Liquid Plastics has launched a mobile phone application which allowsitsroofingexpertsto record survey findings straight to their phone. The app, exclusive to Sika Liquid Plastics, allows information to be sent directly to the technical services team which produces a condition report and technical drawings and calculations. From this, a technical specification can be produced and sent to the client. All the data is bespoke to the project and tailored to the client's needs. www.liquidplastics.co.uk

NFRC Heritage Roofing Register gives a helping hand to architects



The UK's largest roofing trade association, the National Federation of Roofing Contractors, has created an exclusive register of heritage roofing specialists. Designed to ensure that the roofs on some of the UK's most precious buildings are restored to the highest standards possible, the National Heritage Roofing Contractors Register lists only those firms with the vital skills and experience to repair and renovate heritage projects. www.nfrc.co.uk

WHITESALES Em-View rooflight frame works with CSH level six



Leading rooflight supplier Whitesales has launched its latest product, the Em-View, an insulated flat roof PVC rooflight frame with double glazed safety glazing. The versatile and aesthetically pleasing Em-View comes in 11 sizes with fixed. manual or electric opening and is perfectly suited to both new building and refurbishment projects. With a U-Value of 0.64 W/m²K, the rooflight is compatible with the Code for Sustainable Homes to level 6. www.whitesales.co.uk

Bathrooms & Interiors

MORGAN Furniture takes pride of place on luxurious Crystal Serenity cruiseship



Morgan, the design-led British furniture manufacturer, has supplied a range of superb seating for the award-winning Crystal Serenity cruise ship, described by readers of Condenast Traveller as the world's most luxurious cruise ship. In a \$17m redesign, furniture from the Seville, Hampton, Como, Siena and City collections from Morgan take pride of place in the Crystal Penthouse Suites and seating from Morgan's original Oslo collection features in the Lido Café on Deck 12.

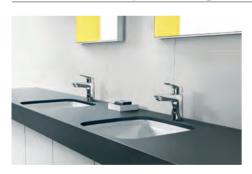
www.morganfurniture.co.uk

MULTIKWIK Trapped shower gully is both stylish and versatile



The new Multikwik trapped shower gully for tiled floors is the last word in versatility. Offering a choice of four grates to go with one of the four gully bodies, it makes it a versatile, lightweight, easy-to-fit product - with an adaptable riser to allow for different flooring heights, diverse $connection\,options\,and\,different$ seal depths. This all makes the new Multikwik shower gully simply the handiest, neatest product to use for modern shower installations. www.multikwik.com

HANSGROHE Joint project creates Logis: smooth and precise mixers



In collaboration with long-standing partner Phoenix
Design, Hansgrohe has developed mixers whose distinctive shapes combine precision with smoothness. Logis is characterised by taut surfaces, clear lines and rounded contours and comes in different heights and handle variants, ensuring that ceramics and mixer match both visually and functionally with options for cloakrooms through to larger family bathrooms.

www.hansgrohe.co.uk

HECKMONDWIKE FB Even more colours for robust Iron Duke carpeting



Heckmondwike FB, a leading UK fibre bonded carpet and carpet tiles manufacturer, has expanded its renowned Iron Duke range with seven exciting new colours. A popular choice in the education sector, Iron Duke features a flat finish, making it extremely robust and easy to maintain. The new colourways include Purple, Violet, Fuchsia, Willow, Blue, Flint and Charcoal, bringing the number of options in the range to $15\,and\,offering\,specifiers\,and\,end$ users even more choice. www.heckmondwike-fb.co.uk

KALDEWEI Flawless finish creates a true bathroom masterpiece



Meisterstücke is a new collection of free-standing baths with seamless enamelled panelling. Using modern technology for deep drawing steel, Kaldewei applies precise handcrafting to $create\,a\,smooth\,transition\,from$ panelling to bath and create a flawless finish. The result is a true masterpiece, available for three iconic Kaldewei bath models: Conoduo, Asymmetric Duo and Centro Duo Oval. The Centro Duo Oval (left) comes in two sizes: 170 by 75cm and 180 by 80cm. www.kaldewei.co.uk

