

PIP

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A stark picture...

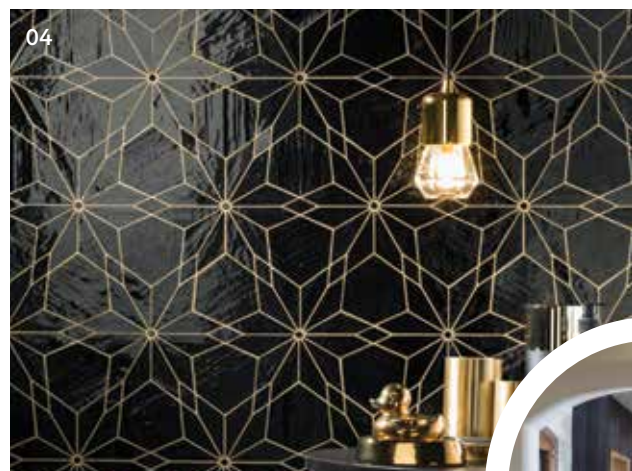
... is painted by the Intergovernmental Panel on Climate Change's recent report, if its limit of 1.5°C (as opposed to 2°C) by 2030 is ignored. If so, by 2100, global sea levels may be 10cm higher than the deeply worrying 48cm predicted by data website Carbon Brief for a 1.5C rise; not least an Arctic free of sea ice in summer and the extinction of coral reefs. Factory farming is partly to blame, with Dr Marco Springmann of the Oxford Martin School warning that things won't change unless the population moves to a largely plant-based diet. Meat once a week anyone?

Construction is also to blame. Nay-sayers might dismiss Foster & Partners' Stirling-winning Bloomberg HQ as an attempt to declare the UK is still open for business; but the fact is, it can be naturally ventilated, uses 40% less electrical energy than a typical office and net zero mains water for toilets, so is arguably the world's most sustainable office. But while saving 1000 tonnes of CO₂/year in smart strategies and CHP, if a return flight to JFK uses four, does Mr Foster's building really 'weigh' enough?

So maybe the best office is no office at all – a

thought on architect Amin Taha's mind – with his 15 Clerkenwell Close (p.10) still the subject of an enforcement order by Islington planners as PIP went to press. No explanation yet issued by either party has joined the dots on this case's peculiar complexity but the idea that a building of such quality and poetry should even be threatened with demolition beggars belief. The developer-driven excrescences that blight our cities due to value engineering notwithstanding, how much embodied carbon is that? ●

Jan-Carlos Kucharek, editor



More online...

The approach hints at a future where architecture is no longer static but able to reconfigure itself at will without human intervention

Stephen Cousins on a building that responds to weather all by itself: ribaj.com/movingarchitecture

TIMOTHY SOAR

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Cover image: KAAAN Architects' Institut des Sciences Moléculaires d'Orsay (ISMO) in Paris photographed by Sebastian van Damme

Compendium

UPCOMING

Sleep Event Olympia, London 20-21 November

Bau 2019 Munich Messe, Munich, Germany 14-19 January 2019

Architect@Work Olympia, London 23-24 January 2019



Grout expectations

If you think this is a still from the 1964 movie of Ian Fleming's *Goldfinger*, you're mistaken; but if CTD Architectural Tiles is to be believed, you're going to be seeing a lot more of this stuff; as bold, retro coloured tiles are coming back in a big way. The firm has a range of mosaic as standard – perfect for giving some bling to curved surfaces; but, in anticipation, it has expanded this to create a range of striking hexagonal and complex geometric patterns in shimmering hues for high-end specification – and real punch. Quite what Mr Bond makes of it is anyone's guess but if he thinks we're expecting him to die, no; we're expecting him to dye.



Go west!

In an update to last issue's Compendium piece on their research findings surrounding washroom design, it transpires in the wash that while Justin and Fraser Lovell are 100% behind their new workplace washroom brand *Splash Lab*, just to clarify, they're still actively involved with family washroom firm *Lovair*. Now that's cleared up, we can draw your attention to their sleek, minimal range specified by architect *ATELIERwest* for the newly opened *Bottles* Italian wine bar in London's Old Spitalfields Market. Stainless steel but bold as brass, the firm has big plans. In addition to a Clerkenwell showroom, it will be opening one in Los Angeles too.

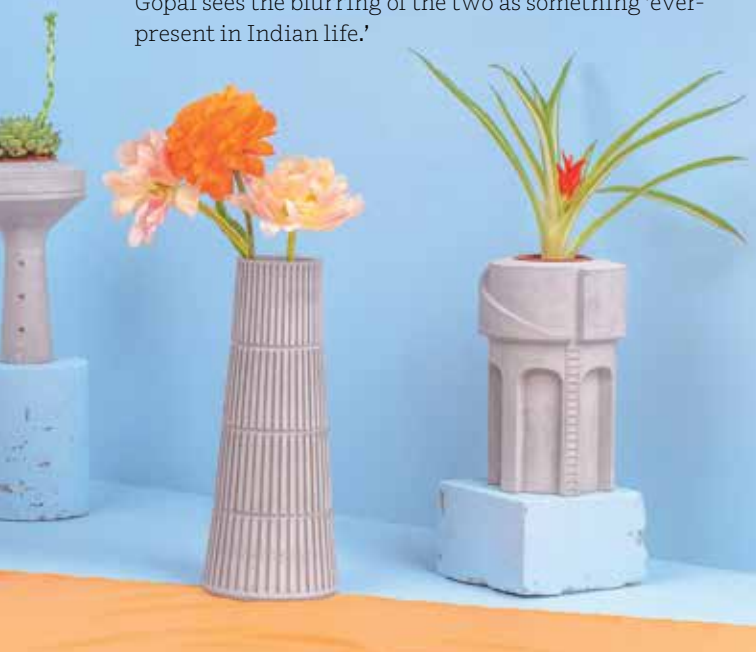


The wonderful everyday

Of Portuguese/Brazilian descent, is it any wonder that London-based designer David Elia came up with this beguiling concept. Blending Portuguese notions of *Arte Povera* and Brazilian makeshift problem-solving technique 'gambiarra', it was probably only a matter of time before he hit upon his 'Stray Bullet Chair'. The crossfire between Rio's military police and drug traffickers were the inspiration for him to riddle the favela neighbourhoods' ubiquitous *Monobloc* polypropylene chairs with industrial eyelet hardware to mimic bullet holes. The result, addressing violence, security, drugs, infrastructure and waste, is a strangely moving evocation of both the fragility and robustness of life on the literal edges of Brazilian city society.

Concrete jungle

No-one I've spoken to has ever failed to be moved by their first impressions of India; the mass of humanity, animal life and vegetation all occupying the same, densely urban space. As a form of homage to all of that, London-based design studio Tiipoi's creative director Spandana Gopal has come up with its 'Siment' range of vases, based on the brutalist concrete water towers and flyover infrastructure of India's infamous conurbations. Wanting to transform the 'material of pure functionality into an opportunity for decoration', Gopal sees the blurring of the two as something 'ever-present in Indian life.'

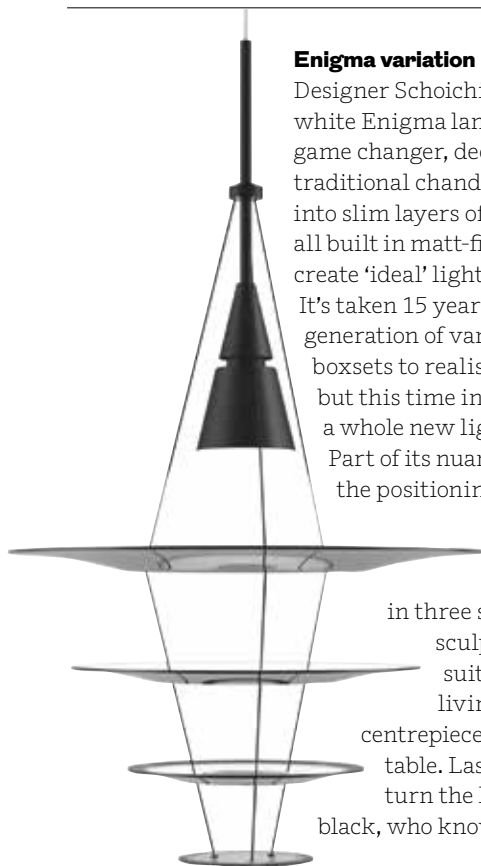


Jaime from Home

Spanish designer Jaime Hayon, with his generally bonkers approach to product design, has secured his position in the last few years as one of the discipline's enfant terribles. So it's interesting to see his sashay into the contract world via furniture company Republic of Fritz Hansen. His high-backed sofa system Plenum consists of three, two, and (ah, there we have it!), one-person sofas with added features like power plugs and USB ports, with a mounted or separate table. Designed for the office, airport lounge or hotel lobby it seems that all these were the last thing on his mind. 'The objective was to challenge the concept of traditional office furniture and create a feeling of home,' Hayon explains. More restrained than his usual forays into product design, it's a sober side to the character that the Financial Times called 'The Clown Prince of Design'.

Enigma variation

Designer Schoichi Uchiyama's 2003 white Enigma lamp was quite a game changer, deconstructing the traditional chandelier and turning it into slim layers of concentric rings, all built in matt-finished acrylic to create 'ideal' lighting distribution. It's taken 15 years and a whole generation of vampire-related TV boxsets to realise the same lamp – but this time in jet black, casting a whole new light on the design. Part of its nuance is that due to the positioning of the shades no glaring light is seen from any angle. Available in three sizes, the highly sculptural form is suited to hallways, living areas and as a centrepiece to a dining room table. Last one to leave turn the lights off. Or on. In black, who knows?



Nano Nano

Apparently, the Fagerhult lighting company 'began on a cold winter's night in December 1943, when Bertil Svensson designed and built a lamp for his mother, so she could continue to knit once the dark Nordic nights set in'. All cold comfort for Luke Skywalker, who arrived just too late to prevent his adopted mum getting vaporised by Imperial storm troopers on the distant planet of Tatooine. Perhaps to appease this cataclysmic act of tardiness, the firm has launched its Red Dot award-winning 'Skywalker' office luminaire. Between its two light sources is a – wait for it – Beta Opti Nano batwing louvre, which creates a 'wide-ranging, homogenous' light. And, running from 36mm to 11mm at its narrowest, it's slender as his trusty light sabre beam.



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The pros and cons of digital workflows



Collaboration is essential in project work. This article focuses on the way structural engineers work; the positive aspects and what we believe is the dangerous and inhibiting side of technology.

My practice uses the 3d modelling platform Rhino and its generative modelling plug in Grasshopper as our default CAD and structural analysis tools. Some call this 'parametric' design, we call it 'getting on with the job with the most effective tools available'. Generative modelling defines an object as sequenced commands in a computer script. This defines the geometry of the structure, the applied loads and evaluates the structural performance. If we want to change the geometry using simple input parameters the analysis results update automatically. Conceptual design is more productive and more fluid, ideas can be quickly tested and influences from real world physics and evolutionary science can be encoded in the script to conceive leaner structures or to adapt to complex forms. This allows us to work with other designers

more efficiently and to go further, more quickly.

