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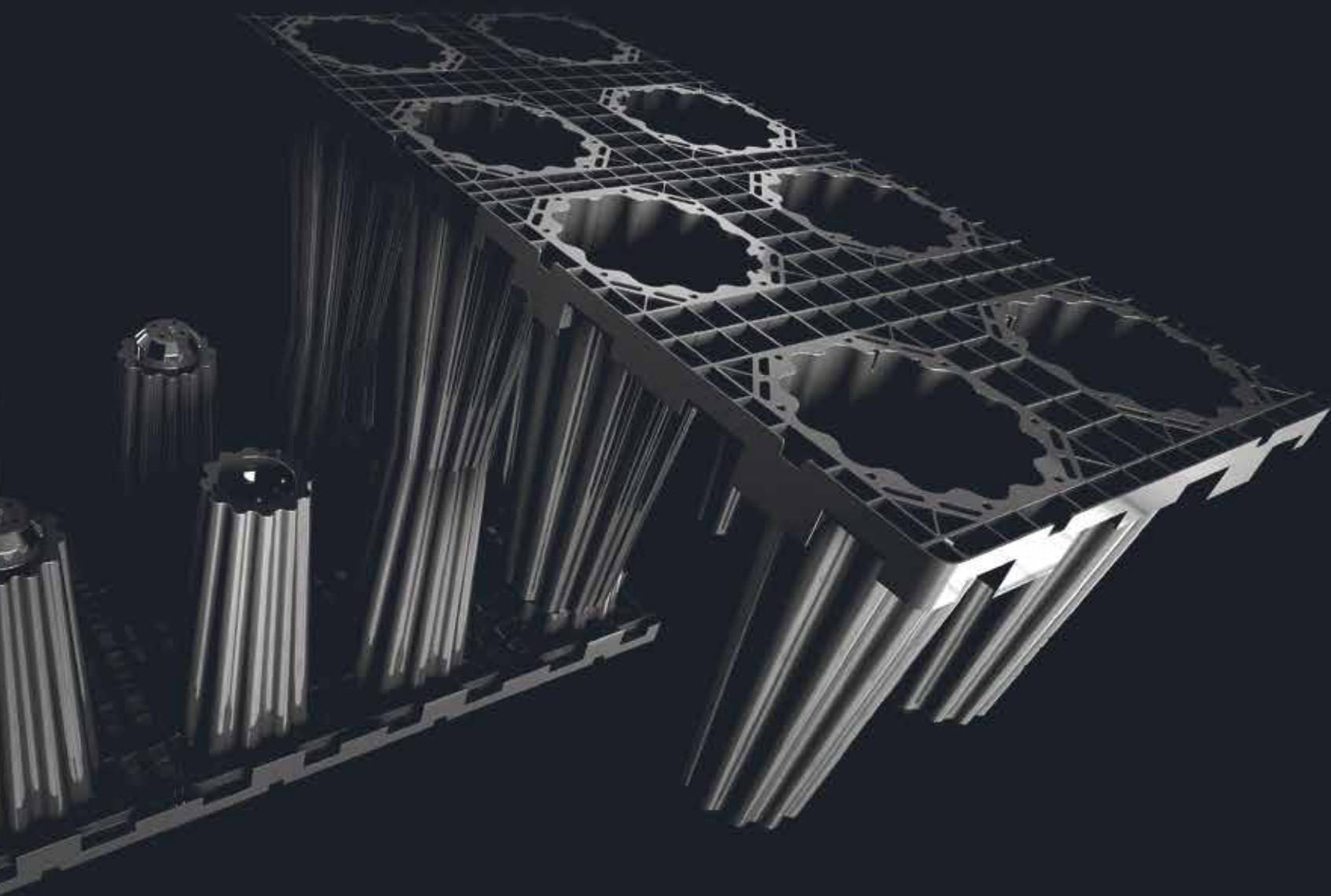
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On 14 June...

... as I write this, thoughts could only be with the 72 victims of the Grenfell Tower fire who, on the first anniversary of the tragedy, are still seeking answers and perpetrators to help mitigate their grief.

Despite the RIBA's call for a belt and braces approach to tightening guidance for residential development, (PIP editorial May/June 2018), the Hackitt report fell shy of demanding any of this. In the circumstances, why? Is there a fear that the consequences of tightening regulation would push a 'subdued but stabilising'

housing market (according to a report in June by the Halifax) back into a downward trend, when factoring in the possible implications of Brexit? As with the vested interest that seems to have characterised EU withdrawal so far, could the report's findings read as too serving of the industry?

And are Hackitt's conclusions on the Building Regulations pre-empting the response of the Grenfell Tower inquiry, which opened movingly with the eulogies of victims being read out to the inquiry in the presence of chairman

Sir Martin Moore-Bick? One hopes not, but as the Silent March marks a year to the day, there's a feeling from the parties' opening statements, that culpability is going to be hard to pin on anyone. Indeed, perhaps the problem with a systemic failure on this scale is that it's unlikely any one party will be held to blame – so no heads will roll. But that's not a get-out clause for the inquiry – it makes positive action on the lessons learned from this horrific event all the more critical. ●

Jan-Carlos Kucharek, editor



More online...

It takes around two seconds for the wallpaper to detect and respond to a fire, and the surface can resist flames for at least five minutes

Stephen Cousins finds a wallpaper that adds substance to its style: ribaj.com/wallpaper

Robots ...are 'aware' of their surroundings and can alter their movements to avoid obstacles

3D printing heads for the building site: ribaj.com/3dprintingonsite

STÅLE ERIKSEN

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Cover image: TUC Congress House photographed by James Brittain

Compendium



Rock of Ages

Unlike its compelling glowing range, luxury stone supplier Antolini is less translucent about the costs associated with its products' use, but there's no getting away from the fact that agate can leave a strong impression, especially when it's used at scale. Discovered in Sicily by the philosopher Theophrastus around the 4thC BC, it's been used in jewellery and art pieces ever since- it even formed the main body of the 'Holy Grail of Valencia'; a 'fake news' chalice fashioned in the time of Christ. Whether this (real?) hotel was aware of that when it installed it isn't known; but there was certainly plenty of room at the inn for the agate.

Northern Lights

Not quite sure if financial services provider Morgan Stanley is pre-empting a Brexit break north of the border, but its handsome new offices in Glasgow might suggest it is hedging its bets to stay within the EU. While it's a ground scraper compared to Glasgow's Manhattan-style skyline, it uses a lot of glass to make the best of Scotland's low light levels. A Schueco curtain-wall system offsets heat losses from the glazed areas with a Pilkington Optitherm S1 Plus low emissivity coating, reflecting radiated heat back into the building during those cold Caledonian nights.



Sterling efforts

Though our actual factory visit may have been eclipsed by a lovely dinner and an edge-of-the-seat two-hour pelt around Loch Ness, there's no doubting the scale of Norbord's £95 million investment in the expansion of its Inverness plant. Resembling some early Richard Rogers scheme, the Morayhill plant was looking resplendent on a rare sunny day. Norbord has turned the 25-year old factory into a state of the art facility that has increased production capacity by 60%, drawing 80% of its timber raw material from a 70-mile radius. Its fan panel dryer, looking like an Ulm School slide projector, now forms the main graphic logo of SterlingOSB's new Zero board – now formaldehyde-free.



Clay conundrums

I'd wouldn't have liked to have been the poor bod working out the algorithm for the packaging of Domus' new 'Piano' tile range, designed by French siblings Ronan and Erwan Bouroullec. The collection is made from coloured clays to which layers of glaze are added in different widths. Measuring 75 or 100mm by 300mm, the five base colours of white, grey, blue, green and pink are grouped by the lead colourway in each box to determine the overall effect generated on the wall or floor. The piecing together of the widths aside, how one proves the quality control of the colourways for consistency across batches sounds like one of those mathematical conundrums that will defy experts for centuries. A bit like proving that 1=2 or The Seven Bridges of Königsberg.



GARETH GARDNER



Warp and weft

Warwick Street in central London's is now home to Squire & Partners latest project for London Mutual Insurance Society. Its re-modelling of an existing 1980s building picks up on the character of the Soho Conservation Area while rebelling against it at the same time. The brick face of stone spandrels has strong vertical columns of Ibstock's 'woven' Umbra bricks. Specified in green to pick up on the glazed tiles seen in the area, it's a contextual nod that perhaps allowed the firm to go off piste with its wilful asymmetrical mansard, which, asserted the design and access statement, was influenced by the paintings of notorious Soho artist and bon vivant, Francis Bacon.

GARY BRITTON



Red and sticky

Given the hammer horror stories fed by Britain's murky, 200-year old relationship with medical institutions and the grave robbing trade, the Royal College of pathologists, ahem... cuts a youthful figure, having received its Royal Charter only in 1970. In keeping with its age, Bennetts Associates is designing it a £15 million HQ in Whitechapel. Contractor Windell went 'full bleed' on the facade, using A Proctor's Wraprite system as an external air barrier and alternative to a traditional breather membrane. Stickier than a depilation strip, it attaches to external envelopes without mechanical fixing, saving time and arguably improving performance. More than just a sticking plaster...



SIMON PRICE

Whisky priest

As the whisky of late architect and academic Isi Metzstein's infamous 'Macallan Club' – a bottle presented to architects whose designs were demolished in their own lifetimes – The Macallan is now making other architectural waves. RSHP has been busy Speyside with its new £140 million HQ and visitor centre for client Edrington in the Easter Elchies estate where it's been brewed since 1824. The roof over its stills is, says the PR, 'one of the most complex timber roof structures in the world, with 1800 single beams, 2500 different roof elements and 380,000 individual components.' Rogers generally needed buildings demolished to get his built – like Beaubourg in Paris, and London's Lloyds and Leadenhall Buildings – which might give him reverse claim to a bottle. Meanwhile London's Coin Street Community Builders, having resisted his 1983 office masterplan for the prime South Bank site where its housing eventually went, might well have been quaffing it ever since.

