Extreme spec Stabilisation of stonework, Hardwick Old Hall

Lighting 80 Strand, London

Special report Schools' neglected fabric hampers retrofit ambitions

Roofing & skylights Angel Yard, Enfield, London

Interiors Ovenecká 33, Prague

R

Products in Practice Nov/Dec 2023



DULUX TRADE COLOUR OF THE YEAR INTERIOR PALETTES

A WARM COLOUR STORY



A CALM COLOUR STORY

| Nordic Hills | 90YY 15/279 | Neptune Seas | 78GG 19/078 | Pea Shoot | 30GY 41/173 | Tranquil Dawn™ | 45GY 55/052 | Horizon View | 10BB 73/039 |
|-----------------|-------------|---------------|-------------|-------------|-------------|----------------|-------------|-------------------------------|-------------|
| | | | | | | | | COLOUR OF THE YEAR 2024 | |
| Sapphire Salute | 50BB 08/171 | Fresh Foliage | 50GG 40/064 | Ocean Stone | 90BG 42/106 | Serene Waters | 30BG 56/045 | Sweet Embrace™ | 70RR 64/034 |

AN UPLIFTING COLOUR STORY

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| Rocking Horse | 00YY 19/261 | Sandy Shallows | 30YY 39/225 | Wild Wonder™ | 50YY 49/191 | Sweet Embrace™ | 70RR 64/034 | Fragrant Peony | 83BB 71/082 |
| | | | | | | | | | |
| Ochre Sands | 37YY 39/443 | High Summer | 50YY 51/519 | Lilac Skies | 50RB 48/051 | Warm Straw | 47YY 62/143 | Tailors Chalk | 61YY 76/109 |

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Contents

| Compendium0 | 6 |
|---------------------------------|---|
| Innovation/IT0 | 8 |
| Extreme spec | 9 |
| Factory visit | 0 |
| Lighting1 | 2 |
| Specified: Lighting | 8 |
| Analysis: Education | 2 |
| Education specified | 6 |
| Roofing & skylights 2 | 8 |
| Costed: Roofing & skylights | 8 |
| Specified: Roofing & skylights4 | 2 |
| Interiors | 4 |
| Specified: Interiors4 | 7 |
| PiP webinar: Sustainability4 | 8 |
| Practical completion | 0 |

 $28 \downarrow$ 'As much as being an investment in realising social impact, we tried to retain as much of the building fabric as we could, and add as little as possible'



The I

ANIEW/INDERLICE

<u>The Eye of PiP</u>

There's nothing like a good start – which the Green Roof Organisation takes on with its new book for young kids, 'Journey to the Green Roof'. Written by Jenny Bailey and illustrated by Emily



 $12 \rightarrow$ 'It was about making sure the new pieces weren't exact replicas or pastiches of what was done before, but had some authenticity'

Seen/Green: \rightarrow

Designer Bethan Laura Wood brings her own brand of pop to German sanitaryware firm Kaldewei with 'Avocado Dreams', a psychedelic take on its otherwise minimalist, white products. She might have started with her splash of colour on the Miena washbowl range but she goes large, slathering the pattern all over the Zero shower tray and Oyo Duo bathtub. Precisely engineered, plastic-free and made of '100% recyclable [so] sustainable steel enamel', it complements the firm's stated aim of 'Luxstainability'.



MES NEWTOP

online... 'Total CO₂ emissions from iron and steel works could be reduced by 58.7 gigatonnes' ribaj.com/cutsteelworks-co2

More



06 ↑ The Leaf range in the Tamashi series is akin to a large-scale Bridget Riley painting that you can just walk right over

↓ PiP's on

Pinterest! Based in New York's Chinatown, lighting company Blue Green Works' Fiber pendant series seems inspired by Jules Verne's Nautilus. Fibre glass golden discs and blown glass bowls combine to create a steam punk look. bluegreenworks.com



Cover image: Bathroom detail of Objektor architekti's Ovenecká 33 apartment in Prague. Photograph: boysplaynice



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The Forge, Upton Park, uses an innovative Blue40 Roof System that restricts and delays runoff from the site, equating to 60% of the equivalent green field flow rate.

25

ARCHITECT IRM_A Photo: Ben Luxemore

Blue and Green roofs are recognised by DEFRA* as Sustainable Urban Drainage Solutions (SuDS), providing storm water attenuation and reducing surface water run-off.

*The review for implementation of Schedule 3 to The Flood and Water Management Act 2010, January 2023





Scrubbed up

06

Turkish construction products company Marmara Group has been doing its bit to preserve Istanbul's unique bathing culture in funding the restoration of the 16th century Zeyrek Çinili Hammam in the city's Zeyrek district. Built by architect Sinan, no less, it was adorned internally with magnificent blue and white 'Iznik' tiles. Some of these have now been returned to the site in Atelier Brückner's restoration of the building, alongside its creation of an on-site museum that showcases the history and cultural significance of the hammam over the centuries.



Any visitor to Sicily should make sure not to pass up the chance to visit the strange and beautiful city of Noto, appearing like a classical mirage out of the dusty foothills of the island's south east corner. And if you're looking to reduce your carbon footprint while you're there, perhaps a stay at the 19th century Villadorata 'luxury ethical energy farm' - sat on a 22ha estate entirely devoted to organic farming methods – might be on the cards. Meanwhile, in the new restaurant, check out the green wall and unit surfaces in Verderame from Laminam's Ossido range.



Two 'H's and an 'O'

Turns out when it comes to water you can never have too much choice. Blanco has just launched its CHOICE. ALL faucet in the UK which supplies medium and fully sparkling water as well as filtered or unfiltered boiling and chilled water - or any temperature in between. And with your choice controllable with an app, it's no wonder that the firm has also provided a handy LED red or blue colour ring to remind you of what it is you wanted.

My left foot

German firm Duravit has brought out three new ranges of taps – Wave, Circle and Manhattan – to complement its extensive range of sanitaryware. The move gives specifiers even more choice in the bathroom department; not least in that the ranges are all offered as single lever mixers, thermostat taps and surface or flush-mounted. Pictured is the 'gently dynamic' wave tap available in chrome, matt black and indulgently luxurious brushed bronze (pictured) or polished gold. All with levers easily manipulated by an outstretched foot.



Batting order

Famed for the sound of willow on leather since 1787, Lords Cricket Ground must have found the choice of timber for its fencing needs a no-brainer. despite its past commissioning of the likes of Future Systems, Hopkins and Wilkinson Eyre. When it came to replacing the rotted fencing outside the ground's Thomas Lord Suite it was keen on a solution that didn't cut too much light from a space used for holding prestigious events. So it fitted 13.5m of Jacksons Venetian Hit and Miss fence panels. In the world of generally low spec world of fencing, the PR calls this a 'luxury fence panel' – and PiP has to agree. Durable too; kiln dried and pressure treated, it comes with a 25-year guarantee. Howzat?





Slice of light

ribaj.com

With mortgage rates still resolutely stuck through the roof, no wonder everyone's hunkering down waiting for the cost of living crisis to abate. So last year's catchphrase of 'Don't move-improve!' is still all too pertinent. And even though the price of the raw materials is still rocketing, it seems that when it came to this sizeable extension in Kensington, it was the slender sightlines of SWA member Perla Windows' W20 section doors and windows that the designers went for, ensuring that looks were, no doubt, as sharp as the kitchen knives.

In our enthusiasm to dazzle with the mirror glass facade of Rotterdam's Depot Boijmans Van Beuningen by MVRDV in the Sep/ Oct PiP Compendium, we did not make it clear that Pyroguard Protect fire safety glass was actually specified for the art store's interior glazed partition systems. Find out more about how it proved a good fit for the project at pyroguard.eu

ribaj.com

Never-ending story

Given that glass blower Barovier & Toso has been around since around the 13th century, the Venetian company, based in a palazzo on the isle of Murano, knows a thing or two about going and going. No surprise then, that its latest Art Deco-inspired light is based on the concept of infinite expansion. The Tuileries wall lamp, cast using a rugiada technique which lends a dew-like quality to the glass, is complemented by a brushed metallic structure with a warm, honey-bronze colour. And with its perfect fleur-de-lys symmetry, it ensures that you can create infinite compositions of both illuminated and solid elements across a surface; meaning that, like Smythson's Tudor Hardwick Hall (see Extreme Spec, p9), you too can have 'more glass than wall'.

Japanese geometry

Italian ceramics firm Ceramiche Refin has produced a new range of large-format tiles inspired by ancient deserts and what looks like 20th century Joseph-Beuys wax sculptures. Sitting somewhere between the two phenomenologically is its Tamashi range, meaning 'soul' in Japanese. Ancient natural wood effects inspired tiles in seven shades characterised by 'fine, dense, parallel veins and subtle colour nuances,' all in 25cm by 1.5m planks. But there's nothing subtle about the Leaf range in the Tamashi series, akin to a largescale Bridget Riley painting that you can just walk right over – available as pleasingly ginormous 600x600x 9mm thick tiles.



Correction: Pyroguard

How to save two years' worth of net emissions



Low-carbon upgrades to iron and steelworks could remove nearly 60 gigatonnes of CO₂ from the world's atmosphere, although cost and other factors challenge its implementation, reports Stephen Cousins

Building low-emissions technology into scheduled refits of iron and steel works could cut global carbon emissions by the equivalent of two years' worth of net global CO₂ emissions, the latest research reveals, as the 'green steel' plans for Tata's South Wales plant are debated.

The study, published in the journal Nature, was led by UCL in collaboration with Tsinghua University, Peking University and King's College London.

Researchers compiled a comprehensive database of 19,678 processing units in 4,883 individual iron and steel plants around the world and found that if all currently operating units had a low-carbon upgrade at their predicted time of refit, total emissions from the sector could be reduced by 58.7 gigatonnes between 2020 and 2050.

Furthermore, if the refits were completed five years early, total carbon savings would increase 16%, to 69.6 gigatonnes, said researchers.

The study notes that, as of 2019, the last year that data is available, 74.5% of the world's steel was produced in coal powered plants that release 'considerable' carbon emissions. Refits to individual processing units, needed to prolong their operational life, typically occur after 15 to 27 years of use, depending on the techniques used and age.

