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‘Don’t it always . . .

... seem to go, that you don't know what you've got 'til it's gone?' The refrain of Joni Mitchell's 'Big Yellow Taxi' may be running through Parisian heads after a disastrous fire tore through the cathedral of Notre-Dame de Paris during the evening rush hour on 15 April. Some buildings embody the spirit of a city and if the devastating fire at Mackintosh's turn of the century School of Art affected the grittiest Glaswegian, imagine the psychological scar left on your average Parisian when eight centuries of history, the 'Point Zero' from which all distances from

Paris are measured, goes up in flames? But, with huge sums of private money pledged to rebuild it, two issues are highlighted: the selective nature of our sense of cultural 'value', and how it could be more shocking for being an accident than a deliberate act. Robert Bevan's 2005 book 'The destruction of memory' draws attention to the erasure of cultures by targeting monuments; not least the West's impotence when Serbian Forces burned Sarajevo's Moorish National Library in 1992, leaving charred pages of two million books floating in its night sky.

'This will kill that,' Victor Hugo's villain Frollo declared, pointing at a book and then Notre-Dame. But what happens when you kill both? By contrast, it is the careless rather than deliberate erasure of history that Joni Mitchell highlights; the buildings, streets and hidden, wild spaces of the city that, in the name of regeneration, are simply lost with no conscious thought. She gently reminds us that, burned out on the end of the Île de la Cité, sits the conspicuous tip of a much bigger invisible iceberg. ● Jan-Carlos Kucharek, editor



More online...
Mixed into concrete, the tiny balls rupture when cracks start to form as a result of fatigue, releasing their payload to stabilise the material
Self healing concrete is just round the corner, discovers Stephen Cousins: ribaj.com/selfhealingconcrete



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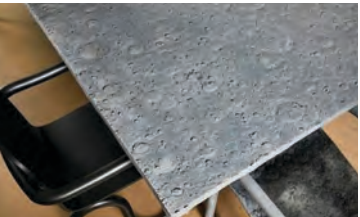
FILO welded wire chair by Marc Sadler for Désirée



Hask mixer by Danilo Fedeli for Rubinetterie Treemme



Duravit's Happy D.2 Plus bathroom range in Anthracite Matt



Matthew Day's Moon-themed Kohlo furniture for Made by Choice

Cover image: Skanderbeg Square, Tirana, Albania, photographed by Philip Dujardin

Compendium

UPCOMING

Retail Design Expo 1-2 May, Olympia, London

Design in Mental Health 21-22 May, Ricoh

Arena, Coventry

Clerkenwell Design Week 21-23 May, various venues, London

London Festival of Architecture 1-30 June, various venues, London



MEGANTAYLOR

Sink the pink

When it came to fitting-out its derelict south London property, interior designer 2LG Studio went for its own interpretation of po-mo for its kitchen/diner/work space. Once it had decided on characterful over-sized arches for the storage units, it chose Caesarstone's pale, soft-grey Cloudburst Concrete for the worktops and backsplash. There are nine colours in the firm's 'Metropolitan Collection', all inspired by natural colours and textures. So while there's clearly a form of Post Modern here, worktops-wise the excesses of Memphis still look some way off.



Boring down

Tired of banging your head against the stainless-steel trim of your highly conspicuous cooker hood? Well, if you've got the readies to hand, your worries are over. Winners of a 2019 Red Dot design award, Bora's new Pure extractors are integrated into the hob right up close to the action to ensure any extraction is done 'at source', so to speak. Watch in forehead-balming pleasure as steam and smells are drawn down and away, with easy access to the filter for regular cleaning. If it becomes the 'go-to' spot for vapers at your house parties, it'll be no-one's fault but your own...



Untapped market

As 3D printing reaches traditionally cast sanitaryware Grohe's Allure Brilliant and Atrio ranges seem to be pushing the envelope. Using a 'powder bed laser melting process', around 4700 layers, each 0.06mm thick, create ultra-thin walls, allowing water to flow through an extremely narrow section and creating 'no limits for individual personalisation'. Available in brushed steel as a limited collection, the mass market might have to wait a little longer for its 'magical, optical illusion'.



PAGEPARK ARCHITECTS

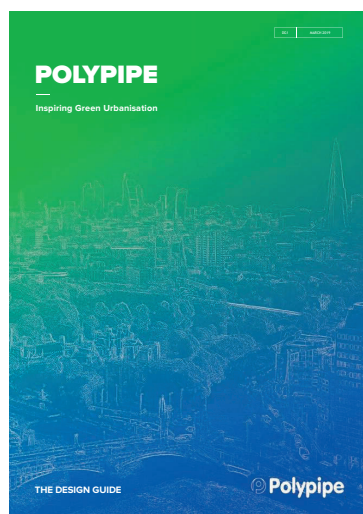
500 miles – nearly

It takes calves of steel to traverse the 96-mile West Highland Way, Scotland's first official long-distance path. Architect PagePark might have had this in mind when, creating a feature at Milngavie in East Dumbartonshire to mark the start of the route to Fort William, it plumped for a robust 25m long artwork of Corten steel and 96 timber posts. Guiding walkers down to the start at Allander Water, it informs them of the milestone sights they will experience on the breathtaking hike 100 miles northwards through the Highland landscape.



Luncheon Vouchers not accepted here

Michelin-starred chef Heinz Beck seems to be increasing his international portfolio. With a restaurant at Brown's Hotel in London, he also has others in Tokyo, Dubai and Portugal. In addition to his three-starred 'La Pergola' restaurant in Rome, the German-born founder of the 'Order of the Knights of Italian Cuisine' has just opened his Attimi 'casual dining' restaurant in Milan. Designer Fabio Novembre has created an interior that suggests fast food – at a price. Its main feature is the glamorous servery zone in HI-MACS 'Frosty' finish from its Volcanic collection. An inverted ziggurat stretching up to the ceiling soffit; weighty and downlit, it trains greedy eyes down to the gastronomic delights on offer.



Blue is the new green

If you're feeling the need to get up on the technical aspects of your Suds strategies you could do worse than grab yourself a copy of Polypipe's free design guide, Inspiring Green Urbanisation. Drawing attention to current and future water management challenges, it offers technical guidance on using its products to help design systems for more resilient water management. Yes, vested interests are at play here, but it's a thorough proposition offering good general rules of thumb and technical advice.



The shape of water

VitrA has launched a new bathroom collection, courtesy of Italian designer Claudio Bellini. And while the press release might talk about 'the fusion of organic shapes found in nature with architectural lines present in the urban environment', PiP thinks the emphasis is more on the geometry than the curves. We're particularly enamoured with the 'suspended' sinks hanging from thin, black metal rails, with integrated mirrors, downlight and towel rail (pictured). All bringing a touch of angular 'industrial' to the otherwise fluid ablution experience.

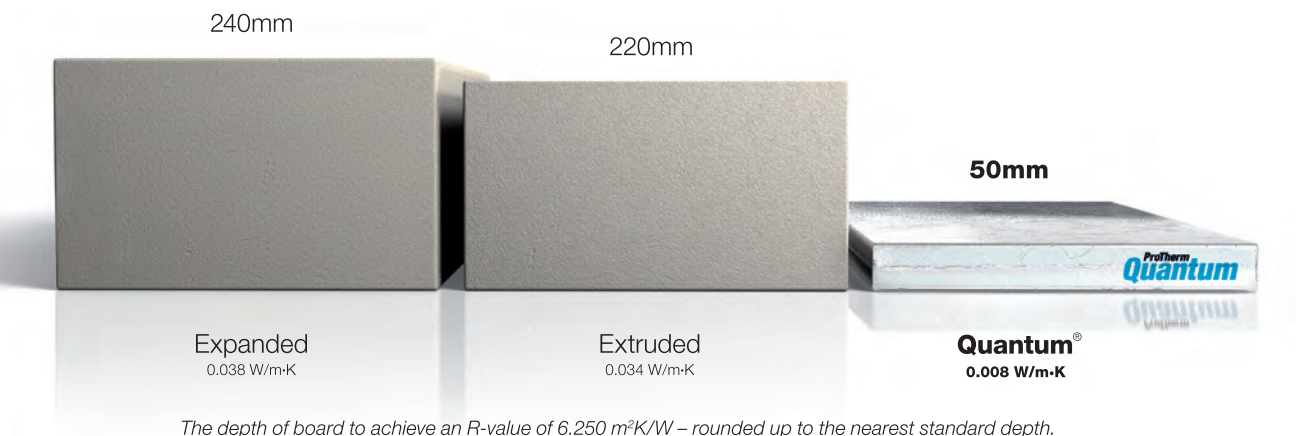


JONAS LINDSTROM

Only connect...


Swedish lighting manufacturer, ateljé Lykta, has launched Vault, a modular multifunctional lighting system, in collaboration with London creative agency Fourmation. The key to the system is the four-way connection block that links 'light bars', allowing it to be laid out in a set grid formation or any combination of the module. It can even act as the ceiling itself, as interstitial voids can be fitted with stretch fabric, for instance, to create an instant suspended lighting grid, masking the soffit above. Not only can you mount it on walls, it comes with a smart phone app that allows users to modify lighting levels.

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Pencils are still in the game



At architecture school in the late eighties, even wild, deconstructivist visualisations were hand drawn. AutoCad was in its infancy.

Recent research by our practice posits that if the 20th century was the age of information, the 21st is the age of gaming – where games are played in the process rather than the project itself. Our recent 'Action Replay No.5.4.17' was a study played out in planning real-time; one where NPPF Para 128 states: 'LPAs require an applicant to describe the significance of heritage assets affected... to understand the potential impact of the proposal on their significance'.

This is typically a visual impact assessment, requiring the planner to be a fluent reader of the architectural drawing and to talk the language of 'architecture'. I sat on a design review panel recently where suspicions were raised that a CGI had been manipulated to reduce the proposal's height. Given that a verified view CGI is paid for by applicants, it's a form of self-certification. Luckily a hand-drawn perspective (with

eye level lines, vanishing points, picture plane) allowed an on-the-spot assessment – the CGI appeared to have squeezed in an extra floor.

On the flip-side, our recent application for 24 flats adjoining a heritage asset (the Spotted Dog) required consent by committee. Now if a planner has trouble reading the architectural drawing, how is it for the lay panel member? One councillor said our rigorously researched gabled proposal looked 'aggressive... the gabled roof looks inhumane, like the teeth of a dog'. In an instant, simple visual language debunked design research. The dumbed-down concern was whether such an important design conversation at a strategic level would lead the Spotted Dog, or architecture, towards Venturi's hotdog-shaped hotdog stand. Did we need to adjust the visual language according to the observer? Some weeks later, we re-presented the proposal, changing only the means of representation. We hand drew it in the 'clear line' style of Hergé – a graphic technique so seductive that the city's identity was subjugated to

the style. Context disappeared. Consent granted.

A hand drawn line can render visible something of the action that gives rise to it, so human qualities can be attributed to them; CGIs are outsourced so the architect no longer creates or controls the image. Further, creating a unique digital drawing identity is increasingly difficult, given generic libraries, elements and texture maps. So, if architects forsake the highly accessible hyperrealism of the digital render, what new forms of drawing techniques could come into play? Structural engineers, for example, still use the sketch for fast, lucid communications. Since modernism, brand identity in architecture has been established through drawing so perhaps it's time to trade pixel resolution for a greater conceptual revolution! That is, continue to embrace and experiment with drawing tools that allow you to develop a proposal beyond mere 'hyperrealism'. To that end, our Spotted Dog project was further developed using kids' game Minecraft. ●

Anthony Hoete is founder, WHAT_architecture

Books

Buy at ribabookshops.com



New Chinese Architecture: Twenty Women Building the Future

Austin Williams. Thames & Hudson. 256p HB £29.95

It might be enough to turn out a book on 20 new architects practising in China but author Williams, honorary fellow at XJTLU University in Suzhou, China, has gone one better and brought out a book on 20 female architects. With the acknowledged assistance of a team of female helpers, the book offers an engaging snapshot of their output across China at a variety of scales. After a short dedication to Zaha Hadid and introduction from Williams positioning the rise of women in the Chinese construction world, the book devotes the rest of its pages to the individual practitioners. Given that this is a showcase text, expect little by way of critical thinking and a lot of sexy photos – here delivered in spades. But overall it is an inspiring read, illustrating the breadth of imagination and style coming from the current generation of China's architects.



Neighbourhood Planning in Practice

Gavin Parker, Kat Salter and Matthew Wargent eds. Lund Humphries. 160p HB £29.95

Part of a series of 12 'Concise Guides to Planning' by experts in the field, first impressions of this book promise much. Like all in the series, it has a captivating front cover design. The foreword states the objective – to guide professionals and lay people alike through simply navigating the Neighbourhood Planning maze. But broken down into nine chapters, the layout and graphic style of the book seem to achieve the exact opposite. Poorly illustrated with black and white images and with little by way of tables or graphic illustrations, impenetrability pervades. This extends to the text, which seems to emulate the style of the very planning documents readers will have to interpret. There's no doubting the skills set of the authors – all professors at Reading University's Henley Business School – but this seems to be an example of the message being lost in the medium.