DR SERVICES Premium range fittings for top notch showering



The Premium Range of stainless steel runners and patch fittings manufactured by MWE in Germany is now available in the UK from D R Services, the architectural glass specialist. Together the framing elements, tracks, hinges, handles and other components enable designers to create stylish and distinctive shower enclosures across the spectrum of customer sectors - including top end residential, hotels, health clubs and spa facilities.

www.drservices.co.uk

KERAMAG DESIGN Robin Platt's Xeno² collection adds to luxury range



Keramag Design has added the Xeno² collection to its luxury, contemporary brand of bathroom sanitaryware and furniture. The range is ideal for specifiers and designers looking to create distinctive bathrooms in high end private properties and luxury hotels, spas and resorts. Combining impeccable quality and contemporary elegance, Xeno² has been designed by Robin Platt. This is his debut collection for Keramag Design.

www.keramagdesign.com

BOSS DESIGN Mark Gabbertas adds multipurpose Toto to Boss's chairs



Boss Design has unveiled a new multi-purpose chair range designed by British designer Mark Gabbertas. Characterised by a simple, graceful profile and significant attention to detailing, Toto is designed to work in both hospitality and corporate environments. Two variants of the chair have been created; a more formal high back version, and a lower back version with slightly higher arms.

www.boss-design.co.uk

General

MARMOX Showerlay has floors well covered for smart London exercisers



Marmox Showerlay has been used by Ten Pilates at its new studio in Hatton Garden. which offers clients a dynamic exercise programme in the smartest surroundings. Five shower cubicles needed a fully waterproof under-tile layer with high thermal insulation and the lightweight, easily handled Marmox Showerlay sheets were the perfect answer. Showerlay is manufactured with a polystyrene core and a double-reinforced surface compatible with all major tileadhesives

www.marmox.co.uk

ACO Simple yet versatile channel drainage system



ACO has launched a highly effective alternative to the traditional two-part channel and grating system - the MultiDrain Monoblock PD100D. Part of the MultiDrain family, the onepiece system removes any risks associated with dislodged or stolen gratings, thanks to its anti-theft design, as well as being extremely robust, easy to maintain and low cost. It is made of Vienite, ACO's high-performance recycled material that is four times stronger than traditional concrete. www.aco.co.uk

ALUK Window and door systems aid Shakespeare House's new lease of life



AluK window and door systems have been specified for the regeneration of Shakespeare House in Hackney, London, where 24 flats were converted into 18 high quality apartments. Architect botw partnership installed additional windows on the housing block to increase natural light levels, using ALuK's 58BW window system as well as its 58BD and GT55 NI door systems on all the existing and proposed new elevations from ground to fifth floor level. www.aluk.co.uk

ASTRA DOOR CONTROLS Slimmer door closers are even more discreet



The 3000 series of fully-controlled concealed door closers from Astra Door Controls now features a new slimline face plate to make it easier and quicker to fit, and even more discreet. The closers offer all the adjustability and control of an overhead closer, with the aesthetic appeal of a concealed device. The closers' face plate $has \, now \, been \, reduced \, in \, width \,$ to just 32mm, so they are more unobtrusive and easier to fit as less timber needs to be removed to fit the closer into the door edge. astradoorcontrols.com

NORBORD SterlingOSB - perfect for refurbishment products



SterlingOSB (Oriented Strand Board) is a multi-layered timber product made from layering strands of wood in specific orientations and then bonding the layers with a resin. Norbord now produces eight types of Sterling OSB – Sterling OSB2, Sterling OSB Sterling OSB T&G, Sterling OSB Cont, Sterling OSB Roofcoat, Sterling OSB Sitecoat and a range of three new Sterling OSB fire solutions. Each has been developed for specific applications.

