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## FROM THE EDITOR



The word 'unprecedented' has been a key part of the Government's mantra in trying to manage the COVID-19 crisis. This extreme situation has forced the administration to underwrite most employees' jobs, yet not, as you might have hoped, to take early action in investing in extra PPE for NHS staff, and countrywide testing.

The 'unprecedented' refrain has probably also been rolled out to explain just why we will all be expected to remain in lockdown for a lot longer than most people can stomach. (Personally, however, I find working at home can generally help to enable the elusive concentration you need to produce good content).

We can argue about whether this clearly colossal viral threat to our old and vulnerable should have triggered significant investment from Government, such as we have seen in Germany on testing. What we have seen however is a concerted effort among most people the country to see off this threat. This ranges from turning the ExCel exhibition centre into the world's biggest hospital in an incredibly short period, to the whole of society withdrawing into a different lifestyle, and one that has several pros as well as cons.

For one, our newly isolated lifestyles are causing a dramatic change of our environment for the better. Bar the vans delivering groceries, our cities are increasingly vehicle, and therefore pollution-free, aeroplanes are grounded, and although many may not get to see it, our natural world is reaping the benefits of reduced human activity. Once the UK has come through the curve of this disease, as it surely will within a few weeks or months, there will be a reappraisal of whether we will need to revert to our former ways.

Of course life will return to normal in many respects – we will probably go back to driving to the shops for small items, whether we should or not, and there will be a short-term rush of people simply congregating together because they've been forbidden to (which no doubt the Government will have to keep a tight watch on to avoid a re-emergence of the problem). But, having become used to harnessing technology even more thoroughly to achieve what we need to do – in more IT-based professions – will we revert fully to face to face, commute-based work, knowing that a lower-impact, cheaper model can bring equally effective results?

Having said that, *ADF* has had to take steps to adjust some of its publishing schedules, following a temporary slowdown in the construction market. This has resulted in this combined April/May edition, a bumper affair bolstered by our new Heritage and Adaptive Reuse Supplement. We look forward to fully reconnecting with our industry – following what is a strange and unsettling period where everyone is 'on hold' – to bring you the latest in architecture across the UK and beyond.

Lastly, we would like to apologise to LOM Architecture and Design for a rare error in our March 2020 issue, where we wrongly credited SOM for the design of Santander's new Campus in Milton Keynes.

To use another overused expression, but one that's sincerely meant, stay safe, and we'll see you on the other side!

James Parker Editor



#### ON THE COVER...

Coloured panels cover cantilevered sections of the Riverside Leisure Centre in Chelmsford, designed by Pick Everard (their hues changing depending on the light and the angle they're viewed from).

Cover Image © Paul Starr For the full report on this project, go to page 30







#### **COMMERCIAL**

## John Robertson Architects completes design of new London HQ for Skanska

John Robertson Architects (JRA) have finished a major refurbishment programme on behalf of Skanska at 51 Moorgate, London.

The premises will provide the project development and construction group with a new regional headquarters for its London projects, as well as offering additional sustainable Grade A office space to other occupiers.

The building comprises a total of 45,000 ft<sup>2</sup> (4,180 m<sup>2</sup>) of office space across eight levels. The upper floors are set back from the masonry facade, while the mansard roof profile has been retained to reduce its impact upon the existing Moorgate street views. The refurbished mansard and dormer windows have been re-clad

in a metal finish, "softening the elevation of the building and providing an addition that is both contemporary and sympathetic to the surrounding mansard forms," said the architects.

Approximately 130 Skanska employees work on the lower ground, first and second floors. These levels – which include 14 meeting rooms – can accommodate up to 200 people when fully occupied, including external visitors, site-based staff, or staff from head office.

The design incorporates living walls, break-out spaces, dining areas, cycle facilities and kitchenettes on each floor, as well as a technology-free 'wellbeing room.' These spaces have been "enriched by a Scandinavian-

inspired natural colour palette and material choice."

A key part of JRA's design has been to introduce more communal spaces for people to meet, including the coffee shop as part of the ground floor reception area and informal seating and breakout spaces on the lower ground floor. The design team also carried out space utilisation and occupational studies to determine the final layouts, allowing the introduction of fully 'agile' working to the office floors. The designs incorporate a number of features specific to Skanska and its business functions, such as PPE rooms, collaboration areas, and wayfinding and detailing inspired by the company's branding.

#### **AWARDS**

## WilkinsonEyre win Metals in Construction Design Challenge 2020 for NYC refurb

WilkinsonEyre have received first prize of in the international *Metals in Construction* magazine 2020 Design Challenge, for a New York office refurb project which also included facade consultants Eckersley O'Callaghan and facade contractor Josef Gartner GmbH.

The international ideas competition invited design proposals to upgrade an ageing, energy-inefficient high-rise office building at 63 Madison Avenue to comply with NYC's 'Green New Deal goals and create a more desirable space for companies competing for highly skilled employees. The challenge addresses how to transform New York City's high-rise office buildings, most of which are now more than a half a century old, but will still be standing in 2030, "a milestone year on the city's roadmap to carbon neutrality," said WilkinsonEyre. The brief was to use a cladding solution to half the building's energy consumption, bring daylight deeper into the building and give better access to the outside.