In the kitchen at parties

Cooker hoods – the bane of most architects' lives. You spend all that time perfecting the kitchen design and then you have to stick an extractor above the hob. Most of these seem to stem from the overactive, thyroidic imaginations of bachelors, so it's a relief to see Italian firm Falmec enter the fray with its very discreet Alba hood from its Design collection. Designers Valerio Sommella (even the name induces a subtle sense of repose) and Alberto Saggia have reduced the extractor intake to a simple slot around a glass frame – which incidentally, lights up along its downstand edge to illuminate your culinary pièce de résistance. There are even motor and air recirculation options if your attempts at 'Celebrity Masterchef' end up smelling more like the burning rubber of 'Star in a Reasonably Priced Car'.



Ambient computing: privacy and security



The Internet of Things (IoT) is becoming part of the everyday fabric of our lives with what is termed 'ambient computing'. But it brings many of the same challenges we all face online. Regular reports of data breaches and Cambridge Analytica's activities have brought this into focus recently. Privacy and security are key considerations when connecting to the wider web.

Regarding privacy, designers must ensure systems specified in buildings respect GDPR regulations, and prevent harvesting of personal data without consent. In domestic situations this is relatively straightforward, as a homeowner is required to sign up to a vendor's terms and conditions when registering.

In commercial buildings, privacy is more complex as systems are designed to enhance an occupant's experience of a space; for example a network of information display screens around a building that can tailor displays for nearby occupants by detecting their mobile phones. These systems know who the occupant is and require them to 'opt-in' to be tracked. Further

issues arise with connected systems and other functionalities use the user's data. If a user hasn't opted into these other systems (perhaps an app-operated locker) this would be a breach of the GDPR; so building operators must consider the functionality they want to achieve and what data is required when setting a brief.

Security is a highly specialised field and there is no common standardised communication method for IoT devices from a single regulatory body. This means there is a layer of integration between a device and a system – posing potential security risks. In commercial projects, systems are generally designed to connect to a network that has specific security requirements. As the number of systems increases, the maintenance burden rises to keep software up to date and ensure no weak points occur. The IT system design must also be more closely aligned with the overall design for its building. Historically, the active IT equipment that drives a building's data network has been procured outside the main contract for a project,

but as ambient computing causes systems to converge, integrated approaches are required.

Domestic security can be a larger issue as homeowners seldom take all the necessary precautions to protect themselves. When proposing smart devices – such as learning thermostats, lighting controls or smart meters – for a dwelling, we advise that two wi-fi networks be used. One is to connect the IoT devices; the second would handle all traffic from personal devices that may handle banking and payment details, such as phones, laptops and media hubs.

Domestic systems, then, pose less of a privacy risk but may be more prone to compromises in security. In commercial systems security will be robust, but privacy issues are more complex to avoid artificial breaches of the GDPR.

Opportunities in the use of ambient computing are exciting. But we need to ensure security and privacy are carefully considered in system design, so we can confidently employ these impactful technologies. ●

Dan Cash is senior engineer at Max Fordham

Books

Buy at ribabookshops.com



Prefab Housing and the Future of Building: Product to Process

Mathew Aitchison. Lund Humphries. 168p £45 HB

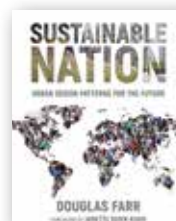
Any number of books on the subject of pre-fabricated homes pass through the RIBA offices – but this is definitely one of the better ones on the subject. The author, a professor in architecture at the University of Sydney who runs its Applied Design Lab, has solicited the services of 17 other global experts in the field to pull together a highly informed and digestibly well-written book. There is a broad history of the subject before the writers home in on examples of pre-fabrication in the key markets of Japan, Sweden and the USA. The book succeeds where others fail in that it strikes the right balance between aesthetics and technical construction. The author's mantra is simple: start with the process and end with the product.



Loft Conversion Handbook

Construction Products Association.
RIBA Publishing 202p £30 PB

This bang-up-to-date little book provides even the novice young architect starting out with their first domestic project with a perfect guide to the process of constructing a roof extension from start to finish. Beginning with the feasibility and the planning process, chapters are ordered according to design priorities, covering everything from fire safety through to acoustics and electricals. Well laid out and illustrated, its body text is minimal and informative, with boxed-out sections providing key technical and legal guidance. This step-by-step guide supplies much needed simplicity for the myriad decisions that are required even for this most basic of design typologies. Small but perfectly formed.



Sustainable Nation

Douglas Farr ed. Wiley 400p £65 HB

While this book might appear at first glance to stem from a particularly stateside perspective, stick with it – its agendas are truly far-reaching. And it doesn't make for easy reading. Farr is dealing with the humanitarian, population and climate change challenges that constitute our modern existentialist crisis. Luckily, he explains it in a highly graphic way; the opening 20 pages providing empirical data outlining the global scale of the problem. But for Farr, the change occurs at neighbourhood level, and so he goes on to cite examples from all over the world, where local empowerment has resulted in positive change. Given Farr's stated timescales, there's an urgency to the writing that despite all the obstacles in its way, pushes localism as the only serious agent for a sustainable future.

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Made



Julian Gomez Fernandez
Director of marketing



Pablo González Rodríguez
Specification co-ordinator



What: CUPA PIZARRAS Slate

Where: A Medua, Spain

Mining in one form or other has taken place in northern Spain for millennia. The Romans famously mined gold at Las Médulas, leaving behind towers of exposed red rock to form a skyline of giant termite hills. There has been iron mining, then later the area fuelled the industrial revolution with its coal.

It's a vast landscape that moves from arid and flat Castilla y Leon to green and mountainous Galicia. It is remote – 2.5 hours from the nearest international airport, where direct flights are not guaranteed. Villages are dispersed, houses crumbling; and the impression is that little happens there now. But its people have long been adept in extracting natural materials from the earth. And while coal mining has been on the wane for 20 years, today the production of natural slate is ramping up in its place, forming another chapter in the region's

history. PIP is here to visit the area's main slate producer, CUPA PIZARRAS – as the company's 500 vehicles busy themselves over the mountains dredging through all weathers.

'Pizarras' means 'slate' in Spanish and it is everywhere – laid with scalloped edges on the roofs of old buildings, detectable in the grey local stone. Specify slate for roofing in the UK and it is most likely to come from in and around the village of A Medua, where the firm's headquarters are built into the hillside, 40 minutes drive from the nearest large town. This part of Iberian Peninsula, which looks more Celtic than Spanish with water gushing around, meets 90% of all high quality tectonic slate demands. From its 17 quarries, the firm produces 180 million natural slate units per year – a figure that equates to 1 in 3 of all global production, or 200 roofs per day. It operates in part from Las Arcas, the biggest open slate quarry in the world.

Slate production on this vast scale here is



relatively new, however. The company was formed from five family-run businesses in 1968 to turn what was previously a small industry catering to local needs into the area's principal business and a major exporter – an opportunity that grew as slate quarries were exhausted elsewhere. With little demand for slate in the rest of Spain, 98% of the firm's produce is sent abroad: 50% to France, 20% to the UK, 18% to Germany and 4% to Belgium.

Two key reasons for this expansion of Spanish slate are that not only does this come from the same geological seam as the slate that was historically used extensively elsewhere, but also that CUPA PIZARRAS has continually adapted its production to offer exacting products that meet conservation guidelines in other markets. Heavy 3 is a textured 7.5mm slate for Scotland, CUPA 4 is for Snowdonia and CUPA 12 for England. It has been used on renovation projects from Notre Dame in Lourdes to Balhousie Castle, and even Tokyo's central train station.

However, that doesn't mean the firm's slate is only useful for traditional buildings. On the contrary, it is pushing modern uses for the material too. In 2014 it launched CUPA CLAD in Denmark, a ventilated facade system to complement flat roofs that can be designed with or without the fixings on show. More recently, its innovative Thermoslate range solved the issue of solar panels not being allowed on roofs in



Far left Las Arcas quarry, the largest open quarry in the world.
Left Tandrupkollegiet youth housing project in Denmark built using CUPACLAD.

MANUEL RODRIGUEZ FERNÁNDEZ

protected areas. The system inserts a solar heating panel beneath a typical-looking roof specification so it is invisible to the eye. And what the company provides above others is complete traceability of its products from production to arriving on site – an important factor when sub-standard grades of slate are often interchanged. It means products are exactly as specified and it is easy to order more at a later date.

There's good reason why the company believes that natural slate is the best roofing and cladding material available. As an inert material, it is durable, lasting up to 100 years without maintenance (the firm offers a 100-year guarantee on its first selection products), and doesn't lose its colour either. A comparable artificial product will need to be replaced four times over the same period. Natural slate has sustainability advantages too. Quarrying slate requires half as much water as clay tile production and the process is carried out without chemicals.

In this remotest of areas, CUPA PIZARRAS employs 1,200 local people directly, and many more indirectly. It is possible to visit too. The company has been a critical force in developing its production and market, pushing the region's switch from coal to slate. That has taken the fortunes of local people with it, and has kept traditional skills alive. The tap, tap, tap of 'splitting' is always best done by hand. ●

Written in collaboration with CUPA PIZARRAS



1 QUARRY

CUPA PIZARRAS has 17 quarries, all based in northern Spain, mainly around the village of A Medua. Quarry 3, which supplies slate for Scottish heritage projects, opened 126 years ago. All the company's quarries produce high quality tectonic slate which is most suitable for exterior use such as roofing and cladding. The company offers 17 different types in 50,000 formats. Geologically, the slate extracted in here is similar to that of France, Belgium and the UK as it comes from the same seam.



