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There was excitement...

... at last month's Stirling Prize Award, when the usually demure protestors from Architects for Social Housing (ASH) got into the RIBA lobby to get more vocal. They'd been heckling outside earlier, someone wielding a large carton of orange juice and conferring on shortlisted dRMM the 'OJ Simpson Award for getting away with murder' for its Trafalgar Place housing, part of the contentious Heygate estate regeneration.

Later, dRMM's Jonas Lencer took the jibe on the nose with good grace but seemed resigned to the architects' lot in this dilemma. ASH targets architects (in its view) for a lack of ethical stance, for 'simply following orders'; but if it is 'wrong' the real villain is surely a government which, since Thatcherism, has promoted home ownership as a linch pin of societal stability at the expense of all else. 'The Vienna Model' (review, p6) says that city's social housing programme means 62% of its residents live in some form of subsidised accommodation. With decent rents, homes and public realm, there's good reason why 2016's Mercer Quality of Life survey made Vienna the world's most liveable city.

Freud (a former resident) identified the power of self-interest and the need for it to be held in check in his 1929 'Civilisation and its Discontents'; seeing 'democratic society' as a trade-off between individual gain and common good, which falters if shunted too far either way. dRMM might be in the tug-of-war here but it is not pulling on the end of the rope. ●

Jan-Carlos Kucharek, Editor

CRAIG AUCKLAND/FOTOHAUS

TIMOTHY GORDON COMBILL

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Cover image: St James's Market pavilion by Studio Weave

Compendium

MANUEL RODRÍGUEZ FERNÁNDEZ

How green is my valley?
New homes set in the rolling green hills of north west Spain might feel a little less encroaching now that slate firm Cupo Pizarras has developed its innovative product that draws on the solar absorption properties of the stone. The locally sourced material is now helping to make its Thermoslate roof tile, a slate-based thermal collector that looks just like the actual stone, but which generates renewable and clean energy. In the agrarian-inspired home above, seven such collectors give this family of five more than three quarters of its heating needs – and that includes the pool. And with its 150 year lifespan, it'll still be doing so long after they've stopped using it – probably preferring to bathe in the new climate change lake that will have formed by then in the valley below.

MAX CISOTTI

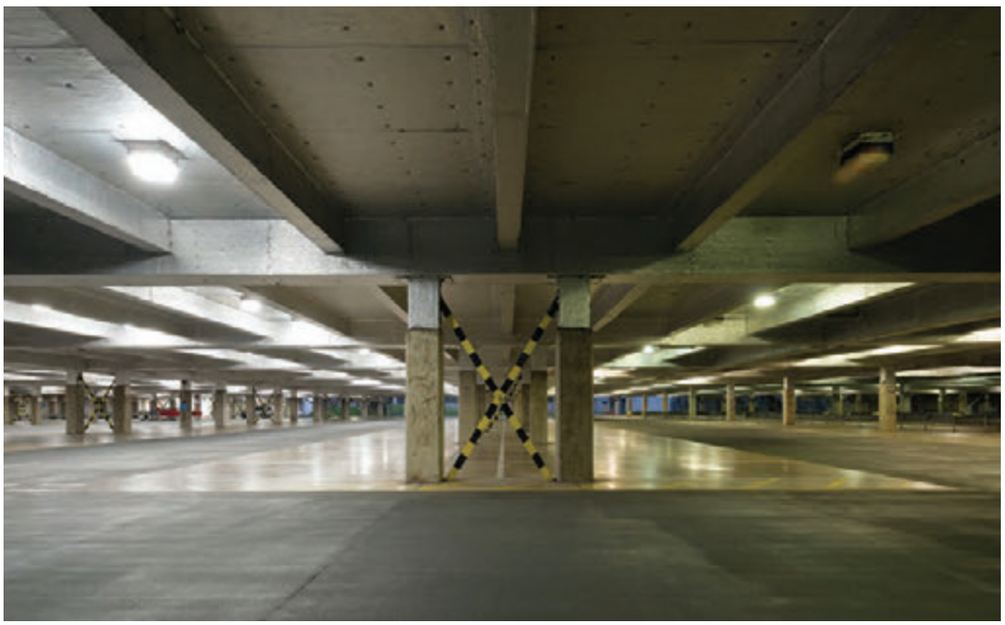
Not falling down any more
Cladding firm Prater has helped realise the newly opened London Bridge station, working with architect Grimshaw to construct the civic-sized below-track concourse which, once the second phase opens in 2018, will link the whole locality. We just need Southern Trains to run properly and we're cooking on gas.

Studying the grates
I have to say that designer Tim Gosling's travails have been so far and wide he almost qualifies as a modern-day dilettante, especially given his tour of duty of Saigon – well, Miss Saigon to be precise – Starlight Express and years at high-end furniture maker Linley. Now running his own empire – Gosling, natch – it's no wonder he sought inspiration from ancient Rome with his bespoke Pompeii fireplace for firm Chesney's. Famously buried by Vesuvius in AD79, style-wise it puts those roaring flames so on point.

Pick'n'mix
Wood or metal? Timber or aluminium? The same old window design conundrum gets played out across a million self-builds in the UK. Luckily Black Millwork, which has been specialising in timber joinery for the last 20 years, is bringing out an aluminium clad window range, so you can specify both types – even on the same building. They might make a fitting analogy for the centre ground nature of English politics – but at least these are high performance!

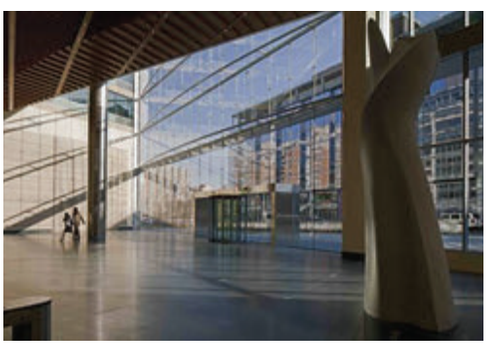
CHRIS REEVE

Sinking feeling
Maybe I've OD'd on Downton but I think it's starting to have an effect on my sanitaryware choices. Of course there's always a lengthy trawl across the interweb to see if anyone in France is almost giving away a version of Corb's trophy sink in the Villa Savoye or Duchamp's urinal but the more time pressed of us might be just as happy with modern interpretations of old classics, such as those by Perrin & Rowe. Their reassuringly chunky Victorian and Deco ranges now come with a traditional style basin stand, allowing you too to ablute in splendid isolation.



ANDREW DIXON

Park that
Though a recent typology, the car park is burnt into our cultural consciousness: remember Get Carter's hapless architects considering their client's contract 'at large' as he plummets past from Owen Luder's brutalist car park in Gateshead? Recently Herzog & de Meuron infused cinematic Deco glamour in its Lincoln Rd example in Miami. Okay, it's not Hollywood – but in Birmingham, a fine performance from Costco's new car park stars retrofitted 70% more efficient LED gear trays from Venture Lighting. Add the Brummie equivalent of The Washington Post searching for Deep Throat in the moody basement and you've got a blockbuster on your hands.



In plane view
Washington DC might be abuzz with talk of the Smithsonian's new National Museum of African American History and Culture by David Adjaye, but over in the CBD district the office occupants of 601 Massachusetts Avenue might be being distracted by their new entrance atrium. The 10 storey, 35m tall structure, by local firm Duda Paine Architects, was designed for maximum transparency and minimum structural interference. This was done using Pilkington Planar's point support glazing system to secure its 1.5m by 3.5m 12mm thick Optiwhite glass to a series of 26m wide , one-piece horizontal trusses. Additional vertical support was provided by small stainless steel tension rods. Weighing nearly 30 tonnes, 970m^2 of glass was used. Maybe not the weight of history, but weight nonetheless.

BIRCAN TULGA PHOTOGRAPHY

Age of Cosentino
Following on from the four that opened in Milan, Manhattan, Sydney and Singapore, innovative surfaces manufacturer Cosentino has opened its 'City' showroom in Clerkenwell, London. Taking centre stage is its sample room, which stocks the full product range, with a selection process that allows you to visualise colour schemes virtually and select ranges via a dramatic lightshow that dims the bulbs on de-selected materials or colours. It's like TV dating game 'Take Me Out' – only with tile samples.

UPCOMING
Sleep Event Business Design Centre, London 22-23 November
Lux Live ExCel London 23-24 November
Eco Showcase Various locations to 1 December

The real deal

Virtual reality might finally be becoming accepted. This year saw the launch of various VR headsets, mainly Oculus Rift and HTC Vive, allowing fully immersive movement in a virtual environment running from a PC. Navigation in Oculus is by standard game controllers such as for an Xbox, or in Vive by physically moving between a pair of sensors mounted up to 5m apart. The latter obviously gives a greater sense of engagement and involvement; your movements in the physical world replicated in the virtual.

There are also less expensive, unwired versions into which you must slot your phone, such as the Samsung Gear VR or Google Cardboard, which essentially play back a 360° image or video. The main difference between these and the wired viewers is that they are single nodal point viewers, so while you can interactively turn your head you can only move through the environment by transporting to another node.

Within the architectural community uptake of real time rendering has been slow – partly due to poor materiality, textures and lighting. But with qualitative advancement of gaming engines, notably Unreal (UE4), the potential is fantastic. Reducing overnight render times to a fraction of a second (real time output is 60+ frames per second), screengrabs of full resolution marketing images and animation can be outputted as real time by-products.

We've been using UE4 for a while now, most notably for London Business School's new premises. We were restoring (virtually) one of its rooms recently to create a fundraising image by building a 3D model, rendering and then creating a 'traditional' interior CGI. Once complete, although it looked great, the wide angle view just didn't feel like the physical space we'd visited. But when the same 3D model was put into the headset it felt spatially identical to being in the room. How our minds interpret 2D wide angle photography vs perceived reality is a massive subject but the effect speaks for itself; VR feels so much more real. Not only is the quality a vast improvement, but the experiential possibilities are much more believable. The word 'immersion' is used a lot – rightly so.

VR's strength has yet to be fully appreciated by architects, alongside the Vive's 'paddles' which allow the user to interact with the space. The use of a mouse/tablet is so ingrained that it's difficult to imagine using another interface, but the ability to use movement and gestures to shape the virtual environment around you is tantalising. Modelling while 'inside the model', pushing volumes and walls and openings around to sense instantaneously how that alters the space, feels like a gamechanger; VR in VR.

The wider potential is mind-blowing. Imagine combining your own immersion with others, where all put on headsets and meet in a virtual room – a form of 360° immersive Skype. Soon we will be able to walk around the pre-application scheme with all the design team in a shared virtual environment, discussing and altering the design to see the implications in real time. We are as close as we have ever been to achieving the state of lucid dreaming... ●

Joseph Robson is founding director, AVR London

Books

Buy at ribabookshops.com

The Vienna Model

Wolfgang Förster & William Menking eds. Jovis PB 246pp £30

In a world where we are constantly reminded of the dearth of any – let alone suitable – housing in our UK cities, opening this sumptuous book on housing approaches taken in Vienna is like a succour. This study of the city's social housing programme, which started in the 1920s and has the consequence of 62% of its population now being housed in some kind of subsidised housing, is both highly informed and, with its bold blue and white graphics appearing throughout the housing studies, visually alluring. It's due in part to Austria's 'Four Pillar Model' for developer competitions, which balances architectural, ecological, social and economic project demands – an issue examined in more detail in one of its essays. And the gift keeps on giving – unfold the jacket!

The Experience of Architecture

Henry Plummer. Thames & Hudson HB 288pp £29.95

Steen Eiler Rasmussen's 1964 Experiencing Architecture served, for me, as a seminal introduction to the visual, spatial and haptic qualities imbuing the greatest architecture. But it's one man's view and Henry Plummer, professor emeritus at the University of Illinois, is entitled to his own take on the matter. Except that while Plummer covers similar themes, perhaps with more concentration on its applicability to modernism, there's something a little anachronistic about the approach now. Spatial concepts have moved on considerably in the last 20 years and with the collapse of perceptions of time and space through virtual technology I'm left wondering if the author's covering any new ground. Luckily Plummer was an apprentice to American photographer Minor White, so the photos, most of which he took, are great.