Upgrading the global inventory of blast oxygen furnaces, used in steel production, was found to yield the greatest projected net carbon savings, accounting for about 74% of overall savings. Upgrades to electric arc furnaces came second, covering about 16% of overall carbon savings.

However, the team warned that effective decarbonisation requires

mitigation measures at every plant and 'the complexity and variety of methods involved in steel production' means there is 'no one-size-fits-all decarbonisation technology or solution for the entire sector'.

Furthermore, retrofitting low carbon technology remains expensive and difficult to finance under current market conditions. Professor Dabo Guan, senior author of the study at UCL Bartlett School of Sustainable Construction, said: 'Iron and steel represents a stable business operation, it would require very strong motivation, usually an order from above, to carry out low carbon retrofitting. Investors usually aren't interested in doing this as it has either a very long, or non-existent, profit return period.'

Researchers hope the findings from the report will help policymakers to create a more realistic roadmap for when and how iron and steel plants should be upgraded to meet emissions reduction targets. The research includes an inventory of the technical characteristics of all processing units, including locations, processing technologies, operating details, status and age.

Effective policy should take into account daily operations in processing units on the ground to be effective, added Guan: 'Policy makers talk about low carbon development, whereas a plant manager is concerned about operation safety and benefits to employees. Retrofitting or upgrading units would mean temporarily ending production, meaning less employment. Effective policy needs to click with what's needed at the bottom level.' See more industry innovation and IT stories weekly on ribaj.com



If all iron and steel works included a lowcarbon upgrade in their scheduled refits, 58.7 gigatonnes of CO₂ could be saved globally.

New harling conserves C16th hall

What New harling Where Hardwick Old Hall, Derbyshire

Falling masonry has closed the 16th century ruined Hardwick Old Hall to the public for more than three years, but in a £1.3million, year-long conservation programme of its shell by English Heritage, Donald Insall Associates has assessed the structure's condition and proposed a stabilisation plan in the context of EH's Sustainable Conservation and Asset Management Plan (SCAMP). A priority was to preserve plasterwork bas-reliefs on the inner walls which are being degraded by water ingress through exterior stones.

Though modern, the intervention involved traditional lime render and harling techniques, explains Donald Insall associate Tom Bromet, creating a 'new' weather shield that sensitively recreates its original look: 'In 1912, the Old Hall was a major conservation project by the Society for the Protection of Ancient Buildings (SPAB) and [followed original] principles. It was the later, more heavyhanded repairs using cement, by the then Ministry of Works, that helped accelerate the decay we are rectifying now.'

Bromet explains that with endemic erosion of the soft sandstone structure, while a SPAB approach would have been nice, its principles prioritise significant interventions to reduce long term costs, as EH's SCAMP advocates. Instead.



Old Hall, is to carry out major interventions to reduce long-term maintenance.

Insall's more 'radical' approach of recovering the stone with new harl returned walls to their 'original' state on the building's west face. 'Our aim was to preserve as much of the historic fabric as possible. Adding the harl achieves that, even though it results in a big visual change. By reinstating a lost element of the building you are able to maintain everything else.'

The architect engaged with master Before the harl was applied parts of

plasterer Philip Gaches of Gaches Plastering, with Skillington Workshop and Historic Property Restoration to agree the best working methodology; with a JCT traditional form of contract. they had to look at 'worst case scenarios' to price the job, to give EH cost security. the wall needed 'dubbing out'. Where stones had eroded into sawtooth shapes, filling in with small stones and lime

ribaj.com

Extreme spec



Above EH's policy, such as here at Hardwick

mortar bridged the gaps and created a flattish surface for the harl to key into. A painted layer of lime plaster was applied to the surface to hold moisture in the core of the wall and prepare it for the harl application. The final surface is covered by three layers of limewash. Bromet explains that the make-up of the new harl was based on detailed study of the old. 'Our analysis of the original harling informed our mix for the new. As the two interface, we wanted the same hydroscopicity, elasticity and density.'

Erosion levels affected the thickness of the harl too, which ranged from 80mm to 20mm where it met non-eroded ashlar quoins or window reveals. Applying it too thickly would add undue weight to the structure. The harl was left rough and untrowelled, maximising surface area so water can evaporate. 'As it is softer than the stone, moisture spreads across it rather than penetrate the stone,' says Bromet.

While it's very bright now - visitors think the walls have been painted - the architect says it builds a patina quickly, as the limewash lets the colour of the stone bleed through. He and the client are happy with the result. 'The other option would have been to replace the stone but that would have been time consuming and expensive, involve loss of original stone and been as visually jarring. Despite the big visual change, the harling ticks all the conservation boxes,' Bromet concludes. **Jan-Carlos Kucharek**

Made

10



Left The state-ofthe-art De Boer production line was commissioned earlier this year. Below York Handmade's production methods use mechanical processes to emulate manual ones.

What: York Handmade Brick Where: York, England

Handmade is a term usually attributed to objects that are distinctive, crafted with care and made 'not by machine' according to dictionary definitions.

That view is challenged by York Handmade Brick. It has invested £1.5 million in machinery capable of creating bricks that live up to the company's name and handmade heritage. The manufacturing line, commissioned in March, is the result of three years of planning – and collaboration with Dutch company De Boer Machines – to match machinery to the Yorkshire-based independent's products, ways of working and business expectations.

As has happened for centuries, bricks are still pressed in moulds, but rather than a maker's hand a mechanical press mimics human muscle to provide the pressure. This approach and end product are very different to the extrusion Ask chairman David Armitage why the company made the investment and he says forthrightly: 'We had no choice'. Recruiting and retaining hand throwers has been a constant challenge, with their training inevitably resulting in high levels of waste, both in sub-standard bricks and the energy used to make them. The new manufacturing line is both more efficient and flexible than the manpower and machinery it replaces. Armitage continues: 'It allows us to make a product at the right price, while still putting the same care into our bricks. That means we can look after the people

process of volume brick manufacture.

The new manufacturing line is both more efficient and flexible than the manpower and machinery it replaces



here and maintain the success of a family company in North Yorkshire.'

Much effort has gone into tuning the machinery to get the right product types and quality, says managing director Guy, a second generation Armitage. By adjusting the line's moulds, presses and other elements, the company can now make around 36 different bricks, across three ranges: the flat stock, available in large format, the standard handmade-style product and a new water struck range. 'As the market evolves, we'll be able to expand that,' he says.

The line is proving its worth on major projects like the latest phase of Manchester's Circle Square, where the company is supplying 600,000 extralong, water struck bricks. Guy explains how, saying, 'We couldn't make water struck bricks before and we would have struggled with that size, so that's an indication of the flexibility we now have'.

The lacustrine clay that the business relies on is quarried close to its rural base in Alne. David highlights its durability, but says: 'The most important factor is its colour and the flexibility it gives us to produce variety, particularly in size. Not all clay is suitable for making long bricks because it can crack'.

While aesthetics are key to brick choice, sustainability and ethics are also growing concerns for specifiers in the face of the influx of non-EU imports made to shoddy standards and working practices. The company has signed up to the Brick Development Association's voluntary Brick Quality Charter, which identifies responsibly sourced products, and is working to reduce energy use. 'Our first step is to conserve what we use more carefully, taking heat from the kiln and using it for the drier,' explains David. 'We have to be conscious of our obligations.'

For Armitage senior, the new production line is the latest phase in the evolution of a company with a 36year track record, which he says is 'relatively young for a brickmaker'. He has been in the industry longer than that, first with the family firm and then buying the company that became York Handmade. He steered the business away from clay pipe manufacture towards the more specialized, premium product of handmade bricks; today the company has around 22 employees and an annual output of roughly 3 million bricks, many destined for high profile projects like last year's Stirling Prize winner. The latest investment more than safeguards that legacy. 'We've built for the future,' says David.

Produced by RIBA5 in collaboration with York Handmade Brick



1 MONITORING ADDITIVES

Clay is combined with water, sand and powdered additives to give the required brick colours and textures. Colour additives include manganese to give black tones and haematite for purple shading. Additive amounts are carefully monitored, being fed via a screw augur for precise control. Sand is also measured by a laser which triggers a conveyor to add more when levels are low. This enhances production efficiency, as the line does not have to be paused for restocking with raw materials. All ingredients are combined in a mixer above the production line.



2 THROWING THE CLAY

The clay mix is pushed through hoppers into brick moulds directly below, with sand fed in afterwards. The line is capable of throwing up to 12 strokes – sets of seven bricks – a minute, producing 84 bricks in total. The throwing process uses twice as much clay as is required for the brick, but the surplus is simply pressed out and then transferred back by conveyor to the mixer for reuse, meaning there is no waste. The company is able to adapt the way the machinery works, even altering the speed at which the clay is pressed into the moulds.



3 THE PRESSES Different presses give the brick ranges their distinctive finishes, with the line's special press – the Hubert head – able to simulate the pressing action of a hand-maker. Sand is generally used to prevent bricks from sticking to the moulds when they are turned out, but water struck bricks' 'reclaimed' look is achieved through the use of water, rather than sand, at this stage. To prevent these from sticking, they are formed in special moulds – supplied by the production line's maker De Boer – which have a

movable base.

ribai.com



4 MOULDS AND TRAYS

A mould actually comprises seven 'pockets', each pocket housing one brick. There are 36 moulds in the machine's full mould circuit, so space to form 252 bricks in all. De Boers' machinery is usually based on filling pockets in pairs – so working with even numbers of pockets – but York Handmade's crating and drying processes work with sets of seven pockets, so the machinery has been adjusted to enable that. The company can change the presses and moulds to produce different ranges in as little as an hour, again giving manufacturing flexibility.



5 CENTRAL CONTROL

The production line is overseen by a single operator, with one or two forklift operators, who manages its processes from a central control screen. The screen is on an upper level where the whole line is visible. Like the production line, the controls are created to meet the needs of the brick maker – intuitive to use and giving a wealth of information, including running totals of production. If the machinery requires attention – for example, a motor is running too fast – De Boer can control it remotely from its Netherlands headquarters.