2 CUTTING

The company has a geological department that carries out constant surveys to find the most economical and efficient areas for extraction. Once a site is identified, production is simple. First two sets of holes are drilled in the mountain, vertical and horizontal, and a locally made diamond beaded steel cable is threaded through them. With the help of water and friction over a day, the rock is cut through between the points. Large truck mounted drills then hit the rock strategically. As slate breaks easily in one direction, this causes the rock to break off as a block.



3 RESIZING

A bulldozer lifts the freed block onto a large rear dumper truck which transports it to one of 22 'transformation factories'. These are as close as possible to each quarry to avoid transporting of excess weight over long distances as only 2-3% of all extracted material is the end product. The production team inspects the quality and sedimentation to determine which way the block should be cut. Once in the factory, blocks are mechanically sawn vertically and horizontally into smaller blocks based on the final required slate tile size. Slate is kept wet as much as possible throughout.



4 SPLITTING

From here, the slate goes to the 'splitters', 6-10 people per factory that cleave it to thicknesses depending on what is required and its quality. Highly skilled craftsmen do it the traditional way by hand. Splitters use a hammer and chisel, basing decisions about splitting on the feel, look and even sound of the material. The process of becoming a splitter is very lengthy, with trainees usually working in other parts of production for many years first. The factory here is filled with the rhythmic sound of tapping.



5 DRESSING AND QUALITY CONTROL

Once split, the individual pieces, which are already recognisable as roofing tiles, pass through a machine that gives them the traditional dressing. From here the quality selection team, usually eight people per factory, assess the slate visually and audially, tapping it together, to categorise it based on industry-wide definitions; Type 1, 2 and 3. Tiles are then stacked into crates that are printed with all the information about their journey – from their extraction point to who was in charge of their sorting selection. This makes each tile completely traceable should clients wish to order more.



6 DISTRIBUTION

Pallets are sent to the stockyard in A Medua for storage. On a good day, each factory can produce up to 36 crates holding 1200kg of slate each. Around 35 delivery lorries leave the yard every day, five days a week. As 98% of the firm's natural slate is exported, pallets usually travel by sea via the port of Vigo. With its own-branded lorries and freight system, the firm cuts out the importer and deals directly with distributors, making the end product very cost competitive. Dedicated specification and technical teams support architects with individual projects too.

Coal Drops Yard, King's Cross, London



Heatherwick Studio has created a flamboyant kissing roof to unite two diverging buildings in his conversion of a Victorian coal depot into an ambitious shopping destination

Words: Stephen Cousins

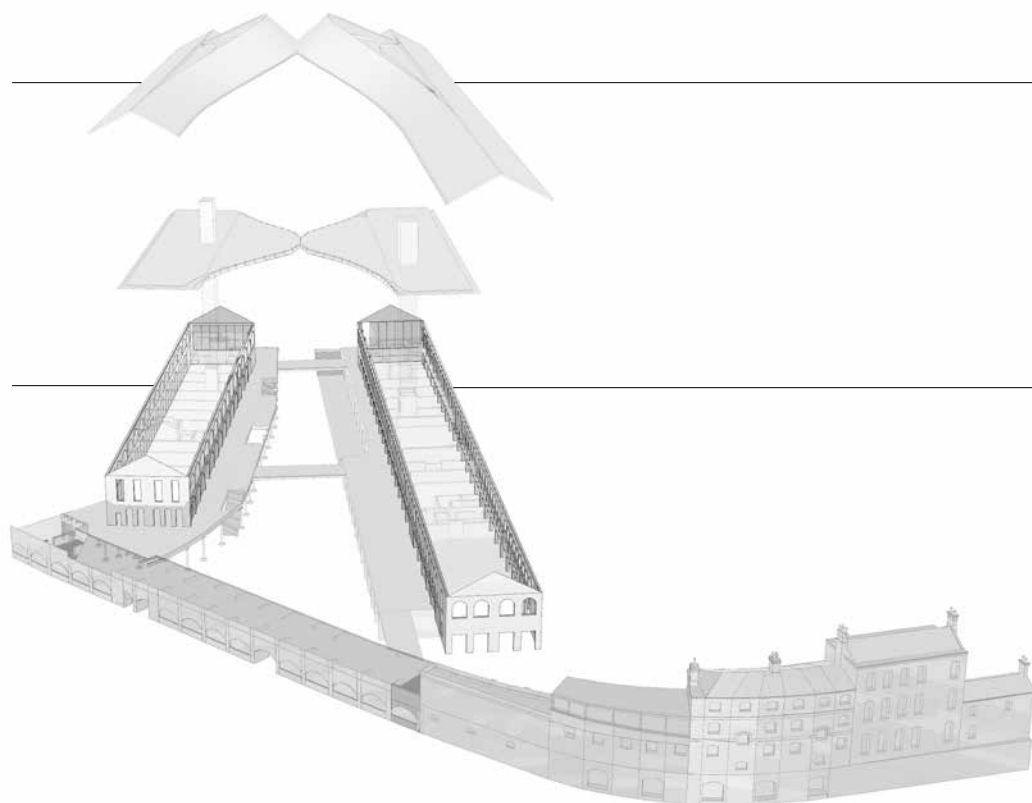


Public displays of affection were frowned upon by the Victorians, but perhaps they'd have set their inhibitions aside had they seen the dramatic 'kissing roof' that crowns the Coal Drops Yard redevelopment at London's King's Cross.

Two former coal depots are connected by the twisting steel and slate structure some 25m above ground, which adds a new upper storey to the 10,000m² retail scheme, which is being constructed in the depots for developer Argent.

Architect Heatherwick Studio worked closely with structural engineer Arup on the bridge-like structure, which in the spirit of a 19th century feat of engineering, appears to hover between the existing buildings and merges seamlessly with their pitched timber and slate roofs.

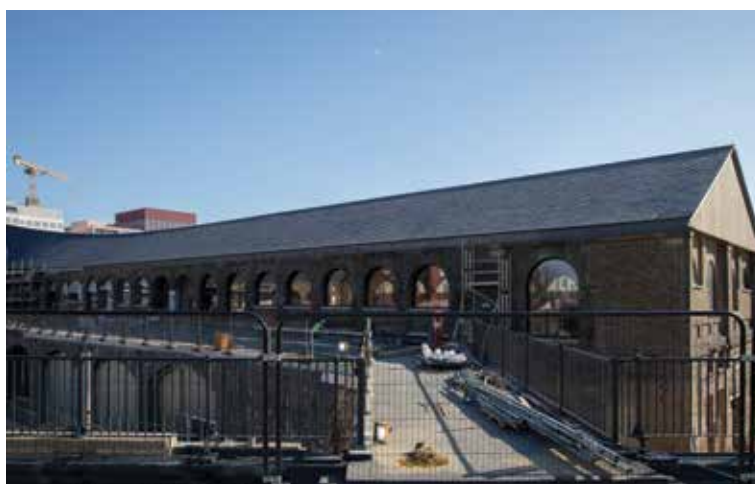
Tamsin Green is project leader at Heatherwick Studio. 'When thinking about the rationale and engineering of this grand gesture,



Far left Visualisation of the completed development showing the 'kissing roofs'.
Left Exploded drawing of the roof strategy.
Below Site plan showing the sheds in context.



Above Coal Drops Yard seen in the context of the wider Regent development.
Right The original arched brick facades have been retained.
Left The kissing roof pulls away from the existing shed roof line.



including the small hand crafted details people will touch, we would often ask ourselves "what would the Victorians have done here?," she says. 'We drew on their industrial building typology and the rich existing material palette of cast iron, timber, brick and slate.'

The coal drops were built to receive and sort coal as it arrived from the north of England by train, but as coal use declined they were converted for light industry and storage. In the 1970s and a major fire burnt out part of the eastern building and by the '90s the buildings had fallen into disrepair, being used sporadically as workshops, studios and night clubs.

Both are very long; the 150m eastern block was the longest continuous brick building in Europe when it was built. A 26m gap at the northern end of the site splays to 39m at the south by Regent's Canal.

This unusual arrangement did not lend itself to a destination retail space with a central focus, says Green: 'A light refurb would not have created the draw we needed to compete with Covent Garden or Regent Street. Rather than disrupt the long elevations and repeating brick arch motif, we focused on the roofscape.'

The kissing roof is designed to peel up and away from the existing pitches to meet at the centre point between the buildings, and creates a 2,000m² suspended floor for the scheme's anchor tenant. A double height space in the courtyard below can be used for concerts and events.

Step inside this new hovering retail floor and the vibe is more light and ethereal than grimy industrial, with a sinuous white ceiling bathed in natural light and column-free spans.

Where the roofs come together, on either



side of the central 'V', a new serrated structural glass facade of 64 separate panels zigzags along. 'The serrations allowed the glass to be structurally self-supporting without the need for additional framing elements, while conveying a human-scale regular bay window,' explains Green.

Undulating strips of oak boarding run along the ceiling edges of the glass, in an oblique reference to timber sarking boards (traditionally attached to the rafters of a pitched roof to boost its strength) on the coal drops roofs.

The roof's chunky bridge structure comprises a pair of inclined ribbon trusses that follow the line of the existing buildings and a primary A frame that spans at right angles to them. These three main structural lines meet at a crucial 'kissing point' node at the roof's apex.

Suspended on vertical hangers from the bottom cord of the ribbon trusses is the floorplate for the anchor store. Primary loads from the roof are spread across new steel frames and





Far left Serrated glass panels characterise the new elevation, created as the roof peels up and away.

Left Internal visualisation of the space under the kissing roof with an undulating of oak boards.



Above Bespoke steel connector at the apex of the ribbon truss roofs.

Left Hefty steel ribbon trusses generated the kissing roof.

some 52 new columns with piled foundations threading through the existing structure.

‘It was vital that loads from the new roof pass through the new columns and do not find their way to the existing walls, which could damage the brickwork,’ says Edward Clark, associate director at Arup. ‘The new steel trusses want to move as the roof deflects and absorbs the load of the new floor and the columns want to spread sideways, so we had to carefully detail the junctions between the old and new structure to prevent distress to the heritage brickwork.’