www.norbord.com

LG HAUSYS Hi-Macs puts style and comfort in Romanian dental waiting room



A new dental implant clinic in Bucharest has used Hi-Macs Natural Acrylic Stone - New $Generation\, material-to\, create$ a comfortable and elegant reception area. The reception desk is entirely made of Hi-Macs in Alpine White.Its organic shapes were possible due to Hi-Macs' thermoforming properties and seamless joints. The nonporous smooth surface is pleasant to touch and resistant to intensive usage, not allowing bacteria or fungi to infiltrate and affect the material. www.himacs.eu

SMART SYSTEMS Alitherm Heritage returns Mount Pleasant to former glory



The recently-launched Alitherm $Heritage\, range\, has\, recently$ been installed on Royal Mail's landmark Mount Pleasant postal sorting office in central London. Alitherm Heritage was developed to provide a modern solution for refurbishment. renovation and heritage projects. Designed to replicate the slim profiles of traditional steel doors and windows, the system delivers both elegant $aesthetics\, and\, excellent\, thermal$ performance. www.smartsystems.co.uk

CELOTEX Roadshow double decker reaches the end of its run



After three months, 50 locations and over 1,000 bookings, the pink Celotex double-decker bus has parked up for the last time at the company's HQ at Hadleigh $\hbox{in Suffolk-marking the end}$ of the insulation specialist's hugely popular 'Insulating Britain' roadshow. The 50-date roadshow saw Celotex take part in live webinars and deliver one hour technical presentations to provide expert guidance and $advice\,on\,UK\,Building\,Regs$ changes - Part Land Section 6. www.insulatingbritain.co.uk

General

FORMICA Vivix panels prove a perfect fit at Norway's Kristiansand Airport



Vivix exterior facade panels have been installed on the new control tower for Kristiansand Airport in Kjevik, Norway. The control tower's egg-inspired shape dictated the choice of material, which needed to be curved. Vivix panels are easily machined and can be cut into a variety of shapes and sizes, and because the tower rises at least 30m above ground, the material had to be lightweight for ease of installation and safety, as well as versatile and flexible.

www.formica.com

KINGSPAN INSULATION Helping Liverpool Library win BREEAM very good



A prestigious £50m restoration project to transform the Grade II* listed Liverpool Central Library into a world class facility has achieved a BREEAM 'Very Good' rating with the help of Kingspan Insulation. More than 3700 m² of Kingspan Insulation Kooltherm K15 Rainscreen Board was used on the scheme. Ideal for both new build and refurbishment projects, the board holds LABC System Approval for use in rainscreen applications, and helps maintain a controlled environment inside. www.kingspaninsulation.co.uk

LOMAX & WOOD Windows keep Victorian flavour in modern flat conversion



Lomax + Wood has been specified as brand of choice for the conversion of a Victorian property in Norwich into eight executive two-bedroom apartments. Original windows were replaced with periodstyle timber windows. They are double glazed, fully factory finished and provide a U-value of just 1.2 W/m²K. A total of 56 box cords and weights sash windows from the Kensington & Chelsea collection were installed.

MUMFORD & WOOD New style guide features most beautiful projects



Mumford & Wood, the award $winning\, manufacturer\, of$ inspirational timber windows and doors, has released a new Style Guide brochure targeting architects, project managers, developers and home owners. This must-see brochure is a $collection\,of\,the\,most\,beautiful$ projects in which Mumford & Wood's products have been specified. The technical brochure is available to download together with a library of CAD drawings and case studies www.mumfordwood.com

GEZE Spoilt for choice of door systems, architects choose more special finishes



GEZE UK, the UK's leading manufacturer of door and window control systems. reports a growing trend for special finishes on covers for overhead door closers. Its comprehensive range of overhead door closers come in a variety of cover shapes and finishes including traditional silver, RAL, satin stainless steel, polished stainless steel and EP polished brass as well as special finishes such as bronze, pewter or a variety of different colours. www.geze.co.uk

KNAUF AMF Things looking up at Passivhaus school



Heradesign ceiling panels from Knauf AMF have been specified for one of the country's first certified Passivhaus primary schools, Wilkinson school in Wolverhampton. The panels, manufactured from sustainable wood-wool for a distinctive, organic surface finish, played a key role in creating feel-good rooms with 2,000m² ceiling panels in the classrooms, sports hall and circulation areas.