Often, we exchange only the computer script, not 2D drawings or 3D models. A recent example of this is 'Galaxia' the central temple of this years Burning Man festival by Mamou-Mani Architects. Arthur Mamou-Mani and his team first defined the spiralling tent like form as a Grasshopper script. We added our structural analysis components to that code and then checked the structure worked. Where it didn't we tweaked the original geometry, added some elements of our own and sent the code back again. This design to and fro continued until everyone was satisfied. With limited time and its complex form, Galaxia couldn't have been delivered any other way.

However, there some dangers with this workflow. First, this great exemplar of modern digital communication can be tough to communicate with. Interconnected components in a script can look like an impossible tangle of spaghetti wires. Secondly, an abstract list of code

too easily allows the interconnected components to be copied to another project, apparently saving time but potentially replicating unrecognised original errors.

As defined by Rittel and Melvin M Webber in their 1973 paper 'Dilemmas in a General Theory of Planning', a building is a 'wicked' problem in which a huge number of inputs go into a solution but the most critical influences cannot be easily identified. With that in mind, by defining the inputs to computer script at the start of a project we may be overlooking the most significant contributions to solving the wicked problem. Early stage design, where computation is potentially most useful, is where designers have the most conceptual freedom. Generative design can force a set of predefined inputs and a symbolic representation onto what should be a fluid and open process, stifling playfulness and preventing serendipity. ●

Stephen Melville is director at Format Engineers

Books

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The Competition Grid: Experimenting With & Within Architecture Competitions

Mary Theodorou & Antigoni Katsakou eds. RIBA Publishing 217p £35 PB

Their seemingly scientific, matrix-addled box-ticking entry criteria aside, architectural competitions remain a weird science little understood by the profession, despite long nights of unpaid effort by small, work-hungry practices to enter them. This book does not ultimately dispel that notion, but may help explain it. It does this by reviewing architectural competitions as experienced by those who participate in them, and by examining how organisers use them as a laboratory-like setting to analyse and challenge their own organisational processes. There's a well-chosen roll call of authors of the numerous essays in its four sections, expounding and critiquing the system. A valuable read, it may not generate a winning design, but it may well help instigate more strategic approaches to entering them.



Design Process in Architecture: From Conception to Completion

Geoffrey Makstutis Laurence King Publishing 192p £24.99 PB

Author Geoffrey Makstutis should know his stuff. He's subject lead in construction for Pearson as well as having taught and lectured at Central Saint Martins, the AA, the Royal College of Art and Westminster. He's also the author of 'Architecture: An Introduction'. In this book's eight chapters he defines what good design constitutes and then takes the reader on a journey through the process using examples of all the approaches. 'Defining the Project' follows this, analysing brief and context, then 'The Design Process in Action', concentrating on design stages. The final chapter takes us through a real end-to-end design process from concept to completion, showing all the stages being enacted. A useful primer for the novice and optimistic reminder for the world-weary professional.

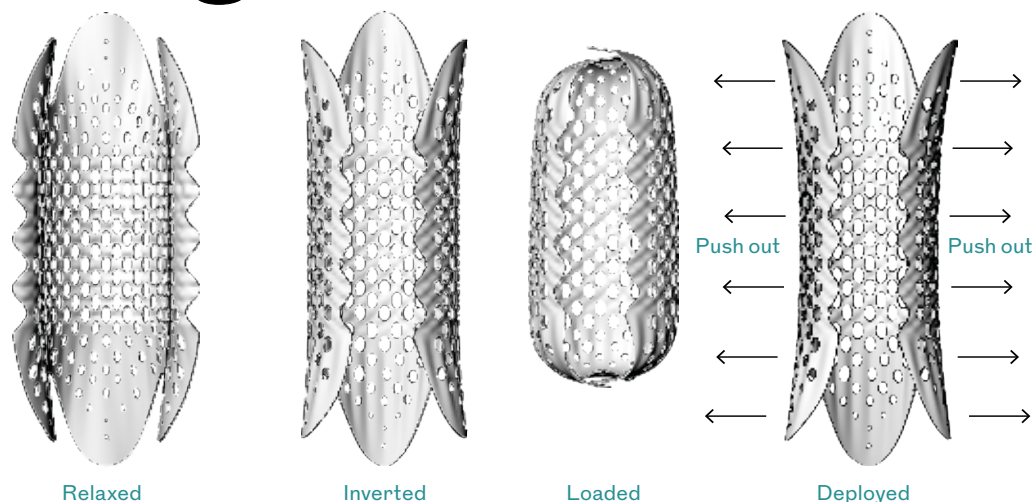


Potato Plan Collection: 40 Cities through the Lens of Patrick Abercrombie

Mirjam Züger & Kees Christiaanse nai010 publishers 208p £43.50 PB

On paper, a book of Potato Plans of cities based on the one Abercrombie and Forshaw developed in 1943 is a good idea. It certainly looks like the graphic designers had a great time with it, but it's important to remember a key word in their 'Social and Functional Analysis'; and that was that it was an analytical 'simplification'. This resonates as one goes through the plans – the most notable aspect being the palpable change of scale moving from European cities to American and especially Chinese ones. Thankfully, the written breakdowns preceding them offer more layered interpretations of the maps' generality; Peter Bishop's analysis on the complexity of modern London not borne out merely by his addition of pink 'regenerating' areas...

Surgical stent



What: Shell Lace Stent
Where: Human trachea

Stephen Lawrence Prize winner Tonkin Liu's smallest scaled project ever gives new meaning to the idea of a tight site. Since 2015, the practice has been developing a new strand of its long-running Shell Lace research into single surface structures with Arup. But this time, instead of applying its biomimicry concept to lightweight structures such as canopies and pavilions, the site is the human windpipe.

Designed to support transplants of the trachea and collapsed airways, the Shell Lace Stent invention has been approved as patent pending.

This unusual piece of technology transfer came about when a medical researcher heard Tonkin Liu give a talk about the Shell Lace concept. She saw potential for its use as a medical stent that performed better than conventional trachea stents. Made of tubular non-tailored mesh, these are prone to slippage, injuries and infection and need frequent replacement.

The practice took up the challenge and set about developing a brief in conjunction with Northwick Park Medical Institute with the aid of a grant from Innovate UK. The key requirements were that it should be easy to install, comfortable, and able to remain in place without migrating up or down. The stent also needed to facilitate air ventilation and be smooth in

texture yet able to 'hold' a coating of medicine.

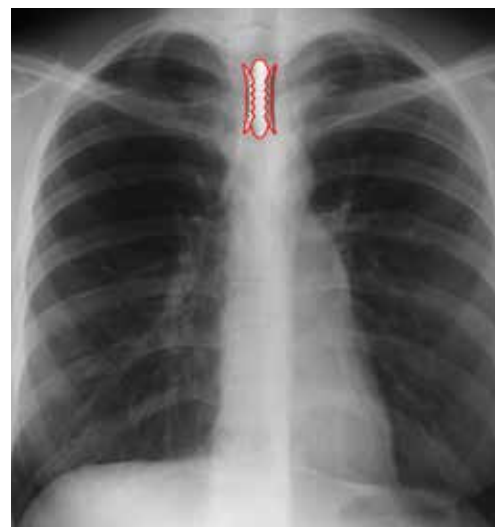
Tonkin Liu attended an operation to understand the process for installing a stent in the body and explored the form of the trachea that the stent would be internally bracing. For this, the architects worked with a trachea from a dead pig, which closely matches that of humans.

This led to the first Eureka moment – the trachea was C-shaped yet regular stents were tubular. Another revelation was the amount of tension when the windpipe was cut, and the need to tense against it. The practice researched helix options using 3D printed plastic before finding inspiration for the eventual solution from nature, specifically the way certain petals unfurl, with the Calla Lily a particular reference point.

Tonkin Liu's design solution was a C-shaped furled stent rather than a closed tube to give more flexibility for different diameter windpipes. This is contoured with three 'petals' at top and bottom that overlap against the healthy trachea that the donor trachea is stitched to. The vertical sides of the stent are contoured to ease the fit. Throughout prototyping, the architect worked with Arup to structurally map the design. In particular, this maximised the number of perforations to make the structure as light as possible and facilitate both air flow and the delivery of medicine held within the perforated surface – without compromising its strength. Testing different thicknesses for performance

UNFURLING MECHANISM

The stent is designed to be preloaded into the healthy donor tissue that is transplanted into the body. At this point, the stent is furled, with the two sets of petals each inverted at their tops and tied down together in their loading position via pin holes in the top of each petal. Once the donor stent is in place, these ties are removed to allow the previously tucked in petals to unfurl from their inverted position and settle against the healthy trachea. As it is deployed and relaxes, the sides of the stents brace in an outward 'hoop' to push against the inside of the trachea to hold it in place.



Above left Close-ups of the stent denoting designed deployment positions.

Above X-ray overlay showing notional position of the surgical stent in the trachea.

showed 0.7mm was the optimum size, and many iterations of the petals were prototyped.

The next step will be fundraising to enable further research towards bringing the stent to market. This will require work with material experts to explore producing the stent in medical grade silicone, as well as various stages of extensive testing and approvals for the use of it for humans. There is also the potential to explore further locations within the body where the concept could be used.

Although the prototype stent is by far the smallest application of Shell Lace, it is perhaps the biggest in terms of ambition.

'It's great for us to be able to go on this journey,' says Tonkin Liu co-founder Anna Liu. ●

Pamela Buxton

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15 Clerkenwell Close, London

Rich in references, Amin Taha's controversial building announces its presence with an intriguing range of finishes on its structural limestone facade

Words: Pamela Buxton Photographs: Timothy Soar

What an astonishing, and controversial, building. An invigorating conversation with architect Amin Taha about his 15 Clerkenwell Close development veers widely and vividly to take in everything from Norman abbeys to Spanish pilgrimages, the Dissolution of the Monasteries, French post-war architect Fernand Pouillon and the minutiae of stone dressing.

Although without Taha at hand to explain it would be impossible to understand the full range of reference, detail and nuance, this most singular construction can't help but draw a response from all that see it. Not for Taha the over-polite and bland anonymity that would have saved his building becoming embroiled in a post-construction planning dispute with Islington Council that could, shockingly, result in its demolition. Taha is contesting an enforcement notice to take the whole building down.

Rich in detail with an extraordinary limestone exoskeleton, the 2400m² building houses Taha's practice Groupwork at ground and lower ground level with five floors of flats above, including Taha's own at the top (RIBA J Profile, April 2018).

He bought the site in 2011 and took a good few years to really explore and understand the site context, deep in London's Farringdon in a quiet road opposite St James Church, and 'getting to know people who live and work here who could inform me of histories that might not be written'. Once a Victorian match factory, the building had been altered over the years and suffered fire damage before ending up as a gallery and offices. Site constraints included two party walls.