Houses

Peter Aldington. RIBA Publishing HB 272pp £49.95

There's a fitting irony that the humanistic work of architect Aldington, Craig and Collinge came in under the radar in the late 20th century UK Modernism – perhaps we were too busy being in thrall to the birth of High Tech to notice. Luckily, recent history, with its emphasis on contextual modernism, has been far kinder to the practice and perhaps gave Peter Aldington, in his later years, the confidence to author a full monograph of its private houses. It's a lovely thing, not only using the author's own photographs but with copious hand-drawn plans, sections and elevations marking the development of all the firm's domestic projects. It establishes the context for some of its significant works, like the award winning contextualism of Lyde End. The contrast with its 1982 proto Hi-Tech McManus House is shocking.

Westbrook Primary is a pioneering new school that received central funding in order to realise an ambitious target: a low-energy building with minimal ongoing maintenance and running costs. To tick all the boxes, fibre cement slates were chosen for the roof and facade. The final effect is a striking modern statement that provides superb energy-efficiency today, and is adaptable to the needs of the future.

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Sliding bridge

What: Inner Harbour Bridge
Where: Copenhagen, Denmark

There is, as the inauguration press release states, no other bridge like this in the world. Studio Bednarsky's international competition-winning bridge finally opened to the city at the end of the summer, as much a relief to the architects as it was to the city. Its tricky gestation wasn't due to design changes along the way however – initial visualisations are virtually identical to the completed structure. Over its construction the project had to endure poor workmanship and the bankruptcy of the first contractor.

Linking two sides of Copenhagen's harbour side near the opera house, the 180m long pedestrian and cycle bridge is characterised by two 25m wide central sliding steel sections that elegantly retract into the main body of the structure to create a 50m wide opening to allow ships to pass through. Concrete access decks either side of these sections give city dwellers ringside seats to watch the mechanism in action – a process that takes about a minute.

The complexity is increased because the bridge is slightly sinuous, mirrored around its centrepoint. This was deliberate – maximising the length of the access ramps across the opening and ensuring that their slope does not exceed 4% also lessened intrusion on the harbour sides. Because of the huge cantilevers involved, both 8m wide moving steel decks had to be formed from triangulated plate sections, each deck weighing 250 tonnes. The outer side faces of these cantilevering spans are slightly curved, smooth steel surfaces, while the undersides are far more complex. Here, the steel plate is made up of three-dimensional facets creating a 'W' form in section and giving a spine-like quality when viewed from below. The spans were made in one piece in Vistal, Poland, transported to Copenhagen by sea and installed by a floating crane over one night.

Key to the bridge is its sliding mechanism, with both moving decks resting on a set of 1.8m diameter forged solid steel twin wheels. The decks are held in line by stainless steel tracks set into the concrete sections on either side of the bridge; two sets of bogies run with each of these, effectively forming a three point support for the decks. Constantly changing moment forces as the bridge opens and closes were behind the creation of its unique form (see box).

Insolvency and delays aside, the newly inaugurated bridge has proved immensely popular with the residents of Copenhagen. Initially expected to deal with 7,000 pedestrians and cyclists a day, it is handling more than 10,000. Users have the pleasure of being able to watch not only the retraction process at close quarters from the balcony at the end of the concrete deck, but also boats passing through the navigation channel. Taking pride of place in the harbour, Studio Bednarsky's new bridge is a testament to how simple, minimalistic design can push bridge technology at the same time creating a thrilling new meeting point for the city. ●

Top The Inner Harbour Bridge now connects two historically separated sides of Copenhagen.
Above right The bridge retracted provides a 50m wide navigation channel for maritime traffic.
Below right The 1.8m diameter twin wheels of the deck retraction mechanism alongside the complex, faceted steel plate deck structure.

ENGINEERING CHALLENGE

The engineering complexity of the scheme is that the moment load forces constantly change as the bridge retracts and moves out. When the bridge is retracted, the distance from the bogies and the steel twin wheels is at a maximum; when closed it is at a minimum. When it is open, the steel wheels act as a form of pivot, with minimal loads on the bogies, but as the bridge closes, the cantilever forces increase to put far greater loads on the bogeys as they draw closer to the central support wheels. Lateral rollers within guides allow for smaller adjustments to ensure that the two bridge sections meet in the middle. Final slotting together is achieved via two conical steel pins on one deck that register into female slots on the opposite deck, ensuring the decks are completely locked together when closed.

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Ideally, buildings for the education sector should nurture curiosity and aspiration while also providing a safe environment for learning, and so demand a careful choice of materials. Surfaces that combine durability and hygiene with particular and inviting aesthetics must also meet the restrictions of the public purse. Spanish ceramics offer the kind of beauty, versatility and reliability essential to such projects.

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Always at the forefront of innovation, the renowned Spanish tile industry offers a variety of advanced solutions for high traffic and characterful education buildings – as demonstrated by a range projects featuring tiles from Spanish manufacturers here.

JAVIER FUENTE, CONSUELO CHAMBO Y LUIS MILLET

CHILDREN'S EDUCATION AND INNOVATION CENTRE BY FOURSQUARE ARQUITECTOS

This nursery and children's centre in the outskirts of Valencia was conceived to champion educational innovation and to inspire its young occupants to explore the world around them – with a strategic choice of materials playing a significant role. A key feature of the project by Foursquare Arquitectos is the family of brightly hued circular structures, externally clad in advanced bespoke porcelain with UV resistant glazes by Spanish specialist Natucer.

MARIELA APOLLONIO

GAVINA SCHOOL HALL BY CARMEL GRADOLÍ, ARTURO SANZ, CARMEN MARTÍNEZ GREGORI

One of the key requirements for the newly built multi-purpose hall was easy adaptation to a variety of uses, from badminton tournaments to theatre productions. A 90m² high-impact sliding facade made of glass-filled ceramic blocks by Cerámica Ferres allows the hall to open up easily to the exterior and merge with the open space, while light coming through the glass-filled volumetric tiles creates playful patterns on the floor. The use of ceramics also helped achieve high levels of acoustic and thermal insulation in line with the school's ethos of sustainability. The project won last year's Tile of Spain Award for Architecture.

CATERING COLLEGE BY SOL 89

This catering college by Sol 89, housed in the compound of a former abattoir in Medina, was honoured with the 2012 Tile of Spain Award for Architecture for its 'strong awareness of the current context and resource-economic design which demonstrated an outstanding sense of tact'. Sol 89 'sheltered' the new building under a series of dynamic, angular roofs, sympathetically clad in unglazed tiles by Exagres. Spanish ceramics were also used extensively for the floors and walls of the school kitchen facilities.

FERNANDO ALDA

FRANCISCO BERRETEAGA

CARLOS III UNIVERSITY BY JUAN BELDARRAIN SANTOS

The campus and library of this Madrid university gained the highest level LEED Certification for its excellence in sustainable architecture. Choosing extruded ceramics for the ventilated facade cladding has increased thermal performance and energy efficiency, while the extensive use of low maintenance floor tiles with 97% recycled content by Porcelanosa throughout the building also contributed to the university's environmental commitment.

COURTESY OF ASCER

JAUME I HIGH SCHOOL BY RAMÓN ESTEVE

Colour coded zones clad in vividly hued glazed ceramic tiles help both students and faculty staff at this Spanish high school find their way around the five interrelated buildings and patios. The application of brightly coloured ceramics was an economical way to create a 'child-friendly' face to replace the existing grey concrete school structure. The project by Ramón Esteve received a special mention at the 2010 Tile of Spain Awards.

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Washrooms from the Stirling shortlist

You learn a lot about a building from its washrooms. Newport Street Gallery won the Stirling Prize, but the others in the running had loos to feel flush about too

Words: Pamela Buxton

OUTHOUSE, FOREST OF DEAN
Loyn & Co Architects

Everything about Outhouse, a home and studios for two artists, is geared towards maximising its fantastic setting in the Forest of Dean while having minimum impact on such a sensitive rural location. This approach includes the washroom strategy, which allows the client to enjoy the magnificent views of the Wye Valley even from the bathtub.

Outhouse has two washrooms plus a standalone bath in the middle of the bedroom in the south west corner of the building. Here the site falls away, ensuring that the highly glazed bedrooms are not overlooked from the garden.

According to project architect James Stroud, the decision to locate the bath as an object in the bedroom was driven by the client's wish not to disturb the rest of the house when she takes a bath very early in the morning. At the same time, the location in front of the triple-glazed bedroom window allows her to take in the splendid view while she bathes.

With such a prominent bath, its specification was critical, according to the architect.

'There was no question of a traditional roll-top cast iron bath. The building is obviously a contemporary building and we wanted furniture and fitting out to be the same,' says Stroud.

Together, architect and client specified the distinctively-shaped, solid surface Delicata Slipper Bath by BC Designs, chosen for both its aesthetics and excellent temperature-retention.

'It is very tactile and lovely to touch,' says Stroud of the matt finish Cian material.

Another factor was its 680mm height, which enables the client to step in easily with the help of a small step, and its short length – 1520mm rather than more usual 1700mm or 1750mm – which allows a sitting-up position for a comfortable long soak. The bath sits on the engineered timber flooring with an adjacent standalone, hand-held Vola shower fitting.

CHARLES HOSEA

A scene of intimacy and exposure: the bedroom's bath has stunning views over the Wye Valley.

The washroom outside the two main bedrooms includes a toilet, bidet and two basins as well as a shower. The latter is designed as a walk-through shower with a frameless glass wall and a concealed slot drain. Users exit the shower close to the window, where they can look onto the house's large earth courtyard, one of four at the house. Sanitary ware is by Laufen, including products from the Kartell range.

Another washroom in the rear half of the house is built into the hillside to limit impact on the landscape. Positioned next to the utility room off the main 'gallery' corridor that runs through the building, this serves the adjacent guest bedroom as well as the rest of the house. Clerestory windows get light into these rear rooms and give views up the hillside. This wet room is similar in design and fittings to the main washroom, minus the walk-through shower.

BLAVATNIK SCHOOL OF GOVERNMENT, OXFORD
Herzog & de Meuron

Washrooms are a much more important element of a building than is generally given credit for, according to Herzog & de Meuron, which designed the Blavatnik facilities to reflect the calm palette of white and grey tones found throughout the post-graduate building.

'Over the course of a day, it is likely that every single user will visit these spaces. It is paramount that each has an equally good experience; one of comfort, privacy and convenience,' says the architect.

The School accommodates 48 units, strategically located according to occupancy needs and taking advantage of areas least likely to benefit from natural daylight and solar gain. They also work as a screen to give privacy to Somerville College's neighbouring halls of residents.

Washrooms are generally divided by gender to accommodate and respect the variety of backgrounds and beliefs of the user group. There are also nine accessible facilities and two bathrooms, which are unisex.

Left and below
The emphasis is on simplicity and homogeneity of materials, with a distinctive monochromatic palette throughout.

Banks of washrooms are located off the main circulation corridors in the north-east sector of every upper floor, with additional washrooms next to the cafeteria and in the basement. Here, facilities include cubicles near the lecture theatres as well as changing and shower facilities.

The monochrome design combines black painted steel doors, vanity tops and cubicles, with hexagonal mosaic wall tiling, white sanitaryware and grey flooring tiling. Above the bespoke vanity units, a full height mirror extends to a suspended ceiling that has a light slot detail that conceals the air extract plenum.

'A balance between white, grey and black elements maintains visual contrast, while providing a calm environment,' says Herzog & de Meuron.

Sustainability was a particular priority, with the emphasis on specifying high quality products, materials and workmanship and designing with maintenance in mind. This meant an increased requirement for access panels including a routed panel detail, developed by the architect in collaboration with the contractor, that interfaces with the distinctive geometry of the Domus mosaic tiles.

HERZOG & DE MEURON (2)

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WESTON LIBRARY, OXFORD
WilkinsonEyre

The key driver for the refurbishment of the celebrated New Bodleian (now Weston) Library designed by Sir Giles Gilbert Scott in the 1930s, was the desire to allow more public access and engagement with the activities going on inside.

This had major implications for the washrooms, which needed to be significantly increased in number and made wheelchair accessible. WilkinsonEyre aimed to achieve this while respecting the grade II listed fabric.

To suit the demographic of the users, the architect decided to retain a gender divide rather than create unisex washrooms, with the exception of the accessible facilities that are provided on each floor. WilkinsonEyre also retained the location of the washrooms but replanned them to increase provision and accessibility – no small task because of the need to avoid the new cubicle layout clashing with elements such as windows, door apertures and risers.

'The most tricky bit was working with existing windows to get the best out of the space,' WilkinsonEyre associate Geoff Turner.

The new washrooms were designed to complement both the palette of the original building, which included stone floor, dado, and sapele hardwood architrave, and the detailing of new interventions.