www.amfceilings.co.uk

MARLEY PLUMBING Lightweight and durable products for new student



Marley Plumbing and Drainage has helped the University of Northampton build a new student accommodation building. Its extensive product portfolio and expert technical team made it ideal for the project. which involved 462 bedrooms with en-suites, plus communal areas. Marley's competitively priced dBlue, HDPE and PVC soil and waste products' durable yet lightweight constructions led to easier handling on site and ability to withstand high daily usage. www.marleypd.com

NATURAL PAVING Stone towers help win gold medal at Chelsea Flower Show



Natural Paving Products (UK)
Ltd's Midnight Blue Limestone
was used in a gold medal winning
garden at the RHS Chelsea
Flower Show 2014. Created
by John Everiss, the garden
entitled Reach Out was intended
to inspire young people into
horticulture. Fundamental to
the design were stone towers,
constructed using a mixture
of Cumbrian slate and Natural
Paving Products' Midnight Blue
natural stone, from the firm's
Premiastone range.

www.naturalpaving.co.uk

SENIOR Clear curtain walling gives views to help mark firm's 150 years



Contemporary offices built in South Yorkshire to mark James Durrans and Sons' 150th anniversary incorporates curtain walling systems from Senior Architectural Systems, ensuring views are captured and that the interior of the building is flooded with natural light.Senior's SCW+curtain walling systems across its primary south elevation and its east and west elevations, give those inside the building clear views down onto the River Don and its natural surroundings. www.seniorarchitectural.co.uk

TIMBER EXPO Two full days, two seminar theatres, one fantastic opportunity!



Timber Expo will again this year deliver an unrivalled collection $of high\, calibre\, speakers\, from\, all\,$ corners of the built environment. From niche areas to leading trends, seminars will be characterised by hot topics, architectural gems and inspirational projects. Timber is grabbing the headlines for all the right reasons, Clients, architects and customers love it. Get Involved-Getin Touch Free events and seminars: www. timber-expo.co.uk/book Exhibiting: www.timber-expo. co.uk/exhibit-or-sponsor

THERMASET All the colours of the rainbow covered by newly published range



Thermaset Ltc. one of the UK's best known companies for the formulation and manufacture of powder coatings, has released a newly published stock range. The eye catching and colourful A4 sized list launches a huge expansion to Thermaset's range. which now includes coatings suitable for railway and London Underground use, Over 600 products cover BS and RAL ranges in several finishes and gloss levels, available for next day delivery. www.thermaset.co.uk

ARMSTRONG Latest multi-material ceilings brochure now available



The ultimate guide to ceiling systems has been launched by Armstrong with its new 2014/2015 catalogue for mineral, metal, wood and fabric ceilings. The A4 brochure is available to download from the company website and provides all the information specifiers and contractors need to make informed choices for education, healthcare, office, retail and leisure applications.

www.armstrong-ceilings.co.uk www.armstrong-ceilings.ie

GEZE Slimdrive sliding operator powers Ripon Cathedral's new glass porch



When Ripon Cathedral decided to install a stunning glass porch. GEZE UK was commissioned to provide door operators for two single-leaf doors positioned either side of the lobby. This was to complement the new porch's $elegant\,design, yet\,create\,a\,safe$ automatic entrance for a historic $building\,with\,an\,extremely$ high level of footfall. With its exceptionally slim design and a drive unit height of just 7cm, the Slimdrive SL automatic sliding operator was the perfect solution for the job. www.geze.co.uk.

STIRLING LLOYD Integritank enjoys the high life on exclusive developments



At 375 Kensington High Street. a new luxury residential block in London, Integritank solvent-free waterproofing membrane has been used for podium decks, balconies and green roofs. Integritank is a solvent-free waterproofing membrane designed to retain, exclude or protect structures from water and moisture ingress. The system provides a seamless membrane free from joints which are recognised as areas of weakness in traditional preformed system sheets. www.stirlinglloyd.com

RUNDUM MEIR Ventilated garage door systems for new Cambridge housing



Rundum Meir ventilated garage doors in solid oak have been installed on new houses in Cambridge. The vertically slatted design met architect requirements for bringing light into integrated carports. Each door was made to measure, from 2200mm to 2800mm in height, from solid European oak, and is fully automated for remote control. The garage doors were installed on new houses by in Abode, part of the award-winning ${\tt Great\,Kneighton\,development.}$ www.rundumgaragedoors.co.uk

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.