Rescue and Reuse: Communities, Heritage and Architecture

Merlin Waterson. Ian Morrison ed. RIBA Publishing. 166p HB £40

There are important examples here of UK properties that have benefited from the kind of sensitive restoration that Waterson, a former director of historic properties at the National Trust, promotes. Its 10 well-illustrated themed chapters contain case studies on Granby Four streets, Devonport Town Hall, Porthmeor Studios in St Ives, William Morris' Kelmscott Manor and Richard III's tomb. But despite the specificity of case study, there is an unsatisfyingly general approach. Part of this could be the lack of information on the technical challenges that presented themselves in each case; secondly, despite their re-use, there is a non-critical view that ignores the gnawing sense of a 'Disneyfication' of our historic landscape. The author might argue his book on saving buildings under threat is not the place for addressing this; but if it's not, where is?

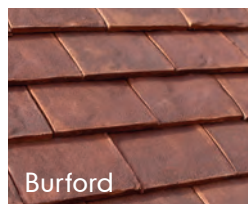
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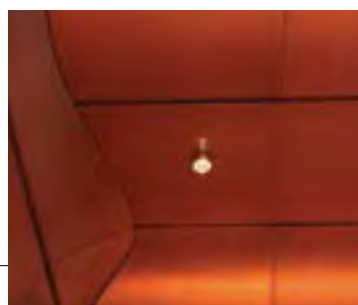
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PAUL OTT



Above Light fixtures accord with the copper theme.

Right Flat wall elements were assembled on a galvanised metal frame.

Below The curved plasterboard 'mould' is the substrate for the copper.

Left Complete, the surfaces seem continuous.

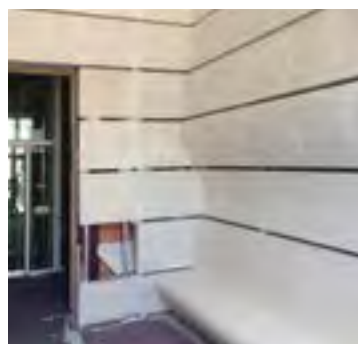


IN DETAIL

According to Ebner, the most interesting technical aspect of the job was the process of arriving at a workable solution.

An original plan to use a thin layer of copper on the walls had to be abandoned when the sheets deformed in tests. 'Working with such a malleable metal, we had to think about potential damage from bumps and bangs, as part of the long term maintenance strategy for the room. This led to the idea of removing individual panels to replace the copper without having to take the whole thing down,' says Ebner.

Each panel is roughly 600mm high, 3m long and up to 300mm deep and can be removed by hand without the need for any specialist equipment.



Copper-lined interior

What: Copper internal linings

Where: Lenbachplatz townhouse, Munich

An entrance room with copper walls, ceiling and floor adds a splash of baroque-inspired bling to the inside of this art nouveau-style townhouse in Lenbachplatz central Munich.

The burnished interior, by architect Peter Ebner and Friends, draws on the local historic vernacular, including beer tanks in local breweries and angled copper roofs, but the sensitive material posed serious design challenges around buildability.

The client, property developer Freiherrliche von und zu Guttenberg'sche Hauptverwaltung, a business run by the family behind the world's first printing press, wanted 'an exceptional entrance' for the building, which was built in 1904 and rebuilt inside after significant bombing in the Second World War.

Ebner drew inspiration from ornately-curved German baroque ceilings and the traditional use of copper to roof buildings in the

region. Copper beer tanks, often glimpsed through the windows of Munich's many historic breweries, added to his fascination with the metal, he told RIBA: 'Whenever I passed by I thought they looked so beautiful; copper makes such a lovely warm reflection.'

The client was convinced of the material's merits, but enthusiasm turned to trepidation when the architect learned of its limitations. 'I spoke to the head of architecture at a leading consulting engineer and he said 'Peter, don't do it! We've had a lot of difficulties with copper, it's really tricky to handle.' When workers hold copper sheets, acid naturally-present on their fingers can stain the metal, and thin panels can easily deform. However, the client's mind was made up, so we had to spend a long time figuring out a workable solution.'

The chosen approach was to fabricate a curved support for the rippled copper walls in situ, then dismantle it in sections and transport it to the metal fabricator's workshop to use as a mould for the outer layer of copper.

The construction company built the support in horizontal bands (the design picks up on horizontal historic elements on the facade in an effort to unify the building's interior and exterior) on a wooden frame filled with fireproofing and covered by a layer of curved plasterboard.

The panels were first 'montaged' together on the walls, then 'dismantled' to transport to the metal maker to press on 2mm-thick sheets of copper supplied by 3M. Rather apply a protective lacquer, the client agreed to polish the walls several times a year to retain the natural unfinished aesthetic.

According to Ebner, great skill was required to form the copper over the panels without deformations and to maintain the illusion of a continuous curve across multiple panels.

To create the floor, the copper sheets were glued direct onto the concrete slab in a layer thick enough to prevent curling at the corners. A transparent liquid protection was painted on to prevent scuffing and must be reapplied every two to three years. ●



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The most important consideration when installing a wet room is ensuring there is no possibility of leaks. Kerakoll has the problem covered

Specifying Kerakoll's Laminat No Crack Waterproofing system allows wet room floors to be waterproofed fast and effectively even when the screed is cracked or has residual moisture. It is safe for foot traffic immediately, allowing other trades to finish off without having to wait for the floor to dry.

A layer of Biogel No Limits or Revolution is applied between any suitable screed and the Green-Pro membrane to create a bond between the membrane and the screed. Next, Aquastop Fix is used to install Aquastop 120 waterproofing tape which is applied to the joins in the Green-Pro membrane and around edges and corners to ensure water-tightness. Aquastop Fix is a waterproofing product which uses nano-technology to make the membrane totally water-repellent and give it high chemical stability.

There is no need to wait before laying coverings on top of Aquastop Fix, so tiles installation can proceed promptly, using Biogel No Limits or Revolution to create a secure adhesive bond between the tiles and membrane,

The wet room walls can then be waterproofed with Nanodefense Eco, a single component waterproofing product that has very low VOC levels. It is applied with a roller directly on to the levelled walls and any joints are taped with Aquastop 120 before tiles are affixed with Biogel No Limits or Revolution. Fugabella Eco Flex grout is used to grout the joints and Fugabella Eco Silicone to fill the movement joints for both walls and floors.

The Green-Pro Membrane

The Green-Pro membrane is composed of three layers – the first has hydrophobic PA fibres which ensure a secure bond with the tile adhesive as well as restricting water movement in the adhesive, the second is an HDPE waterproof structure which bends with the movement in the floor and compensates for stresses caused by hygrometric shrinkage and cracks, and the third is a non-woven breathable fabric which allows vapour to disperse. Together these create an uncoupling mat that allows safe installation of tiles and stone over cracked and uncured screeds where waterproofing is required.

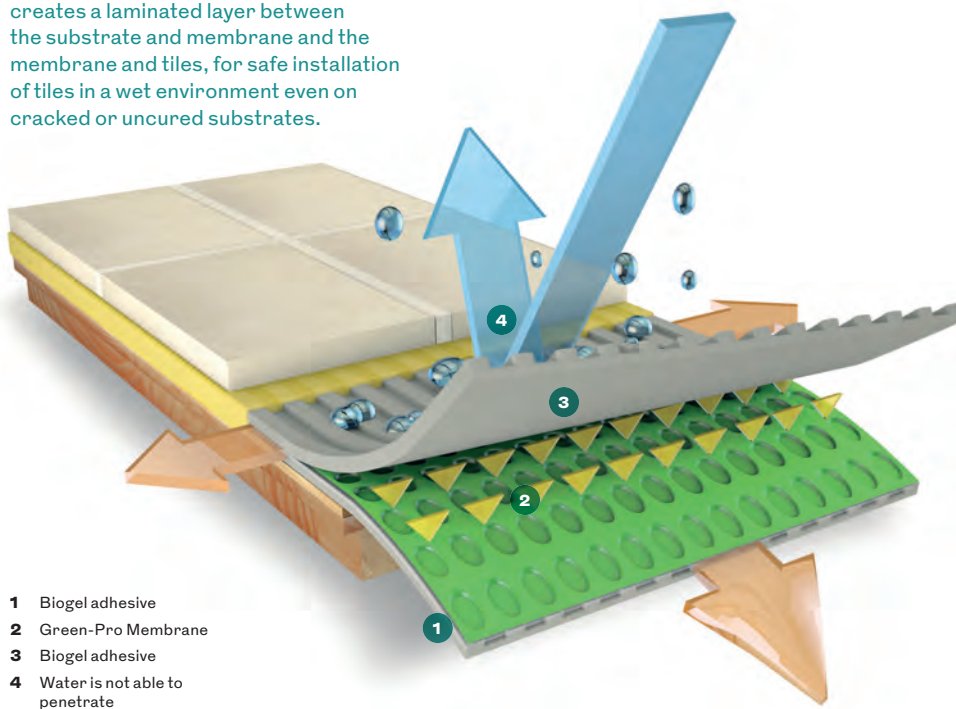
Technical advice and problem solving

Every project is different and it is important to take into account any particular issues that may be present. The best way to do this is to get the Kerakoll technical team involved at specification stage, so that the most suitable products can be chosen. It is also wise to ensure the team has been consulted in case an unforeseen issue should occur on site.

Below Applying Aquastop Fix and Aquastop 120 to joins in the Green-Pro membrane.



Below The Laminate No Crack Waterproof system: the Biogel adhesive creates a laminated layer between the substrate and membrane and the membrane and tiles, for safe installation of tiles in a wet environment even on cracked or uncured substrates.



- 1 Biogel adhesive
- 2 Green-Pro Membrane
- 3 Biogel adhesive
- 4 Water is not able to penetrate

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Skanderbeg Square, Tirana



Skanderbeg Square looking south west. Unifying various ministries and public buildings around it, the reinvented square is more monumental yet more humane than in its former iteration.

51N4E restores Skanderbeg Square as an imposing central civic space using ingenious hard and soft landscaping to create communal respite at the heart of the city

Words Jan-Carlos Kucharek Photographs Filip Dujardin





Top left The former square, despite its original civic intent, had been reduced to a glorified city-scale roundabout.

Right The enormous square is a subtle pyramid in section, generating trickle flows and establishing a new relationship with the buildings around.

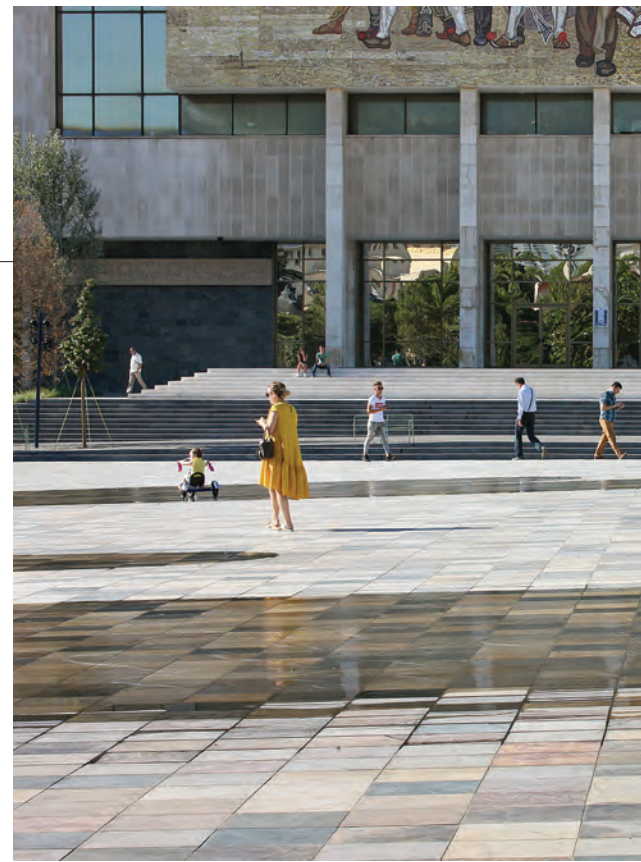
There is a reason why Belgian architect 51N4E's Skanderbeg Square landscape project in the Albanian capital of Tirana was one of the five projects on the 2019 shortlist for the Mies van der Rohe Prize for the best building in Europe. In the call for submissions to redevelop its main public space in 2008, then socialist city mayor Edi Rama's scoping letter of invitation was so visionary and erudite, connecting his spatial intentions for the city centre square to the wider cultural aspirations of the nation, that nothing less than a design whose scope embodied his ambition was ever going to be worthy of winning. Though the project was cancelled a year into construction in 2011 by a more conservative administration, that bold thinking saw it relaunched in 2015, when the deposed Rama returned as prime minister. During the hiatus 51N4E developed its ideas to produce a nuanced civic scheme of exceptional aesthetic and symbolic finesse, rightfully earning a place on the shortlist.

Formed as a country only a few years before WW1, Albania has lived under six regimes; three of which helped form modern Tirana. The Austro-Hungarians created Skanderbeg Square in 1917 but it was the Italian invasion under Mussolini in 1939 that generated the massive-scaled boulevards and neo-Renaissance facades. Post-war, the USSR made Skanderbeg its parade ground – accentuating the square's curious monumentality in this small city.