Above Wilkinson Eyre was keen to reflect Gilbert Scott's original materials in the Weston Library's new washrooms.

In this way, says Turner, they are contemporary in design and materials but sympathetic and respectful of the original.

The non-slip ceramic floor is a similar beige colour to the original. Door and architrave joinery is European softwood but stained to emulate the hardwood original. White Corian vanity units combine with white sanitary ware by Armitage Shanks, while Decra cubicles have a more contemporary expression with deep maroon doors to contrast with the beige tiles.

At the south west entrance are separate male, female and unisex washrooms plus a changing room for cyclists. In the more constrained north east corner, male and female toilets are on alternate levels and accessible washrooms on all. Two unisex washrooms serve the new extension at the top. As well as improved provision for readers and the public, staff facilities have been overhauled to double female provision and introduce staff shower and change facilities. Total provision throughout the library increased from 30 to 55.

NEWPORT STREET GALLERY, VAUXHALL, LONDON
Caruso St John Architects

Robust, metal-walled washrooms were incorporated into Caruso St John's design of Newport Street Gallery, the private gallery opened by artist Damien Hirst in Vauxhall, London.

The gallery is a conversion of three grade II listed, former industrial buildings. These are bookended by two new buildings to extend the terrace, leading to the need for washrooms at both ends of the row. A bank of seven public washrooms was installed at the main entrance of the new Building No 1 with four more arranged over two floors of the extension at the other end of the terrace, Building No 9. This and the basement hold extra staff facilities.

The main washrooms are unisex for greater efficiency of space and also to reduce waiting times, but have the flexibility to be split into men's and women's washrooms if desired at some time in the future. These include one accessible and one ambulant WC. All have full height floor-to-ceiling walls. Caruso St John reviewed the materials, design details and sequencing for the washrooms after building large scale mock-ups during the design and construction process.

'Our approach, as for the gallery itself, was to make the washrooms as neutral and calm as possible,' says project architect Paul Maich.

'The walls are painted steel so they are more robust and feel like an assembly; the walls and doors to the WCs are all painted steel. It was important that fittings (taps/soap dispensers/door handles) didn't have escutcheons or visible fixings.'

The colour scheme is white and grey. Washrooms have the same white walls and floor finish as the gallery spaces. Flooring is an in-situ concrete topping slab, power floated with a dry shake, then ground, acid-etched and sealed. Sanitaryware is also white, with Vitra supplying the basin and pan. Bespoke lighting, consistent with that elsewhere in the gallery, penetrates the wall above the mirror.

A calm and neutral approach to washroom specification – fully mocked up before installation.

TRAFALGAR PLACE, ELEPHANT AND CASTLE, LONDON
dRMM Architects

Future flexibility and ease of maintenance were key priorities in the design of washrooms at Trafalgar Place, a development of two brick-faced, cross-laminated timber apartment buildings on the former Heygate Estate at Elephant and Castle.

Commissioned by Lend Lease, dRMM's design provides 235 homes across three tenures: private sale, affordable intermediate and affordable rent. For programme risk reasons, the client opted for traditionally built bathrooms rather than prefabricated pods. The interior scheme was developed with Woods Bagot to make bathrooms that feel crafted while setting a neutral backdrop for contemporary living.

Washrooms were designed with flexibility in mind, with 10% of units wheelchair accessible either now or able to be so in the future. Many of the washrooms can accommodate other changing requirements. In a typical three bedroom town house, for example, a Lifetime Homes standard washroom at entry level contains a toilet and basin and is generous enough in size to be converted into a wet room with provision for the addition of a shower if desired.

The next level of the house incorporates a family bathroom with a linear arrangement of toilet, basin and bath/shower along one wall. The master bedroom has an ensuite accessed via a sliding door integrated in the wardrobe.

'There's a bit of a blurring of boundaries between the two spaces, which was part of the design concept, to differentiate the master suite from the other bedrooms,' says Wallis.

Specification was very similar between the units for sale and intermediate ownership. A more robust spec was used for the socially-rented provision, which was nevertheless matched wherever possible with the same product ranges to maintain quality throughout the whole development. Ideal Standard sanitary ware and accessories, for example, were used throughout.

Open market and affordable intermediate tenure purchasers were offered a choice of either a warm or cool colour palette colour scheme with different splashback materials and floor tile colours that are cross-referenced across the apartment interior. For these tenures, fittings include a reconstituted stone, off-white worktop from DuPont's Zodiaq range, and Johnson Tiles' Prismatics tiles used in stretcher bond.

Above The same sanitaryware was specified across tenures but materials and finishes were more robust in rented apartments.

As well as the bathroom aesthetic, access to the 'guts' of the building was also a priority to simplify maintenance, with access panels unobtrusively incorporated into the bath panels plus removable plasterboard wall panels and the inclusion of removable cupboard backs where necessary.

'The developer was very keen for concealed fittings such as valves and drainplates to be easily accessible,' says dRMM associate Steven Wallis. 'It required a lot of consideration.'

RIVERSIDE CAMPUS, CITY OF GLASGOW COLLEGE
Michael Laird Architects & Reiach and Hall Architects

This new campus encompasses teaching and residential towers on a key site by a major crossing of the River Clyde. The two types proaches to the planning and construction of the washrooms.

Flexibility was a priority for the overall design of the teaching tower to 'future-proof' it against changes in teaching requirements. Although most of the nautical and engineering students who study at the campus are men, it is hoped to attract more women in time. It was therefore decided that rather than provide separate washroom facilities with a ratio that might need to be changed over time, it was more efficient to make all washrooms unisex, with integral sinks in each cubicle. As there are no separate staff washrooms, the unisex cubicles are used by staff and students alike.

'There won't be a need to change the provision in the future – it's a question of future-proofing the building,' says associate director Adam Frickleton of Michael Laird Architects, adding that the washrooms' position alongside the central cores also creates more flexibility for the planning of each floor.

Washrooms needed to be highly durable and to follow an overall aesthetic for raw and robust materials that could be easily changed and renewed over time. The architect specified plasterboard walls, solid core timber doors, suspended metal ceiling and ceramic floor tiling. Ideal Standard sanitary ware is hung off a high-pressure laminate IPS pre-plumbed panel system.

In the 10 storey residential tower to the west of the site, the priorities were speed of installation and quality control. Here, the washrooms were prefabricated by Offsite Solutions, which built each pod in a factory with fully-finished shower, toilet and sink. These were installed by contractor Sir Robert McAlpine before construction of the external envelope. Each pod was raised using a goods lift and then slid across to be plugged into the services when in situ. In total, the accommodation tower has prefabricated pods for 200 twin and single rooms. Disabled loos were installed traditionally. ●

LEND LEASE

Above Prefabricated bathroom pods as visualised above were manufactured by Offsite Solutions and brought down and installed on site.

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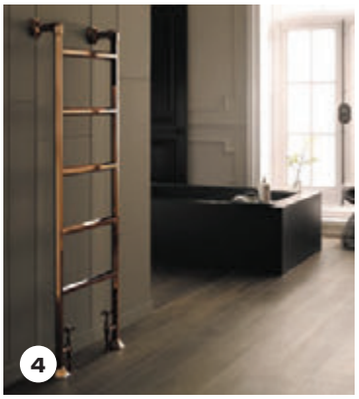

1
Puzzle tiles
Domus

You may not quite be Paolozzi, but there's still a splash to be made with a clever bit of tiling. Domus' Puzzle range offers a solid injection of mid-century geometric abstraction with minimal complication – and maximal options in both colour and potential combinations. Maybe smuggle some onto an unadorned wall at Tottenham Court Road next time you're on your way to Heal's?
domusgroup.com

2
HydroTap Platinum Range
Zip

If performance is your kink when it comes to the kitchen sink, then a quick look at Zip's HydroTap range is going to demand an immediate cold shower. As though a single tap producing chilled, sparkling and/or boiling water (together, of course, with boring old hot and/or cold) weren't enough, detail freaks will simply peak at the eight new metallic finishes Zip's added to the range: nickel, rose gold, gold, gunmetal and platinum, in brushed and polished variants. All come, naturally, with a 0.2 micron parental filter.
zipwater.com

3
Enamelled washbasins
Kaldewei

That violent allergy to shabby chic no longer prohibits enjoyment of the tactile, lightweight and hardwearing benefits of enamelled steel. Kaldewei's new washbasins are designed to accompany the firm's established baths and shower trays, and with a staggering array of styles and mounting options, no-one looking for contemporary enamelware suites will be left nursing a chip.
kaldewei.co.uk

4
Art Moderne towel rail
Vogue UK

It's not long after the cold starts to bite that we Brits start to climb the walls. So it's rather nice to do it up against the smooth polished surface of a stylish heated towel rail. Put down that paperback, and blame the BTUs for that leisurely morning visit. Or, of course, surrender entirely and lock yourself in there with your book.
vogueuk.co.uk/

5
Washroom systems
Trovex

'NOW, what I want is Facts. Teach these boys and girls nothing but Facts. Facts alone are what are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts: nothing else will ever be of any service to them.' – Mr Thomas Gradgrind, educator.
'Fun, colourful, easily-installed washroom systems, however, are also of use. Especially those featuring Pond Life, Farmyard Friends, and sensor taps to take account of inquiring yet grubby hands.' – Yrs Truly Esq, reasoning animal.
trovex.com

6
Sanitary brass and chinaware
Perrin & Rowe

Falling asleep in the bath is pleasant yet inadvisable. Nonetheless, determined aquatic sleep freaks will be able to indulge their fantasies at the Business Design Centre's Sleep event (November 22-23) with kitchen and bathroom brassware manufacturer Perrin & Rowe. Bath, basin and shower; contemporary and traditional; brass and porcelain: the single unifying thread on this stand will be authentic British manufacture. Wake up to the pleasures of unlacquered brass, why don't you? Just don't get your toe jammed in the faucet.
perrinandrowe.co.uk

7
Filtra Pro filtered tap
Blanco Germany

Water in plastic is terribly Essex, don't you think? And I'm not talking Hatfield Peverel. Thank heavens that Blanco's Filtra Pro tap offers taste with taste, thanks to its concealed 6,000-litre cartridge filter and modern styling. It's a high-pressure mixer tap with isolation for economically filterin' your drinkin', removing heavy metals, chemicals and chlorine to encourage optimum hydration. And that's so important when you're shaking your booty in the home gym, eh babes? Here's personal trainer Marco in his racerback vest. Best add a drop of whisky for the electrolytes.
blanco-germany.com

8
Bespoke plumbing fixtures
Hansgrohe with Axor

Climb every mountain til you reach the Frutt Family Lodge on the shores of Switzerland's Alpine Lake Melchsee, and you'll find the underground spa and 90 bathrooms in the newly rebuilt resort equipped to a standard which will sanitise even the loneliest goatherd. With a variety of Hansgrohe and Axor plumbing fixtures used throughout, guests will doubtless find it's one of their favourite things to say 'So long, farewell, auf wiedersehen, goodnight!' to the family von Shower. Or von Tap. Or Trapp, even; I have confidence that the ranges include wastes as well.
hansgrohe.co.uk

Costed

Ruby Galloway of Gleeds Research & Development on kitchen & bathroom costs

The Technical Housing Standards – Nationally Described Space Standard sets out requirements for the gross internal area of new dwellings at defined levels of occupancy.

Kitchens and bathrooms can be a significant proportion (up to 5%) of the total cost of a residential development, although this can vary substantially depending on the individual components. Industrial kitchens can also run to thousands of pounds – excluding power and associated infrastructure such as a three phase electrical supply. In today's market, kitchen units can be manufactured in mass volumes or as handmade bespoke units. Bathrooms can be installed as pods in student accommodation and hotels but more often in combinations of fittings for domestic housing developments

Primary considerations for kitchen design are layout and functionality. Hazards, corners and awkward fitting locations which could force the user into uncomfortable positions must be minimised. Design for elderly and less able users will need to take extra care to accommodate their needs, such as additional space for easier mobility or lower level worktops. Many modern living spaces tend to incorporate some form of dining area in the kitchen if possible.

Bathroom design is generally governed by the space available, although the requirements of the end user are also important factors. With running costs in mind, water consumption is also a driver. Nowadays, most toilets will have dual-flush functioning as standard and taps can be equipped with self-closing features. These features generally manage to reduce the water consumption by around 40% to 50%. With small space living, the design of modern baths have also reduced the water capacities by over 35% compared to some standard size baths.