Taha's response was informed by the site's history as part of the larger curtilage of a long-gone Norman limestone abbey. After exploring several superstructures for his redevelopment including CLT and steel, the final design met



Far left The main east elevation of 15 Clerkenwell Close shows the curious limestone exoskeleton with its various surface treatments.

Left The detail of the south elevation with Clerkenwell's St James church beyond.

the conservation officer's challenge of employing locally used materials and also Taha's preference for avoiding a clad structure.

'Any material should preferably be either its internal finish and superstructure or external finish and superstructure...what you see is how the building is put together,' he says.

After extensive research into stone construction, his solution was a structural limestone column and lintel exoskeleton set in front of a glazed envelope and tied back to the inner

structure. Fortunately the stone superstructure option turned out to be highly economical – coming in at 25% of the cost of a comparable stone-clad steel or concrete structure. Combined with the thermal envelope, the overall cost of the dry shell and core was about 50% of the equivalent using concrete or steel.

For Taha, choosing stone meant not only understanding its physical structural properties but also its tactile and visual qualities that ultimately, he says, give a poetry that's

not skin-deep but is ‘utterly fundamental’ to the building.

After discounting Portland stone because it couldn’t sufficiently guarantee strength for load-bearing use, Taha chose limestone from a quarry near Lyon in France, adding that some of the better listed buildings in the Clerkenwell area also use load-bearing limestone.

Structurally, the building has a concrete core with a reinforced 200mm deep concrete floor slab spanning 8m to the perimeter without columns. This gives a flexible interior well-placed to accommodate future changes in use. The underlying exoskeleton column grid is spaced 3200mm centre-to-centre. At ground floor level, the columns are wider at around 800-900mm depending on their position in the load path, reducing to 250mm further up.

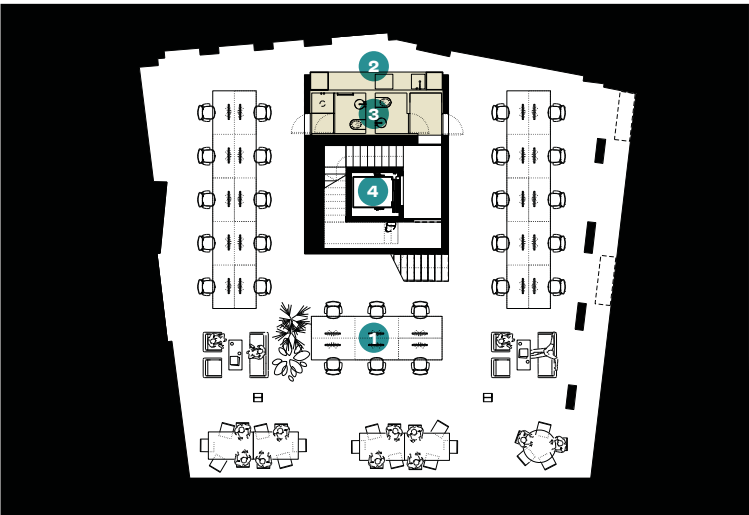
The connection between the limestone exoskeleton and the floor slab is achieved through bolted connections between the stone and a galvanized 10mm, mild steel end plate. In addition, a galvanized steel strap is fixed from the universal beam into the limestone lintel using countersunk galvanized bolts. The UB is then bolted into the back of the floor slab through a cast-in 20mm fixing plate and a 40mm nylon thermal separator. A window system designed by the architects was used for the full height glazing that runs between the exoskeleton and inner structure – the stone exoskeleton provides shading that enabled the use of double rather than triple glazing.

A key part of the design composition is the range of stone finishes on the exoskeleton. This enabled Taha to use the superstructure to ‘tell a story’. Visiting the quarry, he chose to include a variety of stone dressings to express the marks of the processes of extraction and subdivision. There are three main types. The most distinctive are those in a roughly textured ‘as found’ state, in some cases with fossilized coral and ammonites, where no attempt has been made to smooth away irregularities.

‘An interesting way of dressing it is leaving it with its innate, intrinsic beauty,’ said Taha.

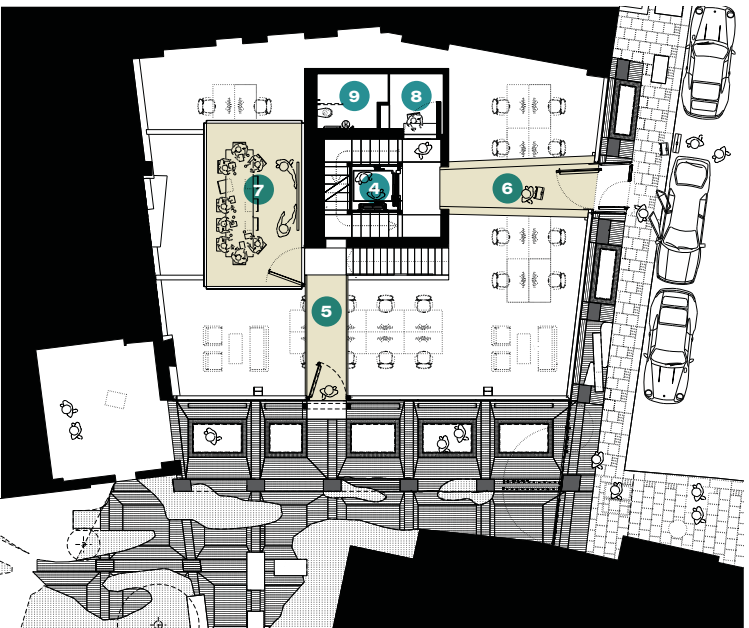
The other two finishes reveal the banded effect of hand-drilling used at the quarry to subdivide the masterblock, and the smoother finish created by saw cutting in the mason’s yard. Taha combined all three in a facade composition that aimed to appear organic without repetition

Lower ground floor plan

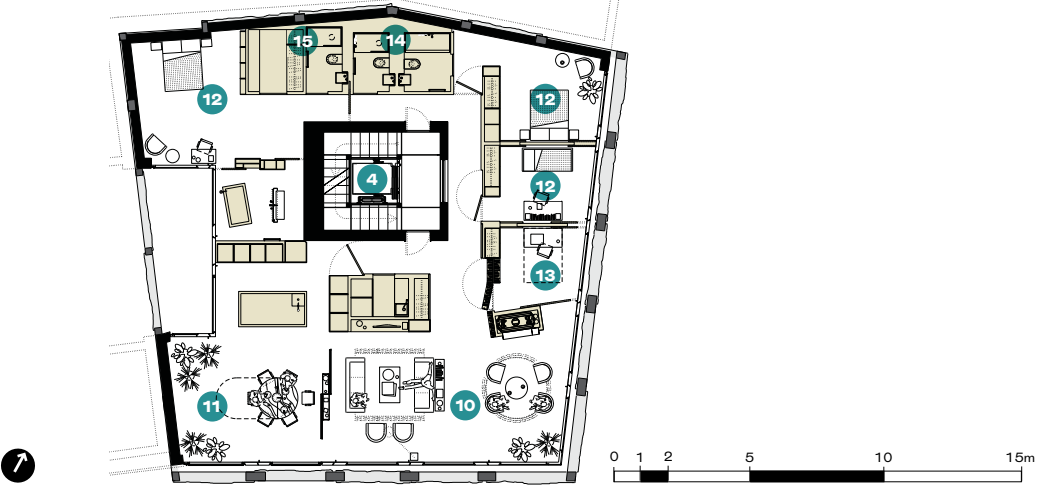


- 1 Offices
- 2 Kitchen
- 3 WC
- 4 Lift
- 5 Office bridge
- 6 Residential bridge
- 7 Meeting box
- 8 Concierge
- 9 Accessible WC
- 10 Living rooms
- 11 Kitchen
- 12 Bedroom
- 13 Study
- 14 Bathroom
- 15 En suite walk-in wardrobe

Ground floor plan



Fifth floor plan



Left Surface finishes from outside to in, expressed simply and 'raw'.



or pattern – the last thing the architect wanted was an unattractive, accidental rhythm.

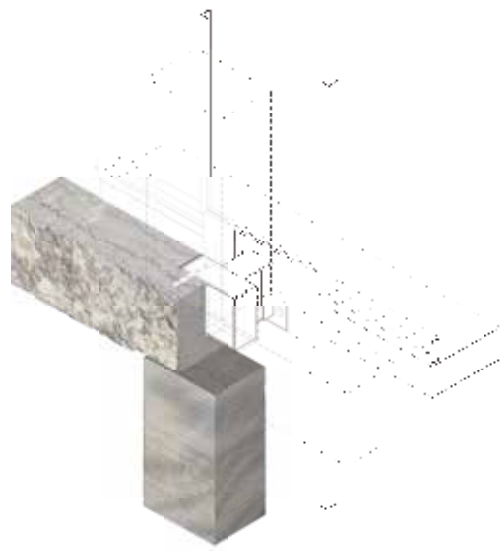
However, achieving this multi-finish composition was a leap of faith, since it was only when each consignment of limestone blocks arrived on site from the quarry that the architect could inspect them and finalise the exact composition in time for the construction of that part of the exoskeleton.

Taha concedes that while the practice found the uncertainty of the process 'quite exhilarating', the result was 'dramatically alien to what people have seen before'.

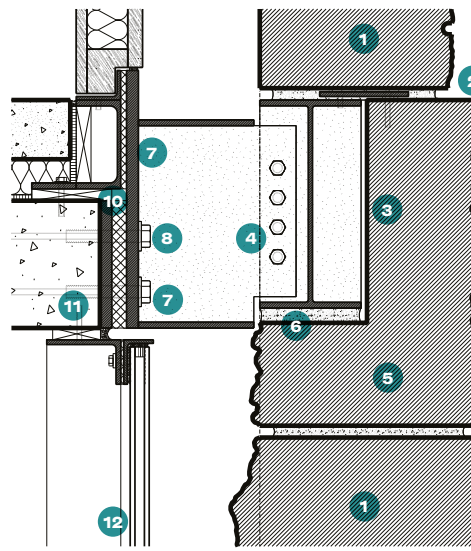
The combination of finishes is certainly rather unsettling and a little jarring, especially when first glimpsed from afar. A number of smoother, saw-cut faces are clustered to create a lighter patch across the stone exoskeleton. Choice blocks with particularly impressive contours or fossils and quartz are located approximately one per floor where they could best be appreciated. On either side of the vehicular access gate at ground floor level, blocks have been polished to bring out the fossils better and in doing so, allude to idea of the gate being burished over time by carriages passing through.