The 2008 competition aimed to arrest what the square had become in the post-Soviet years. Surrendering, in its new-found democracy, to

the hegemony of the car, Skanderbeg had become a glorified round-about at the heart of the city – albeit surrounded by key civic buildings from the intervening period, including the central mosque, National Library, state museum and opera house, and City Hall. Just before the competition a French masterplan had been partly carried out with a new outer ring road linking the radiating routes from the square. This released the traffic's stranglehold on the main public area but the bigger plan had been to build into the square itself in order to densify it.

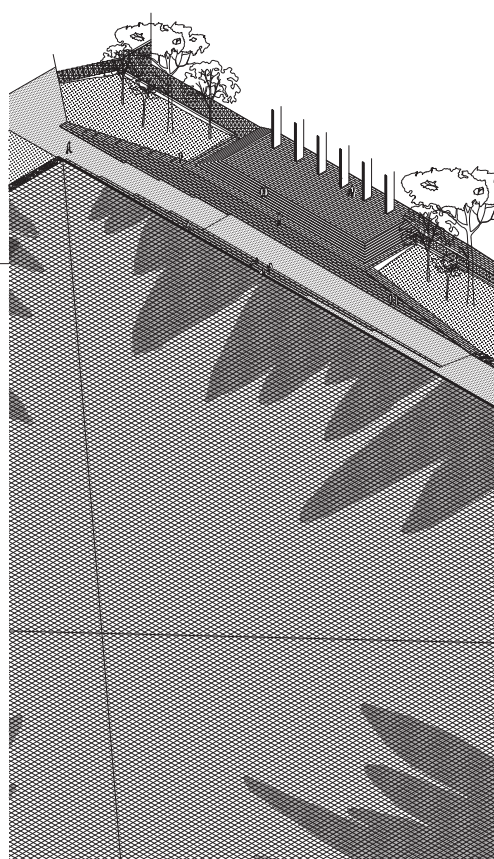
51N4E's winning proposal ran counter to all this, mindful of the unregulated density of development exhibited everywhere else in the city, and making the political decision not to play down the historical imprint of past regimes. 'We decided instead to celebrate the largeness of the square as well as acknowledge the different eras that are represented here,' says 51N4E project director Sotiria Kornaropoulou. 'We saw Skanderbeg Square as the focus of a pantheon of buildings showing what Albania had been and we thought it better to express that truth than to mask it.' Their re-imagining of the 168m by 146m square, constructed using indigenous stone, is screened by a curated landscape of existing and new trees and shrubs; 12 gardens simultaneously framing and connecting all the civic buildings that form the square's perimeter. With this 'fuzzy edge' of verdure adding 50,000m² to the square's 40,000m², in total the project has created the single largest public space in the Balkans.



'We saw Skanderbeg Square as the focus of a pantheon of buildings showing what Albania had been and we thought it better to express that truth than to mask it'

Site section showing the scale of the square as well as its subtle pyramidal form. The form allowed for more underground parking in this very car-dependent culture.





Left At the square's central apex, citizens are at eye level with the plinths of the former communist public buildings, rather than below them.

Below The landscaping was designed to be a fuzzy boundary between the stark geometry of the square and the city proper.



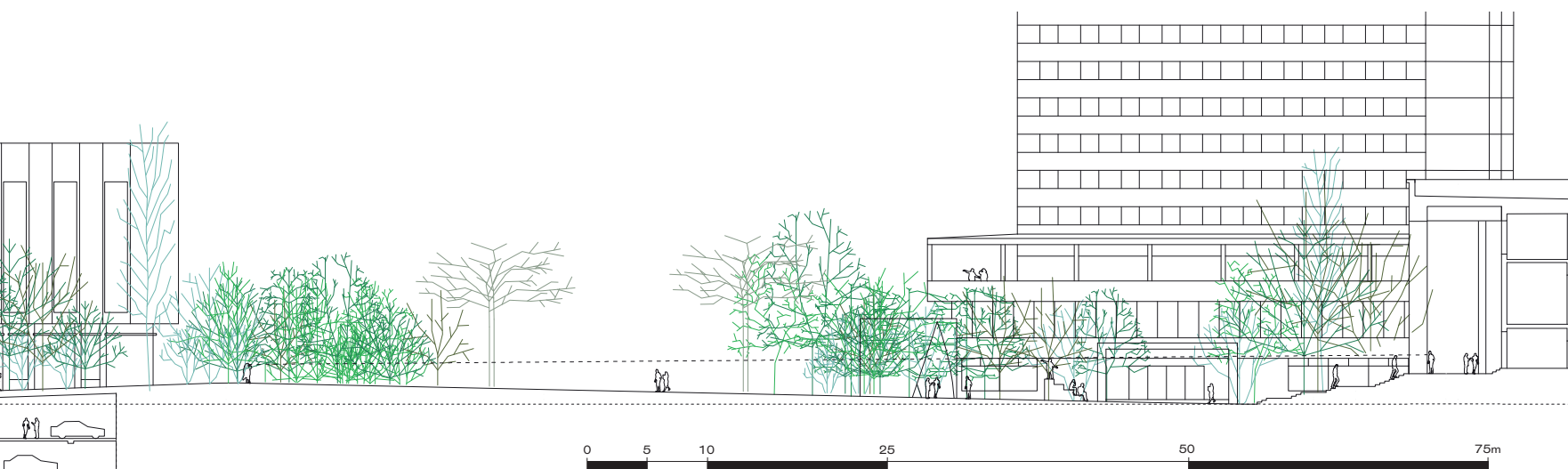
As Kornaropoulou explains, the proposal rested on three main ideas. As well as recognising the 'palimpsest condition' of historic and Soviet structures around, the soft landscaping was not merely to be infill between the old road and new outer ring road, but to have meaning and value in its own right; and lastly, stakeholder engagement in both square and garden spaces would give the civic institutions and citizens themselves a sense of ownership of the space.

The poetry of that democratic appropriation plays out in the design in many and subtle ways. 51N4E wanted this politically charged space to suggest 'soft power' and its design moves were

nuanced. For a start, the square is not flat, but a low pyramid that inclines to the centre at 3%. Kornaropoulou says this serves a dual purpose. Not only does it break down the visual scale of the square in one simple move, 'hiding' one half from view, but as citizens move towards the apex, the spatial power of the plinths on which the former Soviet edifices sit is negated. 'We saw it as a means of countering, de-monumentalising and discharging its totalitarian nature, allowing citizens to stand eye to eye with the public buildings around – to symbolically reclaim it as theirs,' she says. And the pragmatics of rationalising decades of ad-hoc utility runs under

the square aside, the firm justified the expense of shifting thousands of tonnes of earth by squeezing in another level to the underground car park.

The low angle did more than facilitate the drainage strategy of the square – a narrow slot drain running around the perimeter. Across it 100 trickle fountains slowly pump water over its surface. 'This too is a means of breaking up its monolithic surface through revealing the colour of the various stones as well as creating a cooling micro-climate for those traversing it,' explains Kornaropoulou. More than 30 stone types, sourced from small and redundant quarries all over the country were cut into 450 by 400





Left The trickle fountains not only reveal the lustre of the various local stones, but create a cooling microclimate in the Adriatic summers.

Below left Some existing structures, however basic, were retained.

Bottom 51N4E designed cheap, moveable furniture for the square in a conscious drive against the monumentality of fixed seating.



by 90mm tiles (a module of the square itself) in white, red, grey and green hues. As well as referencing the regional geology of Albania, it immediately positions people in the space, says the architect, with a colour shift in the stone palette apparent if you go from one corner to another. It is more noticeable when wet, what the firm calls 'an intimate moment with the stones'.

With the urban wilderness of the Paris Fondation Cartier as a guiding principle, 51N4E developed the perimeter landscaping to connect the existing civic functions and disparate paved areas with a belt of green of varying density; a 'spatial crescendo' of nature gradually experienced on approaching before the reveal of the vastness of the square beyond it. A 'buffer' and liminal point between the square and the city, the planting both renders the traffic

invisible and absorbs its sound.

Kornaropoulou explains that the illusion of depth was almost baroque. 'We wanted to create the sense of an urban forest and the trick to that was structuring the planting in multiple layers, with low and high perennial shrubs followed by trees.' The strategy, developed with Flemish ecological consultancy Plant en Houtgoed, was more akin to installing an ecosystem than mere planting. Biodiversity was addressed by treating each of the 12 gardens in front of the various institutions in a different way, according to their 'planting matrix', which varied the percentages of shrubs according to their specific position. The aim has been to create a garden that is low-maintenance, irrigated with a 'wadi' system and would naturally evolve over time. 'There was the intention that some species

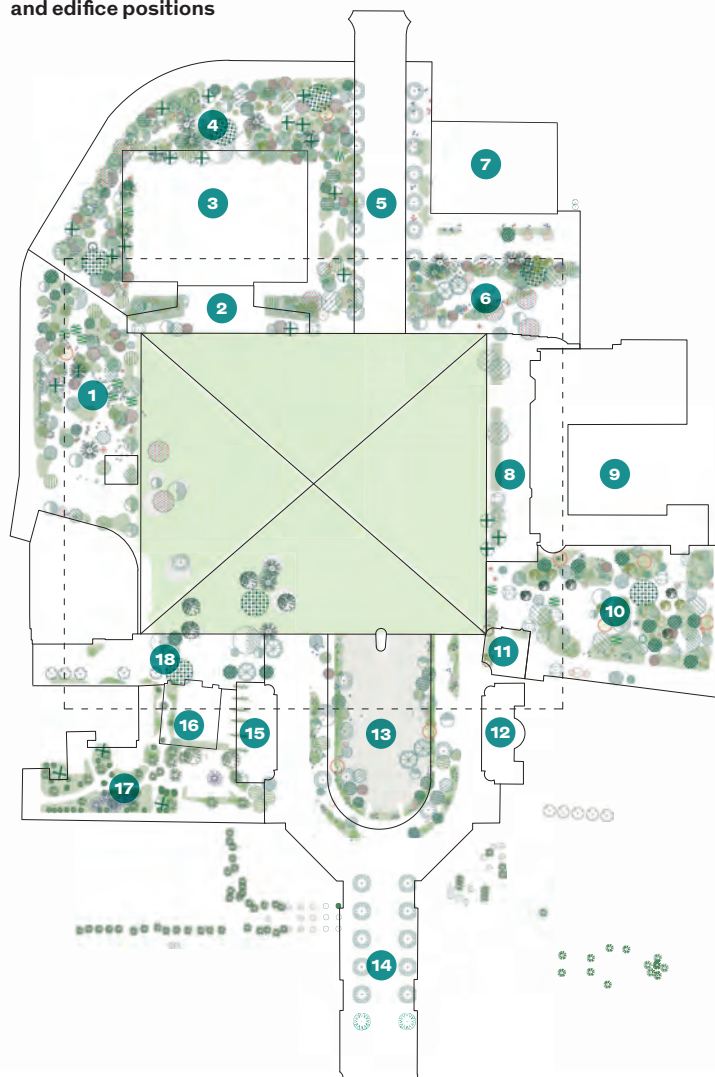
would deteriorate or even disappear while others will thrive and take over,' the architect adds. 'Much effort went into creating dynamic planting biodiversity that would be noticed as such as you moved around the perimeter.' Existing mature trees were left untouched within a circumference of stone planters ranging from 8-20m in diameter, some with bench seating installed within them, allowing them to be sat in as the angle surface of the square sails past them.

Each garden addresses a different civic building, adjusting to their specific needs, and required much stakeholder involvement. So the Tirana International Hotel created a terrace it could extend into for weddings and events, the National Library pushed for more seating areas for open-air readings and outside the National Museum jet fountains cater for families. Small pavilions, also designed by the architect, provide points for citizens to linger and engage. And connecting them all is a formal network of pedestrian and cycle routes.