6 CRATED FOR DRYING

Once the bricks are turned out, moulds are cleaned by high pressure water jet and blown with sand, ready for refilling. Lasers on the production line ensure the moulds and the trays they sit on are aligned and level, and stop the production line if not. Bricks are crated and transported by forklift to the kiln for drying. The production line works an eight-hour day, from 6.45am to 3.30pm. It is capable of manufacturing 40,000 bricks a day but is initially running at a rate of 10 strokes a minute, giving an output of around 30,000 bricks a day.

80 Strand, London

Speirs Major aimed for authenticity without pastiche in bringing the 21st century to Art Deco lighting at Studio PDP's reinvigorated former Shell-Mex House

Words: Pamela Buxton Photographs: James Newton

Lighting

With its huge riverside clock face, there's really no missing 80 Strand, an imposing Art Deco presence on the north of the Thames opposite London's South Bank Centre. Completed as Shell-Mex House in 1931 by architect Messrs Joseph, the grade II-listed building was occupied by Shell-Mex and British Petroleum, and other tenants, until 2020.

It's perhaps no surprise that Speirs Major chose to channel this Art Deco spirit in its new lighting design as part of Studio PDP's reinvigoration project, which revamps communal circulation areas that had become tired and institutional along with four of the office floors. Interventions include a new entrance pavilion on the Strand-side that now serves as the main arrival point, along with lift lobbies, a courtyard garden pavilion at the heart of the plan and an improved Embankment entrance lobby. As a result, the interlinked communal areas form a new thread stretching between the hustle and bustle of the Covent Garden-facing entrance and the more peaceful riverside orientation.

According to Speirs Major senior partner Keith Bradshaw, it was important that, as well as serving to welcome and draw people through the building, the new lighting in these communal spaces



was an appropriate celebration of the Art Deco heritage.

'It was about making sure the stylisation of the new pieces weren't exact replicas or pastiches of what was done before, but had some authenticity,' he says, adding that the firm aimed to be reverential of classic Art Deco geometric shapes and grids, but with a twist.

Commissioned at pre-planning stage, Speirs Major collaborated on the lighting with manufacturer DAL and the rest of the design team, including Studio PDP and concept architect Duncan Mitchell.

Speirs Major analysed light levels in the deep plan building to understand how they varied over the course of the day and throughout the year. This showed that natural light levels were poor even in the new entrance pavilion during the day. As well as looking at how the building was originally lit, the practice researched other Art Deco buildings in the capital, including Senate House, the nearby Savoy

Left An array of 16 glowing pyramids forms the roof centrepiece of the new Strand-side entrance pavilion. Below At night, the glow of the pavilion is complemented by lighting to the courtyard facades.



5 Strand reception



hotel and Hackney Town Hall, and looked at contemporary interpretations of Art Decolighting.

It swiftly became clear that the light levels required couldn't be comfortably achieved through statement Art Decostyle light boxes alone. Instead, Speirs Major created a family of 'decoratives' to catch the eye, supplemented with subtle additional lighting that balance the composition by boosting light levels throughout the spaces as required. The aim was for a warmth level of 3000 kelvins, akin to that favoured in hospitality settings.

Tenants and visitors – up to 6000 a day – now enter through a welcoming new glass and steel pavilion, situated in a former service yard on the Strand side of the building. In this extension is the largest of Speirs Major's decoratives, a eyecatching centrepiece formed by an array of glowing pyramids. Rather than a separate light fitting, this LED-lit feature is fully integrated in the architecture of the roof.

'It seemed a great opportunity at the node point of the pavilion to do something significant with light,' says Bradshaw.

The design consists of 16 pyramids in Perspex, their asymmetrical form a departure from the usual flatness of light boxes. They are surrounded by a border of glass prisms that give a shimmery effect. A rounded perimeter frame of bronzed aluminium incorporates 40 round LED spotlights to beef up the levels. The bronzed metal tones with the rest of the pavilion metalwork, and is carried through to the other decoratives within. The pyramids are sealed units

Products In Practice November/December 2023





Below In the entrance pavilion, the grid of pyramids is set in a shimmery glass border, surrounded by perimeter spotlights.

Right Linear lights with fluted glass covers adorn the reception wall.



Reflected ceiling plan







- areas
- 4 Formed acrylic diffuser module to
- 5

Section custom laylight



ribaj.com

1 Luminaire assembly with substructure to provide constant mounting height. Fixed to pavilion roof to manufacturer and engineer's instructions

2 Recessed LED downlight to provide lighting to Strand reception and open

3 Luminaire formed diffuser modules screw-fixed to structure with safety wire for safe and easy maintenance

provide homogeneous, illuminated surface. Bonded to metal framework.

All wires connected to LED drivers using push connectors for fast release

6 Integral removable, dimmable LED driver



to avoid the build up of insects.

'It would have been boring to have them as regular pyramids, so we skewed the geometry, and took advice from DAL who made it technically possible,' explains Mitchell, adding that an additional benefit was that the pyramids helped soften the acoustic in the space.

'DAL was great in terms of manufacture and finesse,' says Bradshaw, adding that the result needed to feel far more crafted than a more straightforward luminous, stretch ceiling style approach.

In the evening, facade-washing lights illuminate surrounding courtyard walls to compliment the glow of the pavilion.

The new entrance leads to a doubleheight reception area. Here Speirs Major and DAL created linear wall lights using an opal diffuser inside a fluted glass cover, with a bronzed aluminium frame. Glass end caps give a vertical spread of light. Shorter versions are used in the lift lobby.

A series of ceiling-mounted light boxes adorn the thoroughfare to the lift lobby supplemented by recessed downlighters. The latter have been customised to match the bronzed metal of the decoratives. Here, Speirs Major went through many evolutions of the Art Deco-inspired design, 'pushing and

Speirs Major created a family of 'decoratives' supplemented with subtle additional lighting





pulling' says Bradshaw, to achieve the right balance between the dark of the lighting grid frame and the light of the box, creating full-scale mock-ups and testing them in the space to get the best size and illumination. The feature lights are positioned to reinforce the rhythm of the architecture.

Beyond the lift lobby, Studio PDP has inserted a two storey pavilion in a dark lightwell, a forgotten area that was previously used as a service space and was inaccessible to tenants. This deep space has been ingeniously reclaimed as a 'hidden garden' to create a sanctuary of break-out spaces set among live planting. Given the scarcity of natural light, Speirs Major needed to work hard to create the right ambience. This involved highlighting the planting and uplighting the elevations to create a surrounding glow. Spherical pendants provide further lighting features in an area used for meetings and socialising.

Another tricky challenge was the lighting for the subsidiary entrance lobby on the Embankment side of the building, a gloomy space not helped by prominent columns of grey granite with a reflective surface. Existing lighting – a mix of down- and up-lights – gave a harsh yet flat appearance.

'We knew we had to do a lot to make it very welcoming,' says Bradshaw. Here, Speirs Major introduced bespoke, lozenge-shaped lighting boxes to lift the space with a host of luminous surfaces providing a softer and more pleasant light.

Alongside aesthetics and performance, another important consideration when creating custom designs was ensuring that replacing LED components wouldn't be an issue in the future. Speirs Major resolved this by creating a standardised LED module for all the custom decoratives.

Concept architect Duncan Mitchell is pleased with how the interventions 'seamlessly complement' the Art Deco host building. Rather like the best haircut, he says, it doesn't look like you've just had it done.

The feature lights are positioned to reinforce the rhythm of the architecture







Opposite, top Planting is iluminated in the 'hidden garden', a newly created breakout area in a forgotten service space. Opposite, below Art Decoinspired light boxes enliven the circulation areas. Above New lozenge-shaped lighting units pep u the formerly drab Embankment-side reception. Left Lift lobby wall light.

Client Strandbrook Architect Studio PDP Concept architect Duncan Mitchell Structural engineer Simon Bennett Lighting design Speirs Major Interior design Carter Owers Landscape architect Andy Sturgeon Selected suppliers DAL (custom luminaires)



Luna touch-free lighting Occhio

'Yeah. we had to sack him. Ever since we did the second fix on the lighting. Couldn't get a day's work out of him.'

'Funny, I never took him for a lazy type?'

'Oh, he wasn't lazy. Couldn't bloody stop him! That was the trouble! It was these 9W LED "Fireball" illuminated Luna Sospesos in the dining room. It's the touch free, intuitive controls, see. You can turn them on and off, dim, brighten, and even modify the colour temperature with just an airy-fairy wave of the hand. He put down his roller and turned into Leon flippin Theramin.' occhio.com/en-gb

Smart Bezel Voice 7uma

'Mummy! Mummy! God's a lady!'

'Don't be silly poppet! Everybody knows God's a lovely old man and that's the reason everything in the world is always perfect! Why, if he was a lady, everything would be terrible!'

'But Mummy, come into the telly room! I was saying a prayer for the poor family in Schitt's Creek and their daughter who can't buy nice clothes any more and then Lady God said it was all fine and she was just pretending! Then God turned the telly off!'

'Keep your voice down, Xenon. I'll adjust the audio range on the Zuma Smart Bezel Voice a tad. We can't have people knowing we watch telly.' zuma.ai/

Filigrana T6 table light Established & Sons

'Augustus, liebling! He is choking! Wonka! Do something!'

'Oh. it's too late! He's had it now, he's swallowed it. I did warn you all that it was a new acid-etched Murano glass table light by Sebastian Wrong and not a giant humbug, but he didn't believe me! Anyway, the powder-coated spun steel base will prevent his insides from crushing that exquisite mouth-blown mushroom, and if it gets too tight in there, we can use the black fabriccovered cable to haul it out. In the meantime. we can have x-ray fun with the inline dimmable switch. These designers really do think of everything." establishedandsons.com/

Dura IP65 IK10 LED bollard Knightsbridge

'They're E-rated, you know.' 'What?'

'10kW per thousand hours. And a three year warranty, no less! Even on a windy cliff edge!'

'Eh? What about the ocean? The majestic headland? The wildlife? And you're literally talking bollards?'

'Toughened moulded polycarbonate. Three light temperatures to choose from. And they do spike and wall lights too. But these bollards though. Tough enough to grab onto, probably. Could have done with these that time we went into Port Isaac after the pub.'

'Yeah. Now I know why that fence was in the way.'