The following rates are based on the UK average and represent typical prices at 2016 Q3. Please note prices can be vary significantly depending on specifications.

KITCHENS	Range £
Typical all-in rates for residential market – volume housing to mid-range level, include units, worktop, sink and taps. Not including white goods	
One bedroom flat (5 cabinets)	**£2,300 - £2,500**
Two bedroom house/flat (6 cabinets)	**£3,300 - £3,800**
Three bedroom house (8 cabinets)	**£5,700 - £6,600**
Four bedroom house with utility room (12 cabinets)	**£8,800 - £11,500**
Middle range specification (NB dimensions are approximate to indicate the approximate size of units)	
Standard sized unframed units. Veneered particle board cabinet construction, 600 mm deep for floor mounted units and 300 mm deep for wall mounted units	
High gloss finish, floor standing units, 500 mm wide, each	**£230 - £330**
High gloss finish, floor standing units, 1,000 mm wide, each	**£310 - £440**
Solid timber doors, wall mounted, 500 mm wide units	**£450 - £640**
Solid timber doors, wall mounted units, 1,000 mm wide units	**£580 - £850**
Upper middle range specification	
Standard size framed units. Solid timber cabinet construction with birch ply or similar; 600 mm deep for floor mounted units, 300 mm deep for wall mounted	
Solid hardwood timber door, floor standing units, 500 mm wide	**£540 - £1,380**
Solid hardwood timber doors, floor standing units, 1,000 mm wide	**£830 - £1,860**
Solid timber doors, wall mounted units, 500 mm wide	**£570 - £1,510**
Solid timber doors, wall mounted units, 1,000 mm wide	**£850 - £2,070**
Door upgrades (applies to hardwood door rates)	
Hardwood doors, eg oak, ash	**20%**
Premium hardwood, eg walnut	**30%**
Hand painting	**25%**
Worktops – generally up to 40 mm thick (per metre run)	
Granite	**£170 - £210**
Quartz	**£190 - £240**
Composite	**£110 - £160**
Solid timber	**£180 - £260**
Laminate	**£70 - £110**

BATHROOMS	Range £
Sanitary ware – mid range	
Low level WC, vitreous china pan	**£280 - £350**
Wall urinal, vitreous china	**£220 - £270**
Bath, pressed steel enamelled	**£540 - £670**
Shower tray, glazed fireclay	**£280 - £396**
Shower enclosure, hinged door and side panel	**£460 - £720**
Hand wash basin, glazed fireclay	**£180 - £250**
Sanitary ware – high range	
Wall mounted WC	**£520 - £610**
Wall mounted hand wash basin	**£310 - £360**
Bath, freestanding, waterfall inlet filler	**£1,450 - £1,630**
Shower door, bespoke, hinged door and side panel	**£1,030 - £1,460**
Taps	
Waterfall style basin filler, chrome finish, each	**£130 - £220**
Waterfall style bath filler, chrome finish, each	**£120 - £210**
Single kitchen single lever mixer tap, each	**£120 - £150**
Kitchen pull out tap (pull out spray), chrome finish, each	**£200 - £260**
Concussive basin self-closing taps, chrome, pair	**£130 - £210**
Hydro taps (zip taps), each	**£2,830 - £3,100**
Accessories	
Heated towel rails, 600 mm wide, standard chrome finish, each	**£150 - £190**
Heated towel rails, 600 mm wide, designer stainless steel, each	**£360 - £400**
Electric towel rail, 600 mm wide, standard, each	**£150 - £180**

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Look across the water

Welsh Water's award winning Llanegfedd Visitor Centre gives occupants uninterrupted views of the reservoir, thanks in good part to Fineline Aluminium

Photographs: James Morris

With the site exposed to high wind loads and the need to create an open space for diners and visitors, the design used bi-parting panels

Multi award winning Llanegfedd Visitor Centre for Welsh Water is in Pontypool, south Wales, was designed by Hall + Bednarczyk Architects. Already familiar with Fineline systems, the architect chose System 22 sliding and fixed panels, using it as the preferred design option for the centre's restaurant and viewing gallery.

Many challenging design obstacles had to be overcome. Minimal sight lines, to allow panoramic views over the water, were achieved using this system. Clerestory glazing above the sliding panels interfaced neatly with the unique gull wing roof. The original design concept had called for curved fixed glazing, but due to the large live deflections and extreme winds it was decided to square the panels and fix them directly to the steel. Lowering the soffit facia created an impression of a curved roof: this ensured the fixed glazing was not compromised by live load movement of the roof. In the resulting reflection on the glass, the timber soffit appears to run straight through the upper glazing.

With the site exposed to high wind loads and the need to create an open space for diners and visitors, the design used bi-parting panels on the water facing elevation. These measured 2.4m in height and 2.9m in width and were designed to slide across the fixed panels. On the return elevations two panels slide over a fixed unit, again allowing maximum opening. Further detailing around a timber fixed unit created challenges for drainage. Fineline supplied its BSI tested cill detail as standard to the exposed site, and this was further complemented by a wade drain to give maximum protection and enable the removal of excess water. With the addition of toughened glass to create a 10mm outer panel, the system's performance gave an overall U-value of 1.4kn/m^2.

At installation the main fitting issue was to ensure clerestory glazing allowed for the live deflection and the interface with the timer soffit. Movement around site allowed for easy access and the installation of the fixed panels weighing up to 350kg went smoothly. With additional on site assistance of contractor Anthony A Davis Ltd, our project manager commented on the ease of the job – despite his initial concerns.

Overall the project went smoothly: from the initial design meetings with Hall + Bednarczyk at its office in Chepstow, the detailed drawing process and the work carried on site between the contractor and our onsite installation team.

Fineline offers an all encompassing service from free initial meetings to estimating, through detailed drawings from our in-house CAD technicians, to professional site teams and project managers. Whether the job is commercial or residential, Fineline can offer a solution.

Since the completion of the build, Llanegfedd centre has won the RIBA Welsh building of the year award and the Eisteddfod Architectural gold medal. Our congratulations to Hall + Bednarczyk Architects. ●

Opposite Exposed to the elements, the visitor centre benefits from a perfect marriage of slim aluminium glazing and timber elevations.
Above Sliding doors have minimal frames, below clerestory fixed glazing that seamlessly fits into the curved gull winged roof.
Right Diners enjoy full panoramic views from their tables with ease of access to the outside viewing terrace.

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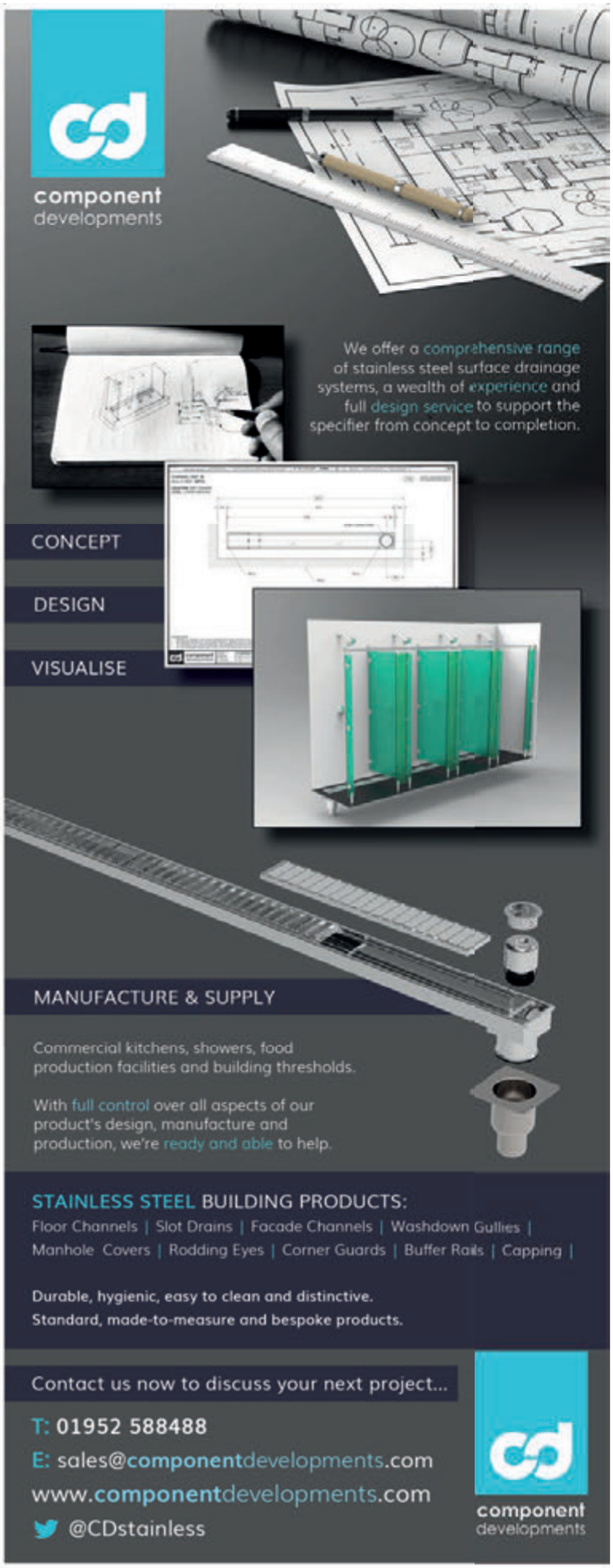

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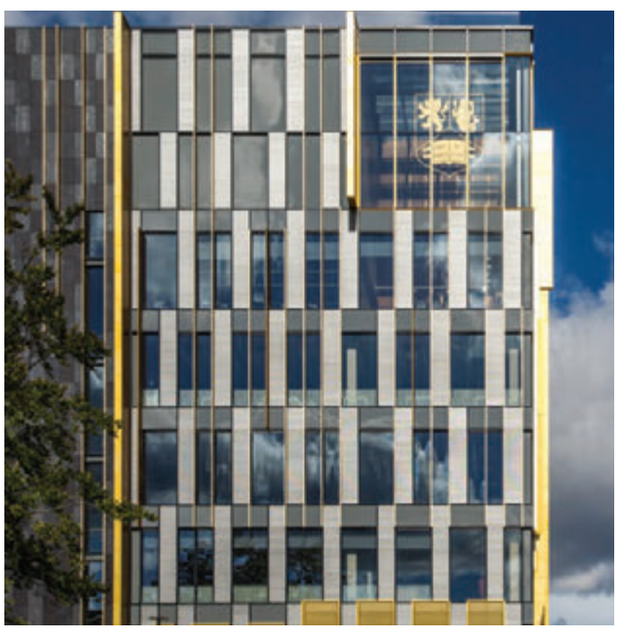
University buildings take a new course

Fierce competition, rising fees, industry links and of course Brexit mean university buildings are requiring very different things of architects

Words: Josephine Smit



TIMOTHY GORDON COMBILL

Above Wilkinson Eyre's Fry building for Bristol University's School of Mathematics.

Left Associated Architects' new library building for the University of Birmingham.

The open days are over, personal statements being crafted and early birds are completing their applications. For the UK's universities, this is where business starts, and the competition is fierce.

A drop in birth rate in the late 1990s means home universities are competing for a reduced pool of students, while universities across Asia, Russia, Australia and Canada are gaining reputation in global league tables, increasing competition for lucrative overseas students.

On the horizon are fresh home-grown challenges. From September 2017, English universities meeting the requirements of the government's Teaching Excellence Framework monitoring system should be able to increase their fees, under proposals set out in the higher education white paper. At the same time, Brexit could hit the UK sector's ability to attract EU students, staff and research funding.

The universities' approach so far is to keep building. Estate development programmes remain ambitious, with landmark new builds as well as redevelopments and refurbishments, often of buildings dating from the university sector's last great building boom some 60 years ago. At the same time, they are developing industry links, which may be fundamental to their future as EU research funding disappears.

Above Sheffield University's Heartspace – Bond Bryan attempts to create a new social centre for its engineering faculty.

'There is always the need for a robust business case and a need to check assumptions,' says Trevor Payne, director of estates at the University of Birmingham. The university estate, of some 200 buildings ranging in age from early 20th century to the present, will see some £365 million spent on a mix of 'purposeful new build and efficient repurposing,' he says. Having opened a new library this autumn, its next major projects are a new hotel and conference centre, and a collaborative teaching block that will unite laboratories from several departments.