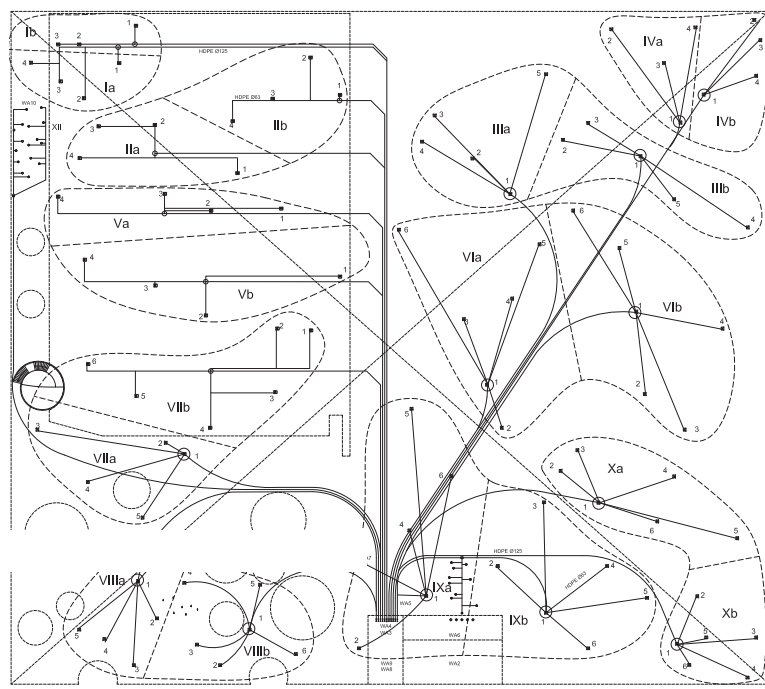
Nightfall reveals other strategies. Mostly low level lighting illuminates shrubs and trees in the green belt, with indirect dappled light only on the winding paths. Main routes approaching it are lit more intentionally, drawing pedestrians into the greenery: 'There are high flow sections and quieter areas and the lighting reflects this'. But the square itself is unlit. This is a deliberate act of 'not doing', and required the authorities to allay their fears and buy into the architect's vision of a caesura at the heart of the city. 'We tried to impress this idea on the city from the very outset; that the square should be seen almost as a lake in the centre of a park. That you could stand at its edge and look out in the dark to a kind of open horizon,' says Kornaropoulou. 'It is an area of rest at the scheme's centre, the surface water reflecting the illuminated buildings



Site plan of Skanderbeg Square with landscaping proposal and edifice positions



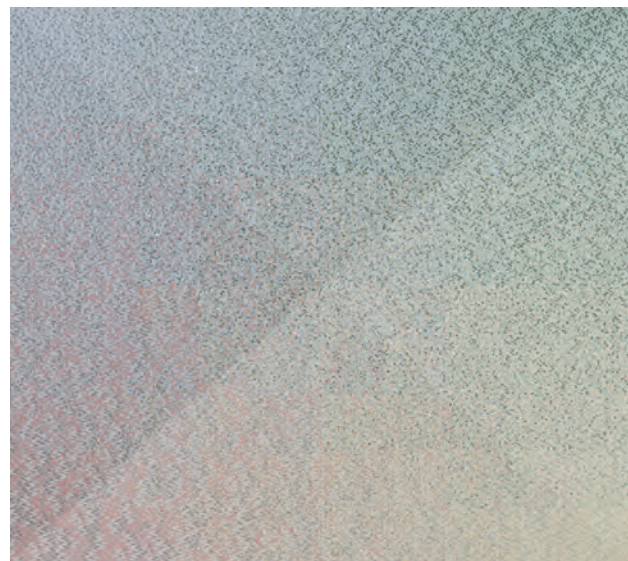
Fountain feed and drainage layout



Key

- | | | |
|--------------------|------------------------------|--------------------------|
| 1 City Gate garden | 7 Tirana International Hotel | 13 Sunken garden |
| 2 Museum staircase | 8 Opera stairs | 14 South Boulevard |
| 3 Museum | 9 Opera | 15 Ministry |
| 4 Botanical garden | 10 Book garden | 16 Puppet theatre |
| 5 North Boulevard | 11 Mosque | 17 Tropical garden |
| 6 Ceremony garden | 12 City hall | 18 Puppet theatre garden |

Stone layout showing colour gradation across square surface



on the other side. It's quite beautiful actually.'

And by day, people drag the 250 cheap, green metal mesh chairs that the firm designed from sun to shade and back. In a final gesture of anti-monumentality, 51N4E argued against fixed seating and allow users to sit where they want. Locally fabricated, the sophistication is in their dimensions: 'At 80cm wide, they are large enough for two people to sit together if you are familiar with them but too small for a stranger.' Appropriated by the city dwellers, they float daily like flotsam between the edges of the square and the shade of the trees; loose furniture in this poetic new living room for the city. ●

Credits

Client Tirana City Government
Architect 51N4E
Executive architect iRI
Landscape consultant Plant en Houtgoed
Building contractor Fusha
Fabric Chevalier Masson
Fountains Aquafontal, Gatic
Lighting Atelier Jeol
Structure Gentian Lipe



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Costed

AECOM associate David Holmes looks at costs for external works and drainage

External works or civil engineering design for external areas can be complex and sensitive. Strength, durability, cost and future-proofing all need to be considered. The requirements at different sites are rarely the same.

The Royal Institute of Chartered Surveyors' recently published New Rules of Measurement Part 3 (NRM3) gives guidance on external works, categorised as: site preparation works;

roads, paths, pavings and surfacings; soft landscaping, planting and irrigation systems; fencing, railings and walls; external fixtures; external drainage; external services; and minor building works and ancillary buildings.

Hardscape, or hard landscape, consists of the motionless non-organic elements of landscaping. They are unchanging, although they may be movable and adaptable. Hardscape might

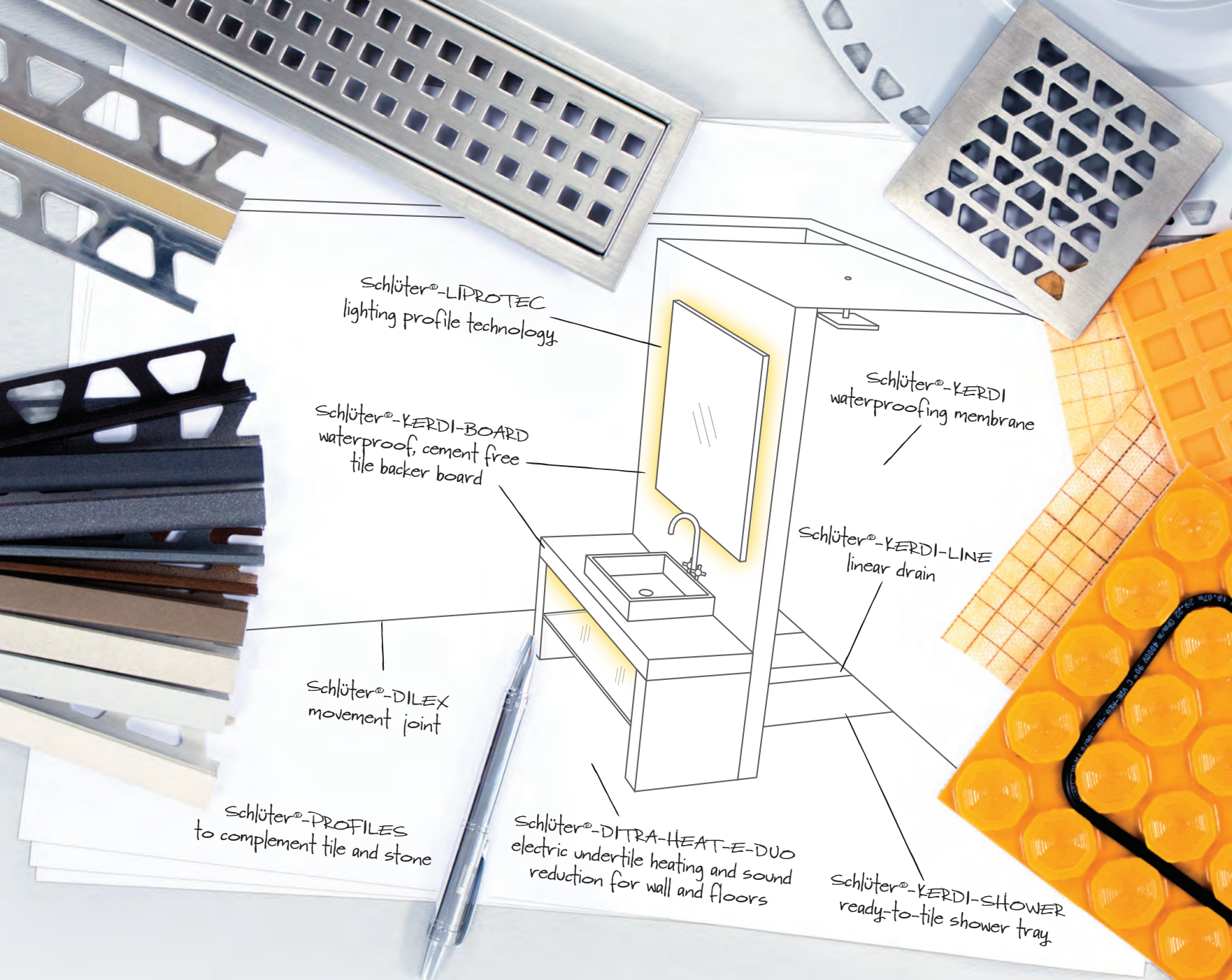
include walkways, walls, outdoor 'rooms' and performance areas, gazebos, fences and so on.

Softscape or soft landscape includes all types of plant life, from flowers and trees to shrubs and groundcover. It naturally changes over time, driven by the climate, time of year and other conditions. Consideration should be given to the amount of maintenance that these elements will require to stay in good order. ●

The rates below are a guide to landscape and drainage costs as at 2019 Q1. No allowance is made for sundry or related preliminaries. VAT is excluded.

Range	£/100m ²
Housing developments	
Housing cost models meeting minimum planning requirements or to maximise sales potential at economic cost. Soft landscaped space only space; planting: turf ratios as shown; planting sizes and densities as indicated; one tree of 18cm-20cm girth at one tree per 100m ² overall external area; mulch and watering after planting	
Landscaped area, turf and trees only; imported topsoil to turf areas at 50mm thick	1390-1590
Landscaped area 70:30 turf to planted area with imported topsoil to turf areas at 50mm thick	2440-2790
Landscaped area 50:50 turf to planted area; imported topsoil to turf areas at 50mm thick	2730-3120
Science and office parks	
Generally areas of more dense landscape incorporating relaxation areas and larger planting schemes; planting is generally more mature at implementation with larger trees; planting schemes often incorporate larger swathes of groundcovers to give graded views over landscaped areas; planting density and sizes are generally of higher standard than housing; soft landscaped space only space; planting: turf ratios as shown; planting sizes and densities as indicated; one tree of 25-30cm girth at one tree per 100m ² overall external area; mulch and watering after planting	
Landscaped area, turf and trees only; imported topsoil to turf areas at 50mm thick	1650-1890
Landscaped area 70:30 turf to planted area with imported topsoil to turf areas at 50mm thick	2730-3120
Landscaped area 50:50 turf to planted area; imported topsoil to turf areas at 50mm thick.	3050-3480
Civic environments and streetscape	
Civic and public areas in the current climate encompass higher quality surfaces for public access. Planting is generally larger. There is a need for furniture and lighting	
Civic town centre area of paved open space; model area 500 m ²	
General open area; one 30-35cm trees with root cell planting system every 400m ² ; metal tree grid; one bench per 200 m ² and one bin per 500 m ² ; granite kerb surround	
Heritage concrete slab paved	17,330-19,800
Granite paved	21,000-24,000
Granite paved with stepped terraces. Three steps of 10m long each in an area of 500m ²	24,680-28,200

Range	£/m ²
Living wall; Design and installation of planted modules with automatic irrigation systems	
Fabric based systems; indicative area rates as shown	
Wall up to 20m ² /50m ² /100m ² /150m ²	660-755 / 515-590 / 495-565 / 480-545
Surfaced areas	
Parking; block paviors 80 mm thick	80-100
Pedestrian areas, 100 mm thick concrete	60-75
Modular grass concrete paving, 100 mm thick	77-97
Resin bonded 1mm-3mm golden pea aggregate pathways	77-96
Parking; macadam base and wearing course (bay 2.5m by 5.5m)	900-1200 per bay
Drainage	
Access chambers	
Excavate inspection chamber; concrete base; half section pipework and benching	
Engineering brick inspection chamber 600x400x1000mm deep	nr 460-560
Polypropylene inspection chamber, mini access chamber 600mm deep	nr 340-410
475mm dia x 900mm deep; ductile iron cover with screw down lid	nr 600-675
Drainage pipe, excavate and lay:	
100 mm diameter upvc pipes over 1.0m deep	51-65
150 mm diameter clay pipes over 1.5m deep	90-110
300 mm diameter concrete pipes over 2.5m deep	170-210
150 mm diameter cast iron pipes over 1.5m deep	190-240
Street furniture	
Road signs; reflected traffic signs 0.25m ² area on steel post	nr 130-175
Road signs; internally illuminated traffic signs; dependent on area	nr 210-280
Lighting to pedestrian areas on estate roads; 4m-6m columns with up to 70W lamps	nr 260-325
Lighting to main roads; 12m-15m columns with 400W high pressure sodium lighting	nr 700-950
Benches; hardwood and precast concrete	1200-1800
Litter bins; bolted to ground	
precast concrete/hardwood slatted	nr 200-245 / 200-245
cast iron/large aluminium	nr 410-490 / nr 610-740
Street planters: Supply and locate in position precast concrete planters; fill with topsoil placed over	
50 mm shingle and drainage mat; plant with assorted 5 litre and 3 litre shrubs to provide instant effect; 700mm dia x 470mm high; white exposed aggregate finish	
	each 1000-1500



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PiP specifieds are compiled from supplied company press releases

Specified



1 Wade concealed drainage channels Alumasc Rainwater

House of Commons escapee Tristram Hunt sits in his William and Mary wing chair, and strokes his massive jade desk tiger absent-mindedly. 'You know, Shere Khan,' says Hunt as he surveys the ornamented vastness of his domain, 'Here I sit, in the bone-dry sanctum of the V&A, the heaviest rainfall invisibly spirited to hidden drains by our Alumasc Wade HCE drainage channels, while the Commons' indoor moistening would have shorted my circuits and revealed my cyborg origins in the flash of an environmentalist's nipple. My secret is safe... for now.'

alumascwms.co.uk

2 Diamond Premier trellis Jacksons Fencing

A Mrs Trellis of North Wales has written in to I'm Sorry I haven't a Clue chair Jack Dee to recommend the timber landscaping products of Jackson's Fencing. 'I was pleased to learn that Jackson's have chosen to name a product after me,' writes Mrs Trellis, 'but while I am flattered to be called "a diamond" and "premier", I am insulted to be described as "1.83m wide excluding wings". My weight remains worryingly high despite an imposed low-carb diet, and I have never once set foot inside a bingo hall.'

jacksons-fencing.co.uk

3 Stone Facing Haddonstone

CALIBAN'S SPEECH, 2019 EDIT: 'Be not afeard; the latest Qatar isle is full of Haddonstone, A thousand tonnes of ornaments and follies, that give delight and hurt not. Oft a thousand twangling cast-stone water features will hum about mine ears, and oft voices That, if I then had wak'd after long sleep, Will make me sleep again: and then, in dreaming, The clouds methought would open and show balustrades Ready to drop upon mine head that, when I wak'd, I was pretty relieved 'twas but a dream, really.'

haddonstone.com

4 Accoya wood decking Accsys Technologies

[DERVLA KIRWAN SMOULDERS TO CAMERA, SLIPS TAPE INTO SONY WALKMAN AND PRESSES PLAY. CUE HAMMOND ORGAN] [DERVLA, SULTRY] Over 1,300 linear metres of Gripsure non-slip decking, lovingly sliced into 4m lengths... Bespoke resin characters routed in... Acetylated timber, dimensionally stable, resisting rot, defying elements, and guaranteed in fresh or groundwater for 25 years... With C2C and FSC accreditations, and a 50 year above-ground guarantee... This isn't just decking. This is VOICED BY DERVLA KIRWAN decking. Go on, eat some. Eat it now.

accoya.com



Below Jakoustic®
Reflective with
bespoke timber
I-beams, London.