'Helicopters are great, aren't they?' mlaccessories.co.uk

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Advertorial Markilux

20

No more relying on the weather

Markilux has expanded the hospitality capacity of Australian winery Brokenwood with a large and flexible awning system





You can find a video about the project under the following link: https://www.youtube.com/watch?v=s9xERxPiV8w

One of the best known wineries in Australia is Brokenwood in the Hunter Valley in New South Wales. Just over 165km north-west of Sydney, the winery holds regular wine tours and tastings. But until last autumn, the estate's large outside terrace had not been used optimally for the hospitality business.

In this outdoor country, this was something that had to change, so the management of the winery took the decision to have the outdoor seating area covered with a large awning system. For the task it turned to manufacturer markilux.

Looking for protection from poor weather and the sun

Markilux fitted the awning in October last year. Neil Marot, general manager at the Australian subsidiary, explains.

'We covered an area of almost 180m² in the winery here in Pokolbin in the Hunter Valley,'he says. 'Our solution consists of three markilux markant systems with four folding-arm awnings of the markilux 970 model additionally mounted on the sides and front.'

This combination gives the Brokenwood winery maximum flexibility to shade either the entire area or selected parts of it. The sun and weather protection system is also equipped with dimmable LED light and infrared heaters. That was exactly what the customer was looking for, because the idea for the future was to be able to use the terrace for a range of events - completely independently of the weather and the time of day.

Design to suit the architecture

However, alongside these more functional aspects, the topic of modern design played a decisive role in the choice of product. The customer wanted the look of the awning system to skilfully underline the discreetly natural, wood-clad architecture of the building complex.

'But, at the same time, good design always has to go hand in hand with excellent, reliable technology,' says Marot. 'Here in subtropical New South Wales, we expect not only a lot of sun, but also rain throughout the year. An awning system had to be made to cope with these climatic conditions.

'And we have the largest product range in the world for that,'he adds.

Expert advice on setup

It also takes a good deal of expertise to be able to realise such a large shading project. As a result, 'team : project' from markilux worked together with specialist Blindmaster from Brookvale, a suburb of Sydney. The company has been familiar with the awning specialist's product portfolio for years now and has extensive experience in the area of sun protection.

'We were able to set up the system in just two days and the customer is totally satisfied with the result. Because now it can use the outdoor area for business - whatever the weather.

'And that's a success for us, too,' says a satisfied Neil Marot.





Opposite As a standalone unit or integrated into the existing architecture, the markilux markant makes a big impression in any situation. **Top** Due to the air-permeable fabric roof a pleasant climate is ensured

because little heat accumulates under the awning system. **Above** In addition, it is possible to design one's own individual colour space using the company's diverse and extensive range of fabrics.

22

Schools' neglected fabric hampers retrofit ambitions

Years of underinvestment in school buildings, exacerbated by weak government plans, is undermining efforts to boost energy efficiency Words: Josephine Smit



School leaders' attention should be focused on their pupils but increasingly it is directed at the flaws and failings of their classrooms. Before concerns about the risks of reinforced autoclaved aerated concrete (RAAC) came to a head this summer, the National Audit Office (NAO) had reported in June how the state of the school estate had declined following 'vears of underinvestment'. The NAO also criticised the lack of progress in decarbonising buildings, with its head, Gareth Davies, saying the Department for Education (DfE) has an ambitious strategy, but 'no plan for how it will achieve this or how much it is likely to cost'.

DfE's school rebuilding programme set a net zero requirement for newbuilds, but there's no such priority for retrofits. And another funding route in England - the government's Public Sector Decarbonisation Scheme (PSDS) grant largely helps replace end-of-life heating systems. As a result, buildings in poor condition may not be having their fabric upgraded and made more energy efficient.

Climate action charity Ashden and funder Green Future Investments are working with DfE to help unlock more innovative finance options, to help schools step up action on retrofit by next summer. 'That's incredibly ambitious,' says Alex Green, head of Ashden's Let's Go Zero schools campaign and member of DfE's user group for its sustainability

Left Victorian school building targeted for retrofit, one of two very different buildings identified for pilot projects by Edinburgh City Council working with Architype. Right Lawray Architects' extreme upgrade of the 1970s-built Pen Y Dre High School in Merthyr Tydfil puts it on course to be the first school in Wales that is net zero carbon in operation.

DfE's school rebuilding programme set a net zero requirement for newbuilds, but there's no such priority for retrofits

and climate change strategy. Finance options are likely to combine improved access to existing money with private investment. 'If we can have more schools take up what's already available and iron out the barriers, it will prove there's an investment route for more private and public finance,' she explains.

Ashden's campaign has shown schools' appetite for change, with more than 2300 schools, colleges and nurseries signed up to its ambition. Green says, 'We've found the two biggest barriers to climate action in schools are access to retrofit finance and a lack of expertise in climate action among school leaders. so they're not confident to take on the funding that does exist.' In response, Let's Go Zero and Green Future Investments are also partnering to recruit 30 climate action advisers to work with schools, helping them access funding.

Already benefiting from a PSDS grant is schools group United Learning, which last year won backing to retrofit five academies in north west England, out of nearly 100 schools in its national portfolio. The five will have boilers replaced with air source heat pumps (ASHPs) and

upgrades to heating infrastructure and lighting, with some adding insulation and photovoltaics. While the group is match-funding its grant, availability of funding is a constraint in achieving net zero, acknowledges George Stroud, United Learning's energy manager, but he says, 'We're aiming to be frontrunners in the education sector in reducing our carbon emissions'.

Learning through repurposing

'You have to improve the fabric, then look at the renewables,' says Claire Mantle, school sector lead at ADP Architecture, advocating this as part of an estates strategy setting out how buildings can be incrementally improved. 'If we can make the fabric right,' she continues, 'a client can get funding or a grant later and put PV on the roof, for example'.

The practice targeted retrofit projects in DfE's rebuilding programme and has worked on five. 'None would be net



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Above Shireland CBSO Academy has been created in a former office block, with a theatre in its atrium.

zero carbon in operation, but they're all creative and some have repurposed buildings, so have been great for embodied carbon,' says Mantle. They include the listed Victoria Building in Blackburn, a college that will have three lightwells punched into its fabric, roof insulation added and timber windows restored using finned double-glazing units. Another project saw a 12-yearold Sandwell office block converted to create the UK's first state-funded music school, complete with a theatre formed in its atrium. Shireland CBSO Academy, opened in September, has had minimal interventions made to its fabric. 'When it comes to retrofit, the priority for net zero carbon is not yet in the DfE framework,' says Mantle. 'But DfE is listening.'

The practice is gathering data on its refurbishments to build understanding and make the case for a more strategic approach, but measuring benefits can be far from straightforward. Says Mantle, 'In theory, a new or refurbished building should be more energy efficient, but then it will have more kit in it, like mechanical ventilation with heat recovery [MVHR] for better air quality and health and wellbeing. So a more energy efficient building might be less expensive to heat, but more expensive to ventilate.'

Then there's the high retrofit cost for buildings in poor condition. 'We can't just keep knocking buildings down. It

Right Blackburn College's listed Victoria Building will have insulation added to its roof, the windows enhanced and restored and lightwells introduced by ADP Architecture.

can't just be financially driven,' says Mantle. 'Yes, the capital cost is going to be more, but we're improving the thermal envelope, creating a better environment for the longer term – and leaving the school with something that's easy to maintain and will stand the test of time.'

Finding the balance

Some local authorities are taking a more strategic view like Edinburgh City Council which, having adopted the Passivhaus standard for new schools, sought similar rigour in retrofit. That led it to work with Architype to develop an Enerphit-informed retrofit planning methodology to inform its decarbonisation decisions.

While the approach sets out options for appraisal, ranging from heating decarbonisation to certified Enerphit refurbishment, with potential costs, savings and payback, initial studies are showing the value of a fabric-first approach, says Alex Reeves, senior architect with Architype. 'Once you model a services-only approach where you might replace the heating system but don't make improvements in the performance of the fabric from an energy perspective - operational costs significantly increase,' he explains. 'Actual running costs of, for example, an air source heat pump, can be quite considerable if you're not reducing heat demand, which is what we always aim to do through energy retrofit.'

The practice has so far analysed 12 non-domestic projects in Edinburgh, including nine schools. One Victorian and one post-war school are progressing to pilot projects targeting insulation works, improved airtightness, new windows, ASHPs and MVHR, but not Enerphit certification. 'Quite often we find that, for clients, the right balance of energy performance and upfront capital cost sits a little bit short of certification,' says Reeves.

Scottish government policy is helping drive change, notably LEIP, the newbuild Learning Estate Investment Programme with its outcomes-based funding model, jointly funded by government and local



authorities. 'LEIP has opened up the conversation about energy in schools in Scotland, and when you bring energy performance into the conversation, you really need to understand the fabric,' says Christina Gaiger, associate at Architype.

Many schools still lack that understanding, says Christian Dimbleby, associate at Architype. For too long, authorities and others haven't invested enough in terms of maintenance and understanding their buildings, he says, adding that RAAC has highlighted longstanding shortcomings that could perhaps be addressed by drawing on the experience of conservation architecture - like quinquennial church inspections. Already, Enerphit-informed options appraisals are starting to change the way the practice works with clients. 'It's essentially extending that relationship to encompass and quantitatively understand how the building performs and works for the client and users,' says Gaiger.

Net zero exemplar

Net zero remains a demanding target however. That's evident in projects like the upgrade of the 1970s-built Pen Y Dre High School in Merthyr Tydfil, which will be Wales' first school retrofit to net

When you bring energy performance into the conversation, you really need to understand the fabric

zero in operation and takes on board government embodied carbon targets.

The project's six phases span the school's linked buildings, with Lawray Architects' design including enhanced insulation, new cladding and windows. Five design options were appraised, but only one met the target of net zero, based on a whole-life carbon approach over 60 years, which included adopting full electrification with ASHPs and onsite PV. 'We knew that for a school refurbishment of this nature we'd need to offset energy consumption via an extensive PV array.' says Mark Morant, director at sustainable design advisor Arda Consulting. 'While we embraced a fabric-first approach to design, reducing energy consumption to that of a new build is very challenging.