Steel fabricator Severfield manufactured the ribbon trusses to very tight tolerances to ensure a seamless join where they transition from retained sections of timber trussed roof at either end of the building.

‘The fact that we have chosen to do something so ambitious and daring, both architecturally and structurally, is very much in keeping with the spirit of the Victorian heritage round King’s Cross and St Pancras, most notably

William Henry Barlow’s single-span iron shed at St Pancras, which was for many years the longest span roof in the world,’ says Clark.

The build-up above the steel trusses comprises a secondary layer of metal purlins covered by insulation then a strata of timber battens and counter battens that support an exterior layer of Welsh slates selected to match those used on the existing buildings.

Some 80,000 slates were installed across the roof in total, of which around 25,000 over the curved sections had to be hand cut. None of the original slates was reused due to their deteriorated condition.

As construction continues, the roof structure is already free-standing, but close monitoring is required to detect any unexpected deflections as finishes, cladding and glazing are added. If the contractors can pull that off everyone will breathe a sigh of relief – and, who knows, perhaps sneak in a cheeky kiss or two to celebrate? ●

Specified



1

Blue Label shakes
Marley Eternit

'In the woods there grew a tree...
and on that tree there was a limb
and on that limb
there was a branch
and on that branch
there was a nest
and in that nest
there was an egg...'
...which fell out when it was
cut down to make 327 bundles
of Marley Eternit's Blue Label
cedar shakes for the new wood-
and-fire rollercoaster at Alton
Towers. They're fireproofed, btw,
and we will be riding nude. Lord
Summerisle's right: it's much too
dangerous to jump through fire
with your clothes on.
marleyeternit.co.uk

2

SIGNature 25 waterproofing system
SIG

'See what they did there?'
'You mean "set in the ancient
village of Yarm on the River Tees
in the North Riding". Yeah, the
name came from the Old English
"gearum", meaning pools for
catching fish; and it turns out
this local primary school has
classrooms shaped like pools;
"teach a man to fish and he eats
for life", eh? And its hot Torch-
On bituminous waterproofing
membrane, good for warm or cold
roofs; which means that in case
any ponding goes on it ain't going
to drench the kids?'
'No. I meant with the product
name...'
singleply.co.uk

3

Renown tiles
Redland

Famed Welsh poet and notorious
boozer Dylan Thomas was no
stranger to a good old night on
the tiles, which kind of puts a
new slant on his memorable 'rage
against the dying of the light'
line. But set against the hills of
the Rhondda in Wales, even the
Maerdy estate social housing,
in its own dying light, has one
wanting to set pen to paper. All
music to the ears of manufacturer
Redland whose 'Renown' tiles re-
roofed it, bringing a slant all of its
own to the valley.
redland.co.uk

4

BLUE urban drainage system
Bauder

Last time I was in Heaven, I
found dear old Hundertwasser
in the VIP room, quietly
enjoying a martini with a
couple of cherubs. I told him
about Bauder's Blue system:
about the reservoir board
beneath the aggregate, and the
restrictive flow outlet which
controls discharge over 12
hours, so preventing flooding.
I told him about how each is
designed for the project at hand,
and that a self-watering green
roof is a functional part of the
system. His tears of joy reached
Vienna, apparently. They
thought it was raining.
bauder.co.uk



5
Bradstone Crofters roofing tiles
Aggregate Industries

On the table was a bottle was marked 'DRINK ME', so Alice ventured to taste it. She shut up like a telescope and very much enjoyed her visit to Bourton-on-the-Water model village. Soon her eye fell on a very small cake, on which the words 'EAT ME' were beautifully marked in currants, and she nibbled on a piece. 'Curiouser and curiouser!' cried Alice 'The roof tiles on this mini eco-friendly Co-op branch are moulded from hand-dressed natural stone slates, reproducing the fine detail of the originals!' aggregate.com

6
Boost R breather membrane
Actis

Q: What links Ellen MacArthur (liberated yachts woman), Ruth Bader Ginsberg (iron judge), Jane Goodall (primatologist), Marie Curie (physicist and chemist), Harriet Tubman (swashbuckling abolitionist), Elizabeth Fry ('angel of prisons'), Hilary Mantel (chronicler of antique shenanigans), Bloody Mary (gung ho mass murderer) – but excludes Hedi Lamarr (wifi maven)?
A: All celebrated for immense usefulness, not their looks. Rather like this Boost R insulated breather membrane, now with a lap and self-adhesive strip. Oh, and Margaret Thatcher. Obviously. insulation-actis.com

7
Modular skylights
Velux

The idea of care homes as a place to spend your last days in ever-declining dotage has had an adrenaline shot to the arm via 76-year-old Dutch radical and academic Dr Hans Becker. The thinker, who views neither drunken dissipation nor euthanasia as off-limits for our elderly, wants more light on the subject. ID Partnership took him literally for Tree Top Village in Newcastle, creating a 'contemporary hotel feel' at its retirement scheme. Crammed with 60 Velux ridge lights and 10 long lights, it's showing 70 other ways to fast-track it to heaven. velux.co.uk

8
Heavy 3 roofing slate
CUPA Pizarras

Hopefully the Atlantic Islands visitor centre on the remote Caledonian Isle of Luing will do something to scotch Wicker Man connotations, but it'll be an uphill struggle. But at least CUPA's robust roofing slate should help obviate the need for any weather-appeasing sacrifices in the near future. Perhaps neighbouring Seil Island should take a leaf out of its book. I mean, it's got its Clachan 'Bridge over the Atlantic', a deserted dead-end street and C John Taylor's creepy wee shop. Dire need of a makeover. cupapizarras.com

A 'PERFECT MATCH' IN BATHROOM DESIGN



It's hard work making good leisure facilities

As sport and leisure become everyday activities, competition for people's attention – and cash – demands innovation

Words: Josephine Smit

There was a time when water features were a relative rarity in the urban environment, a discovery in a city park or square that delighted the senses. Now you can't cross the public realm of a new development or a freshly regenerated town centre without having to dodge random spurts of water. You can soak your shoes in town squares from Hemel Hempstead to Hull.

Jet fountains, pop-up street food markets, open air cinemas and more: these have become common ways of capturing consumers' attention and tapping into their appetite for novelty and experience, encouraging people to spend their leisure time, and ultimately their money.

That leisure time has become a precious commodity for us all. On average, according to government statistics, men enjoy 43 hours of leisure time a week, with women having a disconcertingly unfair 38 hours. Subtract the hours that are idled away at home or on a mobile phone, and it doesn't leave much time for going to the museum, art gallery or swimming pool.

So while today's public may be shopping for experiences, the competition for their limited time and money has become fierce. That, and inevitable funding constraints, have seen some visitor attractions struggle, but for others the application of science, business acumen and creative imagination is both pulling in punters and reshaping the urban environment.

Serious fun

Ray Hole, managing director of Ray Hole Architects, gives a ready explanation for developers' interest in experience: 'Experience has overtaken icon as the trump card in the built environment'. Hole's own interpretation of the e-word runs far deeper, drawing on the ideas of US author and business advisor Joe Pine, who with James Gilmore originated the term 'experience economy' in a book of that name in the 1990s. He talks of the complexities of delivering experience, encompassing such factors as entertainment, learning and discovery, escapism and immersion. The latter is where architects

Right Ray Hole Architects' compact café at Marwell Zoo – an expandable culinary experience.



most commonly contribute, he says: 'Architects rely on the visual, the aesthetic, although experience is actually about all the senses.'

Leading leisure operators understand that need to appeal to all the senses. 'Architects are obsessed with the bird's eye view, even though people never see that,' says Hole. 'But a top US leisure operator works on the basis of sight, acoustic and "aroma" lines, all from visitors' points of view.'

Fun is an extremely serious business, and Hole's projects – which include the Bentley and Volkswagen pavilions at Autostadt, Volkswagen's automotive brandland in Wolfsburg, Germany – routinely see it working with psychologists to gain insights into visitors. 'Clients want a high performing investment, an economic powerhouse,' says Hole. 'We work with clients to monetise experience – they can work out what every minute of dwell time is worth.'

That experience doesn't have to rely on great architecture, or any building. Tennis fans may have just as good a time on Henman Hill as in the Centre Court at Wimbledon, but in fact the solution is often a hybrid. That's the case at Marwell Zoo, in Winchester, where Hole's compact café opens onto decking to provide additional capacity for summer visitors. 'A defined building has

a defined capacity,' says Hole. 'We often advocate openable buildings with outdoor servicing to accommodate more people. It's a question of what is needed to provide the experience.'

Culture competition

Quality and quantity of space is also a priority for traditional galleries and museums, but comes with the added challenges presented by precious collections, often equally precious buildings and a need to integrate technologies to help safeguard and display artefacts. 'We have to deal with the interfaces between disciplines, integrating services while being sympathetic to the most visible parts of the project,' says David Kohn, director of David Kohn Architects. The practice is tackling this to create the new V&A Photography Centre in three 19th century picture galleries in the V&A, for a scheduled October opening. The V&A's fragile photography collection needs an environment with precise climate control, 'a project in itself,' says Kohn.

Kohn's design deftly provides new spaces within the old. The architect has drawn on photographic history, and specifically the 19th century tradition of travelling darkrooms, to create the dark tent, a multi-media projection and

lecture space within a space, without disrupting the listed architecture. Kohn's modular display cases are easily reconfigured for changing displays. Unusually, the architect is even working with the curators on the fine detail of the centre's first hang. 'An architect is not usually this closely involved in the relationship between the object, the viewer and the space,' he says.