This is a building full of moments of drama and poetry. The entrance to the studio is via a charming flanking garden of stone cobbles that alludes to the cloisters of the long-gone nearby abbey. This is adorned with seating formed

Stone connection detail: isometric cutaway



Stone connection detail: section through slab and column



- 1 Limestone column
- 2 Galvanised steel strap fixed to lintel
- 3 Galvanised 356x171mm x 45kg UB with end plate
- 4 M16 bolts fixed through tab in stone connection UB and floor slab UB
- 5 Limestone lintel
- 6 25mm levelling mortar to achieve UB in stone lintel cutout
- 7 356x171mm x 45kg UB black painted
- 8 M20 bolts fixed through slots cast in pace
- 9 20mm galvanised MS plate welded to back of floor slab UB
- 10 20mm black nylon thermal spacer
- 11 20mm galvanised MS fixing plate cast into floor slab
- 12 Double glazed unit



from more of the limestone blocks, some carved and gilded by apprentice stonemasons. At the front, another of these appears as if fallen at the foot of the building to help reinforce the romantic idea of a ruin. Once inside, it's only after crossing the wood clad bridge and descending the folded metal stairs to the lower basement that you realise that a glass meeting room is dramatically balanced on a huge I beam projecting forcefully across the studio. Above the studio is a total of eight enviable apartments, their plans freed up by a clever redistribution of the 1.8m-wide smoke shaft as a slither around the top of the stair and lift core.

And while the stone elevation will inevitably continue to grab the attention and divide opinion, it's just one aspect of a deeply considered design full of detail and delight, from the shells incorporated into the gate to the glint of a single gilded metal support plate on the edge of the main elevation designed to attract and intrigue the eye.

Already, climbing plants inhabit the stonework and soften the initial shock of its design. It is bedding in, and hopefully, unless Islington Council prevails, can take its own place in Clerkenwell's rich architectural pot-pourri. ●



Above left An apparently cantilevering single beam supports the meeting room box, accessed by a folded steel stair.

Top The top floor is all space and light.

Above Simple surface finishes catch the sunlight in different ways.

Below The conceit of a pilaster peeps out from a 'fallen' limestone column.



Project team

Architect Groupwork

Structural engineer WebbYates

M+E & sustainability engineer MLM

Fire engineer Optimise

Approved inspector MLM

Landscape architect Todd

Longstaffe-Gowan

Main contractor JB Structures

Stonemason The Stonemasonry

Company

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Metalwork Ace Sheet Metal/Suckley

Leatherwork Bill Amberg

Timber Reliance Veneer



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Lines fibre cement panels
Equitone

Ah, my mother's Prestige A la Carte griddle, perfect for every 1970s Abigail's Party scenario, and for roasting guests over the coals – God knows how we made steaks or belittled our friends without them. Should see plenty of action at Hull's new Doubletree Hilton hotel, event space and steakhouse, what with up to 1000 guests to entertain. Aros Architects channelled its inner Mike Leigh, specifying Equitone's handsome Linea fibre cement panels on the facade to evoke the town's past industry – and the smell of sizzling beef. Speaking of tone, Demis Roussos anyone? equitone.com

2
Standing seam roofing
VM Zinc

Elon Musk may have grabbed the glory for his electric Tesla cars, but it's all due to the legwork of Brighton's Magnus Volk in 1883. Volk's mile-long electric railway – the first in the world – along its seafront paved the way for all those later pioneers wishing to transport their stick of rock from Palace Pier to the town's aquarium. With a shock injection of lottery dosh, they've rebuilt the aquarium station, now with a zinc standing seam roof by VM Zinc – founded 20 years before Volk was even a twinkle in his clockmaker father's eye. So stick that in your pipe and smoke it, Musk! vmzinc.co.uk

3
AA201 curtain walling
Kawneer

It's no coincidence that Imperial College's Molecular Sciences Hub at its new White City campus is just five minutes from Television Centre. Distinguished by ventilated twin-skin and triple-glazed curtain walling, it was clearly intended from the first to provide location gold for Mrs Dr Who. Future-proof flexibility, noise attenuation, southern outlook and solar path were all considered in the bespoke design. Shame they overlooked the fact that production moved to Cardiff in 2005, and TV Centre was sold in 2012. As Mrs Dr Who would say: 'Whoops!' kawneer.co.uk

4
Colourcoat Prisma Sparkle range
TATA steel

'Colours are light's suffering and joy,' said Goethe, replacing Newton's work with his crackpot Theory of Colours – because physics got in the way of realising that 'colour is a degree of darkness.' Hopefully TATA Steel was more empirical in developing its Colourcoat Prisma pre-finished steel range; now with added sparkle – Sirius, Orion and Zeus Sparkle to be precise – all scientifically tested to European standards. 'Can you lend me the Theory of Colour – it is an important work?' Beethoven once asked. Was he was blind as a bat as well as deaf as a post? colourcoat-online.com



5



6



7



8

5
Precast panels with brick slips
Yorkshire Handmade Brick
/ Marble Mosaics

The Institute of Brickies is in trowel-sharpening revolt – and the object of its ire is Yorkshire Handmade Brick. ‘It shall not come to pass!’ cries the mob. ‘It’s only partnered with precast fabricator Marble Mosaics to produce concrete slabs inset with handsome slips, allowing insulation and windows to be preinstalled, and skins quickly applied with minimum fuss!’ The institute is considering protest signage, but given the required skill, planning and flat-bed hire to shunt it all to YHB HQ, no demo is expected before 2050. yorkhandmade.co.uk

6
Vivix Lap boarding
Formica

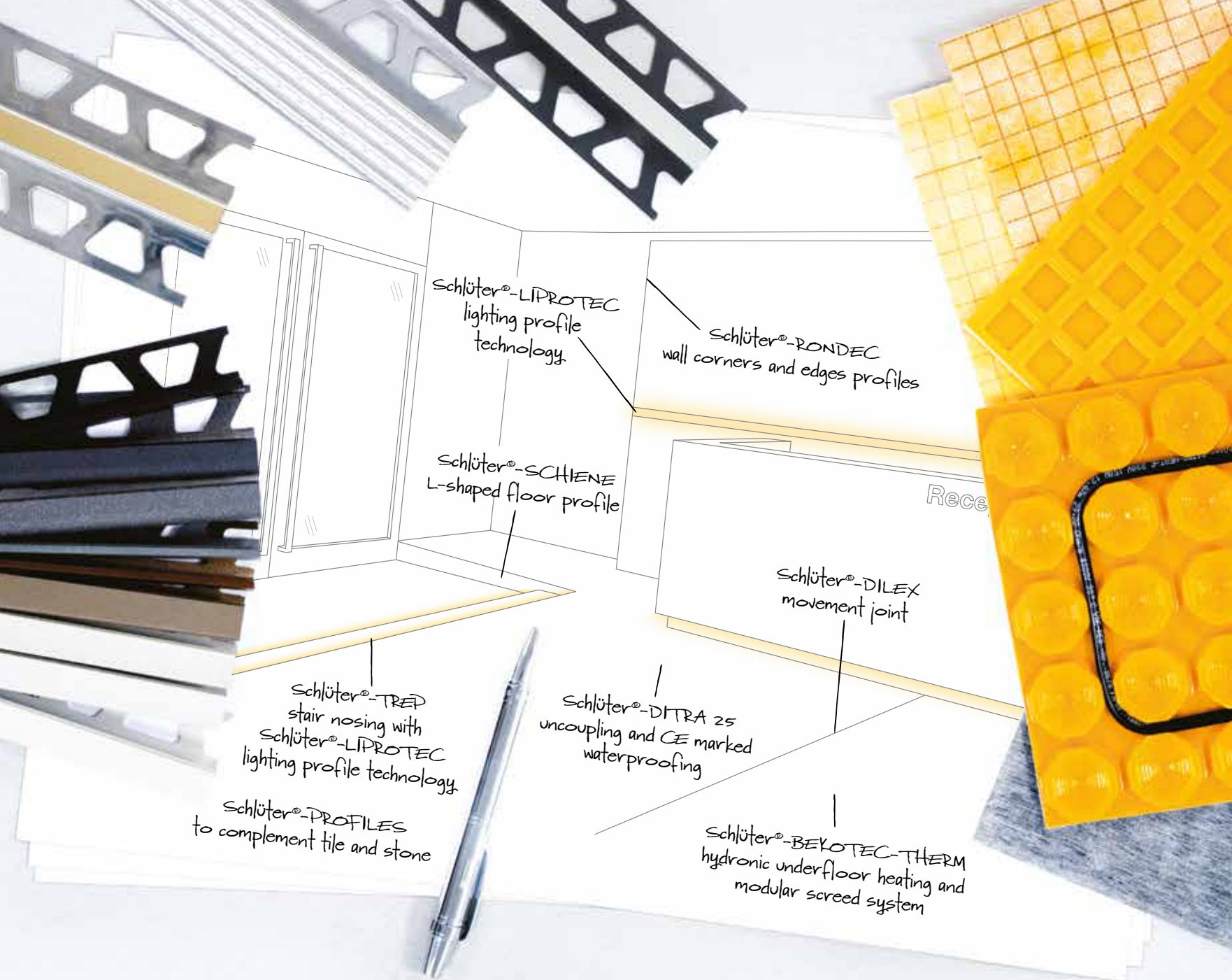
The modernisation of Stratford East continues apace, with plans allegedly afoot to re-clad the Old Dispensary, that clapboard eyesore just up Romford Road from Westfield Cathedral, with Formica’s smart and practical pre-packed Vivix Lap. We hear mutterings of protest, but are unsurprised. What a waste of this high performance, zero-maintenance weatherboarding, with its concealed screw fixings, eight solid colours and four wood variants! How could anyone even dream of throwing such quality away on what is essentially a 300-year old shed? formica.com

7
E52 ST curtain walling
Sapa

Aspiration. It’s all the rage in education now. So is it by luck or by design that Sapa’s Elegance 52 curtain walling was specified for this Cambridgeshire school? The ST standard variant is externally capped, thermally broken, powder-coated in RAL-indexed colours, and has Sun Guard SN 70 37 double glass giving occupant-friendly U and G values. Yet, despite these admirable performance credentials, it plainly still wants to be a Crittall palace just like the Hoover Building when it grows up. sapabuildingsystem.com/en/uk.

8
Picperf aluminium panels
Cadisch

In 1874 English-born American photographer Eadweard Muybridge shot and killed his wife’s lover but was acquitted on grounds of justifiable homicide. Still, with demonstrable interest in catching things in the act he did pioneering work into stop-motion studies of animals and humans. His hometown, Kingston-on-Thames now has one of his images resplendent, applied on aluminium panels to recreate it on a grand scale with Cadisch’s Picperf technology. The firm might plead ‘not guilty’, but is his cheeky pic the moment Mrs Muybridge walked out on him? cadischmda.com



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Rising school rolls see architects turn a new page

In the rush to create more secondary capacity, schools are featuring mixed use developments and their premises are doubling up for other community uses

Words: Josephine Smit

If necessity is the mother of invention, then we ought to be building some of the most inventive and radical schools ever seen in the UK right now. The necessity is for school places – low cost and fast. A population surge that saw an extra 600,000 primary school places created over the past eight years is now inevitably putting pressure on secondaries, as the Local Government Association, which represents councils across England and Wales, has reported.

The government's austerity budgeting and standardised procurement have driven invention, of sorts, in the converted office blocks and modular buildings being created for free schools. But under their direction, innovative and inspiring learning environments are becoming a rarity rather than the norm.