Initial modelling indicates that the project's upfront embodied carbon is around 250kg CO_2e/m^2 , within the Welsh government's 2030 target of 350kg CO₂e/ m². 'That has emphasised the importance of retaining and reusing structure – it's the biggest single saving,' says Morant. As for the additions, he continues, 'The biggest impact by a country mile came from the extensive PV array – which amounted to about 43% of whole-life embodied carbon'.

Ask Morant what broader learning is coming from the project and, alongside collaboration. he returns to common themes: the need to understand the condition of the building, adopt a fabricfirst approach to design and understand total energy consumption in operation. 'Fabric first is fundamental to the entire net zero strategy,' he says.

Advertorial SSO

All you need to know about slate

High performing, natural and attractive: SSQ's CPD explains the background and benefits of slate







For more information visit: www.ssqgroup.com info@ssa.co.uk 020 8038 2675

For centuries, human beings have been building things with slate.

It's extremely robust, long-lasting and aesthetically pleasing – and in its latest CPD, leading supplier SSQ argues that it's still one of the best roofing, cladding and flooring materials available today.

In 'Why Specify Slate and Phyllite?', architects can learn about the many benefits of natural materials, and all they need to know to successfully incorporate them in their projects.

The session explores how metamorphic rocks like slate and phyllite develop, and how the process affects the quality and performance of the material that results.

It discusses key topics like water absorption, issues that can result from high calcium carbonate content, and how to identify material without the reactive pyrites that can lead to leaching and oxidation.

And it demonstrates how, compared to many other mainstream roofing materials, natural slate remains by far the most sustainable choice, with low life

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24

Above Riverstone Ultra: Bodmin Jail, Cornwall Left Riverstone Phyllite.

cycle costs and embodied carbon.

'Natural slate is a great choice for architects as we move into a greener future,' comments SSQ founder Ahmed El-Helw.

'By specifying natural slate in their designs, they are choosing a material that is exquisitely stylish, durable, and, as the name suggests, natural.

'This material has a far smaller carbon footprint than alternatives, making it perfect for eco-conscious architects.

'Our CPD is designed to inform those interested in slate and phyllite about the geological formation of these materials and their applications in construction.

'We want attendees to leave with a better understanding of what makes these fantastic materials so special, and renewed confidence in how to specify them. We hope to see you soon.'

26

Education specified: St John's College, Cambridge

With sympathetic materials and strong environmental credentials, MCW's refurbish and replace project has given the college a new buttery and social space



ARCHITECT'S STATEMENT Paula Mejia-Wright, associate, MCW Architects

The new St John's College café, buttery dining room and bar provides a place at the heart of the Cambridge college where the community can meet, eat, drink and work in an inviting and relaxed atmosphere.

The project involved refurbishment of the south west corner of the grade I-listed Second Court building, built in 1599, to provide a bar and café, along with the demolition and re-building of the buttery of the copper sits comfortably in the dining room, which was built in the 1970s.

The most significant element in the scheme is the new glulam oak superstructure of the buttery dining room, replacing a steel-framed roof that in the 1970s was brutally built into the 16th century brickwork of the Second Court building and the boundary wall to Trinity College.

The dramatic curved, trapezoidal timber structure, formed of prefabricated components, is highly insulated and covered in oxidized copper, which will continue to change colour slowly over the years. The deep brown hue historic environment; its environmental

Oak glulam structure Provides a warm quality to the interior of the dining room. Designed in conjunction with smithandwallwork.com Fabricated by blumerlehmann.com/en Installed by eurban.co.uk

Woodwool panels By Troldtekt, within the oak structure to provide acoustic absorption. troldtekt.com

Full length green wall By ANS Global, unifies the space, brings the outside inside, and provides a sense of calm to a busy area. ansgroupglobal.com

TEAM Client St John's College, Cambridge Architect MCW Architects Project manager Turner and Townsend Cost consultant Faithful and Gould Conservation architect/ heritage consultant Purce Fabric consultant Tobit Curteis Structural engineer Smith and Wallwork Lighting engineer Studio ZNA M&E KJ Tait engineers Acoustic Rambol Fire Affinity Fire Engineers Principal designer MCW architects Planning consultant Turley Interior design Nissen Richards Studio

Gifa 612m²

Construction cost Confidential

Construction period 18 months

Contract type JCT Standard Building Contract

credentials were the number one priority for the client.

The terrace is a continuation of the traditional palette of college materials - York stone paving and black painted metalwork.

Oak is used as the unifying material for all the spaces: the dining room structure, floors, door, internal furniture, canopy ceiling, ramp handrail and external slatted screen.

A living 'green wall', fed by collected rainwater, runs the whole length of the dining room, blurring the sense of inside and outside, and contributing to a sense of wellbeing.

Large opening skylights

By IQ Glass, topping each of the five roof bays, maximising daylight in the space and allowing excellent views of passing clouds. Operated by the BMS to provide natural ventilation in peak summer. igglassuk.com

> Pendant lights Rituals 2.3 and XL by Foscarini foscarini.com

Loose furniture Manufacturers: UHS. Frovi and Predali. Supplied by portsdown. co.uk Tables and banquette made by Pentagon Group pentagongroup.uk.com

Oak floor and large format porcelain tiles Provide a hardwearing yet warm finish to the floors. Oak planks from pica-floorings. co.uk Lea Ceramiche Cliffstone 900x 900mm tiles: colour White Dover. leaceramiche.com



Angel Yard, Enfield, London

Jan Kattein Architects' ingenious roofs add height but little weight to turn derelict garages attracting antisocial behaviour into lively spaces for community use

Words: Jan-Carlos Kucharek Photographs: Jack Hobhouse

While Angel Edmonton might sound divine, the reality was less heavenly until recently. By day, Fore St, running south from Edmonton station, is a bustling commercial centre, but at night locals felt decidedly less secure. The Joyce and Snells estates to the west, built in the 1950s-60s, had all the hallmarks of deprivation; low income, no perceived access to training and employment, and poor access to high quality environments and green spaces. Little surprise then, that when asked by Enfield Council last year, residents balloted for the full-scale demolition and regeneration of the estate over the course of the next decade.

With Jan Kattein Architects, the Council was also awarded ₤2.2 million Above A new creative hub for the locality rises out of disused former garages and which were a centre of antisocial behaviour. **Opposite** The former garage forecourt is now a community hub, engaging with the street on the south side.

from the Mayor's Good Growth Fund to implement a number of small but significant interventions on Fore St and roads west to the estate. With a bold corrugated barrel vault and butterfly roofs, the most notable of these is JKA's €1.4 million Angel Yard. Set in the heart of the estate, 35 derelict garages and forecourts that were until recently a hotspot for illicit activity, have been reinvented as a start-up hub, helping address the dearth of skills training and employment opportunity. Looking like a new-build, Angel Yard is for the most part a radical refurbishment of the garages for charity LaunchIt, which provides workspace at below market rates - and business support - to local

shared spaces. One links a primary school and JKA's new 'School Street' in front with a community centre to the south, enlivening the estate by creating routes you'd want to walk down. For JKA director of projects Gabriel Warshafsky, the challenge was to bring

young people. Running between the

garage-sized units are two covered

in the building, which has a meanwhile use of up to just 10 years, to a tight budget while keeping embodied carbon to a minimum. 'As much as being an investment in realising social impact, we tried to retain as much of the building fabric as we could, adding as little as possible,' he explains, 'but roofs had to go anyway due to the asbestos they contained.' But, Warshafsky adds, as each 2.4m wide garage was separated by only a 70mm blockwork wall without foundations, there was no way for these retained walls to take extra imposed loads. This generated the distinctive form. 'One of the challenges was the low head height – something we couldn't resolve by building up the walls', he continues, 'and as we had the idea of using a roof treatment to differentiate

decision to not break out floor slabs to install insulation there, which would have generated concrete waste and had knock-on effects on threshold heights and thus unit accessibility.

'Instead, we installed a minimum of 32mm rigid floor insulation below a simple, 18mm ply floor finish - enough to counter the thermal bridging – and concentrated on bulking out the roof with Rockwool to achieve overall Part

18mm backing, treated softwood

studwork to engineer's detail and

standard width across all existing

between 150mm arched beams to structural engineer's detail and

14 150 x 50mm joists to span space

15 140mm Rockwool Flexi between

16 90mm Rockwool Flexi between

Section BB

2

10 Existing blockwork wall slope

 $\textbf{11} \quad 4 \text{mm}\,\text{flexi}\,\text{plywood}\,\text{fixed}\,\text{to}$

underside of roof joists

13 Curved plywood beams to

garage workspaces

specification

ioists

purlins

built up in treated softwood

framing to suit

specification

12 Vapour control layer

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Top The street between garage-sized units, with its butterfly roof, now connects to Grove St, a traffic-free road beside a local primary, stitching into what's already there. Above Each barrel-vaulted workspace unit has a direct relationship with the covered street, encouraging interactions.

Products in Practice November/December 2023

L compliance, which had the effect of increasing roof loadings,' he explains.

Timber beams above the separating walls not only deal with the very rough tolerances of the blockwork walls (surfaces have been left unfinished, unlined and unattenuated – graffiti and all - for tenants to treat as they will) but also form the base of a galvanised steel valley gutter detail, which directs rainwater to drainage runs at the front of units. In a charming detail, these dispense **Top** The community space has open access from both covered streets. Above left With its double-height, plylined barrel vaults, the meeting space has presence and dignity. Above right A single height barrel vault gives the 'working' side of the room more intimacy.

into barrel planters, which then drain to a central outlet in the covered street.

Creating the double height communal area, and a kitchen and WCs to the south, involved merging four garages and creating new foundations to build loadbearing block walls on the north side and conventional cavity walls on the south. Here large windows now create an active frontage to the street and community centre opposite. These walls allowed the contractor to run timber beams between

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Credits Client Enfield Council Architect Jan Kattein Architects Structural engineer engineers HRW Quantity surveyor KM dimensions MEP engineer Watts Ltd. Contractor Sullivan Bros. Construction Project manager Flamingo & Oak Workspace operator Launchit

Suppliers Windows Rationel Architectural metalwork Simpson Roof sheeting Hornsey Steels Ltd. Wall board Fermace Exterior timber stain (coloured) Sadolin Exterior timber paint Sikkens Insulation Bockwool

Above Doubleheight units have simple, ply-lined meeting rooms atop the work spaces. Left A simple timber staircase leads the user up to the first floor meeting room. Below Two-storey units run as far as the play street at the north of the site. A double decker bus is a makeshift social space

them to form the larger curved roofs. As with the soffits in both the single and stair-accessed two-storey units, they are lined in 4mm bent ply to give a clean. warm finish. That warmth is reflected too in the choice of timber joinery by Rationel for windows and doors, which gives due thought to reducing the embodied carbon. With water supply and sewerage along the north side of the common area, capped off supply and drainage runs in the workspace blocks behind it handily allow units to connect to them if needed.