Sign Up

Martin Pearson, associate director of DSDHA, gives us three of his specification favourites



VMZINC PIGMENTO

We are using pigmented zinc on several projects, as we did for the completed RIBA Award winning Alex Monroe Jewellery Studio in Bermondsey. The choice of zinc on this project was driven by a desire to create a highly-crafted facade that relates conceptually to the use of the building as a place of making. The red pigment picks up on the brick and terracotta materiality of the context and it has a lustrous finish, responding to diverse tones and colours in the surrounding buildings. With a precise, engineered appearance, closer inspection reveals the hand-made quality of the individually pressed panels. vmzinc.co.uk



Q FLOORING PERMAFLOOR

Permafloor is a 15mm thick magnesium oxychloride screed, which has the appearance of mass poured polished concrete. We used this on Edmund de Waal's ceramics studio in West Norwood (see page 36) where we wanted to create a floor with an industrial appearance to complement the warehouse building, and provide a high quality finish for this hybrid studio/gallery space. The flooring is laid over underfloor heating and screed in a single pour without joints, and the surface polished to provide a slightly reflective finish. The pigmentation achieves a subtle variation across the surface.

qflooringsystems.co.uk



NBK CERAMICS

We worked closely with Germany's NBK Architectural Terracotta on the South Molton Street building facade, using a series of varying profiled glazed terracotta panels. It was developed to create a perceived sense of movement or undulation when viewed from street level – taking inspiration from the aqueous historic reference of the hidden River Tyburn, on whose banks the site sits, and the use of faience and terracotta in the surrounding context. The profiles were enhanced by a twice-glazed finish. The result is a facade with tones that shift from deep red to bronze with the changing weather. nbkterracotta.com

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.Sign Off

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



FLYING FISH

Fresh from saving fish stocks and have us eating less cod and more pollock, Hugh Fearnley-Whittingstall is on the campaign trail again – this time encouraging shoals of London-based middle-management from City breeding grounds to team-building cookery courses at his River Cottage in Devon. While this used to mean a hazardous struggle west along the M4, now, says the PR, you can fly from City airport to Exeter 'from as little as £34.99'. With Satellite Architects building an 11-room hotel on the site for stayovers, encouraging soused bankers to part with even more dough, it's 'carbon footprint be damned' – vou'll be tip-toeing though the tarragon in next to no time!



SCHOOL OF HARD KNOCKS

In an uncertain world, it's reassuring to discover that Townscape Products has been involved in the 'hostile vehicle mitigation' for Rafael Viñoly's 'Walkie Talkie' in the City. The firm installed six granite-clad concrete seat bollards circling the public plaza at the tower's foot, designed to the latest PAS 68 vehicle impact test standards and providing 'the utmost protection for London's latest skyscraper'. This should be ample deterrent for the volumetrically ballooning tower from 'ram raid' style attacks from terrorists, extremists, G8 protestors, tenants, architects, architectural critics, passers-by, hippies, priests, nuns, Buddhists, pacifists...



TALL ORDER

'He has slight, but very slight whiskers; a beautiful figure, broad in the shoulders and a fine waist,' wrote a young Queen Victoria eagerly in her journal. Actually referring to husband-to-be Albert, she could just as easily have meant the giraffe she was presented with as a state gift in 1875. At a bit of a loss at what to do with something she couldn't look down on, a Norbord press release says Queen Vic gave it to her faithful postillion rider 'as a thank-you for his services over the years'. Duly obliged, back home in Bovingdon, the coachman built it a shed, now refurbished with Sterling OSB panels, where the poor creature probably went out of its mind with boredom.

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