'Brexit is a challenge but with change comes opportunity,' says Andrew May, director of estates at the University of Hertfordshire, which has a reputation for its business-facing outlook. 'Universities can work very powerfully with the private sector leveraging investment to feed local economic benefit,' he explains.

May says change and challenges are nothing new in the sector. 'When I came into this job in 2010, we had an ageing estate, needed to invest heavily, and had few available resources to respond to changes not seen for a generation.' The background was one of austerity and student protest against the coalition government's plans to raise the cap on tuition fees to £9,000. The university struck a deal with an established student housing provider which unlocked funding to improve and develop the campus and facilities in an estates strategy that extends to 2020. Projects include a new 10,000m^2 science building by Sheppard Robson, which opened this autumn, plus informal learning and social spaces and a café, the latter adding to the university's £5 million a year turnover.

Instagram-a-licious

The university sector is associated with some of the best – and worst – new architecture. 'Architecture is hugely important,' says May. 'Increasingly, students are saying facilities are an important part of their choice of university.'

Associated Architects' director Warren Jukes says the impression a building can make

was evident on its University of Birmingham Library project: 'Even when the building wasn't finished, Birmingham was keen to have people in. There was a viewing platform to showcase construction in progress.' With visitors and new students showcasing buildings across Instagram and other social media, that first impression can be powerful marketing.

However, clients differ across the sector, adds Jukes. 'Redbricks tend to be more reserved on design and take time to make decisions. Younger universities tend to pay attention to what's on trend. Libraries can be especially important because they are so highly used.' A recent trend is to incorporate the library into a multi-service building, like Associated Architects' design for Royal Holloway University of London's library and student services centre in Egham, Surrey, which blends library, gallery, careers services and more.

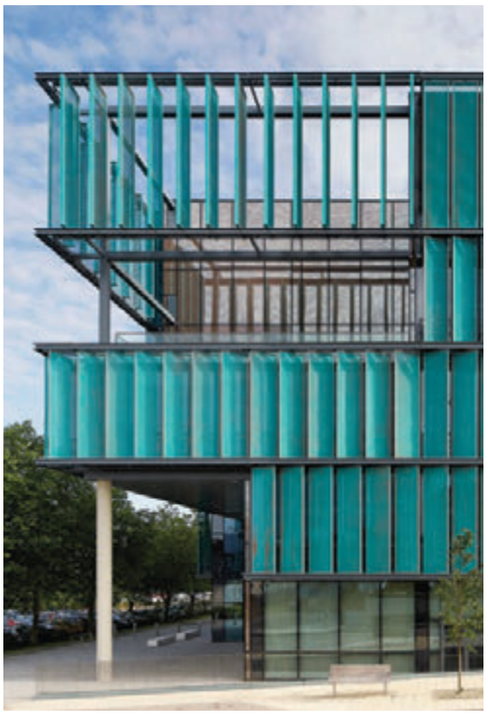
Many such buildings are highly sustainable, for example Associated Architects' Centre for Medicine at the University of Leicester, which is the UK's largest Passivhaus. There is a strong business case for sustainability – particularly when facilities, like Birmingham's new library, are in use 24/7 – but it also adds to student appeal, says Payne. 'Students are passionate about sustainability. In fact, they're driving us to create sustainable buildings.'

University of Bristol bursar and director of estates Patrick Finch outlines how findings from the National Student Survey and its own surveys are feeding through to its programme. 'We've been criticised in the past for not [providing] enough library space and learning space – so we're making a determined effort to enhance our facilities with a major project and smaller interventions.'

But the shape of that library space is open to question. 'In health and biomedical studies there is a demand for social space and they are less concerned about print collections. But arts and social sciences students expect more traditional libraries,' says Finch.

Bristol is about to launch a study to evaluate what a library means. 'A library has to be all things to all people now,' says Finch. While students still want access to PCs in the library, Bristol also has to consider homes for its print collections, including the Penguin Book Collection, which spans some 550m of bookshelves and needs to be accessible to the public.

As a century-old university in a city, Bristol has to consider how its listed estate – much of it in a conservation area – fits into its urban context. Its grade II listed Fry Building is being transformed into a new facility for the School of Mathematics by WilkinsonEyre with the addition of an atrium, appropriately incorporating mathematical patterns, lecture theatre and



Above Sheppard Robson's new science building for the University of Hertfordshire.

raised courtyard garden. Public realm is important in the city location, says Finch. 'That often means challenging things like car parking and opening up courtyards to make attractive places. We're very proud of where we are. We develop for Bristol, rather than for the university.'

Doing business with business

Blue sky research is out; replaced by a growing focus on business. 'The industrial collaboration model will be part of research in the future, and possibly teaching as well,' says Finch.

Buildings like the University of Sheffield's Factory 2050, part of its Advanced Manufacturing Research Centre, therefore make an important statement, says Jonathan Herbert, managing director of Bond Bryan Architects, which worked on the project. 'It's not just about creating a technical environment, but reaching out to the wider business community.'

Masterplanning can also maximise potential for industry engagement, Herbert points out. 'We're asked to masterplan sites so manufacturers can come and establish their own centres alongside and create jobs in the community.'

As in workplaces, the design of research buildings increasingly emphasises collaboration, whether inter-departmental or between university and industry, through informal meeting spaces. Bond Bryan is working on the University of Sheffield's Heart-space project, which links the Faculty of Engineering's two oldest buildings with a four-storey glazed atrium. 'Its position at the centre of the older structures will provide interesting additional space, and importantly will encourage interdisciplinary collaboration,' explains Herbert.

Bringing industrial partners into buildings poses challenges, however. Swansea University's School of Industrial Design is a grade II listed former library that has been refurbished and extended to create a teaching facility for academics and guest lecturers from industry. 'The guest lecturers want the kind of facilities and equipment that they're used to in their own businesses,' says Dr Antony Davies, director at Powell Dobson, the project's architect. A different challenge was presented by Swansea's Data Science Building where medical data are analysed. 'Its security levels mean it has layers of accessibility, with meeting rooms and conference facilities on the ground floor,' explains Davies. 'We've had to reconcile the need for security with the need for collaboration.'

Another conundrum for designers is the integration of technology. 'Universities like to specify equipment as late as possible,' says Davies. 'You have to accept that the technology may change so the build may have to be flexible, with features like knock-out panels in facades.' Swansea's Centre for NanoHealth, which is housed in its Institute of Life Sciences phase two development, brings together experts in medicine, engineering and science, and industry partners. It includes nano-engineering equipment requiring a low-vibration environment, MRI equipment that relies on a magnetic field, and other technology, which all has to be accommodated safely in one building. But there is a ready source of advice on hand, Davies points out: 'Ironically, the client tends to know a lot about the technology'.

The fact that universities are such expert patrons, entrepreneurs and innovators in many respects makes them the perfect clients for architects. The hope is that it will also stand them in good stead in an uncertain future. ●

HUFTON + CROW

KEY STATS

The sector spent nearly £2 billion on property in 2013-14

Capital expenditure was more than £2.5 billion, the highest annual spend on record

More than a dozen institutions spent more than £40 million, with four spending more than £100 million

UK universities occupied almost 21 million m^2 of space, adding just over 500,000m^2 in a year

Five institutions had estates with a gross internal area of more than 500,000m^2

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Bristol Royal Infirmary

Daylight, views and a sense of space fall victim to exterior aesthetics in Bristol's hospital refurbishment

Words: Isabelle Priest Photographs: Craig Auckland, Fotohaus

Above Existing 1970s brutalist facade designed by Watkins Gray Group 1 before Nieto Sobejano's refurbishment.

Left The reclad peels away on the three lowest levels to encapsulate Capita's recent welcome building, which was built and funded separately but almost simultaneously.

Below The project covers the entire length of the building along Upper Maudlin Street with the exception of the tower on top.

If it's possible to have a favourite hospital, mine is in Spain. It's the Hospital de Sant Pau in Barcelona. Look it up, it's a magical place with not only light, air and openness but architectural joy and wonder: an art nouveau complex of pavilions with turrets, golden domes, colourful glazed tiled roofs, orange trees and gardens yet now with modern ambulances and nurses.

For one reason or another I've spent a fair amount of time in hospitals. I know they are challenging environments with competing requirements, beleaguered by cost. So I was excited to see Spanish architect Nieto Sobejano's new £2.8 million front for Bristol Royal Infirmary in the centre of the city. Roland Halbe's photographs on the press release looked great.

The facade, worked up with locally based CODA Architects, is the last piece of a £150 million, 10-year, hospital-wide refurbishment, initiated as part of a scheme to modernise services in the area. If revamps to the site had been invisible from the street until this point, this project was supposed to make them show – a kind of 'look at me, don't I look nice', enhancing the view of the hospital in the public realm alongside a handful of technical improvements to bring performance up to date and manage the original 1970s decaying concrete. That there's a brand new shiny PFI-funded hospital on the north side of the city that might be more appealing to picky patients than blown out brutalism obviously had something to do with it too.

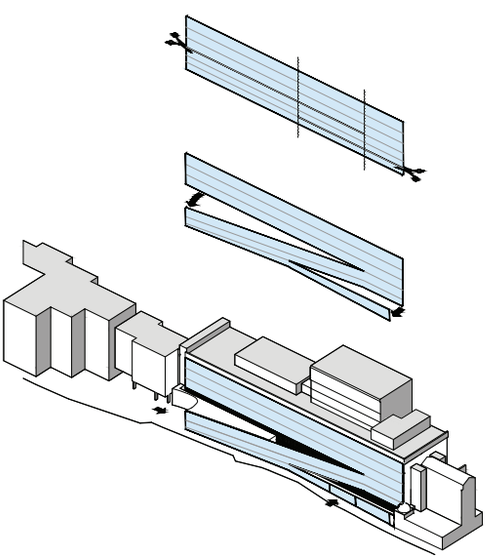
I guess I got the wrong approach. In terms of its construction and concept Nieto Sobejano's facade is an interesting project. In essence it's a glamorous overclad that directly extrudes the rhythms and openings of the existing concrete frame and fins 150mm out in a grey powder-coated aluminium rain screen. The cladding enfolds the existing, adding room for insulation and solving the issue of the degrading concrete by keeping the weather at bay while giving the elevation a contemporary look.

'All the original facade is still there,' explained CODA Architects' director Craig Bennett who showed me round. 'The windows have been replaced because they were 1970s single and secondary glazing and there was only around 15mm of insulation, so the building responded quickly to changes in temperature.'

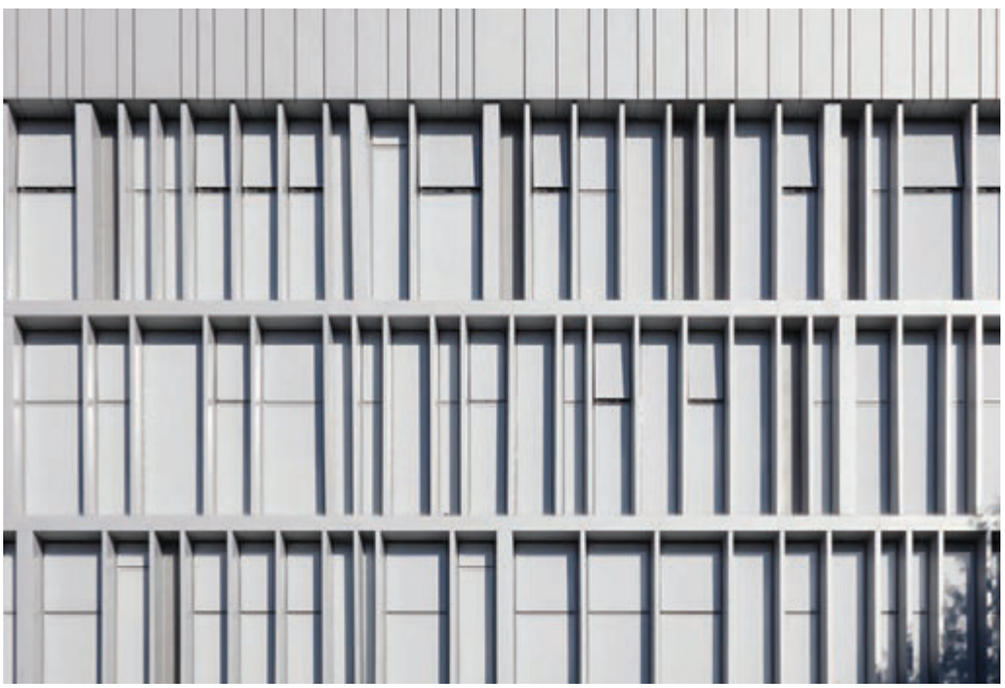
Covering the entire 100m-length facade along Upper Maudlin Street is a new cladding system of prefabricated hollow column casing, ventilation mesh and fixed panels by specialist contractor D+B Facades. Panels are bolted together; some with recessed coloured strip lighting, and screwed into a railing system hung on the original concrete structural elements. Expansion and contraction issues are resolved by give in the panels. On the upper storeys are 1mm-thick aluminium sheets while the lower levels have 4mm composite for impact resistance. Only the windows have been replaced with double-glazed thermally broken units.