This being JKA, the concept of shared space is fundamental, so clear polycarbonate external canopies covering the shared courtyards between facing workspace blocks were in effect posterboys for that idea, as a communal spillout and outdoor events space. Warshafsky accounts for how the firm settled on the butterfly roof form: 'The wing structure was partly about getting the top of the roof over the barrel vaults' peaks without making the whole thing ludicrously tall, but it was also an exuberant shape that we felt was suitable when trying to set a new tone for the area.' There had been an idea of making the workspace roofs demountable but cost precluded this, so, he adds, they concentrated on the canopies, where timber elements are bolted together rather than screwed. The architect is keen to credit contractor Sullivan Brothers for its efforts here, calling them 'skilled craftspeople'. He quips that they were at times bemused by the basic level of finish but they also realised 'it wasn't just about putting in standardised products, but ingenious carpentry too'. It was perhaps the latter that contributed to the £2,333/m² cost.

The workspace opened in the summer and is bedding in nicely. On school days, the route from the JKA's new 'School Street' just to the north becomes a thoroughfare for mums and kids, and 70% of units are now let to the likes of architect Fisher Cheng - who worked with JKA on the local street art project an accountant, nail bar, bubble tea shop and brother and sister roti stall. Notably, they were generally keeping their front doors open, not just on hot days but, with the butterfly-roof canopies between them, on rainy ones too. And with invasive, estate-wide regeneration about to begin, it feels like this meanwhile use may yet be of real import to the wider community.

Advertorial Vario by Velux

Seamless Integration with Nature: The Smurf House

Custom skylights from Vario by Velux were a critical part of an ambitious transformation of a Victorian house in Devon

Amid Devon's stunning seaside landscapes, The Smurf House, believed to be Victorian, blends contemporary architecture with nature's splendour.

Having served as a village hub, the house now radiates a welcoming ambiance, ideal for its new purpose as a vibrant holiday home.

Led by visionary Katie Woods and her family, this ambitious renovation showcases the flawless integration of bespoke rooflights, bringing the magic of daylight and nature indoors.

Custom-made possibilities

Beyond the striking blue walls and yellow door, at the heart of the Smurf House's remarkable transformation lies a combination of Vario by Velux rooflights. Designed to invite the outdoors in, the opening Unlimited Rooflight, Round Rooflight and Rectangular Rooflight offer a personalised touch to the space. The Woods family's aim to blur

Above Devon's costal charm: The Smurf House, a Victorian property transformed with Vario by Velux bespoke rooflights and reimagined into a unique holiday home. indoor-outdoor boundaries lead them to incorporate round rooflights that are walk-on capable. During the day, the family enjoys the sight and sounds of children roller skating on the roof terrace from the open-plan living room, while at night, LED lighting in the rooflights' upstand creates a stunning visual effect.

The unwavering commitment to detail blends safety with style. The round rooflights are equipped with Vario by Velux's anti-slip dots, ensuring peace of mind and accident prevention. These skylights take center stage in the household, elegantly bridging the interior and exterior spaces and orchestrating a mesmerising spectacle as night descends.

The Vario advantage

The Smurf House's design concept reached its peak with the incorporation of Vario by Velux rooflights, says Katie. Sleek and versatile and strategically positioned in the kitchen, living spaces, rooftop terrace and bathroom, they serve as the ultimate finishing touch.

One of the Smurf House's defining features is the meticulous placement of these rooflights. Leveraging Vario by Velux's 'Book a Call' service, Katie and her family saw the value of collaborative planning in home renovation.

Beyond Aesthetics

Skylights enhance aesthetics while improving indoor air quality and the family's wellbeing. The ingenious Unlimited Rooflight's opening mechanism facilitates natural ventilation through wireless operation. A clever connector system allows it to host both fixed and opening modules, promoting air circulation and reducing the need for artificial lighting during daylight hours.

Why choose Vario by Velux

Collaboration with Vario by Velux empowers customers to redefine living spaces. The Smurf House in Devon is testament to Vario by Velux's transformative prowess. Katie Woods and her family have created a breathtaking space inspired by its surroundings. Through strategic placement, they have harnessed daylight's transformative power, celebrating nature at every turn.

Unleash the potential to create spaces as unique as your creative vision with Vario by Velux Products.

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Above and below Elevating design and wellbeing: Personalised skylight placement improves natural light, ventilation, and aesthetics within this unique holiday home.

Right Custom-made transformation: Velux Vario's Rooflights Illuminate The Smurf House in Devon, UK.

Costed

James Garner, global head of data and insights and analytics, and Nicola Sharkey, UK insights and research lead, at Gleeds, look at roofing costs

A wide choice of roofing materials is available to meet different project requirements. Factors influencing design decisions include structure and pitch of the roof, appearance, planning considerations, durability, maintainability, weight, sustainability requirements and cost.

Generally, tiling covers pitched roofs and the number of materials available shows the importance of those various considerations. Options for tiles include clay, concrete, natural slate, fibre-reinforced concrete, cedar and metal. Natural slate is the typical choice for historical properties and those with a long design life. Clay tiles are common, with concrete tiles being a more economical option, but both need their weight to be factored in.

Metal roofs of zinc, copper, aluminium and galvanised steel are increasingly popular due to their durability, energy efficiency and sustainability properties. A long life span, high recycled content, total recyclability and an excellent ability to reflect radiant heat make them attractive in this regard.

However, metal roofs can be significantly more expensive

than other options and recently, commodities have seen considerable volatility. Shingle roofs can be a more costeffective, green option if produced from sustainable wood or recycled plastic, wood fibre and rubber content. Green and brown roofs can offer environmental benefits such as supporting rainwater management, improving thermal performance, and enhancing biodiversity.

Aside from the residential sector, there is also a major challenge ahead for the upgrading of non-domestic buildings. Mace published its report 'Transform & renew: Making nondomestic buildings in the UK fit for a low carbon future' in June 2023, which highlighted that 87% of non-domestic buildings would need upgrading in some way and is recommending that demolition be justified at planning stage - which would involve a 'consideration of retrofit' for every major application.

Key considerations during specification are, therefore, thermal efficiency (U value), solar gain (G value) and air leakage (L value). In addition to these factors, acoustic performance and aesthetics are also important.

The following rates are based on the UK average and represent typical prices at 3Q 2023. Please note that prices can vary significantly depending on the exact specification. PC – prime cost;

| | a£m² | | | |
|---|--|---|------|--|
| Flat roof systems, including insulation and vapour barriers as excluding decking or similar | Pitched roof sheet metal, including breather membrane, underlay or vapour barrier as necessary; excluding roof structure | | | |
| Single layer polymer roofing membrane; insulation | 180-215 | Copper sheet; mill finish; flat seam or wood rolled | 375- | |
| Single layer polymer roofing membrane; tapered insulation | 265-300 | Copper standing seam roof; mill finish | 375- | |
| 20 mm thick polymer-modified asphalt roofing including | | Extra for pre-patinated copper finish | 75- | |
| underlay | 190-225 | Aluminium sheet; mill finish; wood roll; insulation | 275- | |
| High performance bitumen felt roofing system | 190-225 | Aluminium sheet; standing seam; mill finish; insulation | | |
| High performance polymer-modified bitumen membrane | 200-235 | Extra for Pvf2 aluminium finish | 25 | |
| Pitched roof tiles or slates, including reinforced underlay and | Stainless steel; terne coated sheet | | | |
| necessary; excluding roof structure | Lead roof covering; code 7; welded seam; milled lead; laid flat | 275- | | |
| Natural Welsh slate tiles | 250-280 | Lead roof covering: code 7: welded seam: milled lead. | | |
| Natural Spanish slate tiles | 170–200 115–150 | pitched roof | | |
| Synthetic slate tiles | | Zinc; Natural Bright Rheinzink; pitched | | |
| Reconstituted stone slate tiles; random slates | 240-275 | Extra for pre-weathered zinc | 50- | |
| Clay pantiles | 95-125 | Landscaped roof, excluding decking | | |
| Clay tiles; handmade; sand-faced plain tiles | 125-160 | Green flat roof – extensive type: growing medium: | | |
| Concrete tiles; interlocking; troughed/bold rolled | 85–115 | waterproof layer; separation layer; low maintenance | 300- | |
| Concrete tiles; plain | 65–95 | Green flat roof — intensive type; growing medium; | | |
| Fibre cement slates | 70–100 | waterproof layer; separation layer; low maintenance | | |
| Red Cedar sawn shingles; preservative treated; uniform length | 115–150 | Brown flat roof; growing medium; waterproof layer; separation layer; low maintenance | | |

Advertorial The Rooflight Co.

Design vision turned into a beautifully crafted reality

Sawtooth rooflight design adds industrial chic to a residential home in south west London

The extension to this exquisite private residence in Kew is the work of Simon Merrony Architects. Unique sawtooth lighting sections consisting of vertical glazing with bespoke Conservation Plateau Rooflights introduce height and an abundance of light into this open living space.

The client brief set out the vision for an extension with a sophisticated interpretation of the glazing and roof style of a 1930s factory. The extension would serve as a seamless link between the house and the garden.

This residence is located in the Conservation Area around Kew Station, and therefore necessitated a sympathetic approach to the property, with respect to the surrounding environment. A unique adaptation of the Conservation Plateau Rooflight, with its Victorian style features, such as the angled silicone wedge and

Above left Conservation Plateau with its authentic traditional appearance. Above right Maximum height and light introduced by bespoke rooflights. **Right** Unique sawtooth rooflight sections with bespoke Conservation Plateau.

exposed hinges, dutifully honoured the land's heritage. The distinctive, fully glazed sawtooth rooflights rest above the open plan kitchen and dining area, creating a focal point in the room. The two custom designed and handcrafted Conservation Plateau Rooflights integrate with vertical glazing with a bespoke base frame structure, forming the sawtooth structure. The additional upstand and abutment detailing ensure complete weather-tightness for this tailor-made installation.