So it is worth considering another way of making the difficult financial proposition of modern day school development stack up, which is to marry schools with other uses. Education-led mixed use embraces a number of variations on a theme, with the capital seeing schemes that mostly match schools with homes. Away from London a different model is emerging in the school hub, which follows in the footsteps of Cambridgeshire chief education officer Henry Morris, who almost a century ago conceived the multi-purpose village college to serve rural communities in the county. The two are very different but equally pragmatic responses to economic constraints, and they are challenging educationalists' and local communities' perceptions of what a school should be.

City limits

Why create a gym in a private rented housing scheme when there will be one next door in a school? Why move teachers around a school rather than pupils? These are the kind of questions that should be asked, but all too often aren't, says Lee Mainwaring, design director with Architecture Initiative. 'In the UK we are only just scratching the surface of what's



Above Kingston Community school in Norbiton, south London, by Avanti Architects.

possible,' he says. Mainwaring's practice has explored possibilities including a primary school above a supermarket, a secondary school with high rise apartments above and even converting an office tower to an all-through school (see box).

Such ideas have grown out of London's shortage of available, affordable land. 'Free schools may have to compete with residential developers, so they have to think uniquely,' explains Mainwaring. The government's LocatED property business, which acquires land and buildings for free schools, was looking for 20 sites across the capital this autumn. Typical of Avanti Architects' London schemes is Kingston Community School, a 420-place primary alongside 19 homes on a tight site in Norbiton, south west London. The linear school

adjoins the residential corner block, each distinct and with its own entrance. There is no outside space at ground level, so the design has an underground sports hall and a rooftop playground, but Mainwaring says that doesn't mean the quality of the environment is compromised. 'These schemes are always education led. When you have the constraint of an urban site, the first thought is where is the best place for the sports hall. As this is a small site and the hall doesn't need daylight, the best solution was underground.'

Such innovation needs to be explained, Mainwaring accepts, through more community consultation and more dialogue with a school. 'You have to ensure the school and governors are comfortable. It may require changes like having lunchtime sittings to reduce the size of the refectory, or varying break times to suit playground size.' Any negativity about proposals, he adds, 'comes from people thinking it is a private development, and that it is only the residential component that is higher quality. In fact, these are holistically driven regeneration projects.'

Amir Ramezani, director with Avanti, also points to the regeneration potential of education-led mixed use. 'Where ground floor retail is not working and use needs a rethink this is a good typology,' he says. The architect is working with Hackney Council on The Makers in Shoreditch, a scheme where added housing will help fund future schools and off-site affordable housing. It will see a pupil referral unit replaced with a low-level school plus 175 homes, the latter in a seven storey linear block and a 29 storey tower above a two storey podium. The prominent site was in serious need of remedial action,

With no ground level space, the design has an underground sports hall and a rooftop playground



Above Ayr Grammar: The proposal is learning from BDP's Waid Community Campus.

Right Architecture Initiative's feasibility study for converting an existing office building into a school.

says Ramezani. 'It had a single storey school, permeability had gone and an alleyway ran through the site, which had anti-social behaviour issues.'

The design is set back from the edge of the site and incorporates new public realm, as well as amenity space at ground level for the school. 'We believe schools need a direct relationship with the ground – and it's good for staff management,' says Ramezani. The architect also worked to orientate homes and school so that the former's balconies would not overlook the latter.

Separation does not only apply to the different uses, but within the school itself, as this alternative provision is for temporary attendees, such as those who lack a permanent place or are excluded, and cohorts may need to be kept apart. Classrooms are therefore set around a courtyard, with groups accommodated on different sides, while the dining room has a central kitchen servicing two dining spaces from separate serveries. 'It goes against all the things you would normally do,' says Ramezani. Some of the school's sports facilities will also be made accessible to the community, albeit under fairly controlled conditions.

Civic studies

The vision of Henry Morris in breaking down barriers between school and neighbourhood for all-round community benefit is finding fresh expression in schemes like Waid Community Campus, in the Fife town of Anstruther. The

A school hall serves as the town hall and hosts evening cinema shows. The police service has an office and the NHS is coming

secondary school is designed for civic service, and evolved following discussions between its architect, BDP, and a host of local authority departments. Walk through the main entrance – designed to be welcoming, even for those who remember school days unfondly – and you could head to the school, community café, library or adult education space. The atrium includes ICT-rich workspace for the use of students and for former students starting up businesses. 'The school is intended to provide a seamless transition from school to work,' explains Colin Allan, who was architect director for BDP on the project. A school hall serves as the town hall and hosts evening cinema shows. The police service has an office there and the NHS is coming.

The building housing all this is far from spacious. 'The area had to be kept tight on cost; this didn't have a generous budget,' says Allan. The funding formula of the Scottish Futures Trust, the Scottish government's delivery body, was based on an area allowance of 12m² per pupil. 'But for this we were asked to work to 10m²,' says Allan. 'That was a big challenge and we thought we'd lose social space. We avoided corridors and used space to capacity.' It means teachers even have to book rooms for their lessons, rather than having one allocated. The school opened in 2017, has recorded 1700 adult visits to date and is home to many activities. 'You always worry that you create potential that won't be adopted, but the feedback has been great,' says Allan.

The project's learning is now informing plans to transform the listed Ayr Grammar building to accommodate a primary school, plus local archive and arts centre and a registry office. Again the scheme's potential goes beyond the provision of school space, as it promises to improve street connections and – through its architecture and its activities – engage citizens with their heritage. 'These facilities are good value,' stresses Allan. 'There is always the danger that you put the goodies into one building and others close down. For some elderly people, it can be a trip to get to Waid, but there was no other site large enough in the town. If you didn't have a facility like that, the library would be in the next town, or in a van.' ●



UPPER CLASS

Architecture Initiative's feasibility study looked at how an office tower could be converted entirely for educational use, as an all-through school. The primary occupies the lower seven levels, with its own sky garden at the eighth and ninth floors. Above that, is the secondary school's learning resource centre with ICT-rich spaces and flexible furniture. This is topped by secondary school classrooms, sixth form and roof terrace.

As the structural grid of the building prevents the insertion of large column-free spaces for sports and drama at lower levels, the architect's solution is to remove two storeys higher up the building and replace them with a theatre topped by a sports hall. Above is a multi-use games area.

Movement of pupils through the school day is a big challenge for the vertical school. As an office, this building housed 2,000 workers, who came to and from their desk each day using five lifts. As a school, it would have fewer pupils but they would be moving from class to class. Consequently, the primary would be served by three oversized lifts, and the secondary and sixth form by five high speed lifts.



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Positivity reigns as architects tackle the housing crisis

There's a huge housing shortage and balancing costs with a good design is as challenging as ever. But architects are inventive – and optimistic

Words: Ruth Slavid



Above Bell Phillips director Hari Phillips discusses the practice's St Chad's scheme in Thurrock, Essex, procured through the council's development arm, Gloriana.

Not a single architect put their hand up when asked whether they had found specifying paint an easy process at the recent PIP seminar on housing and residential development. This was in response to a question from John Staunton, specification manager at Dulux Trade/Akzo Nobel. He had previously asked how many of the attendees had specified paint on projects and about half had done so. He went on to explain how he and his colleagues could help with the specification process, explaining new formulations and how to deal with the differing substrates that are now used.

The difficulty with paint specification was virtually the only negative point in a seminar full of hope and positivity. Architects with great clients – in sometimes difficult circumstances – showed how they overcame difficulties. Hari Phillips of Bell Phillips discussed the challenges of building in Thurrock, Essex, where building costs are at London levels but house prices considerably lower – making it almost uneconomic to build.

Nevertheless, his practice, having worked on several improvement projects with the council, then designed a successful scheme with its newly formed development arm. The St Chad's scheme in Tilbury comprises 128 new houses arranged to make the most of views to the docks and to open country. With a mix of mews, streets and two avenues, it creates and defines successful public spaces. A swale in one avenue, designed to deal with flooding, provides attractive planting and is widely used as a walking route.

Phillips explained that he kept costs down by only having a few key details. 'We did a valley gutter or a window,' he explained, 'and then repeated it 130 times'. The thick frames of uPVC windows are disguised behind deep reveals in the brickwork. Soldier courses above and below the windows make them appear larger than they are.



TIM CROCKER (2)



Left Housing the older generation: Hazelhurst Court in Lewisham by Levitt Bernstein for Phoenix Community Housing. **Below** Maccreeanor Lavington's Elephant Park, replacing the Heygate Estate in Southwark.

Architects with great clients – in sometimes difficult circumstances – showed how they overcame difficulties

Most of the houses are red brick, relating to nearby Tilbury Fort, but a few are interspersed in a more expensive white brick. There are four house types in total and the end result is what Phillips said he sought: 'coherence and individuality'.

Levitt Bernstein's Hazelhurst Court, in Lewisham, south London, tackles one of the main problems of social housing – older residents 'blocking' large homes, which they find difficult to manage. The practice designed these largely one-bedroom homes for Phoenix Community Housing to provide an attractive alternative. The flats are dual-aspect, which is important, believes Irene Craik, director at Levitt Bernstein, because older people tend to spend a lot of time indoors. The external access walkways have been designed with seating outside the front doors and planters, to provide a place for social encounters.

The main flats face a small courtyard carved from the grounds of existing housing, and open onto a communal room that straddles this space and a larger one. It is transparent, so residents can see who they might like to join for a meal or a chat. The client – evidently a special client – decided, when the chosen bricks looked too expensive, not to compromise but to increase the budget. It has been rewarded with a project where every element has been considered carefully. For example, each bedroom window has a lower section so bedbound residents still have a view

out. Craik said: 'This won't solve the housing crisis, but is one small element. Creating much better housing for old people is part of the jigsaw.'

Gerard Maccreeanor, of Maccreeanor Lavington, discussed a project on a much larger scale, Elephant Park which replaces the Heygate Estate in south London. Like the other two practices, he chooses to work in brick, saying that he does not like the materiality of the concrete that it replaces. Among the flats are some individual houses built to Passivhaus standards. He stressed that, even with an excellent contractor like Lendlease, achieving this was a challenge.

As cost and workmanship are issues in most housing projects, it was interesting to hear from Dudley Rochelle of Reco Surfaces about his firm's alternative to tiling – and sometimes wallpaper. Made of PVC, they are durable, quick to install, hygienic and available in a staggering array of finishes. They are, said Rochelle, 'bullet proof!' And while, thankfully, real bullets are rare in housing, metaphorical ones are all too common. Luckily we have architects, and product suppliers, with the skills to cope with anything. ●

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New trends in hotel bathroom design

From a vintage marine-inspired pamper zone, via a minimalist haven of yin-yang tranquillity, to a domed jewel box lined with gold, the latest luxury hotel bathrooms are a showcase of design dexterity

Words: Stephen Cousins

Project Nobu Hotel Shoreditch, London

Interior designer Studio Mica

Client Nobu

Mood Buddhist ablation

At Ron Arad and Ben Adams Architects' Nobu Hotel in Shoreditch, a key concept for the 148 guest rooms and suites was to create tranquil spaces through simplicity. The bathrooms are all accessed via a minimal 'ebonised' dark corridor, the doors picked out by a simple custom brass push and pull plate.