The V&A is just one of a number of big names with projects recently completed or in the pipeline. 'It's important for major museums and galleries to have a high profile, to ensure they attract visitors and donors, and big blockbuster travelling exhibitions,' explains David Hills, partner with Purcell. 'In the international competition to attract exhibitions it is important to have the right facilities.' London's National Gallery is a top destination, consistently welcoming more than 6 million visitors annually. Last year it added an infill extension, designed by Purcell, adding 200m² of display space and improved circulation routes. Breathing space is just as important as gallery space in the all-round visitor experience, says Hills, allowing for cafés, retail and pop-up displays.

The National Gallery continued to operate throughout construction work. Hills says, 'You always have to be sensitive of opening up listed buildings, but here we also had to consider challenges like the potential impact of vibration on walls with priceless works of art behind them.' In the effort to keep the gallery looking its best, the architect is considering its next project, a room refurbishment. The room has some, but not all, of its original Victorian features, and the practice will take its cue from that, says Hills: 'The National Gallery is seen as a venerable institution, so we'll be retaining its 19th century gallery experience. It's true to the building.'

Integration of display technology into such buildings has become easier, with the visitor's own mobile now taking the place of the old push button displays and headsets. 'The digital

'We work with clients to monetise experience – they can work out what every minute of dwell time is worth'



Left David Kohn Architects' V&A Photography Centre, opening later this year.

Below The Cube, a concept by FaulknerBrowns, brings together 20 sports, retail and entertainment activities in one form.



Beacon of Light in Sunderland epitomises what can be done, with the single building having sports facilities, teaching space, a cookery school promoting healthy eating and a health centre.

The architect has innovated in leisure development with concepts such as the Cube, which houses 20 adventure sports, plus retail and entertainment, in a single shell. It has also long been combining leisure activities

experience means we are able to do a lot more with less,' says Hills. 'The visitor can download an app onto their own device as a guide. It's now about the artefacts themselves, rather than the high tech lens to see them through.'

Technology has helped cultural experience extend beyond the gallery via apps and websites, but there are other ways of breaking out of museum walls. Purcell is working with Nissen Richards Studio and the Wordsworth Trust on the Re-imagining Wordsworth project, a plan to extend the Wordsworth Museum. As well as physical facilities, the project aims to offer an immersive experience, with a rooftop viewing platform and viewing points connecting visitors to the landscape that inspired the poet.

The leisure influence

Traditionally, the leisure sector has been in the business of creating distinctly separate or ideal worlds for us to escape to, but the tables seem to have turned as leisure exerts a growing influence over our everyday environment. Sports centres offer more than space for a Sunday kickabout; they are now key to our health and wellbeing. 'Traditional sports may not have changed, but there is an increasing crossover with education, and with active design. That allows buildings to be intensively used,' says Mike Hall, partner with FaulknerBrowns. The architect's design for the

in indoor snow and activity centre projects, from Braehead, which was completed some 13 years ago, to the one now planned for Swindon, where snow slopes sit alongside a bowling alley, hotel, retail and restaurants. 'It's all about breaking down the barriers,' says Hall.

Another barrier the architect is breaking down is the old stereotype of the dull suburban leisure centre. Designs for water complexes like those proposed for Coventry and Derby are very different. 'In Coventry leisure is being brought right into the town centre, to a location right next to one of its historic spires,' says Hall. 'And the architecture has to work harder.' In Derby, the design nestles into an undulating landscape and provides flexible spaces.

In a world where leisure is a growing priority in urban regeneration and mixed use development, it's not surprising to learn that the architect's creative thinking is in demand. 'The work we've done developing flexible concepts for sports projects has won us work with commercial developers,' says Paul Rigby, partner with FaulknerBrowns. 'The mono-culture is over. It's unsustainable. Now it's about curating a mix and refreshing it on a regular basis. We can catch people's time.' And to catch people's time is ultimately what every developer, whether they are creating a workspace, apartments or a leisure facility, wants. ●

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St David's hospice, Newport, Wales



Sunlight streaming in through the open window is one of my enduring memories of the days leading up to my father's death. In those delicate, contemplative hours, the quality of light – how it shone in deep yellow broken beams into the otherwise dark room, catching the sill at the end of his bed – felt significant, to the extent that memories of the events that led us there are fuzzy and it is the ambiance of the space, its intensity, that I think about.

He'd been on quite a journey to get to this point. It was a whirlwind of hospital transfers, words, nurses, doctors, disappointments and frustrations. But what we felt when he arrived at the hospice where we then knew he would die was an enormous sense of relief and tranquility. The wintry light cast a dappledness into the room that captured that feeling, a serenity and freshness.

It is in moments in life like this that light, air and architecture come together, and one soaks in an aura of a place. Crucially, that moment hadn't been designed. For this feature, it therefore seemed appropriate to explore how lighting might be arranged in a purpose-built hospice instead. And the lighting at KKE Architects' new St David's Hospice in Newport, Wales, which has just won a RIBA Regional Award, could have many such moments.

Located in the suburb of Malpas, St David's is a charitable organisation founded in 1979 to provide 24-hour care to people in their homes. Over the past 10 years, however, the charity has expanded with a new head office, outpatient day centre and outreach chemotherapy unit completed by Worcester-based KKE in 2013, and now, following the takeover of the nearby St Anne's hospice in the same year, an

inpatient block with 15 single-occupancy bedrooms on the greenfield site behind it.

'St David's has no set way of doing anything,' explains CEO Emma Saysell, who commissioned the building. 'We try to give people what they want, when they want, and provide choice in a non-judgemental way. Because we are smaller, we are more bespoke.'

The headlines of the brief to KKE were that the new inpatient building should be clinically safe, but homely so you wouldn't know what was going on there, have an emphasis on natural materials that age well, and be lovely for whichever social demographic you come from.

'It couldn't feel too much like a luxury hotel,' says Saysell. 'The majority of hospices are self-funding and that can often lead to opulent buildings. But I was mindful of using public money. It had to be affordable and without huge

Sensitive use of natural and artificial light sources creates an environment that is both practical and peaceful

Words: Isabelle Priest Photographs: Ståle Eriksen



maintenance costs – or be too on trend either.'

The bedrooms had to be on a single storey, non-facing and supervised from a central nerve point too. But Saysell also had one unusual requirement: that if you want to see your horse for the last time, the building should allow it - that meant bedrooms with outside space: 'NHS hospitals make patients feel very enclosed. I come from rural Herefordshire so I lean towards things outdoors. Also, many patients in the area are non-cancer, with chronic respiratory diseases caused by mining. These people require fresh air to breathe well. There is no substitute for the real thing. That pleasure is completely cut off in an ordinary healthcare environment.'

KKE's response has been to design the building in a long reverse L-shape, with the entrance, café and service rooms to the approach-side of a central corridor and patient bedrooms

Above View of St David's new inpatient unit from the outpatient building. The café and entrance, clad in copper, step forward from the main elevation, which is primarily clad in red cedar shingles.

with terraces overlooking Mynydd Twyn-glas mountain to the rear. The entrance is the only area where the view cuts directly through the building with a clear line of sight through the reception, family sitting room and green views beyond. The café comes off the reception, together separated from the patient area by a glass partition, allowing it to be lively and noisier.

Lighting plays a central role in creating an adaptable setting appropriate to the needs of patients, families and healthcare staff. As a result, it gives choice, control and autonomy for activities that might take place and atmospheres people may wish to create. Nonetheless, daylight is prioritised. In this regard KKE has been inspired by Danish good practice, visiting hospices in Djursland and Copenhagen, as well as taking advice from the Programme for Good Hospice Design in Denmark. It is part of



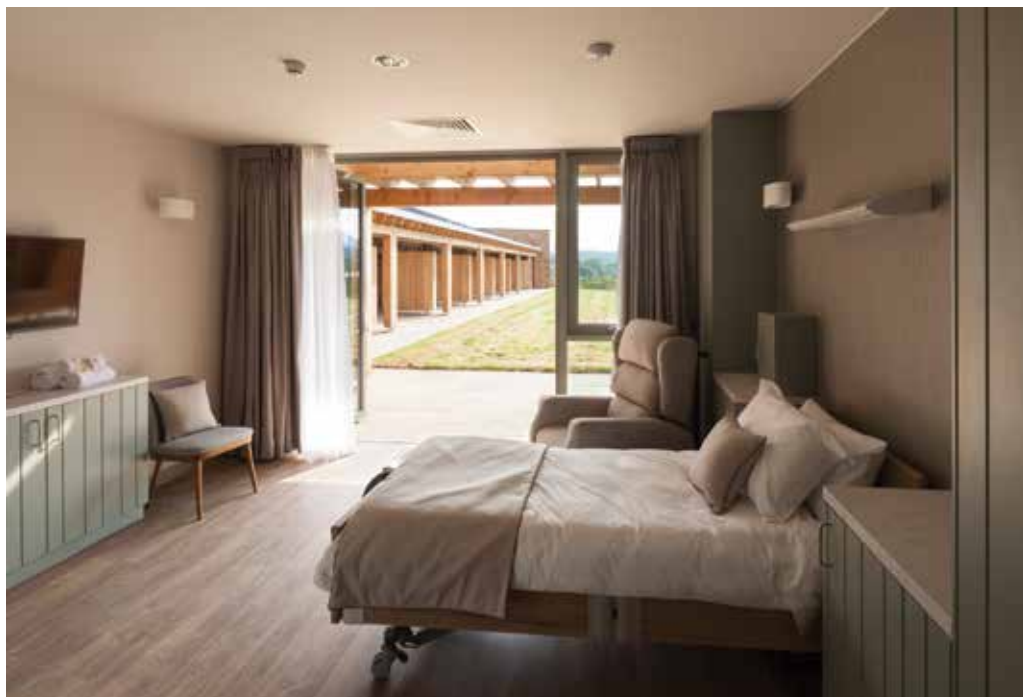
a wellbeing strategy for users, particularly as eyes need greater amounts of light as they age, as well as to make the building economical to run.