How does acoustic fencing work?

Jacksons Fencing has ways to keep noise out – to improve communities

It's becoming increasingly difficult to escape from noise pollution. Cities and urban areas are getting more densely populated and more housing developments are being built close to major transport infrastructure. Furthermore, our need to shop 24/7 has created its own set of noise problems, with extended retail opening hours and deliveries round the clock.

Noise pollution has been linked with chronic stress, hearing damage, hypertension, diabetes and even heart problems. To protect the public, a simple solution is to install acoustic fencing that either reflects or absorbs unwanted sounds, reducing the impact of environmental noise.

Acoustic fencing and the science of sound

To understand how acoustic barriers work, we first need to look at the science of sound travel.

In free space without any reflective surfaces, sound propagates or radiates spherically. When a ground plane is introduced, sound propagates hemispherically. In virtually every application for a noise barrier, at least one principal reflective plane will be present from which sound will be reflected.

In a situation such as road traffic, sound has two basic ways of getting from one side of a barrier to the other:

- Transmission through the barrier
- Diffraction over or around the barrier

Knowing how sound travels allows the laws of physics to be applied in the design, construction and location of barriers to mitigate the effects of noise.

The effectiveness of noise barriers

A noise barrier's effectiveness depends on a number of key factors:

- Material density
- Barrier construction
- Barrier height
- Distance from noise source to receiver
- Relative height of source and receiver with respect to the barrier.

In general terms, a noise barrier should be



Left Jakoustic Reflective, Faversham Linen Services, Faversham.

Below Jakoustic Reflective, McDonalds, Tonbridge.

high enough to break the direct line of sight between the noise source and the receiver. It should also be constructed with no air gaps to prevent noise penetration through its structure and have sufficient mass to reflect noise. Additionally, the barrier should be flush to the ground to prevent noise creeping under it.

Acoustic barriers are generally available in:

- Timber

Probably the most cost-effective and flexible solution that can be adapted to suit most ground conditions and contours.

- Steel and aluminium

Barriers are relatively costly and need to be well supported if they are to avoid the 'drumming'

effect from their surface from noise vibration.

- Plexiglas/Perspex/Acrylic

These can be highly effective and do allow for light and visibility; however, they need to be kept clean and it's difficult to maintain the integrity of their acoustic properties.

- Earth bunds or berms

Perhaps the oldest form of acoustic barrier, these are highly effective in situations where soil and plant are readily available. They do, however, require a lot of space.

- Combination barriers

The materials above can be combined to suit particular applications, aesthetic considerations or topography of the site, which may result in a less cost-effective solution.



Acoustic solutions from Jacksons Fencing

Jacksons Fencing manufactures timber acoustic barriers, opting for high performance and adaptability. There are two types of timber acoustic barriers that deal with unwanted noise: reflective and absorptive.

By default, a noise barrier without any added absorptive treatment is reflective. Reflective barriers are the most commonly used type, where sound waves meet the barrier and are redirected away from the protected area.

For noise issues within a confined space where noise reflection could pose additional problems, an absorptive barrier is the best solution as it soaks up a high percentage of sound into its structure, rather than reflecting it in a different direction.

Reflective and absorptive barriers are suitable for different sites and their individual needs, with neither being 'better' than the other. Jacksons Fencing recommends a qualified sound engineer is consulted before a product is specified; a professional acoustician can provide a detailed report to help you make an informed decision.

Jakoustic® Reflective Acoustic is an attractive timber structure that reflects noise away using heavy section-planed boards. This high-privacy barrier is constructed to eliminate gaps and has the ability to reduce noise by up to 28 decibels. It is suitable for residential properties, commercial properties, construction sites and sports venues.

Jakoustic PLUS Absorptive fencing has an additional absorptive layer covered with a mineral Rockwool fibre and a protective membrane, reducing noise by up to 32 decibels. It's ideal for applications where a noise source is in a confined area surrounded by other reflective surfaces, such as commercial properties, industrial sites, railways and residential settings. ●

Jacksons Fencing

For more information or help with specifying acoustic fencing for your site, visit www.jacksons-fencing.co.uk/acoustic or contact acoustic@jacksons-fencing.co.uk

Modular booms as architects meet their makers

As the skills shortage, housing crisis and growth of build to rent drive growth in factory-made housing, architects and manufacturers are cuddling up

Words: Josephine Smit

It is now almost 80 years since the Housing (Temporary Accommodation) Act enabled the construction of the post-war prefab, but controversies and concerns about building a home in a factory have run deep ever since. While practically every other item we buy rolls off a production line, housebuilding's transition to the factory remains, for many reasons, problematic.

Architects have been part of that story, unsure of their relationship with manufacturers, and the impact of standardisation on their role and input. But they have also demonstrated manufacturing's creative potential – think of Cartwright Pickard's Murray Grove in Hackney or Rogers Stirk Harbour + Partners' Y:Cube studio homes for the YMCA.

Now things could be changing, for both offsite housing development and architects. With a skills shortage, a push from government and impetus from the build to rent sector, manufacturers and offsite schemes are growing and a few housebuilders, like Berkeley Group, are setting up their own modular factories. Now, says Darren Richards, managing director of offsite consultant Cogent Consulting: 'Architects are moving beyond being fearful to viewing this as an opportunity – and seeing they can still have an impact on design.' That offsite opportunity is evolving as the market develops, with designer-maker alliances forming to deliver serial projects or branded house concepts. These new relationships can change the way architects work.

Going large

The student accommodation sector has helped to give some architects an edge in offsite experience and learning, which is now being applied to urban apartment schemes, notably for the private rented sector (PRS). But still relatively few practices have in-depth knowledge of how to work with manufacturing, believes Richards, whose firm helps develop understanding between clients, their design teams and manufacturers.



Left Studio RHE's CLT nHouse: 100m² volumes produced in tandem with Lesko Modular.

Architects have much to learn, says Richards. 'At an engineering level, there is a need to understand the difference between a real standard component, and one that you think is standard, but actually isn't. Inefficiency manifests itself in cost. There's a need to understand how manufacturers sequence components and labour, so that when they push back against something, you understand why.' Architects can add value by focusing on key areas of the building, he adds. 'Layout, massing and so on are fairly mechanistic. Architects can really earn their money in the design of facades and common areas, as well as in creating efficient circulation space, which is key for build to rent.'

HTA is one that seized the offsite opportunity early. It gained expertise through long

relationships with manufacturers, including Vision Modular Systems, with whom it is working on schemes at 101 George Street in Croydon and Greenford Quay. These are both being built to rent for operator Greystar, and the PRS sector is providing a boost to market perception and industry practice, says HTA partner Rory Bergin. 'It has a business case and is demonstrating this works. As the rest of the industry follows, that will help get offsite embedded in the residential sector.'

These are big projects, with 546 homes in two connected towers, 38 and 44 storeys high, at George Street, and 379 at Greenford Quay's first modular building alone. The architect focused on the urban apartment market partly because of that scale. It has also fostered relationships that go beyond project design, explains Bergin. 'We work with manufacturers on the development of systems and products – and meet them regularly to talk about the market.' As he says,

DIRK LINDNER

usefulness and value work both ways.

Today, around a third of the practice's projects are already using or are destined to use large-scale manufacturing – whether pods, modules or panelised systems. Bergin estimates that three quarters of staff working in its architectural team have now gained experience of working with these approaches. 'We know what to look for and what to avoid, like buildings that don't stack,' says Bergin. Manufacturing homes involves a trade-off, he adds. 'It's more efficient, will be cheaper in future and is less environmentally damaging, but to make it work there are simple rules that you have to be rigorous in applying.'

For the architect, the design and production drawing process can be intense. 'Once we have a production date in the factory we have a time limit,' explains Bergin. 'We have 150 people in a factory who wouldn't be able to do anything so we have to get the design work done and clients have to make decisions, all in time. That can be stressful.' Even details like bathroom taps must be decided before homes are made, but the upside is that the more routine elements of the design are streamlined. 'You don't have to design 27 apartment typologies or detail 57 bathrooms,' Bergin continues. 'Once you get the building figured out, you get more time to spend on the façade and the visible side, so our best buildings have rich façades.'

Repeating the house

At the other end of the development scale, the interest in offsite for houses spans the tiny, the temporary and the more conventional suburban family home. A number of architects have produced house concepts for developers or manufacturers, like Cube Haus' alliance with David Adjaye and others. Taking a different route, Studio RHE director Richard Hywel Evans has established a modular housing company, nHouse, with Nick Fulford, its chief executive.

The nHouse concept grew out of Hywel Evans' own Suffolk self-build, which had a glulam frame and cross laminated timber (CLT) infill. 'The ease with which it went together was a joy,' he recalls. He also drew on learning from the practice's work with manufacturers on larger-scale projects, such as the Import Building at the Republic office campus in London Docklands.



Left HTA's 101 George Street, Croydon, for operator Greystar comprises two towers and 546 homes.

'As an architect we are used to designing a one off – not something to be repeated 700 or 800 times. Any design needs to be enduring'

With the help of crowdfunding and a partnership with manufacturer Lesko Modular, the company launched a prototype house just over a year ago and is now working with customers to bring through the first projects. The first nHouse model was a three bedroom house with 100m² of internal space, which Hywel Evans describes as four boxes. 'The hard part in designing it was to get the boxes rigid enough for a crane to pick up, and to avoid over-specifying them to keep them affordable,' he explains. Another key challenge was the aesthetic, he adds. 'As an architect we are used to designing a one off – not something to be repeated 700 or 800 times. We can create an innovative design, but you have to bear in mind that when repeated it would age. Any design needs to be enduring.'

The business now offers two to six bedroom house models, and an apartment option. And in another manufacturer alliance it has worked with Pepper Kitchens for the homes.

Developing the product range and securing its essential approvals and accreditation has been time-consuming, occupying precious staff resource. But the transfer of knowledge between the embryonic business and the practice's commercial projects continues to be fruitful, says Hywel Evans, feeding into projects like The Gramophone Works in London's Ladbroke

Grove, another project using CLT. 'Having had a team on nHouse for 18 months has been very useful in increasing our understanding of the strengths and weaknesses of the material, and particularly how connections work.'

In fact, Hywel Evans believes it has changed the way the architect works. 'We are so used to being close to a manufacturer that a conventional relationship seems strange now. The in-house learning makes us better at what we are doing. Without doubt, we're well placed because of our exposure to systems.' And the nHouse venture looks to be taking off, with a string of enquiries, the first home delivered to a site in Wales this spring, and the potential for around 20 more this year.

Partnering with a manufacturer is the only way the firm could have taken the nHouse concept to this point. Fulford points out: 'The government wants us to set up factories, but you would need about £5 million to do that.' A newcomer to housebuilding, he believes a shift to modular is long overdue: 'We know how to make great houses and we know what people like. With homes, we are basically making products, and we have got to get to the point where we have market variety for consumers.'