From this perspective the remedial work has brought the building performance in line with current U-values and, as much as possible, was put together from the exterior to minimise disruption and keep the building in use. And the technical improvements should be commended, for the aesthetics and spaces cannot.

Architectural moves to 'peel away' the lower three levels are bold, unifying the parts of the building so they can scarcely be recognised as two while slotting in a small garden at one end, and in the competition winning design existing block work was exchanged for full-height elements; cladding, glazing or louvres. But once asbestos removal from the existing spandrels and sills was costed, the full-storey elements were scrapped and the asbestos left sealed in place. To achieve the same effect, explains Bennett,



Above How the facade peels away to bring coherence to the street.



Above Panels and windows are covered with a micro-perforated film to merge them into one.

Below The freestanding screen is designed to mediate between the building and street, creating a small outdoor sitting area at the end.

The decision to prioritise the conceptual integrity of the exterior is careless towards the users and purpose of the building

Credits
Architect Nieto Sobejano Arquitectos
Local architect CODA Architects
Client Bristol Royal Infirmary
Competition organiser Willis Newson
Overcladding contractor D+B Facades
Structural engineer AECOM
Windows Velfac
Panels Gilmour-ecometal
Access/mast climbers BFT
Spandrel panels Avtek Solutions
Overcladding support structure Neptune Fabrications
Lighting Lighting Services

'The compromise was to have the windows at the top and panels below treated with a perforated plastic film to make them look as one.'

Grey like the rest, the film acts as a trompe l'oeil so it is impossible to tell one from the other, merging the grey of the window, with the grey of the panels, ventilation mesh and casing.

From the exterior the overall desire to pursue a completely grey facade seems odd, appearing in practice like hoarding; but the more severe problem is what the new facade – in particular the film – has done to the environment inside. The decision to prioritise the conceptual integrity of the exterior affects the users and purpose of the building. Outside views and natural light are known to contribute to health and wellbeing. Daylight and clarity of connection with the outside world from the misfortune of a patient's hospital bed has been lost. This was the hottest September in 55 years, the skies reasonably clear and representative, and the room we visited was dark and prison-like. Hospitals are stuffy; claustrophobic enough without someone greying over the windows and internalising them even more.

The increased depth of the facade to 400mm only doubles the impact. It does have a new lining that should hopefully reflect some of the lost direct light but, being made of UPVC, one wonders how pristine it will remain over time – problematic considering how often hospitals are renovated. The last facade was there for 40 years. Actually, theoretically, it's still there.

This tends to be what happens in hospital refurbishments; windows disappear in favour of almost anything. At Bristol, within 15m of the entrance the outside view has vanished, obscured by newsagents selling crisps and chocolate. So daylight, and access to it, is a problem in such spaces anyway – but then to go one step further and reduce the light where it can get through cannot be the right solution, no matter how 'ugly' the building is from the outside.

Apparently there haven't been any complaints – as though that's the measure for success – but it sounds like those consulted during design development did choose the best prototype on offer. Was clear glass an option? No, and if the architect had got its way, perhaps the windows could have ended up with a sturdier aluminium mesh across them. Hardly a fair test.

In context, the thing is that Mediterranean

Above The new film blocks daylight, and makes views out dappled and unclear, here on a 'less affected' upper floor.

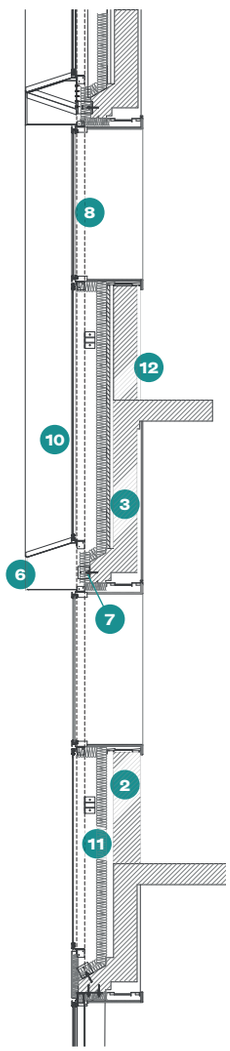
architecture is more about light and shadow, mitigating light ingress rather than encouraging it, whereas in northern climes windows are articulated as windows. One might ask whether there was an architect with more experience in Britain in the competition. There was a local artist among the three architects and three artists invited, but none made it to the shortlist.

While Bennett insists that the difference in light levels is better higher up the building, that too invites the question of why the whole facade got the same treatment. Overall it seems the architectural statement on the exterior trumped any thinking at a detailed level of the experience of the building inside. And let's face it; few people will understand how difficult and daring it is to create an all grey elevation. What's more, because the building is so long, the street narrow and the reveals deep, the effect of creating a new kind of homogeneity across the facade cannot be appreciated as a whole from many angles. The glazing may as well be clear.

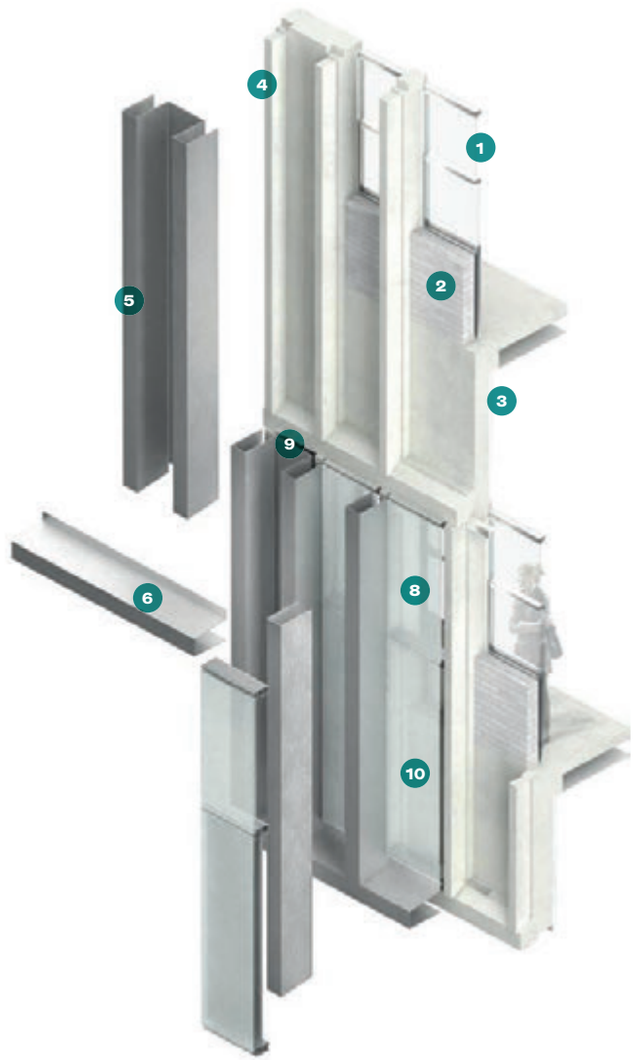
Aside from this, the point of the project was to make an attractive facade for the city. Yet to top it off the cladding has integral problems with cleanliness that contribute to making it unattractive. In the images – not Halbe's here for their more realistic quality - it looks pretty good, but when you get close the aluminium encasements have smears of dirt and pollution from the passing busy road, and cigarette butts and rubbish is amassing between the entrance and the freestanding screen which crosses in front. Just as well the whole thing didn't end up being white as per the competition proposal.

It's as though the architects and those involved had downplayed some of the principles of modernism in architecture; that form follows function and a building should speak of what is happening inside – let alone the light, air and openness of Sant Pau's mentioned above. Remember modernism had clinical origins too. In one grey sweep, the film obliterates all this and is part of an idea that is more artistic than architectural. Perhaps this reflects the fact that the competition organiser Willis Newson is the hospital's art co-ordinator. My only hope is that the film can be removed, but if it ever is what will unfortunately be revealed is a facade that barely looks different to the one it replaced. ●

Section detail



Exploded axonometric of recladding design



1 Existing single glazed window
2 Existing blockwork and panel containing asbestos
3 Existing concrete downstand beam slab with toe at window head
4 Existing concrete fin
5 Aluminium column casing
6 Aluminium sill casing
7 Galvanised steel structure
8 Top hung window with anodised aluminium frame and printed micro-perforated vinyl film on external face
9 Aluminium mesh panel with 40.31% open area
10 Fixed glass panel with anodised aluminium frame and printed micro-perforated vinyl film on external face
11 Insulation
12 UPVC interior lining

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Specified

1
Profile 6 sheet
Marley Eternit

Skye's Rural Design Architects are speaking the vernacular with their specification of Marley Eternit cladding for this self-built three-bed family home in the island's crofting village of Fiskavaig. The practice's Gill Smith describes the project as 'inspired by rural, agricultural sheds' – and the black Profile 6 sheeting's good looks, corrosion resistance, cost-efficiency and ease in both use and sourcing make it a rustic choice that is as accommodating as an ambitious eighteenth century milkmaid to a wrinkled laird.
marleyeternit.co.uk

2
Kalwall translucent glazing
Structura

Imagine what you could get up to in this leisure facility at Immingham in Lincolnshire, your 'activities' masked in daytime by diffused natural light. Kalwall's shell-like looks are brought to us by prismatic glass, and a thoroughly satisfying Economy Seven bill. Lit inside and glowing in the darkness, it frees user's hands up so you wouldn't even need a torch to search out the poolhouse for that late night skinnydip. Just don't do anything too interesting close to the wall unless you want to star in your own Chinese lantern show.
structura-uk.com/kalwall

3
Alsecco Airtec natural stone
Lithodecor

Stone cladding's come a long way since I were a lad. Indeed, Lithodecor's Airtec 'neat and crisp' surface-mounted Portland stone has gone so far up in the world that it's being installed on this cocky development slap bang up against an increasingly tiny grade I-listed Tower Bridge. So next time you're caught in the traffic jam that's invariably created when the bridge shows its moves, close your eyes and think Portland Bill instead of muddy Thames – a moment's peace amid the noise and haste.
lithodecor.co.uk

4
Dry glaze system
Taper-Loc

Shall I regale you with stories of 100% Stainless Ltd's 48mm slotted stainless handrail? Or the 15mm glass specified from a choice of everything from 12mm to 21.52mm? Maybe I should I tell you of the 15mm top mount heavy duty aluminium base shoe and rubber gaskets used to secure CR Laurence's sleek Taper-Loc dry glaze system? Shall I wax lyrical about the speedy, adjustable and dismantlable installation? Or should I just leave you to admire this lucky client's Devon view, unruffled by the strongest Atlantic gale? Yes. Thought so.
taper-loc.co.uk

Specified

5
Penrhyn Heather Blue slate
Lagan Group

Students bedding into the new term are starting with a clean slate at Newcastle University, kept dry by 32,000 newly quarried Welsh slates lustrous in their laminations. The project found itself between a rock and a hard place when the sheer scale of this high-end 350-bedroom project, a combination of new build and period refurbishment, made the original spec of reclaimed roofing slates unworkable, so an army of old boys up in Bangor's badlands were prised from their easy chairs and set to work with hammer and chisel. Tidy.
welshslate.com/our-portfolio

6
Azengar zinc cladding
VMZinc

Given Cambridge's associations with Nobel Prize winning discoveries like the electron, artificial nuclear fission and the structure of DNA, it's strange we now seem more interested in fiction than fact. Maybe we've just gone all Philip Pullman and 'string theory' sounds less enticing than Voldemort, the Alethiometer or Sauron. Similarly VM Zinc has thrown in its lot with other worlds with its CS Lewis-sounding AZENGAR engraved zinc cladding in two finishes for Rutherford labs' new Maxwell Centre – offering the aware parallel readings.
vmzinc.co.uk