Indeed, the entire rear elevation is made up of full-height, full-width bifold doors that let in light, provide views and enable patient beds to be wheeled out to enjoy the fresh air. The central corridor is also open to the rafters and top-lit by rooflights, and glazed bays at either end bring in light, create interesting vistas and provide seating areas. Staff offices and a family quiet room also borrow light from the corridor through internal glazing that helps with surveillance.

The key area is the patient bedrooms, which are spacious (between 20 and 25m²) and painted in green/grey shades to encourage calm. The terrace in Douglas fir, is protected by an overhanging roof for patients to lie outside. The deep loggia prevents overheating, but KKE has incorporated a strip of rooflights so it didn't cause too much shade to the room – a feature that was moved outside during value engineering so it could be single rather than double-glazed. An inner voile curtain can be pulled across for finer light adjustments or privacy.

Nevertheless, an enormous variety of artificial lighting has been specified as well, from external bollard and pavement lighting, to table and standing lamps for sitting areas. KKE's approach has been to minimise overhead lights as this is often the 'patient's elevation', and use lighting to bring down the scale of spaces, add a feeling of domesticity and opportunities for individual preferences. 'We wanted to avoid glare and visual complexity,' explains KKE director Phil Kavanagh.

Artificial lighting in the bedrooms, for example, is non-intrusive, offering many options to suit personal preferences – perhaps



Top The building is designed in a reverse L-shape. Bedrooms have a private terrace and a loggia that give onto the lawn and expansive views.

Above Bedrooms are calm spaces, designed with the 'patient's elevation' kept in mind. Fully opening bifold doors mean patients can be taken out into the fresh air.

Left Zeppo suspended lighting domes and Ginestra pendant lamps from Astro animate the loftier interior of the café. Flush strips are specified as the space opens to the garden.

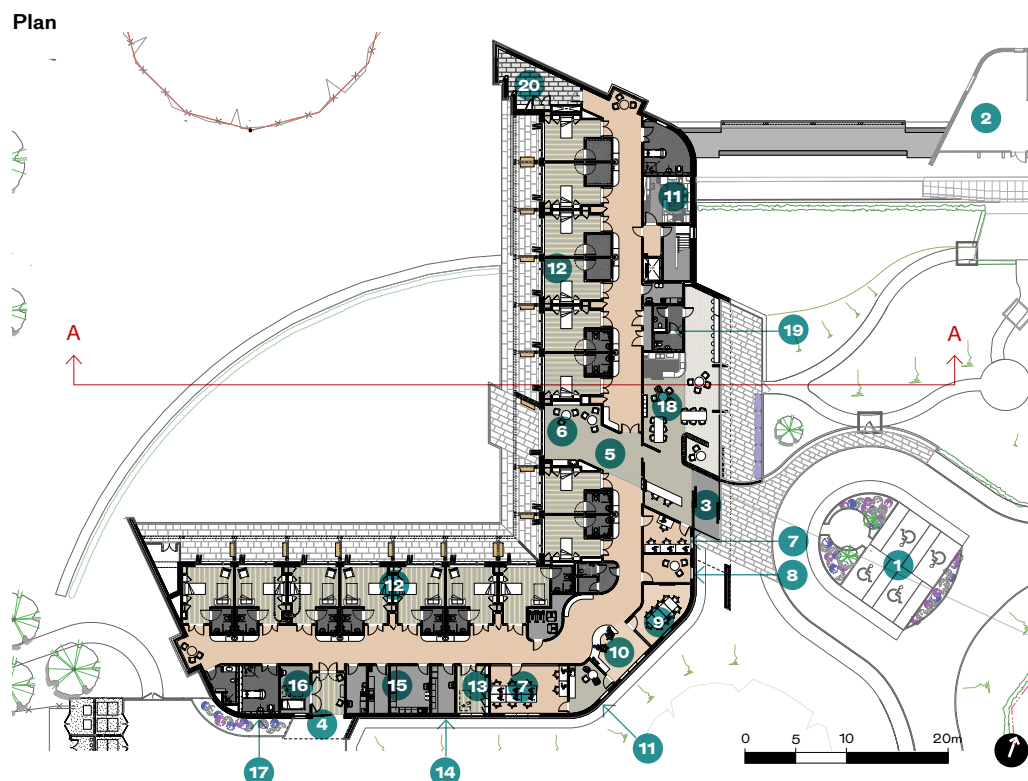
Opposite right One of the two assisted bathrooms. Patients can customise the room with the Starscape twinkling light.

KKE's approach has been to use lighting to bring down the scale of spaces, add a feeling of domesticity and opportunities for individual preferences

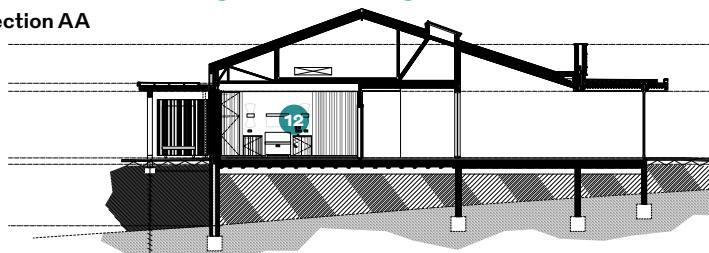
a calm environment for patients and visitors and a bright workspace for staff. There are two large Whitecroft Florin E3 recessed spotlights in the ceiling to provide stronger lighting and a Whitecroft Florence Elite inspection light above the bed for examinations.

Otherwise, the priority is on throwing light across walls, with two Astro 0966 Tokyo Classic wall lamps on each sidewall. All lighting is dimmable, and a slightly textured wall surface behind the bed helps the wall light dissipate even more softly, and break up the uniformity of the room. There are remarkably considerate details too – like the Astro 0660 Fosso flexible arm reading light wall-mounted above the pull-out bed in the family rooms so overnight visitors can have the light on and not disturb the patient. Recessed LED strip lights in the loggia partitions, downlighting the alcove and floor in a bluish hue, add a touch of disco to the night.

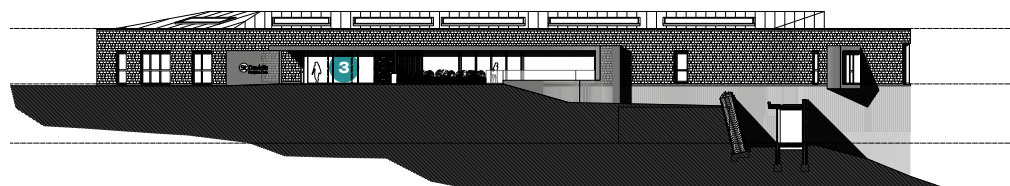
The central corridor is one of the most complicated areas as it is used by patients, families and staff. It has a generous width to allow a spacious feel, but also passing beds. The nurse station is positioned on the turning angle to have views to both sides. The exposed glulam structure brings in natural materials while the space is modulated into bays to make it feel more domestic in scale. The lighting scheme is also



Section AA



East elevation



- | | |
|-------------------------------|----------------------|
| 1 New inpatient unit drop-off | 11 Kitchen |
| 2 Existing outpatient unit | 12 Bedrooms |
| 3 Main entrance | 13 Therapy room |
| 4 Secondary entrance | 14 Utility |
| 5 Reception | 15 Drugs room |
| 6 Family day room | 16 Holding room |
| 7 Office | 17 Assisted bathroom |
| 8 Quiet room | 18 Social hub |
| 9 Handover room | 19 Children's area |
| 10 Nurse base | 20 Multi faith room |



Above The loggia is constructed in Douglas fir and includes a single-glazed rooflight. Each partition includes an alcove seat with recessed lighting.

Left The central corridor is open to the rafters and top-lit.

Right Brighter and brighter daylight space draws you towards the back of the peace room, Y Dawel.

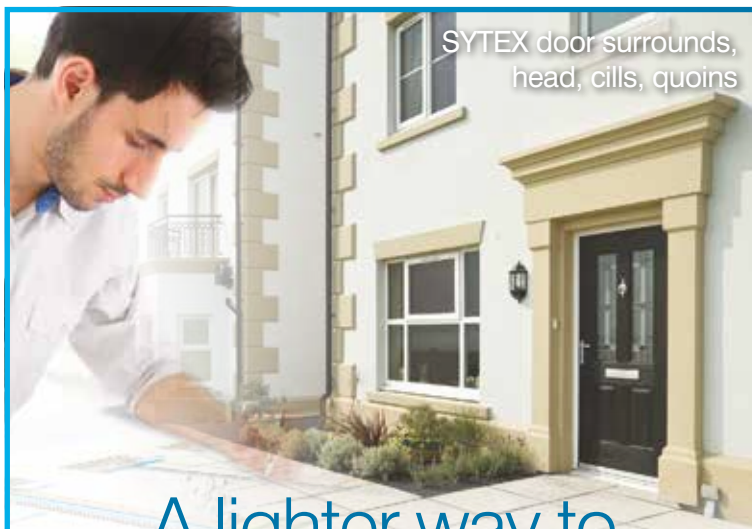


carefully considered in addition to rooflights and glazed ends; there are long Whitecroft Avenue Universal suspended LED strip light fittings the length of each strait, providing both down and uplight. These also work to lower the perceived height of the space. Low-level Thorn D-Co LED wall lights are evenly spaced for night hours so no invasive light passes through viewing screens as nurses check on patients.

The en-suite shower rooms to patient bedrooms also prioritise natural lighting, with a solar tube fitted to supplement with two recessed spotlights. It means patients and visitors don't need to turn on the lights to go to the loo, making the experience that bit simpler in rooms without an external wall. Meanwhile, in the two assisted bathrooms, patients are treated to adjustable coloured lights in the bathtub, music and twinkling spa-effect ceiling lights to give the experience of taking a bath, one patients might not have had for a long time, a relaxing and perhaps entertaining quality. 'It can also look quite psychedelic,' explains Saysell.