This will mean change for architects, he argues: 'The house has still got to be in its environment, so there is always the need for the specialist skill, but we don't need as many architects designing houses.' Cogent's Richards says such a future may be a long way off, but could happen. He points to the fact that already manufacturers are bringing architectural technician skills in house. 'That's happening because clients are pressing them for turnkey contracts – their view is why should I have a lot of different suppliers?' he says. 'There is a need to embrace – or get left by the wayside.' ●



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Royal College of Pathologists, London

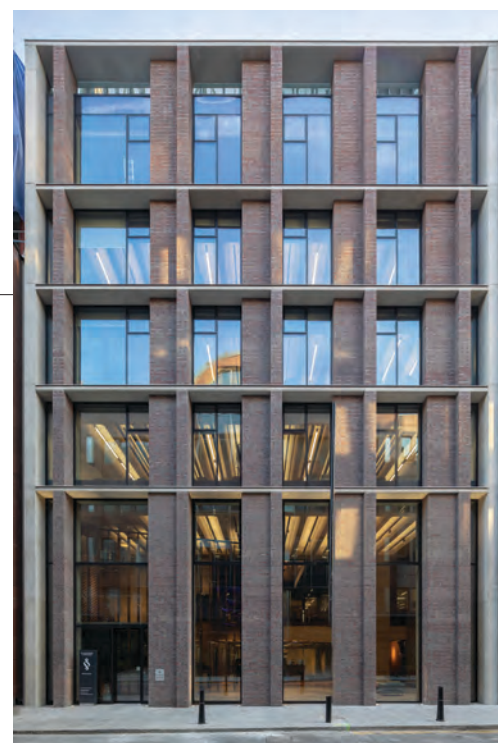


This page Concrete soffits, board-marked concrete, concrete screed floor and waxed steel: it's a far cry from the Royal College of Pathologists' former home in Carlton House Terrace.

Above right A simple brick and concrete facade is the embodiment of restraint.

Pathologists got used to living with well crafted elegance in their Nash-designed HQ, and Bennetts sustains that at its new east London home

Words: Pamela Buxton Photographs: Peter Cook



Members of the Royal College of Pathologists may get something of a surprise when they visit the institution's new headquarters in the East End of London for the first time. With an interior showcasing exposed board-marked concrete, brick and waxed steel, it's quite a contrast to the College's previous Nash-designed Carlton House Terrace home in the West End.

Not that this should be a problem, since the £16.9million building, designed by Bennetts Associates, is a triumph of well-crafted, contemporary elegance. And in this, the flooring plays an important part, from the polished concrete of the reception through to the extensive use of solid walnut. Both are key components of a pleasing and rich material and colour palette – you'd be hard pushed to find a white surface anywhere.

When the college decided to sell its lease and invest in a new London headquarters, it turned to Bennetts, which had completed several projects at its previous grade I-listed home over the years. The new location was occupied by undistinguished 1980s offices within a terrace close to Aldgate. With low floor-to-ceiling heights and a floor plan riddled with columns, the po-mo building was not suitable for a retrofit. Instead, Bennetts retained the foundations but designed a completely new eight storey building, providing 4,500m² of accommodation – an increase of one third – with a layer cake of uses including members' facilities plus learning, events and hospitality accommodation below three floors of office space. At the top, a set back pavilion creates terraces for events as



Left The waxed steel stair is a monumental sculpture within the main volume.

Above Steel is softened with timber treads and handrails.

well as housing a modest apartment for overnight accommodation.

Sustainability was the priority, and for that the building required clear floor spans to adapt to future needs.

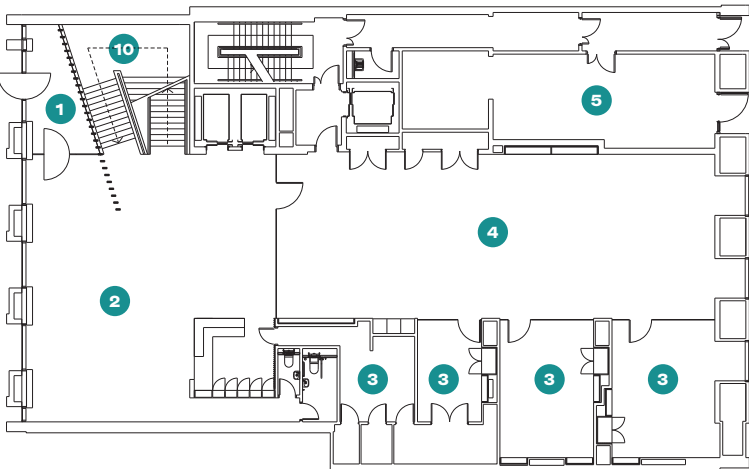
'A Royal College is a serious organisation so the new headquarters needed a sense of gravitas. But it also had to be contemporary and flexible in order to be suitable for the next 100 years,' says director Simon Erridge.

Externally, the sober front elevation is, he says, a 'classical facade in brick' with the double-height entrance atrium clearly expressed and brick piers reaching the full height of the facade. The rear is less formal, with bays creating shading and angling views over the square.

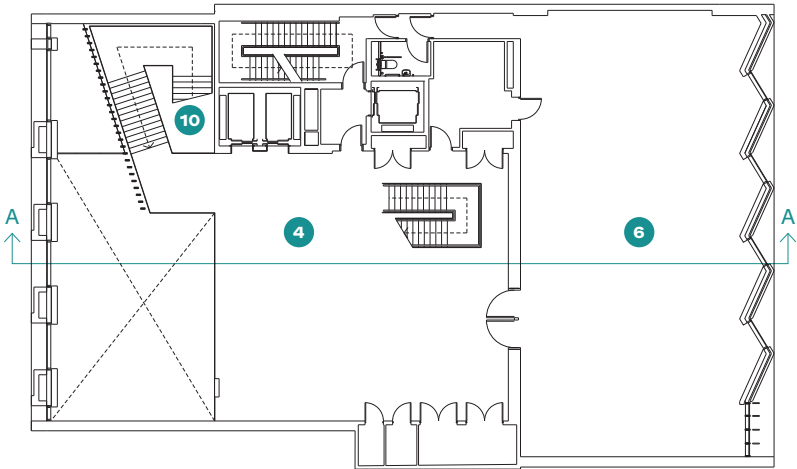
The site footprint was, at 30m, quite deep in relation to the 20m width. Rather than incorporate a central atrium to funnel light deep into the heart of the building, Bennetts cut into the edges of the plan from either side through the creation of double-height spaces to bring light further into the building. These include the impressive concrete, brick and walnut reception area and a triple height space at the rear of the third floor.

Visitors step onto a polished concrete screed, made by concrete flooring specialist Lazenby in a light natural standard mix. This is the first taste of a material that is very much the essence of the project. For both the structure and

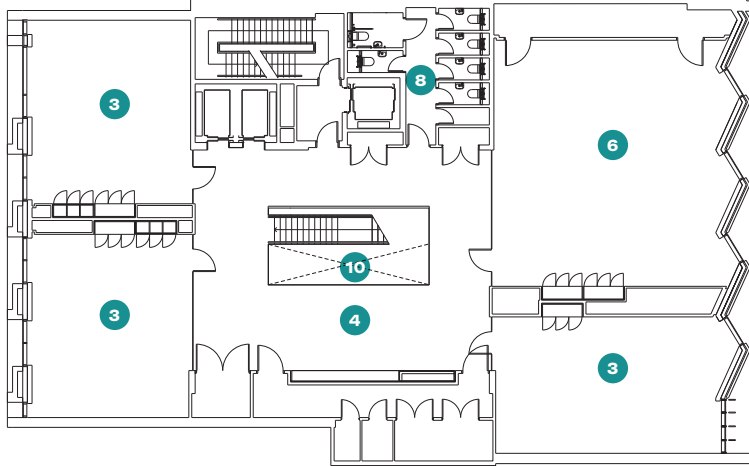
Ground floor plan



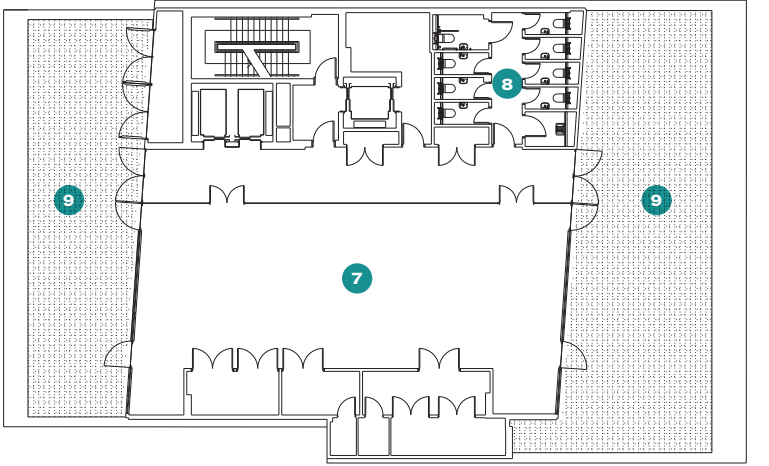
First floor plan



Second floor plan



Sixth floor plan



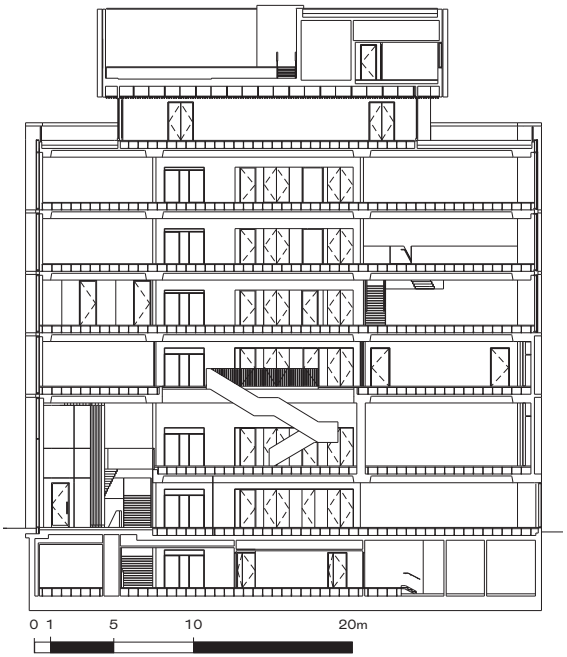
- 1 Main entrance
- 2 Reception lobby
- 3 Meeting room
- 4 Open plan members' area
- 5 Archive/storage
- 6 Lecture hall
- 7 Committee room
- 8 Toilets
- 9 External terrace
- 10 Steel staircase

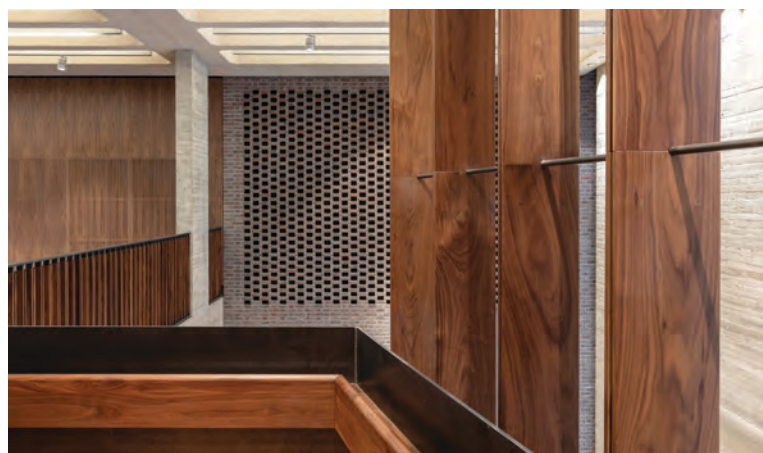


South elevation



Long section AA





Above Softer carpet and timber take the edge off the echoes in the lecture room.

Left A simple palette of materials is used throughout: concrete, brick, steel, timber.

aesthetic of the building is all about the exposed concrete frame. Created in-situ by concrete sub-contractor Oliver Connell & Sons, this has a larch board marked finish that contrasts with the floor and the deeply coffered soffits.

'It's finely-crafted, like joinery,' says Erridge. 'It's all about the concrete. If you don't get the concrete right, the building won't work. So we put all our efforts into that and kept the palette simple.'

The exposed soffit was created using fibre glass moulds to give a smooth texture but still with a matt finish.

The concrete is combined with a double-height brick wall, the upper half in hit-and-miss brickwork with concealed insulation behind to soften the acoustics in such a high space.

From the reception to the lifts on a line with the first exposed soffits, the flooring changes from concrete screed to engineered walnut in 190mm wide boards supplied by Whiteriver. Walnut is another key material throughout the building, chosen for its rich dark tones by the architects, which also considered oak.

'Palette was really important... We experi-

mented with different tones to find one that was right to go with everything else,' says Erridge.

In total, around 500-600m² of walnut is used up the main, waxed steel staircase, and for circulation and break-out areas, and is carried through in joinery for the ground floor library-like members' area. And it appears as lift floors and surrounds and tactile hand-rails.

Walnut also forms borders around the perimeter of the main events and hospitality rooms on the first and second floors. In the middle of each room are deep pile 500mm by 500mm Arcade carpet tiles by Desso, specified to be plush and soft. The grey/blue was chosen to tone with the walnut and concrete palette.

'It's neutrally grey, slightly blue. It just sits tonally really well with everything else,' says Erridge.

The same carpet is used in the members' room and individual meeting rooms. In contrast, a less plush shorter-pile Merge tile, also by Desso, was specified in the two floors of offices for Royal College of Pathologists staff. This has a variegated neutral tone to break up the expanse of flooring and has an acoustic backing to

reduce in-room noise and noise transmission.

In the washrooms, Bennetts specified a Domus Petrology porcelain floor tile in 1195mm by 396mm grey. This is teamed with a close-up images of digital microscopy showing human body cells/diseases on the rear wall of each cubicle, which make for surprisingly colourful and pleasing images. In the basement commercial kitchen, Altro's Stronghold Monsoon rubber sheet flooring was used.