7
Flat roofing
Prater

The old BBC Television Centre is clearly ripe for a serious makeover. Perhaps artist Catherine's Yass' suspended grand piano in its courtyard, strings playing randomly in the wind, drew a final and dissonant line between its Top of the Pops undertones and reincarnation as a £200 million mixed-use resi/office scheme with indie cinema and private members' club. Envelope specialist Prater is to top off the demanding grade II listed building in a major roofing contract covering two plots and renovation of the iconic studios. Now there's a new signing no-one should have a problem with.
prater.co.uk

8
AA100 cladding system
Kawneer

Cardiff Central masterplanner Foster + Partners' city office development is either genius or folly. The mixed use office, resi and hotel scheme, sited between the station and Millennium Stadium, includes a pedestrian route wide enough to deal with 35,000 fans all heading for the game. I'm imagining stunned office workers of a Wednesday, faces forced to the glass as unruly hordes pile past them in a Pamplona-esque bull run to the stands. Luckily, Kawneer's robust curtain walling and mullion-drained cladding should deal admirably with the saliva and dropped Prets.
kawneer.com

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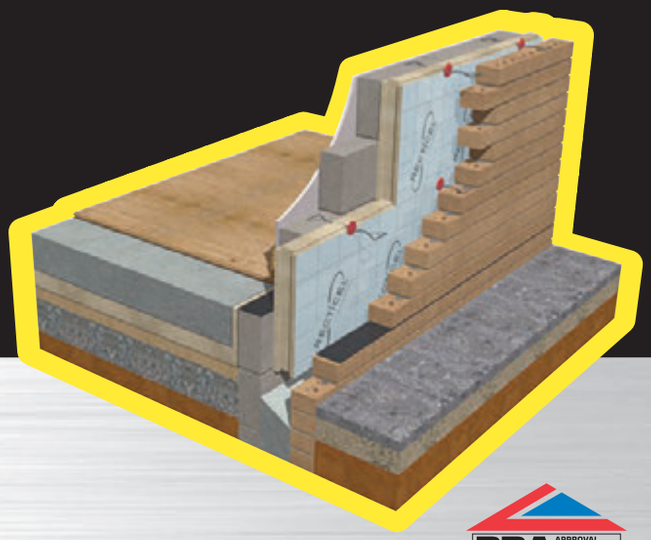

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St James' market pavilion

A gold cabinet of curiosities reflects historical and contemporary stories in London's wealthy Mayfair

Words: Jan-Carlos Kucharek

Part of The Crown Estate and Oxford Properties' £400 million development of St James' Market in Mayfair, London, Studio Weave's Je Ahn calls his small pavilion building, part of the quiet retail street running through the heart of it, a filling in of a 'missing tooth'. But it's a gold one – and not just because of its prime position in the centre of the city. The site had previously been simply an unexplained corner plinth at the back of the 1970s St Alban's House office building, but in the client's new proposal became the heart of a small residential street running parallel to Haymarket and within arrowshot of Eros at Piccadilly Circus.

In a similar vein to its previous work, Studio Weave was keen to pick up on the psycho-geography of the site and here looked to the concept of the safety deposit box, tucked away in buildings that would have served this thriving mercantile area. 'But they weren't just used for things of high value – it was also about items of sentimental value,' explains Ahn, saying that they might have held family mementos or letters, anything susceptible to light fingers or fire. This concept of storing and displaying items of value underwrote the concept for Studio Weave's highly crafted market pavilion; a 7.5m by 4.5m gold-lined interior to its granite black casket, a Wunderkammer, cossetting the visitor but tantalisingly open to the street.

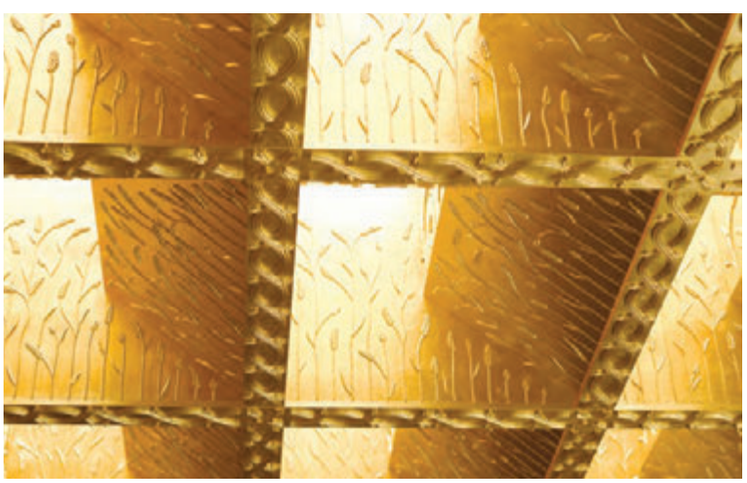
Timber veneered glass vitrines form the centrepiece of this public display, the marquetry

Stephen Fry's dulcet tones recount the saucy 'Ballad of the Handsome Butcher of St James' market'

of stitch patterns delicately inlaid into it below, where the gubbins is. Above the shelves it's like a 1930s wireless set with a fine filigree cut out of the timber and speakers set in behind in readiness for some son et lumière. Currently Stephen Fry's dulcet tones issue out of it, recounting the saucy 'Ballad of the Handsome Butcher of St James' market', while inside the vitrines, plywood models recount the tale visually, the automated ones steering prudently clear of the ballad's more racy verses. Similarly discreet, behind the vitrines' lightly patinated copper backs are small heating units. When the hinged glass doors close on their seals they'll maintain the internal temperature at 18°C, ensuring that whatever the weather, condensation on the display glass will never be an issue.

Bathing the box in golden light is the ceiling, a deeply coffered affair above your head. With debossings of wheat sheaves slathered in gold leaf, it picks up on local associations with the grain (Haymarket runs to Trafalgar Square nearby) and its historical links to the sale of bread, beer and whisky; traditional staples, the 'common gold' as Ahn terms it. Reflecting the coffers in parallax, the terrazzo floor below is laid in faceted pale red green and brown; rich materials reifying the daily market experience.

Hidden by the large, granite-encased bulkhead, protecting the precious contents, a heavy, scalloped golden shutter is drawn down over proceedings at night, creating a nocturnal light box to the street, lit in its golden glow. The construction overseen by specialist fabricator Millimetre, Studio Weave's cabinet of curiosities evokes fictional references that lend some credence to the new development; a literal gilding of this commercial lily. ●



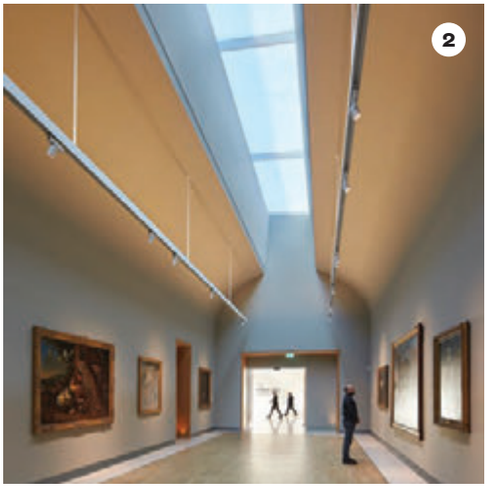
Above The pavilion feels like an internal room externalised.

Left Myths of wheat are engrained in the very fabric of the design; here part of the deeply coffered gold leaf ceiling.

Opposite Myths of wheat are engrained in the very fabric of the design; here part of the deeply coffered gold leaf ceiling.

Client The Crown Estate
Architect Studio Weave
Cultural consultancy Studio Weave
Project Management Ferraby Taylor
Structural engineering Price & Myers
M&E engineering Mecserve
Lighting designer Studio 29
Main contractor Millimetre
Ceiling makers Sands and Randall
Landscape architect (design of public square) Paul Deroose

Specified



1
Bespoke joinery
Morelato

Morelato's work for Blake's Hotel restaurant aims for timeless elegance, but a few decades can be identified. Designer Anouska Hempel's vision was of a steamer forging its way up the Bosphorus – but whether the vessel is churning up the mudflats of the 30s or 70s, we can't quite decide. Still, with craftsmanship, delicious materials and attention to detail forging ahead on full steam, the Italian cabinetmakers evoke a meeting of east and west without going overboard. This freshly dusted space simply awaits the arrival of Ustinov and Dunaway.
morelato.it

2
Gypsum fibreboard
Fermacell

When next you go in search of art, be sure to demonstrate your grasp of the culture by loudly discussing the walls. For at the Portland Collection's new home, that's what everyone will be doing this year. You will of course note that they're lined with the very finest Fermacell gypsum fibreboard – a name increasingly collected, being denser than normal plasterboard and so able to stand 50kg per cavity fixing and 30kg per screw for dead loads. Of course, it was a very popular medium in 15th century Florence – we are (un) reliably informed...
fermacell.co.uk

3
Highlow 900 carpet
Object Carpet

Listen! The best thing you can ever hear in a lavish European concert hall is silence. Seriously. The absorbent properties of the materials are critical when the likes of Anna Lucia Richter perform at the new Philharmonie de Paris, if the divas are not to puncture an eardrum with their own resonant frequency. So the reverberating waves inside the venue are less sound than vision, thanks in part to Object Carpet's Highlow 900 carpet – all six floors and 10,500m² of it. Bouncing a high A off all that weave will take a big voice.
object-carpet.com

4
Skyfold Zenith partitions
Style Partitions

It's well known in corporate circles that there's no such thing as too many management staff. But in a James Bond like twist, at the new offices of 'a globally recognised provider of timely credit rating options' in the City, such certainty can be injected with new levels of intrigue via Skyfold's Zenith high-tech retractable room partitions, which slide noiselessly open mid-meeting to reveal a whole other tier of middle management. You've Been Framed hidden cams then hilariously catch the looks on everyone's faces as they work out if they're about to be made surplus to requirement.
style-partitions.co.uk

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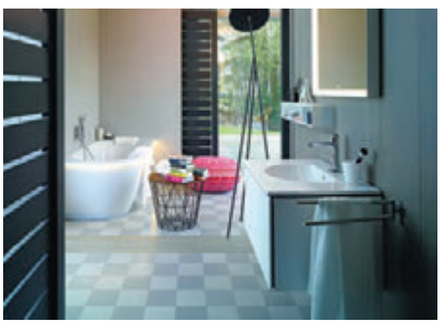
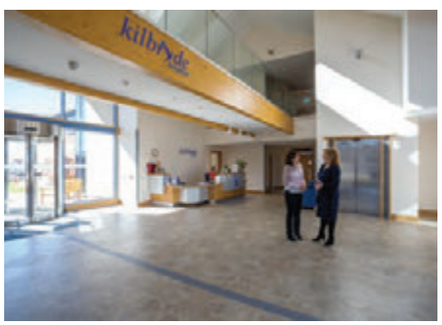
www.vasco.eu

Classic launch at Sleep 2016
Hansgrohe
Sleep 2016 – Stand G23
At Sleep, Hansgrohe will present Hansgrohe Metropol Classic. One of the outstanding features of this new collection is its surface design: the Metropol Classic collection boasts elegant, gold accents on the base, handles and spouts of the mixers. From 22 November, a selection of these new products can also be experienced at The Water Studio in London Clerkenwell.
www.hansgrohe.co.uk



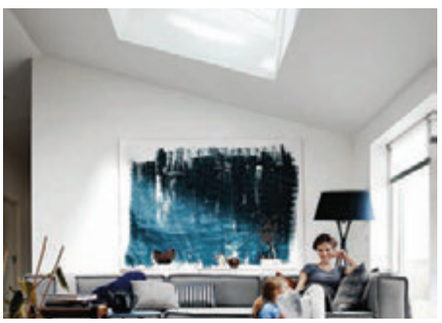
Darling New range reaches out
Duravit
Darling New is a Duravit design classic. Developed in collaboration with sieger design, Darling New features harmonious shapes highlighted by delicate edges. For 2016 new products, including four Darling New furniture washbasins, have been added to this already extensive bathroom series in order to meet the most sophisticated design and comfort requirements.
www.duravit.co.uk



Rigorous items for gentle care
Gerflor
Jim McColl and other celebrities have raised money for Kilbryde Hospice near Glasgow. As a new build the project needed 2000m² of high quality flooring that would not only look stunning, but would stand up to the rigours of daily use. Gerflor products including Taralay Impression Comfort, Creation 70 Luxury Vinyl Tile and Planks and Tarasafe™ Ultra H²O were specified, plus items from SPM handrails.
www.gerflor.co.uk