Finally the peace room is another area where light, air and architecture combine to create a calm ambiance. Deliberately kept cool, it is a flexible, contemplative space. It unfolds in a series of side and top-lit stepped window alcoves, framing a brighter and brighter daylight space to the back that draws you in, to culminate in a projecting triangular window bay with views out to surrounding treetops. Flagstone flooring, copper cladding and rough-textured walls give an outdoor feel – with artificial lighting kept to a minimum except in recessed cubbyholes, but splashing across the textured walls with a soothing graininess. It is one of many spaces that capture attention for memorable moments. ●





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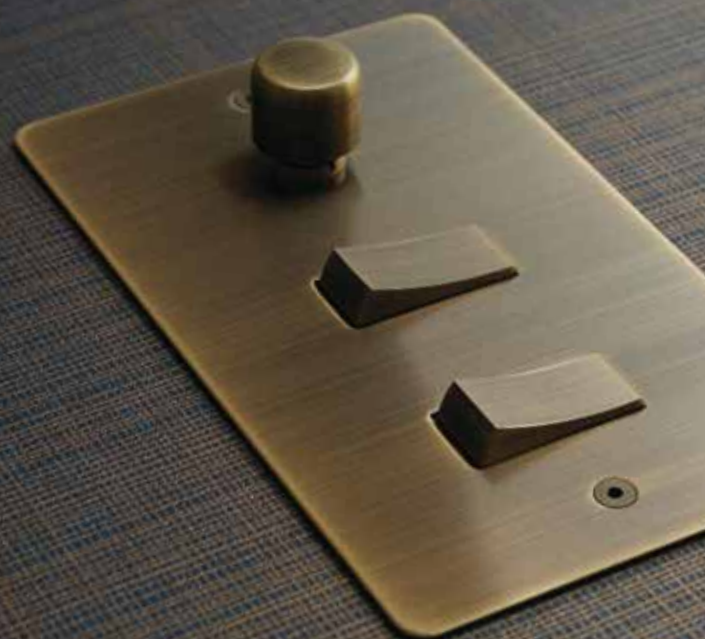
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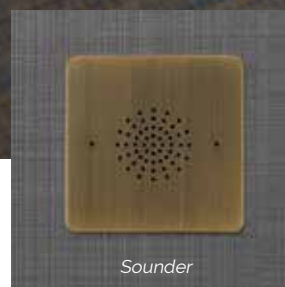
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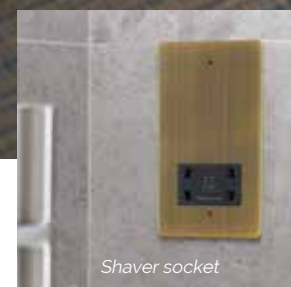
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3



2



4

1
'Light Bulb' limited-edition lamps
Foscarini

'Surely the darkness shall cover me; even the night shall be light about me. Yea, the darkness hideth not from thee; but the night shineth as the day...' And lo! Behold ye the Light Bulb series of the Foscarini/Wines 'Reverse Room' collaboration, in which the tungsten filament passeth away yet the Murano glass art project yieldeth up the spirit of the blown bulb. For yea, the bulbs shall remain in darkness even as their bases glow. The bulbs shall melt in wax for all eternity and even shall they hold the lilies as they grow. foscarini.com

2
LED stair edgings
Gradus

For an art award that attracts a range of whacky submissions: pickled sharks, concrete mattresses, people dressed as bears, pornographic pottery – even a huge bum you can walk into, the Turner Prize sure takes some beating. 2017 shortlister Rosalind Nashashibi's films might have been a conventional medium but had a far more political programme, looking at isolated lives in Gaza and Guatemala. Hull's Ferens Art Gallery hosted her show in a custom-built Turner Prize mini-cinema, where Gradus' LED stair edgings, ahem, guided you to your seat. gradus.com

3
Bis pendant lamp
Sollos

Ah, the power of the caffeinated imagination! Alberto Santos-Dumont, Brazilian son of a coffee planter, could doubtless thank that limitless espresso access for his creation in 1906 of the 14-bis, the first aircraft to fly in Europe. And as I lie here on the dining table, eyes twirling in their sockets thanks to the trusty old 10-cup Robusto, I ponder the slender brass 'Bis' pendant overhead, and weep. For even though it may be styled and named from that pioneering aircraft, it really isn't going to take my weight. sollos.ind.br

4
Square Line illuminated balustrades
Q-Railing

Not enough of an incline, old chap. Beautiful smooth rail, but how is one supposed to get up the kind of velocity that enables le grand jeté combined with a turn and bow on the dismount? Concealed LED illumination, welded installation and the ability to resist a uniformly distributed load of 1.5 kN are all very nice, I'm sure, but this 1.5kN demands more slope! Locating Q-Railing's woefully low Square Line 60x30 balustrading at the new Battersea pier only adds insult by denying the sporting balustradier their dramatic finishing 'Plop!'. q-railing.com



5
'Flute' spun-metal sconce
Studio Dunn

We've always been more of a coupe clique of course, but these solid American-made flute sconces from Studio Dunn could drag us downmarket (if only metaphorically). In fact, we have decided to forgive them their origin in the greasy flutes of the golf club wedding circuit, and instead we gladly embrace their powder-coated spun-steel sleekness, their neat brass articulation, their E26 versatility, and restrained, chic, mid-century references. These features render them entirely in keeping with our taste for PROPER champagne glasses. Bottoms up!
studiodunn.com

6
Pearl Drop chandelier
Preciosa

'Grandma always promised me her pearls, you know, but when it came to it we absolutely couldn't find them. And just as Certain People were getting hot under the collar, Mummy looked up at the ceiling and commented that she'd not remembered the unusual chandelier. Certain People claimed it was in fact a new pendant light by Dutch designer Frank Tjepkema, and only hand-blown glass spheres and brass. Complete rubbish, naturally. I'm only pleased that we found them. 'And I do rather feel that they would have worn me.'
preciosalighting.com

7
Hotel lighting
Platek

When you go to the Alàbriga Hotel & Home Suites, you don't go for five-star luxury, gold sculptures, vast suites or 24-hour butlers. You don't go for the 10-minute walk to the beach, the spa, pool, gym, or boutique. You're not interested in Aryanour Djalali's yacht-inspired architecture; in the sea-facing balconies, velvet sofas, marble flooring or starry starry chef. No, you come only for the lights. Just look at those myriad lights. Platek will tell you the names of your favourites. And you can call them from home.
platek.eu

8
Basalt ceiling lights and lamps
Tala

So Finn McCool's off to see his mate Gogmagog in England, you see, and he's got his sarnies and little can of pop, and off he goes on his Fenian cycle. But when he gets to the Giant's Causeway it's getting a bit dark, so he gets off his bike and he sits down and has a think and then he breaks off a lump and makes one of these here 'Basalt' LED lights what Tala have now brought into production in polished sandcast brass with mouth-blown, matte borosilicate glass. The End.
talaed.com

Costed

Nang Murng, head of resource data, and Clive Rowe, construction data analyst, both at RICS, look at lighting costs

In the UK lighting consumes 58,000 TWh/y, equivalent to 18% of electricity production. Domestic lighting accounts for 26% of consumption (15,000TWh) and 15% of a typical household's electricity bill. Smart lighting controls and energy efficient lights could cut consumption by up to 6% a year, for example by changing which bulbs we use and how we use them. Homes typically use a mixture of standard light fittings and down- or spotlights; energy efficient bulbs are available for both. Reduced energy consumption would also lower CO₂ production and help meet government targets.

Lighting is central to making a house a

home. The right lighting allows you to perform tasks easily, and makes you feel safer and more comfortable. Lighting choices are guided by the function or use of the room, aesthetic requirements, degree of comfort required and cost. Factors such as energy consumption, lamps and ballast life, installation and maintenance costs must also be analysed. A more expensive system may be justified by savings over its lifespan. Each room has specific general and lighting needs. Pendant or chandelier light is common in living rooms. When compared to pendant lights, chandelier lights with their multiple bulbs are generally more expensive

and heavier. Chandeliers give a greater amount of light in a wide open space while pendants focus on a specific area.

The following guide rates reflect the prices a developer might expect to pay on a medium-sized residential project for products in the low to upper-middle specification range. Prices allow for electrical installations (per point) for straight forward installations including the cost for cable, conduit and conduit fittings, from distribution boards to appliances and fittings, and for switchplates, socket outlets and the like (main switchboards, distribution boards, main and sub-main cables not included). ●

The following rates are based on the UK average and represent typical prices at 2018 Q1. Please note that prices can vary significantly depending on the exact specification. Prices are based on the BCIS Schedule of rates online services (service.bcis.co.uk/bcisonline)