The white bathroom interior is the yin-yang counterpart to the corridor, augmented with accents of sparkling brass and gold, including a specially-commissioned ceramic basin with a golden glaze, by Laufen Living. The basin is backed by a rotating vanity mirror incorporating an illuminated magnifying mirror, and an internal window.

Carolynne Shenton, partner at Studio Mica, told RIBA: 'The vanity counter, a vertical opening that brings borrowed light into the shower room, and an illuminated wall niche that extends to the ceiling, were meticulously detailed to create continuous joint lines between tiles around the room.'

Floor tiles were laid as a 'structured' random design to mimic the board marked concrete of the building's facade. The design addresses the common problem in hotels of accidental flooding that can damage bedroom carpets and ceilings below. The shower entrance is narrow, relative to the position of the shower fittings, which made it possible to minimise 'splash out' and create a simple, clear opening with no glass door or curtain.



WILL PRYCE (2)



Above Everything subjugates to concept architect Ron Arad's diagonal concrete structure. Here luxury Laufen baths populate the free space of the bedroom.

Left Laufen's ultra thin porcelain Saphir Keranick sinks embody luxurious minimalism.

The design addresses the common problem in hotels of accidental flooding that can damage bedroom carpets and ceilings below

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Project The Ned, City of London
Interior designer Alice Lund and Adam Greco
Client Soho House
Mood Port out, starboard home

The faded glamour of a 1930s transatlantic ocean liner was the starting point for all interior design at this five star hotel set inside the grade I-listed former Midland Bank building designed by Sir Edwin 'Ned' Lutyens.

The 252 bedrooms feature a mix of small, medium and large bathrooms. The small bathrooms are 'tidy and efficient' layouts inspired by modern technology in the Edwardian era. The designers worked with a Spanish factory to develop the custom creamy white crackled effect wall tiles that have a sepia tone rubbed in for variation.

Alice Lund told RIBA: 'The floors are black and white marble mosaic in a classic 'target' pattern, the light fittings were custom made in Blackpool based a Victorian fixture found at an antiques fair in the north of England. Wall-hung basins are by British supplier Thomas Crapper.'

Medium sized bathrooms are more 'gracious and urban', they include a larger variation of the crackled cream tiles, with accent tiles in bold petrol, mulberry, and mustard. The floors are Carrara & Nero Marquina marble in a diamond pattern.

Most glamorous are the large bathrooms, with vintage mirrors and relief moulded tiles with patterns inspired by the various motifs Lutyens used in joinery and ironwork. Some bathrooms feature custom console basins with teak legs and unlacquered brass fittings by Lefroy Brooks. Large marble mosaic bathrooms feature brass hardware and a walk-in rainforest shower.



Above Edwardian opulence is evinced in The Ned's tiled bathrooms with modern interpretations of the contemporary look.

Right Unlacquered brass fittings by Lefroy Brooks give a turn of the century feel.

Small bathrooms are 'tidy and efficient' layouts inspired by modern technology in the Edwardian era





Above These might be Victorian claw-foot baths but they are on outrageous display in the bedroom.

Below Victoriana meets 70s nightclub in the bathroom spaces.



AMY MURRELL (2)

Project Avon Gorge Hotel, Bristol

Interior designer Dexter Moren

Client Hotel du Vin

Mood Cheeky Victoriana

Panoramic views of the Avon Gorge and Clifton Suspension Bridge provide the backdrop for the respectful yet irreverent revamp of Bristol's most iconic Victorian building, which was originally opened as the Grand Clifton Spa and Hydropathic Institution in 1898.

'We wanted to pay homage to the history without it becoming like a museum. The hotel has beautiful cornices, original skirting boards and other details that we wanted to highlight, but we've introduced a contemporary slant to the bathrooms to keep things fresh,' says Anya Gordon-Clark, designer at Dexter Moren.

Up-spec bathrooms feature diamond patterns of ceramic tiles, a modern interpretation of patterns seen in Victorian homes, while standard bathrooms have porcelain tiles with a printed concrete effect. Most of the sanitaryware is from Hansgrohe, vanity units are made from Italian Carrera marble. Teal-painted walls provide a bright pop of colour in contrast darker blues and reds in the bedrooms.

The Hotel du Vin brand is associated with roll top bathtubs. Here Astonian Rimini cast iron baths with claw feet, from UK-based supplier Aston Matthews, were installed inside the bedrooms to allow guests to enjoy scenic bay window views while having a soak.

'Our original render of two roll top baths in the mock up bedroom suite overlooking the suspension bridge was what initially sold the concept to the client and what probably won us the job,' Gordon-Clark concludes.

Cast iron baths with claw feet allow visitors to enjoy scenic bay window views while taking a soak.

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A lack of natural light led to the concept of bathrooms like jewel boxes, with accent lighting and delicate special tricks

Above Marble mosaic tile forms the centrepiece of bathroom designs. **Right** Gold mosaic on curved walls brings an indulgent bling factor to these luxurious spaces.



Project Four Seasons Hotel, City of London
Interior designer Aukett Swanke Architects (lead)/4Bi (bathrooms)
Client Reignwood
Mood Hotline bling

This five star hotel lives inside the newly refurbished Ten Trinity Square, a grade II* listed neo-classical edifice and former HQ of the Port of London Authority.

The hotel's deluxe and superior suites are housed within the frame of the existing building, their design influenced by the period windows, cornices and other features. The bathroom walls and floors are Volokas White marble with a central mosaic pattern was formed from Nero Marquin, Marron Emerador and Carrera C marbles.

Junior suites sit between the existing building and a new internal rotunda. A lack of natural light led to the concept of bathrooms like jewel boxes, with accent lighting and delicate spatial tricks.

Jack Bird, associate at Aukett Swanke, told RIBA9: 'The baths are the centrepiece of the bathrooms and stand below a dome with a faded gold mosaic, with recessed accent lighting, by Italian firm Bisazza. The gold tiles are more dense at the base of the dome and fade out as they reach the top.'

Bird says that the historic building fabric and listed status made rooms extremely difficult to co-ordinate and every spare millimetre counted. Fan coil units and aircon had to be located inside the bathrooms and configured to feed into another floor with access via a single panel. ●

A dark blue rectangular box containing white text. The text includes the company name "DURAVIT LONDON" in a large, bold font, and the address "36-42 CLERKENWELL ROAD, EC1M 5PS" in a smaller font below it.

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The principal transformation

Kerakoll's eco-friendly range has played an aesthetically and practically significant part in the luxury refurbishment of a historic London hotel

When the historic Russell Hotel was refurbished before reopening as the Principal London Hotel in spring 2018, the tiling contractor chosen to fit out the bathrooms and public washrooms was Chiltern Contracts, which in turn specified Kerakoll products for their 'ease of use and eco credentials'.

Kerakoll has adopted a 'GreenBuilding' philosophy and tries to apply that to everything it does, from the construction of an ecologically friendly R&D facility to the development of new green products and the improvement of existing ones. It has developed an independently certified GreenBuilding rating system to show how ecologically friendly its products are and is working to achieve CFP certification for the whole range.

The company also strives to make its products as easy to use as possible and its award-winning Biogel adhesives are a prime example of this. Joe Simpson, editor of *Tile & Stone Journal*, recently said of the range: 'One recent tile adhesive launch really does deserve the term "revolutionary". Kerakoll's Biogel, the recipient of The Tile Association's 2018 Innovation Award, is a new type of adhesive manufactured using gel technology'. Unlike standard adhesives, the range can be used on any substrate and any material. It is loved by tilers as it holds its shape, avoiding the need to mix the adhesive more stiffly for large tiles, has a long pot life and fully wets the tile back, so ensuring a strong structural bond.

A total of 338 guest bathrooms, beautifully designed by Tara Bernerd & Partners, were tiled: Calacatta Crema marble was used for all floors and skirtings in both mosaics and larger tiles, while the walls were covered in a mixture of crackle glazed Metro tiles and Calacatta Crema.

Time was a factor on parts of this project so Kerakoll UK's project manager recommended the use of some of the company's fast track products.

Keracem Eco is a screed that supports foot traffic eight hours after application and can be tiled after 24 hours in standard conditions. Biogel Revolution, the rapid-set version of the Biogel range, is ready for foot-traffic and grouting on floors after only three hours and grouting on walls after two. Finally, Fugabella Eco Flex is another rapid setting product, which also offers a high degree of flexibility.

In areas where the work was not so time-critical, Biogel No Limits, the standard set version of the range, was used with Fugabella Eco Porcelana 0-5. Fugabella Silicone was used as a sealant throughout.

The results speak for themselves – fast, problem-free tiling giving a beautiful finish for this luxury hotel. ●

Kerakoll has developed an independently certified GreenBuilding rating system to show how ecologically friendly its products are and is working to achieve CFP certification for the whole range





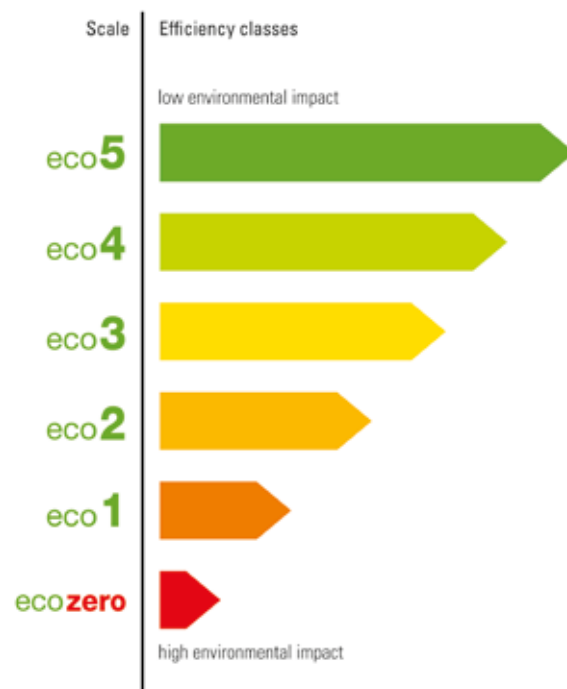
Left Calacatta Crema marble grouted with Fugabella Eco Flex in one of the hotel's suites

Above Crackle Glazed Metro tiles and Calacatta Crema marble with Fugabella Eco Porcelano 1 - 5 grout in another of the hotel's guest rooms

Top right The rating classes under the Kerakoll Greenbuilding Rating which feature on the packaging and technical documents of all products

Bottom right The award-winning Biogel range.

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REALISE INFINITE POSSIBILITIES

Fusaro's seductive new aesthetic exhibits the fine edges, contemporary curves and light appearance favoured by today's discerning eye. Its soft geometry translates into an extensive range of complementary pieces, providing the ultimate solution to premium bathroom specification.

specifysottini.co.uk



sottini

SIMPLY IMAGINE

Costed

Nang Vo Kham Murng, head of resource data at RICS, looks at kitchen & bathroom fixtures and fittings costs

Several factors determine the choice of kitchen and bathroom fixtures and fittings, including size, function of the space, aesthetic appeal, comfort, cost, quality and durability. However, it usually comes down to cost and to some extent the life cycle costs of the components.