Stunning new table collections
Lyndon Design
An inspiring new 'Tables Edit' showcases Lyndon Design's stunning collections of handcrafted wooden tables. Featuring dining and occasional tables, coffee and side tables, and low, medium and high tables, plus a new bistro table, each collection oozes beauty and wood craftsmanship for which Lyndon Design is renowned. Designed for corporate or hospitality spaces, the collections have unending possibilities.
www.lyndon.co.uk

Two hour fire resistance
Ancon
In recent fire tests at BRE Global, Ancon's innovative basalt-fibre, low thermal conductivity wall ties, Teplo-BF and Teplo-L, offered 120 minute fire resistance, making them suitable for buildings of any height (subject to structural performance), in line with Building Regulations, Approved Document B. BBA will update the ties' fire resistance from 60 to 120 minutes in the next issue of Ancon's Agrement certificate.
www.ancon.co.uk



VELUX brings light to life
VELUX roof windows
VELUX® has launched a campaign to help homeowners bring extra daylight in to their single storey extensions. The leading window manufacturer looks to inspire and support homeowners with practical tips, advice and tools, to help them plan and create their dream single-storey extension with VELUX roof windows. To see the difference daylight makes using the VELUX 360° Extension Experience, visit
www.velux.co.uk/extensions

Christian Dior selects Kemmlit
Kemmlit
Christian Dior's largest UK store recently opened in London's New Bond Street. In keeping with the high specification of building's interior fittings, Kemmlit's durable Type S locker system was specified for the staff changing areas. Lockers are manufactured from sheet steel with a scratch and abrasion resistant stove enamelled finish. A 13mm solid grade laminate version is also available.
www.kemmlituk.com

Shades of grey
Junckers
Junckers has launched a new, solid hardwood floor in grey, the most sought-after shade for floors in the design industry today. Vista Grey is a subtly textured floor made in solid oak, combining pale grey with white tones to enhance the natural grain structure of the timber. Vista Grey is a wide board floor with 140mm or 185mm wide boards in Junckers' signature long-length planks.
www.junckers.co.uk

Dow sets new standards
Dow Building
Dow has become the first company to attain a coveted Green Guide Rating A+ by BRE Global for its extruded polystyrene (XPS) roofing insulation product XENERGY™ SL. Launched last year, this is the only XPS to achieve this internationally recognised certificate. XENERGY SL is a flame-retarded, XPS roof insulation product, which delivers a Global Warming Potential (GWP) of less than five.
www.styrofoam.co.uk

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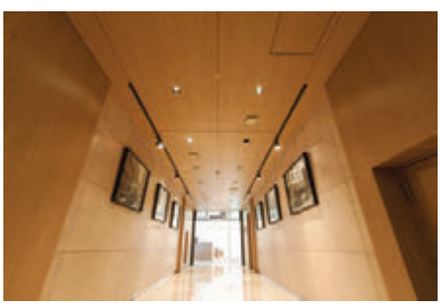
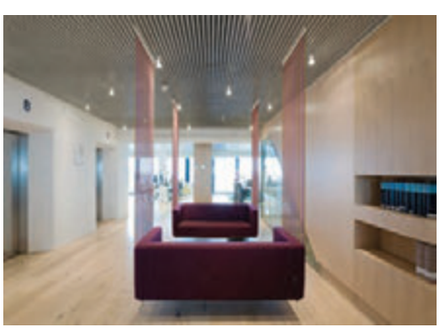
Bigger mullions and transoms
Comar
Comar has added new mullions and transoms to its 6EFT curtain wall system. Preferred by specifiers in the UK, demands have risen for transom spans in excess of 3000mm and unsupported multi-storey mullions. Where there are different glazed areas in the same envelope it has extruded high span mullions and transoms in the most popular box sizes, so the same box size can be used throughout the project.
www.comar-alu.co.uk

London product showroom opens
James Latham
Showcasing James Latham's extensive range of exclusive and semi-exclusive panel and timber products, the new showroom is now open at Suite 301 of the Business Design Centre in Islington, London. Created to provide expert advice, inspire architects and designers, and keep them abreast of the latest trends and developments in innovative surfaces, it puts some of the world's most recognised brands under one roof.
www.lathamtimber.co.uk



The perfect finish
David Clouting
Interior Film from David Clouting is a CE Certificated self-adhesive, decorative film manufactured by LG Hausys that can be applied to almost any room surface including: wood, metal, plaster board, plastics and melamine. Offering excellent flexibility and adhesion, it comes in a range of innovative designs. Interior Film is also IMO/MED certified for use in the marine sector. View on BIMSTORE .
www.davidclouting.co.uk

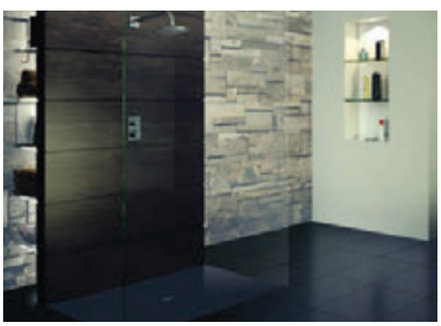
The Purist Approach
Rooflight
Specifying a roof window is one-time decision for the envelope of a building. When working on heritage or listed buildings, the original Conservation Rooflight® has the most authentic design. The Nicholas Dean Practice specified 20 bespoke Conservation Rooflights for Week Farm in Devon, in sizes measuring up to 1m wide by 4m long. #GOLARGEdiscreetly
www.therooflightcompany.co.uk



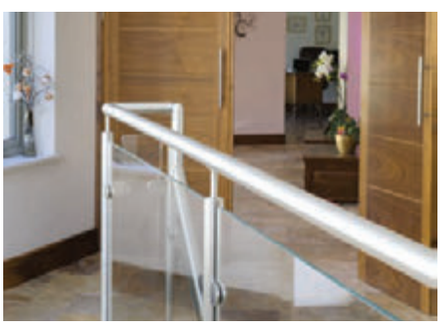
New modular felt ceiling system
Hunter Douglas
Hunter Douglas Architectural has introduced the first modular felt ceiling system in the world. HeartFelt is a new creative and attractive linear ceiling system that generates a warm ambience, offers exceptional acoustic control and is sustainable by design. Each panel is box shaped and is easily clicked on to the specially designed carrier system. Totally recyclable, it comes in five shades of grey.
www.hunterdouglas.co.uk

Working in the light
Structura
Designed by DarntonB3 architects, this stunning 25,000m² facility is Airdale International Air Conditioning's new production HQ in Leeds. It's a great example of how Kalwall® translucent daylighting system can be used to flood the interior with stimulating diffused daylight. Here, Kalwall panel unit windows are incorporated to control glare and solar heat gain, without the need for blinds, to provide external visibility.
www.structura-uk.com/kalwall

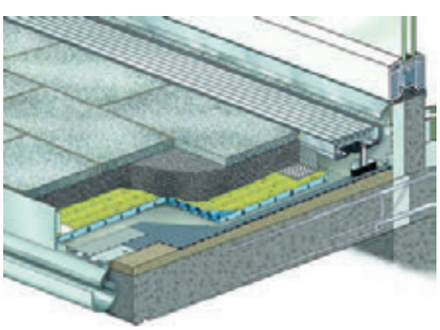
Paving the way in Shanghai mall
Compac
Functionality, longevity and beauty were key factors for architects RTKL to specify 9000sq m of COMPAC's technological marble for the floors of a shopping mall in Shanghai. Containing up to 96% natural marble mixed with resins, COMPAC's technological marble has a hardness that is similar to marble but its resistance to impact and breakage is much greater owing to its enhanced flexibility.
www.compac.es



Size – and type – not object
Kaldewei
With the expansion of the Scona range, Kaldewei has grown its shower programme to include almost any size requirement and installation type for low level showering. Combined with the KA90 ultra low waste fitting, it is easy to achieve a luxurious, contemporary look at either low level or completely flush with the floor.
Kaldewei will exhibit at Sleep, 22-23rd November 2016, stand V10.
www.kaldewei.co.uk



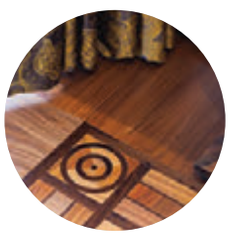
AkzoNobel handles the heat
AkzoNobel
Acquiring the now redundant premises of door manufacturer Leaderflush Shapland has given UK Fire Doors Ltd an opening to gild its expansion plans with ready-made plant and equipment. Coatings manufacturer AkzoNobel helped to start up the production line with technical support supplying a range of UV lacquers – curable clear sealers and top coats produced in Malmo, Sweden.
www.sikkens-wood-coatings.co.uk



BAL external tiling system
BAL
BAL's new external tiling system provides drainage, ventilation and uncoupling solutions for balconies, terraces and roof terraces. Specified throughout Europe, the patented technology protects tiles, natural stone and pavers against frost and water damage, efflorescence and staining caused by surface water trapped in the substrate. BAL's full system solution also includes waterproofing, adhesive, grouts and sealants.
www.bal-adhesives.com

Sign Up

Brian Wade, associate at Tim Flynn Architects, gives us his three specification favourites



WELDON FLOORING

I believe floors should be artworks in themselves, and, as one of the hardest-working parts of a building, must be of an exceptional quality. For our most recent project, a private 7500 ft² residence in Knightsbridge, we worked with our long-time favoured flooring expert, Weldon Floor. We exploited the natural beauty of wood to create spectacular floor artworks. In the Drawing Room the marquetry floor has a 'shattered glass' design in American Black Walnut with a Soldier course border and inner border with circular motif and Wenge trim.
weldon.co.uk

LORENZO TONDELLI FURNITURE

A well-executed residential design requires timeless comfortable furniture that never goes out of style and I believe there is no better place to go for this than Carpi, near Modena, home of the talented Lorenzo Tondelli and his dedicated team. For our Knightsbridge project, I was enormously impressed with Lorenzo's striking yet practical forms. Combined with some exceptional fabrics sourced from Jean Paul Gaultier, Sonia Rykiel and Lelievre, the results are not only aesthetically thrilling but also extremely comfortable.
lorenzotondelli.com

BARONCELLI LIGHTING

I like to think of ceiling lighting as 'a floating art sculpture' to which the eye is drawn, whether the light is on or off. Together with Baroncelli we created bespoke ceiling and wall lights for our Knightsbridge project which are simply magical. 'Storm Cloud' is a masculine geometric 'looming' light cloud sculpture of clear crystal glass tubes internally ribbed and locked together. Pin-prick LED lights diffracted through the glass create shadows and patterns dance that on the Weldon timber 'shattered glass' floor. Baroncelli is defined for me by sculptural elegance and decorative flair.
baroncelli.com/

...Sign Off

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

CONSTRUCTION FEET

Nice to see Olympian Louis Smith hit the ground running after his success at Rio, on a site visit to Birmingham City University's new £41 million sports & life sciences building by Sheppard Robson. With all that scaffolding about I'm surprised the former Strictly winner didn't feel compelled to cut a few gymnastic moves there; a quality Front Salto Straddle from a couple of parallel poles to raise even his impeccably manicured eyebrow. Since gymnasts tend to be diminutive I assumed either all the Bam staff with him were very short or Smith had forgotten to take off his Cuban heels. Turns out he's a towering 5ft10!

WHERE THERE'S MUCK THERE'S BRASS

Fifty years since Ken Loach's Cathy Come Home was aired, UK social housing going up at a tenth of the rate it was then, and where are we? Are these the 'poor doors' so oft talked about when developers have to fit the affordable housing on site alongside their luxury apartments? Not so – it's Warrior Doors and Assa Abloy's handsome bin store doors for Solihull Community Housing... or is it? Could it actually be a panic room for the luxury flats – or even a security door to stop Daily Mail journos from rifling through the Z-list celebrity bins of an evening? Nowadays you never can tell...

SMELLY, VIDI, VICI

Last month as part of Silchester's Roman Army Week, Reading University anthropologist Dr Ian Ewart created a special virtual reality experience to show users an interactive Roman neighbourhood, based on findings from its archaeological dig. Held at Fishbourne Roman Palace, it moved visitors through zones triggering a variety of sounds and smells; wild dogs barking, tools banging, flies buzzing, the smell of a herb garden or animals. The academic felt VR was too vision-based and that sounds and smells play a vital role in environmental perception. To that end, he even added a cess pit in his sensory experience, thereby putting the 'Ewww' in Ewart...

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