Balancing the elements, the living space benefits from plenty of natural light and

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75–125

the optimum level of comfort in heating levels, through the use of carefully selected glazing specifications. An 8mm Cool-Lite outer glazing panel is teamed with an 8.8mm laminated inner pane for both solar control and thermal performance qualities. The chosen glazing specification achieves a G-value 0.36 and a light transmission of 68%, meeting the solar control needs.

Combined with the vertical windows in the area below, the architect has achieved a stylish representation of the industrial theme, while creating a bright and welcoming space.

Calling everyone in the field of architecture! Enter the VELUX Conservation Project Competition.

Are you passionate about preserving heritage while being mindful of sustainability in design? VELUX invites you to participate in the VELUX Conservation Project Competition. This is your opportunity to gain recognition for your exceptional skills in architectural excellence.

What our VELUX judges are looking for:

Impeccable aesthetics

Impress our judges with your outstanding design sensibility that celebrates the aesthetics of heritage structures.

Sustainable design

Demonstrate your dedication to sustainable design principles that prioritise heritage preservation as a key element of sustainability.

VELUX Heritage conservation roof window integration

Skilfully incorporate VELUX Heritage conservation roof windows into your project, demonstrating their flawless integration into historic architecture.

Why participate?

Grand prize Win a prize of £7,500, recognising your outstanding craftsmanship, dedication to heritage preservation, sustainable design principles and retrofit representation.

Copenhagen trip

Enjoy an unforgettable trip for two to Copenhagen, Denmark, hosted by VELUX. Explore a city designated as the World Capital of Architecture for 2023 by UNESCO and the International Union of Architects.

Media exposure

The winner will receive well-deserved media coverage in esteemed publications such as RIBA Journal, Architects' Journal and the VELUX website.

For more information, contact us at architecture@velux.co.uk

Competition timeline

Registration period

Open from September 1st to December 1st, 2023.

Installation deadline

Ensure your project incorporates at least one VELUX Heritage conservation roof window by March 31st 2024 to qualify.

Judging and site visits

In April 2024, a panel of judges will evaluate submissions and select the top three projects based on architectural merit, innovation, successful window integration, sustainable methodology and retrofit representation. Finalists will receive an on-site evaluation.

Winner announcement

The winner will be announced in May 2024, receiving the cash prize and the Copenhagen trip.

Case study filming

During the summer of 2024, the three finalists may be featured in a case study, offering unique insights into the transformative impact of VELUX Heritage conservation roof windows.

Don't miss this remarkable opportunity to showcase your architectural talent, earn recognition and contribute to heritage conservation.

Learn more and register at:

VELUX Heritage conservation roof window

Preserve, transform, enhance

The Heritage conservation roof window has been co-created with conservation officers and architects. The result is an authentic top-hung roof window that complies with the building requirements for historic or listed properties in conservation areas while meeting all modern housing standards.

Find out what our new Heritage conservation roof window can do for your project.

Original hand-winder for natural ventilation.

Sleek, slim-fit profile.

Flush installation blends into roofing material.

' Fire rated glass floor IQ Glass

'Look here!', said the Water Rat. 'I really think you had better come and stop with me for a time. It's very plain and rough – not like Toad's house at all – but I hope I can still make you comfortable.'

Mole was so touched by his kind manner, but then remembered the workmen he'd left earlier, installing IQ Glass' new 60-minute layered glass fire floor in the meadow, pouring sunlight into his dark and lowly little house. With all fixings included in the package, they assured him it would be done by nightfall. 'Plain and rough just won't do any longer,' he thought to himself.

iqglassuk.com

2 HG2 patented system rooflights Howells

'Hi. Ghost of Alfred Lovekin industrialist here. I built it and I love it. This powdercoated aluminium glazing you've just done on my beloved Tudor Grange really fits my brand as a Brummagem silversmith. Not sure I like the 'Blossomfield Park' rebrand but, as a Victorian, obviously I love it being a patented system.'

'Alfred Bird, Wraith Baronet here; second owner. My opinion? Plus sides? Howells' slim lines and traditional style really keep the aesthetic of the old glazed roof. But the 40mm HG2 glazing bar and double glazed sealed units with internal stalk glazing bar are all too... solid perhaps? Where's your trifling dessert angle? It needs more custard!' howellsglazing.co.uk

3 Cupa 12 natural slate Cupa Pizarras

We are the Gnomes! The Gnomes of Highoaks! And we claim this new

building from you infill blokes! For these gardens are ours:-We're Hillingdon ancients! We've endured all your digging

with gnomely good patience:-But this house you've just built here

has displaced our Gnome nation

so its low carbon slates will be some compensation. Tectonic compression is muchly our vibe:and a 100-year lifespan just right for our tribe! So ta for the house, lads! It's awfully nice! Now do us another 'cause we don't share with mice! cupapizarras.com/uk

4 Traditional range roof gutters Marley Alutec

It is a truth universally acknowledged that an old house in possession of a roof must be in want of traditional gutters. Mr Darcy soon drew the attention of Derbyshire's planners with his fine, tall Traditional Square downpipes, handsome Ornamental Hoppers, architectural grade Heritage Black polyester powder coating, and the report which was in general circulation of his being BS8530 certified yet 65% lighter than cast iron. The gentlemen pronounced him to be a fine figure of a rainwater system, the ladies declared he was much handsomer than plastic, and his Traditional Moulded Ogee bolted guttering was looked upon with great admiration for about 50 years, needing only minimal maintenance and periodic aesthetic cleaning. marleyalutec.co.uk

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Ovenecká 33 Prague

Architects and artists rethink a Czech apartment as a home and gallery made magical with childhood fantasy elements

Words: Will Jennings Photographs: boysplaynice

Most domestic interior projects have a simple programme – a place to live or stay for an individual or family, slightly deviating from a standard form to suit specific living demands, plus some stylish design detail to add personality. With three distinct programme demands, Ovenecká 33 in Prague, by Objektor architekti, is more complicated, but such complications enable a playful space of artistic exuberance.

Creative producer and curator Tereza Porybná approached Objektor architekti having visited a contemporary art exhibition the practice had designed. Having already discussed ideas to transform her upper-floor apartment with other architects, it was with the Objektor team of Jakub Červenka, Václav

Šuba, and Vojtěch Šaroun that it made most sense for her. Porybná wanted not only a place to stay in when in Prague, but also somewhere that could be used for an artist residency and occasionally to host exhibitions, performances and events. That meant there was a lot of programme to fit into its 209m².

The architects started by creating

Porybná had design ideas including 'childhood dreams' of a throne and secret doorways

three models with the space stripped back to its core concrete structure. It added different approaches to the client's wish for a 'shared, open, and permeable' space which contained 'hidden corners and secrets', leading to a collaborative six-month process of progressing the design from the three proposals. As a creative herself, Porybná had design ideas including 'childhood dreams' of a throne and secret doorways and, while bringing in references including Luis Barragán, Valentina Schlegel and Bijoy Jain to the initial design meetings, she says that 'gradually the apartment found its own voice and identity'.

Objektor architekti formed in 2017 while the trio was studying in Prague's Academy of Arts, Architecture and

Opposite Apartment, artists' residence and exhibition space all come together in Objektor architekti's intriguing Prague flat.

Above Artist Daniela Danielis's ribbed weaving drapes over the architect's curved wall detail, forming a primitive 'throne'.

Left One cupboard door in the hallway is a hidey hole to a bedroom space.

ribaj.com

Below left A timber 'wall' folds open to reveal the hidden half of the kitchen.

Below centre Detailing is conscious and crisp.

Below right Concrete, stucco and timber are in material counterpoint throughout.

'The space can be used as a gallery, without seeing nails or special lights,' Červenka explains, but describes how it is all secreted within the domesticlooking design. Moveable galleryquality lighting is built into recessed ceiling tracks, while other tracks support textile walls that can subdivide the main space: 'Very useful when you have an event or exhibition of paintings,' the architect adds, describing the resulting lines in the ceiling as 'a huge abstract drawing.'

A palette of pared-back concrete and stucco allows natural light and shifting

14

Top left A red-walled shower room is womb-like and indulgent.

Top right The indulgence continues in the main bathroom, where cool, green tiles run down the wall and form the bath.

Above Minimalism runs throughout, not least in the stark bedrooms.

partitions to create spatial forms in a monochrome space, punctuated with singular moments of material flair. An oversized geometric terrazzo under the bar is such a moment. Designed by artist Aleksandra Vajd, the terrazzo exemplifies how Porybná drew on her artworld contacts to feed into the design. The architects worked with the artist to specify the stone and ensure that it could withstand the weight of the bar above. Another example of creative collaboration appears at the entrance, where artist Daniela Danielis's ribbed weaving drapes over Objektor architekti's curved detail, creating the client's desired 'throne'.

The other bedroom, used for artist residencies, can be reached from the main space or through a balcony door – or via a hidden entrance from the corridor library. Such spatial games allow for different readings of the space on each visit and enable privacy between public and private uses.

Another secret door connects the primary living suite to the entrance corridor via the walk-in wardrobe. As Porybná playfully suggests, 'you can leave the apartment during a party, and nobody would know.'• Interiors

Specified

2

Amalgama Block Herringbone primed boards Havwoods

Simon, come on in. You know Alan and Katriona from HR & Legal, don't you? And Rashik is down from HQ.