Worktops are one of the most hardworking elements of a kitchen. Granite, composite and solid surfaces are tough, durable and will give the kitchen a professional finish. Kitchen cabinets have a big impact on both budget and

aesthetics. They are one of the first things people see when walk in a kitchen and have a big influence on the whole feel of the room.

Bathtubs also come in a variety of shapes/ styles and materials. But before choosing, consider whether there are size constraints and how the bath will be installed.

The following rates are for the supply and installation of a range of domestic kitchen and bathroom fixtures and fittings. These are intended to give a guide of the range of costs for

basic to top-end trade and contract fixtures and fittings. However, while it is unlikely that anything less than the basic would be acceptable, there is no upper limit to the amount of money that can be spent on fittings.

Because of the very wide variation in design and quality of kitchen and bathroom fittings, the prices can vary significantly depending on exact specifications. Prices are based on the BCIS Schedule of rates online estimating data (service.bcis.co.uk/BCISonline). ●

The rates below are a guide to kitchen and bathroom fixture and fitting costs as at 2018 Q2. No allowance is made for sundry or related preliminaries. VAT is excluded.

| Range £/unit | | Range £/unit | |
|--|-----------------------------|---|-------------------------------|
| Domestic kitchen fittings | | | |
| Kitchen fittings | | Sundry accessories: | |
| Floor cupboard units, 500 or 600mm deep, 900mm high, supplied assembled | | End panels 500 x 600mm wide x 900mm high | 39-50 |
| Door line units: 300 / 500 / 1000 mm long | 69-161 / 78-187 / 112-316 | Cornices / Lighting pelmets | 20-27/m / 19-35/m |
| Drawer line units: 300 / 500 / 1000 mm long | 86-166 / 98-192 / 162-321 | Tidy bins, vegetable racks and the like | 72-103 |
| 4 draw units: 500 / 1000 mm long | 174-238 / 311-426 | Cooker hood / island chimney hood | 134-286 / 466-821 |
| Pan draw units: 500 / 1000 mm long | 157-214 / 280-383 | Sinks etc | |
| Sink drawer line units: 1000mm long | 126-284 | Stainless steel, single / double bowl, single drainer | 172-277 / 209-357 |
| Belfast sink unit: 625mm long | 84-173 | Ceramic, single / double bowl, single drainer | 269-373 / 309-418 |
| Door line corner units: 1000mm long | 118-263 | Belfast sink unit / Waste disposal unit | 273-389 |
| Draw line corner units: 1000mm long | 140-267 | Mixer taps | 74-99 / 195-248 |
| Oven and tall storage units, 500 or 600mm deep, 2100mm high | | Appliances, fitting and testing | |
| 500 or 600mm long | 215-377 | Hob, gas / electric | 142-264 / 183-329 |
| Wall cupboard units 300mm deep: | | Oven, single / double gas or electric | 260-322 / 610-856 |
| 720mm high: 500 / 600 / 1000 mm long | 76-117 / 82-132 / 101-204 | Range cooker, stainless steel / Aga or Rayburn | 994-1,783 / 5,666-8,213 |
| 900mm high: 500 / 600 / 1000 mm long | 126-191 / 143-216 / 220-335 | Microwave, integrated, combined | 298-636 |
| 600 x 600mm corner unit: 720 / 900mm high | 152-221 / 238-361 | Sanitary appliances/fittings | |
| Worktops | | Bathroom sanitaryware | |
| 40mm MDF: applied veneered, 600mm wide | 52-86/m | WC suite inc cover and seat: close couple /close couple, syphonic | 272-375 / 307-407 |
| extra for cutting hole for sink unit, hob or the like | 22-29 | Bidet, including fittings | 313-423 |
| extra for forming corner | 19-24 | Wash hand basins inc fittings, standard /vanity inc base unit | 163-234 / 214-287 |
| 40mm beech/oak block: 600mm wide | 94-149/m | Baths with mixer taps | |
| extra for cutting hole for sink unit, hob or the like | 34-46 | Plastic / pressed steel / cast iron with panels | 398-501 / 452-568 / 899-1,305 |
| extra for forming corner | 27-38 | Cast iron, antique with brass mixer taps | 1,801-2,789 |
| 40mm beech/oak, solid : 600mm wide | 150-215/m | Corner bath with panels and whirlpool | 948-2016 |
| extra for cutting hole for sink unit, hob or the like | 49-60 | Showers with thermostatic mixer valves, hose and rose | |
| extra for forming corner | 38-47 | Ceramic, standard size / quadrant | 474-803 / 573-923 |
| 40mm polished Purbeck stone/granite: 600mm wide | 592-928/m | Wet room tanking, 1.5 x 2.0m | 1,387-2,198 |
| extra for cutting hole for sink unit, hob or the like | 155-224 | Shower partitions – glass, standard size | |
| extra for forming corner | 128-185 | Sliding door / shower door / quadrant door and side panel | 245-496 |
| 12mm Corian: 600mm wide | 568-884/m | Bath side panel | 181-290 |
| extra for cutting hole for sink unit, hob or the like | 198-245 | Independent cubicle | 1,166-1,569 |

Specified



1
Engineered quartz surfaces
Caesarstone

My plan to inveigle Tom Daley into my home was perfect. But how could I have been so stupid? The dimensions and style of my new Caesarstone engineered quartz kitchen-island-cum-diving-board were perfect. The pure beauty of the finish was heart-breakingly perfect! Tiny Tom accepted my invitation to coffee and everything was PERFECT! I persuaded him to jump up and try a simple tuck – and he broke his perfect little ankles. Now he's not even talking to me!

caesarstone.co.uk

2
Polaris 3-in-1 instant hot tap
Perrin & Rowe

The demise of the English country house has long been the talk of hunt kennel, town market, and hedgerows between. The Dowager Countess of Grantham, however, is sanguine about an imminent move to her new, unstaffed 'Grandmother flat' high in the eaves of the once-great Crawley seat at Downton.

'All I ask, son dearest, is that you fit Perrin & Rowe's 3-in-1 instant hot mixer in that dreadfully tiny kitchen,' she smiles, drily, eyes askance. 'One does rather draw the line at a £5 plastic kettle.'

perrinandrowe.co.uk

3
New Class Laminate kitchen cabinets
Rotpunkt

Years after, once they had returned to their home and their beloved parents, and Gerda and Hans were grown and had children of their own, who should come knocking but the little robber maiden, and she gave them each a delicious pie, and invited them to come over and see her new kitchen.

'I only ever stole that I might afford so shiny and white a set of Rotpunkt cabinets as those in the Snow Queen's palace', she confessed; and so happy she was that Hans' bitter heart melted, and he wept for joy.

rotpunktuk.com

4
Fairfield wall-mounted basin mixer
Samuel Heath

'Yet how', expostulated Doctor Frankenstein, 'shall we provide the means of draining the fluid from the chamber once the ferocity of the storm has energised the creature? For we must ensure', was further ejaculated, 'that the enlivening fluid is evacuated at the very moment of animation such that we may prevent either excessive quickening, or such an intensity of elemental fire that the corporal elements be hardened or charred.' Then inspiration. 'Sink taps!' He cried. 'Samuel Heath's City Bronze wall-mounted mixer with dual lever controls might just do it!'

samuel-heath.co.uk



5



7



6



8

5
Penta basin mixer
Grange Design

This is Prostetnic Vagon Jeltz of the Hyperspace Planning Council. Examine the image supplied very carefully and understand that Penta's solid, satin stainless steel, tap, equipped with integral Babel filter, is now the only model of basin mixer permitted on ships throughout the Constructor Fleet. I can't believe that I worked hard to get to where I am today, and didn't become a captain of a Vagon ship simply to turn it into a place where people have even the remotest chance of understanding one another.

grangedesign.com

6
Acrylic sanitary shower trays
GROHE

GROHE aficionados like us can finally ablute upstairs with gay abandon, after so many years of saving ground-floor ceilings from water penetration. For 'Hooray!', I say, it has launched its very first shower tray range. 'About blinking time!' says the Dearly Beloved, who was getting rather tired of enjoying her luxurious GROHE douche with feet planted in nothing more than one of the rubber tub things we use for the horses. Progress!

grohe.co.uk

7
Plural bathroom range
VitrA

A little-known fact is that Ian Schrager's entrée to the luxury hotels business came by way of an attempted nightclub pop-up following the demise of Studio 54. Sited in the bathroom of his TriBeCa walk-up, the snug venue was eventually closed after an attempt to recreate the equestrian theme of Bianca Jagger's 27th birthday party. 'Plural', by VitrA, picks up on his exclusive theme, promising a bijou club experience with fittings aimed at making the wipe-clean space 'a social hub where people meet and reconnect with... close friends and family.'