Range £/unit		Range £/unit	
Domestic internal lighting			
Pendant, one way switch including single LED lamp	126-136	240v creative/designer, fused and draped glass	195-210
including three LED lamps	184-198	240v creative/designer, splashbacks, 1200 x 800 mm	891-958
Creative, fused and folded glass, suspended by wire, two LED lamps	363-39	Add for:	
Contemporary chandelier one way switch including three LED lamps / eight LED lamps	208-239 / 479-550	two way switching / three way switching	62-66 / 118-127
Traditional chandelier one way switch inc eight candle lamps	303-333	Emergency lighting luminaires:	
Flush ceiling one way switch reflecting wash, recessed, two LED lamps	138-149	150mm / 300mm three hour non-maintained emergency bulkhead luminaire IP40 4 watt T5 240v	186-200 / 257-277
circuit of four, reflecting wash, recessed, two LED lamps	237-254	Commercial internal lighting	
single spotlight, one LED lamp	124-133	Industrial lighting fittings; high bay type complete with reflector and lamp and gear:	
of three spotlights, one 12v LED lamp each, one transformer	190-204	250 Watt sodium	223-240
downlighter, one LED lamp	116-125	250 Watt metal halide	213-229
circuit of six downlighters, one LED lamp each	162-175	250 Watt mercury discharge	208-223
eye ball downlighter, one LED light	124-138	Domestic external lighting	
twist and lock low voltage downlighter, one LED light, transformer	127-136	Weatherproof bulkhead luminaire IP65 8 Watt T5 240v non-maintained / maintained	257-277 / 156-168
Track		garden lighting, spotlight on stake, 240v, IP67	156-167
low voltage track kit, three pendants, LED bulbs, transformer	247-265	garden lighting, stainless steel bollard, 240v, IP67	382-411
low voltage cable kit, five pendants, transformer	322-346	garden lighting, LED spotlight, 240v, IP67	225-242
high voltage track kit, three pendants	284-305	1000W floodlight, PIR unit, 240v, IP67	170-183
Add for:		Commercial external lighting	
low voltage cable pendant / track pendant	26-28 / 28-29.87	Black aluminium medium beam economy discharge floodlight with toughened glass diffuser, integral gear, timed ignitor and lamp:	
high voltage track pendant	30.94-33	250 Watt SON-T / 400 Watt MBF	232-250 / 222-239
Wall mounted one way switch:		250 Watt HQI-T	232-249
240v recessed reflecting wash, LED lamps	136-147	Black low Wattage discharge floodlight with clear polycarbonate diffuser, integral gear:	
low voltage light kit with transformer and five recessed LED units	195-210	lamp 70 Watt SON-T no ignitor	172-185
240v picture light / spotlight	151-163 / 129-138	lamp 80 Watt MBF	162-174

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Light your world



Congress House, London

Hugh Broughton Architects extends the original aesthetic in this phase of a near quarter-century refurbishment of the TUC HQ

Words: Jan-Carlos Kucharek Photographs by James Brittain



Left The distinctive curvaceous modernism of the original building feels decidedly contemporary.

Right The memorial courtyard, with Jacob Epstein's *Pieta*, against its screen of green mosaic and delicate Pyrex tubes.

Opposite Hugh Broughton Architects has extended the existing palette of materials and augmented it with Eva Berendes' new glass art installation.

Over 23 years, what started off as a simple refurb of the toilets at David du Roi Aberdeen's Congress House in London by architect Hugh Broughton's rookie practice has become a long-standing, painstaking £12 million wholesale refurbishment of the 1946 grade II* modernist building. Broughton himself refers to his relationship to the building as a kind of 'surveyor to the fabric', but it feels more personal than that. For in the stripping back and renovation, it's as if the architect has gained an intimate understanding of the mind behind one of the UK's most unusual modern buildings. du Roi Aberdeen was a self-confessed Corb obsessive, whose cavalier interpretation of functionalist

Below The new Rookery entrance on the south side of Congress House.





theory, applied to a tight sight and complex programme of an HQ/conference centre/memorial, resulted in a strange proto-deconstructivism – a kind of Berlin ‘Checkpoint Charlie’ 30 years before it was even a twinkle in OMA’s eye.

Last month marked the completion of the latest phase in the upgrade with the launch of ‘The Rookery’ – new offices for commercial let on the south side of the building. Originally intended to house the offices of the Labour Party complementing those of the TUC to the north, the Bainbridge Street ‘working’ side of the building, with its protective walkways and ramps, had been treated as a refuge by the capital’s homeless. That use may not be antithetical to the altruistic ideas embodied by the TUC, but it did make leasing the offices on this side more problematic – something Broughton had to put his mind to for the newly branded Rookery.

His response, after consent from Camden council’s conservation team, was to redefine the enclosure on this side of the building. The Rookery’s new reception area has been pulled out to du Roi Aberdeen’s original balustrade line, with a Schueco cladding system running all the way around to replace the W20 steel

sections that overlooked the car park ramp. Broughton feels the nature of any intervention should be dictated by its scale – he believes overt contrast with the original generally only works in the macro – so he opted for ‘modernisation of the existing palette’. The vertical oak slats that lined the lift shafts continue into the new reception space, and Rhodesian teak parquet flooring and Sicilian marble are restored or replaced with similar to meet the new building line. Overall, the effect in the reception is a muted, considered one, but the high gloss of the rejuvenated marble is particularly enjoyable.

The effective enclosure of the external ramp

The architect has gained an intimate understanding of the mind behind one of the UK’s most unusual modern buildings

was, like Jacob Epstein’s imposing 1958 Pietà in the Memorial courtyard, the subject of a competition, with the client team opting for a work by Berlin-based artist Eva Berendes. Her tactile, hand-sandblasted screen of brightly-coloured geometric form is inspired by the enamel badge motifs of the TUC’s affiliated unions and, sitting within Broughton’s brass-effect steel frames, animates the Dyott Street facade to create an identity for this subsidiary entrance.

Work is ongoing. Broughton has yet to remove the black mesh screens installed by Cedric Price at council chamber level to counter solar gain. ‘I don’t think he was cut out for mere refurbishment’ says Broughton, but he hopes his firm’s work – which, save for the installation of a slightly incongruous curved ETFE roof over the courtyard – keeps to the spirit of the original endeavour. ‘It represented the TUC’s post-war drive, in austere times, to promote construction, craftsmanship and the arts,’ he explains, ‘an exemplar that embodied the socialist ideal.’

It’s true, the TUC’s continued commitment to the legacy and longevity of the building is an admirable one; although the inner city homeless, forced to move on, may beg to differ. ●

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2 Comfort-E underfloor electric mat Uponor

'Blessed be the fruit, Mummy.' 'Under his eye.' Uponor's electric underfloor mat is designed for quick, simple single-room installation. Two options, of 3mm fibreglass mesh with sewn-in cables (for tile, Karndean or Lino), or aluminium foil with optional 6mm insulation (for laminate or tongue and groove), are simply unrolled and connected to the mains. Innovative it may be but in the words of The Handmaid's Tale's Aunt Lydia, "Ordinary" is what you are used to. This may not seem ordinary to you now, but after a time it will.'

comfort-e-co.uk

3 Novitex vinyl flooring Forbo

I just had the most incredible fillet of peppered mackerel for lunch. On a bagel. With rocket and cream cheese. Can't beat a really good bit of mackerel. Not even if you're Forbo's new Novitex hybrid vinyl, with 17dB impact reduction, tolerance of subfloor imperfections, and dimensional stability loose laid up to 15m². The range has been created using 25 of the company's most popular Novilon designs, with a flexible felt backing making it almost indecently quick to get down. Rather like that mackerel, in fact.

forbo-flooring.co.uk

4 Cronos stainless steel farmhouse sink Blanco

'Dear Mr Cronos, Thank you for coming to interview last week. While we were impressed with your Titan credentials, we feel your ability to consume and regurgitate infant Greek deities would not sit well in a domestic environment. Thank you, however, for the interesting demonstration. We have decided instead to go with Blanco's Steelart Cronos, whose matt stainless finish and large integrated bowl come in top, under, or flush mounting options, providing an exact fit with our requirements. We wish you success in your future Olympian endeavours.'

blanco.co.uk

Sign Up

Jan Kattein, director at Jan Kattein Architects, gives us three of his specification favourites



ORIENTED STRAND BOARD

At our project Switchboard Studios in east London we lined the interior of the workspaces with Oriented Strand Board (OSB). This is made from cross-laminated wood fibres fused together with a resin/wax compound under pressure, using up to 90% of the raw timber. Even small trees – often from forest thinning – can be used. OSB is used for roofing and temporary hoardings, but is underrated for its visual appeal. I enjoy the textured surface and the warm hue of the wood fibres. There is an honesty about its appearance with the structural properties of the wood fibres manifest on the surface.



MINERAL PAINTS

Working in High Road Leyton we specified mineral paints for some 20 high street frontages. Six years after we completed the works, the facades look every bit as colourful as on the day when they were painted. We have never looked back and have used mineral paints for 28 other high street regeneration projects since. There are four distinct advantages. Mineral paints don't attract atmospheric pollution in the same way that acrylic paints do, they are more sustainable, the pigments have greater light stability and they allow the building to breathe – all that one would ever want from a facade coating.



LINOLEUM

It's hard to dissociate linoleum from memories of daycare centre receptions and primary school corridors. Yet we have long departed from the gaudy marbled colour ranges that blemished our relationship with this wonderful material and I specified it recently for a residential project. The material is made from wood by-products – pine resin bonded with solidified linseed oil to a canvas backing. Some of the great advantages of Linoleum are that it can be repaired, if properly installed it's water resistant and has natural anti-bacterial properties.

...Sign Off

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



BIG CURL

Remember Point Break, the 1991 US crime movie where a dashing undercover FBI agent ends up in thrall to a testosterone-and-dope addled Sunshine State surfing gang? Clearly some dude did, coming up with the 'bodacious' 'Surf' bathroom radiator. This 'one that got away' heating unit can help 40-something husbands look to their Big Wednesdays and that time they rode that once-in-a-lifetime tube. As for unsolved crimes, we're pointing no fingers but it comes in black or white.



NO 'I' IN 'TEAM'

Do all designers have a 'jump the shark' moment? If so, Konstantin Grcic may have performed a triple salchow over Jaws with his new 'Stool-Tool', 'multifunctional furniture solution'. Even in the PR pics the chairs seem to be ignoring each other in the break-out space, are stacked in the corner like an awkward office party coupling, or just sit alone. 'You regularly face situations that call for ad hoc activity,' says Grcic. This is hock alright – just add a big chunk of ham.



GO DEREK

June, July and August were named after Roman emperors but Derek? During its 'Derek month', online estate agent HouseSimple opted to drop its £995 commission and sell any Derek's house for free. Considering the possible financial exposure, we tried to list all the famous Dereks we could: militant Hatton, he of the Dominos, Jarman, Jacobi and Nimmo. ONS says peak Derek was in the 1930s, 'plunging heavily since the 1960s'. Ten star Bo might just count; but either way, HouseSimple's quids-in.

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