No, this is not a carpetting – look, you're almost completely on the wood bit! Each bevelled T&G lacquered board is FSC® certified timber. The top third is 4mm slow-grown European oak, backed with spruce or birch ply! And there's underfloor heating too. Go on, give it a feel! So, you see, Simon? No

carpetting here. We are going to have to let you go though. havwoods.com/uk

GRP Composite shower pods Offsite Solutions

Stop! Our rigorous specification process has resulted in exactly the factory-finished GRP pod you were about to compromise. The fully-installed shower unit. wall-mounted toilet, mirror-fronted LED-lit cabinet, white granite-effect solid surface vanity shelf, vanity front, wall-hung D-shaped basin and circular mirror with halo lighting are all exactly as our designers envisioned. They spent endless meetings just deciding on which two of the multiple tile-effect finishes would go where. It would be sheer desecration of that vision to have messy human bodies actually use these cost-effective, quick-install facilities. That's why there's a watering can and bucket in the corridor. offsitesolutions.com

Products in Practice November/December 2023

PiP specifieds are compiled from supplied company press releases

Ancona radiator in Rose Blush The Radiator Company

So I'm like, objectum-sexual? I'm in an on-off open panpoly relationship with the Tour Eiffel, the Golden Gate Bridge, a wire fence in Maine, and this sexy little custom, six-column steel radiator. His Pistol TRVs are a naughty detail that I love; and yes, we spend most evenings cosying up together.

He has 188 RAL-coloured brothers in 32 special finishes, with five configurations, 25 heights – and three mounting options! They'll all be here in 4-6 weeks, so the next step in our relationship is, obviously, get a bigger house.

I'm committed. He's got a 10-year guarantee. Can't say that about humans! theradiatorcompany.co.uk

Section O Window Guard Keylite

'Rapunzel! Rapunzel! Grow your hair back quick 'cos I reckon that now that witch has installed a set of firstto-market NHBC-approved Keylite window guards in various chrome types and tube lengths - all to comply with this June's enactment of the new Building Regs Part O ref: 3.8 'Protection from Falling' – we can wrap your plaits round this one a couple of times and I can climb up without ripping your scalp off like when we tried before! It's healed well, I'll give you that! And I've been working on the weight loss too!'

keyliteroofwindows.com

Buildings as rallying calls for sustainability

Our latest webinar shows there is no shortage of committed innovators out there trying to make life greener, improve our wellbeing and cut embodied carbon as much as possible

Heatwaves, flooding, wildfires and extreme weather events appear to be happening more frequently in the UK. Scientists looking at these trends are now finding that significant changes to the UK's climate appear to be happening over shorter timescales - making these events more common. 'All is not right with our climate,' said chair Jan Carlos Kucharek in his introduction to the PiP webinar Design for Sustainability.

It was appropriate, therefore, that the webinar's opening speaker was Mina Hasman, leader of SOM's sustainability practice and author of the newly published RIBA Climate Guide. This book is intended to equip built environment professionals with all the information necessary to deliver sustainable projects.

Hasman says the guide is 'the first in the world that contextualises the United Nations Sustainable Development Goals for 2030 within the built environment landscape'.

She has organised the book around six overarching themes: human factors. circular economy, energy and carbon, water, ecology and diversity, and connectivity and transport, each of which forms the basis of a chapter.

Sustainable sound levels

Ben Hancock, managing director of sponsor Oscar Acoustics, then outlined the importance of sound insulation in creating sustainable workplaces. 'Sustainable design is not just about energy efficiency; it is linked to wellbeing,'he pointed out.

He reported that a 2022 Oscar Acoustics survey found that 'over half' of those surveyed believe their workplace to be too noisy, which was affecting their health and productivity.

Hancock said that there is an opportunity to improve acoustic performance and 'to fix a long-overlooked productivity pitfall' in commercial offices as part of the energy efficiency improvements needed to bring most offices up to EPC band B by 2030 to comply with MEES.

Next, James Lingard, owner and practice director of Nidus Architects, spoke about

the practice's approach to sustainability. using its award-winning extension to a 17th century Welshlonghouse, Pen-y-Common, as an example.

He said the practice's work with older buildings had given it an insight into building techniques developed to optimise the use of local materials, which he says forced regional builders to be more creative and sustainable. 'If you cannot have what you need, you use what you have,' he said. 'As a practice that is the approach we try to embrace when designing for sustainability.'

At Pen-y-Common, this philosophy saw the practice use materials from the area, including larch board for cladding from a local sawmill. Using a random board width allowed the sawmill to be 'efficient in assessing timber required for the job', said Lingard, meaning there was no need to cut boards at window openings. Meanwhile, a BIM-generated cutting list enabled the contractor to ensure timber cladding was used so efficiently that 'a good proportion' of the contingency was available for the interior, avoiding waste.

Units in the utility room were salvaged

from the science lab at the local school, with those in the kitchen beautifully crafted by a local carpenter, using storm-damaged oak 'mended' with timber butterfly ties.

Cathi Ramsbottom, UK technical manager and sustainability ambassador for sponsor Thrislington Cubicles, talked about the importance of embodied carbon. She used a series of washroom case studies intended to reduce embodied carbon, including the refurbishment of the Theatre Royal, London, where durable materials minimised the need for cubicle replacement, and St Boltoph Building, also in London, where cubicle door locks incorporate sacrificial elements to 'allow the door to be rammed open in an emergency without damage to the cubicle'.

Creative flexibility

Jolene Hor, an architect at Tate + Co, spoke about the development of the design for the award winning Creative Centre at York St John University. She explained that, following input from teaching staff, the design of the competition-winning entry was reconfigured, including moving the auditorium from first to the ground floor, to enable spaces to be used more effectively.

The building's envelope is designed to Passivhaus standard. Hor explained that it is clad in prefabricated timber modules in various textures 'to break up the mass of the facades and animate the public face of the building'.

Following this, Gonzalo Bunse, director of sponsor Wienerberger, outlined how the building material manufacturer was innovating to lower embodied carbon in its bricks, blocks, roof tiles and rainscreen cladding systems. He explained that the kiln at its Broomfleet roof tile manufacturing plant had been electrified to eliminate the use of natural gas, 'reducing its carbon emissions by 75%'. Bunse also showed

Sustainable design is not just about energy efficiency; it is linked to wellbeing

ribaj.com

Wienerberger's Eco-brick, which he said has 'all the aesthetics and performance of a standard brick', but is 37.5mm narrower. allowing additional insulation to be accommodated within the same wall width. Embrace the limitations

The final presentation was from Matthew Curtis, project lead at Bennetts Associates, on the transformation of a quadrangle of former industrial factory buildings into the Fireworks Factory arts venue in Woolwich, south London.

Curtis said the key to the project was 'accepting and embracing the limitations that come with these listed buildings'. This meant most interventions were 'light touch', apart from the addition of an extra bay to the South Building, which Curtis says 'unlocked' the scheme by enabling the audience to circulate around the venue. This bay is clad in insulated cast glass to form a simple contemporary addition which contrasts starkly with the older brick fabric of other courtyard buildings. Internal finishes include new poured concrete or existing timber floors and simple plywood bars.

All these featured projects demonstrate that there are those who are committed to innovation and to creating more sustainable solutions and, perhaps, even helping slow the worrying rate of climate change.

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49

Opposite Nidus Architects used local larch as cladding for its Pen-y-Common retrofit and extension. **Above** York St John University was keen to put sustainability at the heart of

their new Creative Centre. Above Creation of a new bay at Woolwich Works unlocked the problem of how to sustainably convert the former factory into a new theatre.

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George Dawes, co-founder of Bruton-based practice Bindloss Dawes, gives three of his specification favourites

50

Rheinzink by Q&M Roofing

The brief in our Autobarn project was to reference surrounding agricultural buildings, so we specified Rheinzink in a natural finish. It quickly developed a subtle patina that complements the chestnut cladding which will silver over time. The workable nature of natural zinc allowed for a number of carefully crafted details. At the verge and eaves, the metal was folded into a minimal drip detail protecting the end grain of the vertical chestnut cladding. A recessed gutter detail also avoids the need for rainwater goods on a facade composed of moving timber screens.

Facadeshield by Proctor

We like cladding buildings using breathable timber lattice structures and open rain screen facades, which, with some weatherproofing membrane on show. need to be aesthetically discrete as well as physically robust. Proctor Facadeshield, a non-woven breathable membrane, combines water and UV resistance and allows up to 30% of the facade to be left open to the elements. Aesthetically its dark colour and lack of prominent branding allows the membrane to recede into a discrete shadow zone hidden behind the timber battens.

Troldtekt Acoustic Panel

We first used Troldtekt on our Autobarn project as an alternative interior finish to plasterboard or timber. Made from natural, sustainably sourced spruce shredded into wood wool and mixed with cement, Troldtekt has sound absorbing properties that when used on walls and ceiling create a calm, peaceful space. The rough finish and jointed boards also produced a softer, more textured interior which could have been quite stark if finished in more conventional plaster and paint. It has natural resilience and can handle moist environments, and provide effective fire protection.

Read up

titles. Buy at ribabooks.com

How to be an Architect Developer Amanda Baillieu and Gus Zogolovitch. RIBA Publishing. 170pp PB £35

RIBAJ editor Jan-Carlos Kucharek flicks through the latest tech

Baillieu, founder of the Archiboo website, is also a former editor of the RIBA Journal and Stirling Prize judge while developer Gus Zogolovitch co-ran Solidspace and set up Unboxed Homes, London's first custom-build developer. So there is some weight behind this unassuming-looking book. In clear language, it draws the architect into the mindset of the developer, from the appraisal to finding land, financing and managing projects, managing risk - even selling properties at the end. It starts where architectural education finishes.

Touch Wood: Material, Architecture, Future

Structure

Touch Wood

Carla Ferrer. Thomas Hildebrand & Celina Martinez-Cañavate. Lars Müller pubs. 304pp PB £40

From the outset, this tome on timber and its architecture is almost as dense as the raw material it comes from. Your journey starts with essays that go from the trees in the forests, to wood's chemical and material properties. The second half concentrates more on timber's use in architecture, with more illustrated essays by architects on global projects. Gorgeous examples of considered use of the material, not least the rebuilt grand shrines of Ise and Izumo, are rendered in minimal black and white images. Lovely!

Engineering Nature: Timber Structures: Jakob Schoof ed. Edition Detail. 224pp PB £47.50

In Detail's customary fashion, this book concentrates on the technical realisation of timber structures from around the world – in a generous format layout that allows plenty of space to concentrate on key drawn details as well as GA plans and sections. It breaks chapters into the latest research and technology on the material, as well as recent examples of its application, then moves on to large-span timber roofs and multistorey structures. Great for staying abreast on the fantastic structural and architectural possibilities inherent in this evergreen material.

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