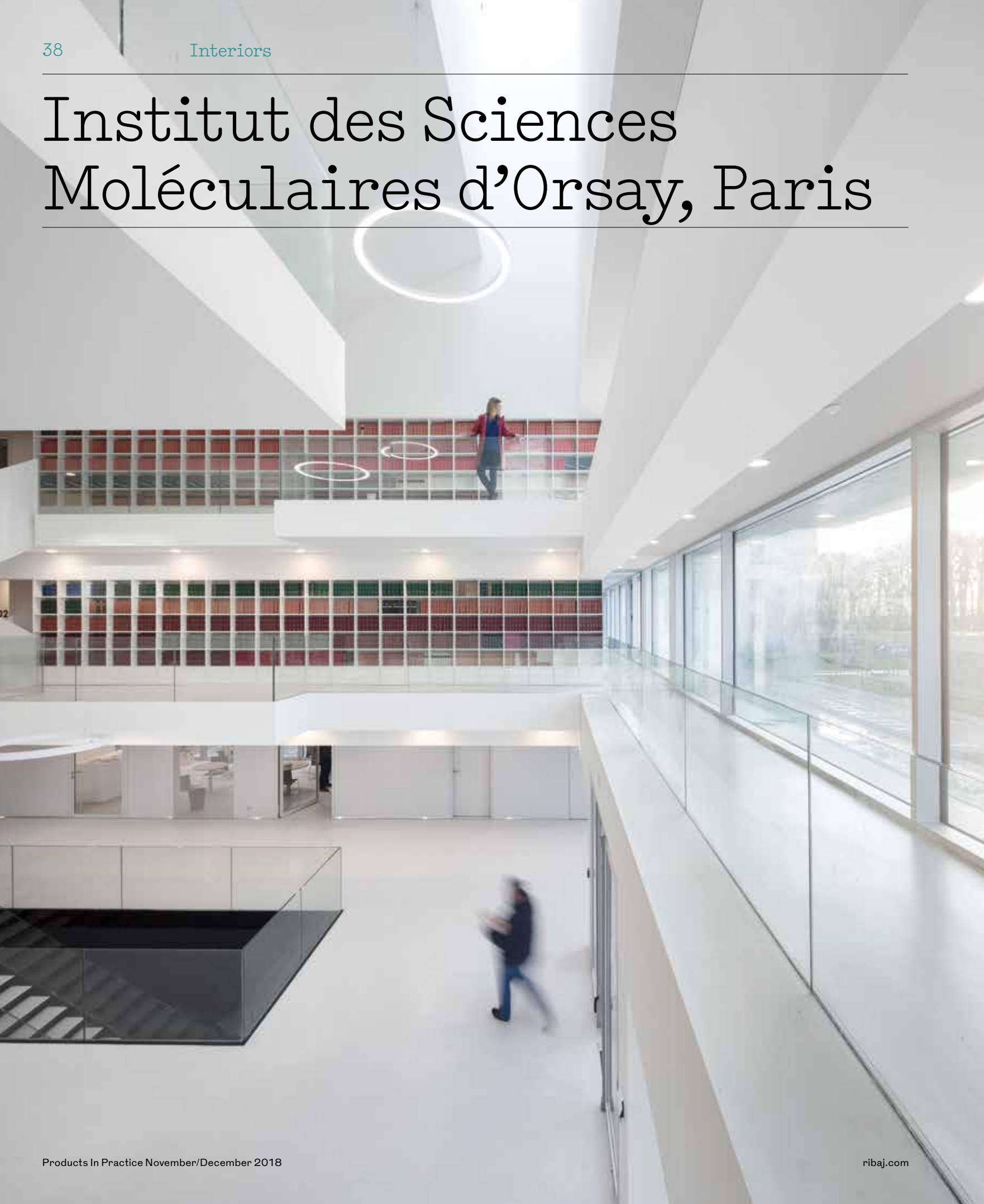
vitra.co.uk

8
Vitreous enamelled steel baths
Kaldewei

A friend extols the many benefits of a really hot bath – to relax muscles, lower blood pressure, improve circulation, and induce us at the end of the day to fall gratefully into Morpheus' arms. So while Kaldewei's voluminous bath range allows a luxurious soak, one caution: don't have the water *too* hot. Certainly not at anything approaching 800°C. It's uncomfortable, certainly, and could possibly send the proprietary vitreous enamel of your anti-slip steel bath down the plughole. 1400°C, by the way, and you can probably forget about the plughole altogether.

kaldewei.com

Institut des Sciences Moléculaires d'Orsay, Paris



Circulation bags the best views at KAAN Architects' Paris institute, while in quiet space deep inside the building is reserved for serious study

Words: Jan-Carlos Kucharek Photographs: Fernando Guerra



In trying to explain the design genesis of its new Institut des Sciences Moléculaires d'Orsay (ISMO) in Paris, Dutch firm KAAN Architects' founder Kaas Kaan proves his point by citing a domestic scheme of the firm's which is, in plan, its antithesis. Tilburg University's Self Study & Education Centre has a social function and runs all its programme around the perimeter, leaving a central zone, with its sunken auditorium, open for public interaction. But ISMO, merging this French institute's faculties into one entity, is a very different beast altogether. Dedicated to theoretical and practical scientific research, the idea here is that the building's centre is the focus for concentrated study – away from prying eyes – and its south perimeter, with views over a verdant campus, becomes the public forum. And up at roof level, above its central reception and library space, floats the auditorium. Now why is that?

'At Tilburg the auditorium was well used; we even glazed it to connect with the public space; but here it has far more limited use and doesn't contribute to the daily life of the facility,' explains Kaan. 'Here we wanted to keep the ground floor completely open to receive researchers and allow them to interact and socialise. The same goes for the perimeter circulation. Study is an isolated activity, and good things can come from a chance encounter with another discipline.' In a similar way, the library space, formerly sequestered in the faculties, has here been transformed into an atrium. An extension of the public space, it links to the corridors that connect to the central study cells, and offers views via balconies down to the reception area.

It's almost counter-intuitive when a building



of loadbearing concrete – to deal with the sensitive scientific equipment housed here – has a trabeated facade that evokes a cell-like quality at odds with the horizontality of the circulation that runs behind it. But Kaan isn't bothered by this – he's just playing games with the formal language. It's the reason why the north elevation, stacked with laboratory spaces, is like a fishbowl – completely glazed to reveal the internal workings to the campus behind. But even this is a conceit. In section they connect down to the lower ground floor where a bank of other labs, equal in volume, are hidden from view.

Internally, the language of the laboratory is expressed everywhere. Hygienic white surfaces of painted concrete, plasterboard or metal abound. Balustrades are glass, as are the doors of the study cells that face onto the public corridor. 'In effect, every researcher has a 2m x 1m window onto the landscape; it's just experienced via the corridor,' says Kaan. And that, replete with bright, white cast resin floor, is illuminated by the strong south light and registers the passing of the day via the deep shadow of the columns moving across it, like some in-situ Newtonian experiment. ●

Opposite The library forms the focus of the atrium linking the circulation walkways.

Above right The cell-like trabeated facade in fact masks all the horizontal study room access corridors.

Above Two central courtyards allow light into study room cells.

Right The north elevation is a completely glazed facade revealing laboratory spaces.

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Specified



1 Villae sink Blanco

JULIUS CAESAR
by Harold Pinter
Act 3, Scene 2
BRUTUS: Romans, countrymen,
and lovers! Who is here so base
that would settle for pressed
stainless? If any, speak: for
him have I offended. Who is
here so rude that would not
laugh knowingly at a Latinate
nomenclature referencing our
antique homes and streets? If any,
speak! For him I have offended.
Who is here so vile that will not
love this Blanco Villae ceramic
sink and Vicus mixer combo? If
any, speak! I pause for a reply!
[PAUSE]
blanco-germany.com

2 Hi-Macs acrylic stone countertops LG Hausys

Good syr, now atte the port of
Amsterdam, which latelye we
reached yquipped with coine
and intelligence. The morrow, as
Phoebus doth climb the heavens,
we do meete with one Willem
Ruigrok, dealer in bulbs, who
hath in his posseioun the 'Semper
Augustus' as you instruct. Until
such time, we tarry in a fine
coffee-house. I commend to you
most particularly their boards,
whereon are shewn the fancies
and accompaniments. A most
carefulle note have I made. HI-
MACS® Volcanics acrylic stone
shall be profitably traded. I am
sure of it!
himacs.eu

3 Sphera Element vinyl flooring Forbo

Reports indicate that the decision
of the Peaks and Plains Housing
Trust in Macclesfield to refurbish
its offices with, among other
choice details, Forbo's 'Sphera
Element' homogenous low-
emission, pthalate-free and high-
LRV vinyl, has led to unforeseen
issues with its clientele. Police
were recently called to
remove a client who is reported
as having chained themselves to
a swivel chair, and was allegedly
heard shouting 'No! This is the
one I want! You can keep your
three bedrooms and spacious rear
garden! I live here now!'
forbo-flooring.co.uk/sphera

4 Handmade decorative slips Imperial Bricks

So I'm doing the washing up
and that Kate Bush pops up at
the window and starts doing
the eyes and legs bit and she's
calling me Heathcliff again,
and I say 'No love, it's Alan',
and then old Gilmour comes
in from the back where he's
been chipping the clags out his
wellies and he says here Alan,
let me fix that for you, and he
goes off and gets a pile of these
Imperial Victorian limewashed
handmade slips, and bish bosh
he's covered it all up and I can
get some blinking peace. He's
good with bricks, is Dave.
imperialbricks.co.uk

Sign Up

Phil Kavanagh, director at KKE Architects, gives us three of his specification favourites

STILL VIEW PHOTOGRAPHY



RECESSED STRIP LUMINAIRE

Light is of particular importance in our work. The biggest emphasis is on daylight, though inevitably artificial light is always required as well. Unless they are a feature themselves, we generally prefer fittings that are integrated and discrete. In this refurbishment at Four Oaks Methodist Church we introduced lots of natural light into what was a dark corridor via internal glazed screens and light wells. These iGuzzini recessed LED strip lights, proposed by Ridge & Partners Electrical Engineers, draw the eye through the space and are so elegantly simple that they become a feature themselves.

iguzzini.com

STALE ERIKSEN



ROOFLIGHTS

The '2005 Sunlight and Health Study' by Walch et al. demonstrated significant improvements in wellbeing in patients exposed to sunlight. Daylight, with exposure to natural diurnal patterns, helps maintain healthy circadian rhythms. A lack of daylight disrupts metabolic function, immune response and cognitive performance. This research brings home the importance of bringing daylight into hospices, like this new In-Patient Unit at St David's Hospice, where patients are less able to go outdoors. Natural Daylight Solutions offer good quality, attractive rooflights at an acceptable cost.

naturaldaylightsolutions.com

KKE, SALLYMCKEE, BRANSFORD TRUST



BESPOKE TILED MURAL

This mixed-use scheme is part of a recent redevelopment at the former Royal Porcelain Works in Worcester. We have taken inspiration from the rich, industrial and creative history of the site in aspects of the interior design. The well-known 'Worcester blue' is at the heart of the colour palette. We were able to create this totally bespoke tiled mural with The Surface Design Studio, which appears as a wall of hanging plates, though on closer inspection is actually printed tiles. The plates featured were all photographed from the Museum of Royal Worcester collection.

thesurfacedesignstudio.com

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...Sign Off

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



MIKLAS WRIEDEN / BKE FISLAGE

NINE TO FIVE

For those for whom the high point of the office day is the water cooler moment, a visit to this year's Orgatec trade fair in Cologne last month might have been a game changer. To kick off the event, organisers arranged an inaugural game of 'chair hockey' – it's hockey, but on office chairs! The craze, starting in 2007 in the unlikely venue of a 'large disco in Lower Saxony', has since built up a following beyond Germany's Teu-dio 54 crowd. The stick-based rules are the same, except you're whizzing around sat on a chair. Highest score wins; and like Formula 1, vehicle design gets rewarded too; there's even a 'Constructor's' category.



STRICTLY FOR THE BIRDS

Having 21 Caribbean flamingo chicks squawking round your ankles sounds cute as – but that's a shed load of guano, as Chester Zoo keepers Clare Wylie and Wayne McLeod know. As the birds have sensitive feet, they needed a floor that wouldn't give the footsies at the end of their leggings soresies. An internet trawl turned up Forbo's 'flocked' Flotex; its highly dense surface pile, impermeable PVC backing and hell, name, helped Claire and Wayne 'clean right down to the base...which meant we could get the chicks back on it in no time.' All tickety-boo for the birds, but for the poo-cleaning pair, it's surely an avian take on the Task of Sisyphus?



GLITTER BALL

I felt mildly depressed last month to see John Lewis' Christmas floor blazing away festively while it was 23°C outside. But while, like God, we rely on Never Knowingly Undersold to tell us when it's Christmas, unlike him they can't control the weather. However, the IPCC report on climate change suggests WE can. As a first step, we can get some seasonal guilt-free glamour with Ronald Britton's 'Deco Bioglitter' – 'an eco-friendly alternative to microplastic-based glitter.' It uses 'a form of cellulose... made primarily from Eucalyptus'. So instead of just paying lip-service to global climate change, remember; this Christmas you can spray it as well as say it.

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