For the college, the new building is an investment in its future – however grand, the previous Nash building may have been, it offered far less flexibility of use. In contrast, as well as column-free spaces throughout, the new headquarters includes an extra office floor that can be either occupied by the College or let out. Improved hospitality facilities offer more scope for income generation from external clients.

The practice is fast becoming something of an expert in Royal College buildings. It completed premises for the Royal College of Ophthalmologist and is working on a new headquarters for the Royal College of Obstetricians and Gynaecologists near London Bridge. ●

Client Royal College of Pathologists
Architect Bennetts Associates
Structural engineer Waterman Group
Services engineer Troup, Bywaters and Anders
Contractor Gilbert Ash
Project manager CBRE
Cost consultant Equals Consulting
Acoustic consultant Sandy Brown Associates
Lighting consultant Pritchard Themis
Fire consultant The Fire Surgery

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Photography Rob Parrish

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Business of architecture: exploring ethics in practice	26 Jun	20 Jun	5 Dec	4 Jul	31 Oct	10 Sep	14 Nov	27 Mar			5 Mar	13 Jun	27 Feb	30 Jan		16 Oct	
CDM 2015: your essential guide to Designer duties	20 Mar	16 May	26 Feb	28 Mar	20 Jun	29 Oct	4 Jul	12 Jun	22 Feb		12 Feb	11 Jul	1 May	27 Nov		6 Mar	
Business planning: key to running a successful practice	13 Feb	28 Nov	31 Oct	12 Sep	11 Jul	29 Jan	5 Dec	25 Sep		13 Nov	3 Sep	11 Apr	27 Mar	19 Jun	9 Oct	5 Jun	17 Jul
Fire Safety for designers Post-Grenfell	3 Dec	28 Feb	20 Jun	9 May	7 Feb	26 Mar	7 Jul	10 Sep			4 Jun	16 May	2 Oct	11 Sep	16 Oct	3 Jul	10 Apr
Project management: delivering high quality outcomes	22 May	11 Jul	2 May	17 Oct	16 May	2 Jul	31 Mar	6 Mar	15 Sep	23 Oct	7 May	7 Nov	27 Oct	30 Oct	13 Sep	18 Sep	
The big wins: deliverable and cost-effective sustainable design solutions	16 Oct	5 Sep	31 Jan	7 Nov	21 Mar	5 Mar	12 Sep	27 Nov			1 Oct	21 Feb	30 Oct	9 Oct	20 Nov	6 Feb	
Inclusive environments: designing for neighbourhoods of the future	6 Nov	24 Jan	26 Sep	13 Nov	28 Oct	1 Jun	6 Oct	9 Oct	4 Oct		29 Oct	12 Sep	22 Feb	27 Feb		26 Mar	
Community engagement: collaborative design techniques	16 Jan	21 Mar	23 May	6 Jun	5 Sep	26 Nov	9 May	15 May		27 Mar	12 Nov	14 Mar	18 Sep	10 Apr		1 May	16 Oct
Plan of Work through the conservation lens	1 May	31 Oct	4 Apr	28 Nov	26 Sep	11 Jun	3 Feb	13 Feb			2 Jul	5 Dec	19 Jun	20 Mar		6 Nov	20 Nov
Ensuring safety through specification and detailing	25 Sep	3 Oct	11 Jul	7 Mar	11 Apr	14 May	4 Apr	13 Nov	22 Nov	6 Feb	26 Mar	10 Oct	30 Jan	22 May		22 Nov	

Prices

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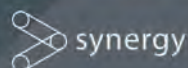
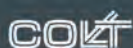
- Architecture for social purpose
- Health, safety and wellbeing
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Forgiving flooring

Spanish floor tiles offer aesthetically pleasing and high performance solutions that are ideal for expansive high-traffic spaces. Innovative designs in porcelain imitate a wide variety of materials, ideal for a broad spectrum of projects, and are available in large-format slabs, tiles or even bespoke pieces for unique architectural needs.



Technical advances in printing

Whatever effect is required – whether it's metal, marble, stone, wood, cement, terrazzo – the Spanish tile industry is creating porcelain slabs and tiles that faithfully replicate all kinds of 'raw' materials, but offer all the advantages of ceramic. Thanks to advances in digital technology the warmth of wood can be created while using a product that is hygienic and fully water resistant. Or a faux rusty metal look may be specified with gres porcelain slabs that – unlike the real thing – will be a stable and reassuringly smooth surface underfoot.



Above Cuatro by Saloni: Porcelain floor and wall tile in a 48cm x 38cm format that combines the four colours of the co-ordinating floor planks also in this Eukalypt series. www.saloni.com

Left Gravity by Ibero Porcelanico: Porcelain tile in four colours including Oxide (shown), Silver, Dark and Pearl and various formats including 60cm x 120cm. www.iberoceramica.com



Above Mar del Plata by Neolith: One of four new sintered stone slabs available in 260cm x 120cm, 360cm x 120cm, 320cm x 150cm and 320cm x 160cm formats.
www.neolith.com

High performance

Tackling issues such as safety, durability and ease of maintenance, pioneering tile producers continue to push forward the aesthetic and functional capabilities of their products. More and more designs are offered with anti-slip finishes. Surfaces that are frost-resistant allow for impressive segues between interior and exterior spaces. Ever larger porcelain slabs are being created in thicknesses that meet a variety of purposes, allowing a sleek, contemporary and grout-free look. Flooring with a 6mm profile can be co-ordinated with formats made in alternative thicknesses for wall panels and countertops to give an immersive effect. Another trend is the extended offering of porcelain floor tiles that can be teamed with 3D or textured ceramic pieces in matching hues.



About Tile of Spain

Tile of Spain is the voice of the Spanish tile industry, encompassing more than 125 tile manufacturers. Renowned worldwide for an inspiring blend of aesthetic and technical innovation, Spanish tiles draw on a rich heritage of skill and creativity, while remaining at the cutting edge of design. Manufactured in Spain and widely available in the UK, these products embody the spirit of an industry that prides itself on proposing beautiful, meaningful and high-performance solutions to flooring, wall coverings, furnishing and external paving and cladding.

Further information: www.tileofspain.com

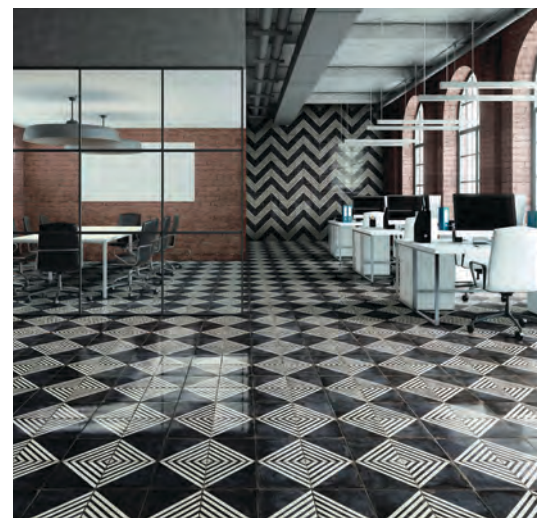
Creativity unleashed

Recently Spanish manufacturers have created some imaginative re-interpretations of traditional products such as terrazzo or marble. Inspired by the popularity of maximalism in design, the Spanish tile industry has kept pace with demand for bold patterns by producing tiles with exaggerated 'marble' veining and giant terrazzo-style flecks, ideal for expansive spaces. Manufacturers are also responding to increased interest in small-format Décor tiles, encouraged by the fact that it's become increasingly quick and cost-effective to do a small production run. Some producers will even work closely with architects to create a custom product.



Left Stracciatella by Arcana: Floor tile in gres porcelain with a matt finish and 80cm x 80cm format that's available in two background colours Grafito (shown) and Nácar.
www.arcanatiles.com

Right Laurent by Museum: Inspired by Noir St Laurent marble, this polished gres porcelain comes in a 75.5cm x 151cm, 60cm x 120cm and 90cm x 90cm format.
www.museum-surfaces.com



Left Tempo Roads by Natucer: Extruded porcelain floor and wall tile available in 18 designs, six formats and six colours including 22.5cm x 22.5cm format in Caviar.
www.natucer.es

PiP specifieds are compiled from supplied company press releases

Specified



1

Flotex Planks flocked tiles
Forbo

Naturally, sea otter was our first choice! You can't argue with a million hairs per square inch, now can you? But apparently there's some kind of problem with moth infestations? And then of course Compliance was worried that vegans would come abseiling through the glass roof or something.

So we went for Forbo's 70 million fibres per m² Flotex flocked Planks tiles. They're far more durable and easy to clean, and we feel that our sea otters are far more useful to the organisation in their existing Services roles. Fish pie Fridays, folks!

forbo-flooring.co.uk/

2

Entryway Inertia modular carpet
Amtico

'Here at Sexdonkey Brand Mavens, we briefed our interiors people to pick the pattern from Amtico's new Entryway collection that best reflects the essential vibration of our 21st century IDENTITY™ operation. The impervious, fade-resistant Type 6,6 nylon fibres, we felt, perfectly represented our values. "Force" or "Charge" would certainly have energised the foyer, but their choice of "Inertia", we feel, rightly emphasises the likelihood of SDBM staying at this location long enough for suppliers' invoices to at least reach us. Names, people! The power of names!'

amtico.com



3

Heritage range of LVTs
Karndean

'Hello? The Dowager Lady Grantham here. Yes, dear, your own beloved Granny! The very same! I'm so glad you remember. 'The flat? You mean the bijou attic apartment-ette you've so kindly fitted out for me? Well, that's precisely why I'm calling! These encaustic tiles on the kitchen floor...

'...well, I dropped one of those eighteenth-century Meissen plates you admire so, and the stupid thing bounced! '...They're vinyl? This is terrible! I have three dozen of those dreadful plates – how do I get rid of them now?'

karndean.com

4

Flowshield LXP poured resin
Flowcrete

Something of an Olympic historian, I have followed Leszek Blanik's new Gdansk gymnasium project with interest. His signature 'handspring double front vault in piked position' was as much a marvel as this, his thoroughly 21st century facility. The hygienic, flexible, abrasion-resistant Flowshield LXP seamless polyurethane floor ensures that no matter how gruesome the carnage, the main gym hall will swab down nicely for years to come. But where are the cold baths? The traditional oily mud wrestling pit? And WHY OH WHY is everyone wearing clothes?

flowcrete.co.uk



5



7



6



8

PHOTO CREDIT: JASON O'REAR

5
Fusion carpet and LVT flooring
Tarkett

Tired of the monotony of office life? Looking for a career change? Don't be daft! No-one's going to give you a chance at your age. You're done for, mate. On the bright side, though, Upstairs have just signed the contract for Tarkett's Fusion mixed modular flooring to be laid in the open-plan cubicle hell that is your gaol. With just one gentle kick, your operator's chair will soon be gliding from DESSO carpet tile to smooth Inspiration LVT in an instant. And back again, sadly.

fusiondessotarkett.com/nl/

6
French sustainable oak parquet
Chene de l'Est

The highly-trained truffling hogs of the Périgord have been thrown into crisis by the discovery that the English commonly mistranslate 'Chene' as 'Chien'; as a result, second-homers have been spotted in Chene de l'Est's sustainable oak forests with their waggy-tailed companions making use of the facilities as only Les Rosbifs Idiotiques might permit. 'Mon dieu,' said Monsieur Porky-Porker of Périgueux, yesterday. Possiblement c'est bon pour le parquet mais mal pour nos truffles! Et quoi? Je serais jambon, c'est quoi!

chenedelest.eu

7
Creation 55 luxury vinyl tile
Gerflor Group

Home, where busy until 7 at night when DIY SOS comes on. And there do I sit with my wife and Deb, the each remarking 'Ooh, that Nick Knowles' and the other 'Ooh, but Lawrence Llewellyn-Bowen though', and I nonplussed at their talk until the big reveal when I too exclaim 'Ooh, tasty!', and consulting my accounts find that I am effectually 5,000l, the greatest sum I ever was, and so do I send for the exact same flooring displayed to good advantage in said episode. And so to bed.

gerflor.co.uk/

8
Natural Genius Slide wooden tiles
Listone Giordano

1990s World Tetris Champion Will Shoehorn has enjoyed a legendary career installing Listone Giordano's parquet floors. So it sent ripples through the global tessellation community when 16-year old installation prodigy Isla Shovit demonstrated a dazzling mastery of its new 'Slide' tile set. With the three rectangular trapezoids giving the new rising stars infinite opportunities for interlocking innovation, Shoehorn has decided to put down the sustainably-forested premium hardwood lozenges for good and open a scree-organising consultancy in Snowdonia.

listonegiordano.com

Design, supply, support – the key to winning major contracts

The window supplier explains how its approach keeps the company at the top of its clients' list of trusted suppliers

VELFAC, leading manufacturer of aluminium/ timber windows, continues to win major contracts across the UK, citing a commitment to 'design, supply and support' as key to continued success in this sector. 'Investment in our consultancy services is paying real dividends,' says VELFAC director Andy Cook. 'We have the resources to work closely with clients during the specification phase, winning trust and proving our knowledge of architectural drivers, technical constraints and complex installation management.'

Subcontracted design is now a strong differentiator for VELFAC, he says: 'Our design service has become a real asset. The team ensures glazing is specified and installed correctly, with services including accurate (guaranteed) window specification, regulatory calculations, detailed design drawings, and direct liaison with installers.'

'In practice this means potentially significant savings in both time and cost, while also ensuring quality is maintained throughout.' The company adds value to any project.

Proven expertise

Design, acoustics, cost consultancy, glazing performance, BIM and installation – in-depth expertise and support based on long term experience. We work closely with architects, contractors and developers from the earliest project stages to ensure proposed VELFAC solutions meet project targets, and can also provide advice on issues such as sustainability, ventilation or indoor climate.

Proven versatility

Luxury apartments, social-rent housing, mixed use commercial / residential projects – VELFAC has proved the ideal fit for major projects in every sector. Frames comprising durable external aluminium and natural inner timber bring a distinctive style, inside and out,



COLINDALE GARDENS – TEN PHASES NOW FEATURE VELFAC GLAZING

VELFAC recently won a contract to supply glazing to Redrow Homes' Colindale Gardens, a major development being built in North West London. VELFAC will supply 3,800m² of aluminium/ timber windows and doors to project Phase F – this is the tenth phase to feature the VELFAC system, which has been specified for its acoustic and solar performance, with all ground floor glazing also SBD-accredited. Once complete, Colindale Gardens will offer 2,900 homes, together with extensive open space, leisure and retail spaces.

while complementing architectural vision and building use.

Bespoke manufacture

Windows and doors are manufactured to deliver location-specific performance. For acoustic control, for example, we analyse decibel levels and frequencies to ensure precise and cost effective sound-reduction strategies for every facade.

Uniform sightlines – seamless facades

Whether triple or double glazed, fixed, motorised or opening, VELFAC sightlines – for windows, doors and patio doors – remain uniform across multiple facades and glazed features, delivering architectural impact and contemporary style without compromising performance.

High energy performance

U-values as low as $0.8\text{W/m}^2\text{K}$ for triple glazed units make a major contribution to low energy targets. Slim frames – only 54mm – maximise daylight, further reducing artificial heat and light, while excellent insulation means full use of floor space, right up to the glass.

Low maintenance guaranteed

Large scale projects demand low maintenance products to ensure minimal ongoing costs, and to give potential residents peace of mind. Day to day, VELFAC units only need cleaning – no repainting – with reversible units also available. A 12 year warranty on every window installed – and operational lifetimes of 40 years or more – give added reassurance of long term product quality.

Business stability

In uncertain times financial security can be a company's greatest asset. We are part of the VKR Group which includes VELUX, one of world's best known brands, committed to daylight, fresh air, and a better environment underpinned by expertise and quality. Our continued investment in product development, support and supply will ensure our products are specified for many years to come. ●



D+B FACADES SPECIFIES VELFAC FOR REFURBISHMENT AT WELLINGTON CLOSE

Aluminium over-cladding specialist d+b facades is installing 2,600m² of VELFAC aluminium /timber windows at Wellington Close, Walton on Thames, as part of a major refurbishment project. The block of 132 flats, built in 1967, had large single-glazed windows which offered poor insulation, with some flats suffering from mould. VELFAC composite double glazed windows will significantly improve thermal efficiency, reducing both condensation and residents' energy bills. The external aluminium VELFAC frame will also deliver a seamless finish when installed in the aluminium over-cladding, while the inner wood window frame will greatly improve the internal appearance of the flats. The refurbishment project is scheduled for completion in 2019.



WINDOWS FOR LIFE

For more information visit www.VELFAC.co.uk
or contact us at enquiry@VELFAC.co.uk



The Painted Hall, Greenwich

Words: George Grylls

Photographs: James Brittain

Hugh Broughton Architects has excelled itself with its sumptuous conservation work at the ‘Sistine Chapel of the UK’

The Spirit of Architecture is painted to look like a schoolteacher. She reprimands the monarch with the help of some cherubs. In her hands she bears an elevation of the King William dome at the Old Royal Naval College.

‘She’s saying there’s still work to be done,’ says William Palin, craning his head to analyse the gaudy brushstrokes on the ceiling. ‘The chapel still hasn’t been finished!’

Palin similarly understands how to petition authorities to cough up. As conservation director at Greenwich’s Unesco World Heritage

Site, he secured £3.1 million of lottery funding to renovate the Painted Hall. That formed part of a larger £8.5 million fundraising campaign that saw Hugh Broughton Architects appointed to the task.

‘We’ve always had a weird practice,’ says Broughton. ‘Half the time we do Antarctic research stations. Half the time we do massive conservation projects.’

Massive conservation projects do not get much more massive than this. The Painted Hall is the ‘Sistine Chapel’ of the UK. Sir Christopher

Left Sir James Thornhill's 'Sistine Chapel' painting adorns Wren-Hawksmoor's dining hall.

Wren and Nicholas Hawksmoor designed the cavernous clerestoried dining hall. Sir James Thornhill lavishly covered its ceilings with celestial images of the protestant royalty.

But the images were growing fuzzy. Under assault from UV damage, humidity and temperature fluctuations, the varnishes had worn away. It was an ongoing problem. Every 50 years the varnishes had to be replaced.

'It was just too leaky,' says Martin Ashley, surveyor of the fabric at Greenwich and collaborator on the project. 'We have had the ability to break the damaging cycle.'

In the hall itself, a new heating system has been installed and discreet blinds now shield the precious interior from the sun's damaging rays. But the biggest change has been the entrance. Previously visitors entered the Painted Hall straight from the street, bringing in humidity and all sorts of invisible pollutants. Now they enter through the Undercroft – an environmental and psychological buffer that prepares them for the baroque splendour ahead.

In place of a clunky kitchen and naval mess, Hugh Broughton has exposed Hawksmoor's subterranean vaults and excavated space for a café, a shop and a small exhibition space. In a muted palette of cream, beige and bronze, the space maintains a sense of airiness and calm through a series of light touches: the banquettes are perforated to dampen any echoes and Hawksmoor's columns are left beautifully exposed amid all the re-plastering.

And at the far end of the Undercroft, a thin glass screen has been stretched across the room. On the other side is a small exhibition space that acts as an antechamber. You can take a deep breath before ascending to the Painted Hall above. The screen interacts well with Hawksmoor's architecture. Columns pleasingly pop out of a shadowing of plaster that hides the joint. Made by the Milanese firm Cappoferri, the craftsmanship more than does justice to the original ironmongery of the windows.

Broughton has proved an adept orchestrator of craftspeople. John Weaver's joinery is bespoke. Bill Amberg's banquettes hug the walls. John Desmond has created a sweeping brass handrail that frames the newly-discovered remains of Henry VIII's original palace. Only Mike Stoane's light fittings seem a bit



Above The restored Undercroft now houses the café and shop.

Left The small antechamber now acts as an exhibition space and 'airlock' to the Painted Hall.

timid. Great glass pendulums hang throughout the Old Royal Naval College, so an offering from the Alvar Aalto catalogue does not quite do justice to the space.

But upstairs craft is in evidence once again. The renovation allowed the hall to lose its trestle tables. They were replaced by Dan Miles' sumptuous oak daybeds. Visitors can now lie in the middle of the room, look up, and thank the Spirit of Architecture for fighting the fight. Conservation projects such as these are simply invaluable. They are worth every penny. ●

RIBA BOOK CLUB

Hear from the authors of best-selling books at the new RIBA Bar. Our Book Club features award winning architects and authors in an intimate setting, discussing their work.



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HOW AND WHO SHOULD WE BE DESIGNING HOUSING FOR?

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RIBA 
Architecture.com

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Specified



1 Mesh ceiling panels Armstrong

Finagle and Lines, brand consultants for various retail banking operations, have decided the sector urgently needs to be more rock and roll. So they've started by working with Armstrong Ceilings to install their B-L302 jet black custom mesh ceiling panels around HSBC UK's new HQ. The HSBC Black Metal ceilings are to be followed at Barclay's by a Psychedelic Doom breakout zone, and over at the Ecology Building Society, they've already issued RFPs for a Donovan-themed multi-faith prayer cupboard. Exciting times! armstrongceilings.com

2 Craftsman-built vanity units William Garvey

Yes, nurse. Yes, I know. Personal hygiene is terribly important. And yes, in an ideal world, I would wash every day! But you don't understand! I've been on the street since I invested in one of these luxurious William Garvey vanity units. Look! I carry the brochure with me everywhere - here! Hold on, it's definitely in one of these bags - ah! Yes! Look - just look at that clean, smooth teak veneer! How could I bring myself to splash soapy muck on all that British craftsmanship? No? You see? Please help me get clean. williamgarvey.co.uk

3 5151 Empira White engineered stone Caesarstone

'My dear Mrs Condomine, I came directly I got your message.' 'I am profoundly disturbed, Madame Arcati. I need your help.' 'Come now - out with it. You've heard strange noises in the night, no doubt. Boards creaking, doors slamming, moaning in the passages. Is that it?' 'No, I'm afraid it isn't. It's worse. The other night, during the seance... a low-carb salad with spiralised courgetti appeared. Here, on the countertop.' 'Heavens! I must make a report to the Psychical Research people! Your kitchen island is in the Caesarstone Supernatural range.' caesarstone.co.uk

4 Skyfold Classic 60 partition walls Style Partitions

James Bond (007) and Eve assist on a mission in which an operative has been killed and a computer drive stolen. The drive contained details of all NATO undercover agents. Bond and Eve chase the assailant and attempt to recover the disk, but vertical partitions descend from the ceiling as if by magic, and the pair are trapped. Bond attempts to break out as Eve screams, but the material quality, engineering, and acoustic damping are just too good. Bond and Eve collapse into one another's arms as oxygen dwindles. Credits roll. style-partitions.co.uk

Sign Up

Anna Parker, founding director of Intervention Architecture, chooses three of her specification favourites



VALCHROMAT

Enabling our research into low-cost CNC sheet cutting fabrication, Valchromat is a textured and colourful MDF, made of softwood waste and dyed with organic and non-toxic colours. We used it for our volunteer programme 'make:it_brum', a collaboration with Arup in Birmingham, where we worked with local school children to design and build a pavilion to further insights into careers in design and construction. For our latest project we tested its structural capabilities and developed our own angular jig pieces to create a self-supporting enclosure just in Valchromat. The spectrum of tones offers interesting experiential properties too.



CHIP FOAM

Chip foam, a lightweight, high density recycled foam, can be used in many ways. We appropriated it to use as backdrop infills and seat cushions, for its acoustic properties and its softness for seating, for an exhibition we designed and made recently in a local Birmingham gallery, Grand Union. We were searching for a material which would add warmth and comfort to an open plan gallery, as well as a pop of colour (we went for pink) with interesting terrazzo-like flecks providing an almost kaleidoscopic effect, to contrast with the joinery framework which we built in blond birch ply.



ROUGH-CAST CONCRETE

We took part in an artists' show at Centrala in Birmingham, and wanted to recreate domestic objects from the home dematerialised within an immersive installation that we built. For this we tested alternate rough casting concrete recreations from latex mouldings. Through this process we embraced the handmade and mis-shapen versions of a traditional construction material such as concrete, and have since specified kitchen worktops to have a similar character of roughness and imperfection to create an informal and crafted effect. When we made the cast objects, our concrete bar of soap also pleasantly retained the fresh smell.

...Sign Off

Jan-Carlos Kucharek enjoys three stand-outs from the inbox



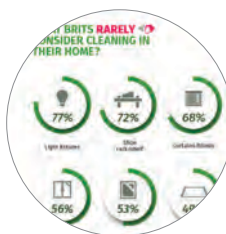
MAR-TELLO TOWER

Bernd and Hilla Becher photographed them in dull, shadowless light. Ricardo Bofill put part of his sprawling concrete works office and home in one. What else can be done with water towers? Well, retired neurosurgeon Peter Stanworth turned his into a holiday let. Sat in the garden of his 17th century farm and costing £50k to demolish, this was the only use local planners would ascribe to it. And a well-insulated one – stuffed to the gills with Actis insulation. Now Peter might be beaming like the Cheshire Cat with his renovated eyrie but we can't get our heads around the odd geometry. Square peg in around hole? Curiouser and curiouser...



SHINE BRIGHT LIKE A DIAMOND

It was one small step for man but a giant leap in visitor numbers for the National Museum of Wales last year, when it held its British astronaut Tim Peake show. The museum was apparently relieved it had Gerflor floors to handle the footfall of those taking a peek at Peake's Soyuz TMA-19 space capsule. And it has 'excellent' slip-resistance in case of any spillages. Not that that's an issue in deep space. I'm told that one of the most beautiful sights there is a urine expulsion in sunlight, your tinkle crystallising instantaneously into a billion diamonds in temperatures nearing Absolute Zero. Bear that in mind next time you're trying to defrost the lock on the driver's side.



NEXT TO GODLINESS?

Judging by the hordes quaffing ales and Pinot Grigio in the pubs during last month's glorious Easter weekend, spring cleaning was the last thing on our minds. Cleaning firm 'End of Tenancy', researching Brits' dusting habits, pulled together empirical and anecdotal evidence. No big surprises here: 77% of people don't clean light fittings and 72% forget to dust the shoe rack. But it's the other stats that raise an eyebrow. Only 44% clean the microwave, 41% vacuum, and only 53% clean the bathroom mirror. Yet 28% of us buy a new cleaning product monthly that we never use. The only thing getting into those nooks and crannies seems to be forgotten Cillit Bang.

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