The WilkinsonEyre scheme, called Second Skin, employed the concept of an 'adaptive net' facade, "creating a habitable area within a highly efficient, simple, regular cladding system." The 'adaptive net' allowed the firm to "respond to the specifics of the building's locale; protect against seasonal environmental conditions; optimise views and introduce natural greening; all enhancing occupants' wellness."

A system of external shading/reflector devices was developed to provide shade, reduce glare, increasing the quality of daylighting and improving the usable area by 20 per cent, while preserving views out. The engineers demonstrated through thermal modelling that this concept (combined with an improvement in the efficiency of M&E equipment), "would offer a 50 per cent reduction in carbon emissions as well as offer an embodied carbon offset after only four years."

The site and building were chosen as it was "typical of a large swathe of American real estate of a similar type and period," meaning the winning solution has "great potential across the US," said the architects.













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#### **AWARDS**

## Partially subterranean Lincolnshire home shortlisted for Yorkshire RIBA award

Barrow House, a family home designed by ID Architecture and built by Belvin Construction in the Lincolnshire Wolds, has been shortlisted in the RIBA Yorkshire Awards 2020.

The home is one of 11 properties to be shortlisted in the regional heat of the national RIBA awards. Barrow House is a bespoke, contemporary family home that's partially subterranean. Resembling a modest, modern barn from the roadside, the lower storey is concealed beneath a wildflower meadow. When viewed from the valley however, the house "opens up" to reveal a contemporary glass, concrete and

metal structure which "seems to defy gravity," said RIBA.

Andy Inch from ID Architects said: "Barrow House gave us an opportunity to work for some wonderful clients on a truly interesting site. It was our first Paragraph 55 house, and we are truly grateful for the ongoing success and recognition the whole team has received for this fantastic project. For it to be shortlisted for an RIBA award is the icing on the cake. Belvin did a great job on this project, managing the budgetary requirements and design quality on what was a very unique build."

Other properties shortlisted for the RIBA

Yorkshire Awards are: Leeds Playhouse, Manor Ridge Barn in North Yorkshire, Doncaster Enterprise Market, The Longhouse in York, Park, St Albans Place in Leeds, Nexus in Leeds, The Old School in North Yorkshire, Engineering Heartspace at the University of Sheffield, Thorney Barn in Calderdale, and the Barbara Hepworth Building at the University of Huddersfield.

The winners will be announced at an awards ceremony which is currently scheduled for 4 June. Properties that win at the regional RIBA awards will be considered for a RIBA National Award.





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#### RETIREMENT LIVING

### Saunders Boston Architects' over-55s scheme opens its doors

Cambridge-based Saunders Boston Architects have designed a new £4.8m development for LACE Housing. The Burrows, located in Nettleham, Lincolnshire, has been designed exclusively for over 55s and will provide a total of 36 "affordable, safe and secure homes for the local community."

The development is made up of 22 two-bedroom apartments and 14 two-bedroom bungalows, which are designed to provide light, spacious and accessible accommodation. Each home contains fitted kitchens with built-in ovens and a wetroom comprising a modern three-piece suite with double shower enclosure, wash hand basin and WC.

Construction of The Burrows began in July 2018, after the Nettleham Parish Plan revealed a growing need for affordable accommodation for older people in the area. The Burrows not only aims to create affordable homes for members of the local community, but also focuses on sustainability, through the use of PV panels, which will help the units run economically.

Saunders Boston Architects worked alongside local construction firm Lindum Construction to deliver the development. The scheme has been part-funded by Homes England through its Shared Ownership and Affordable Homes Programme, which aims to increase housing options for older people in England by March 2022.





#### **LEISURE**

# AM2 Architects announces completion of three "luxury lodges" in Nottinghamshire

Works have now completed on a series of luxury holiday lodges at popular events and wedding venue Goosedale – set in the idyllic countryside of Papplewick in Nottinghamshire.

Designed by Nottinghamshire-based firm AM2 Architects, the first three dwellings, titled Goosedale Lodges, are now complete as part of phase one of the ongoing project, and available for self-catering bookings.

The lodges have been constructed with timber and steel frames for a "modern and sleek finish," said the architects, and feature underfloor heating and natural Siberian larch timber cladding.

Each lodge also boasts an environmentally-friendly roof with planted

green foliage, that looks to blend into the "surrounding picturesque countryside," and "adhere to modern eco design aspirations and codes."

AM2 Architects, which has offices in both Newark in Nottinghamshire, and Gibraltar, has been involved with the project since 2014. The firm were tasked with "creating a development to further enhance the offering at the venue in terms of key positioning, aesthetics and sustainability," while also creating a "bespoke holiday experience with stunning views over the lake and hill."

A further six lodges at Goosedale, taking the total to nine, are being constructed in 2020 as the second stage of phase one of the project.



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#### HOTELS

## Another Wembley result for Dexter Moren Associates

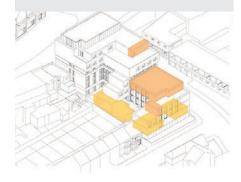
Dexter Moren Associates (DMA) has achieved planning consent for 18 additional rooms at the popular Best Western Plus Hotel, adjacent to Wembley Stadium. In two successful simultaneous planning applications, DMA has redesigned the sub-basement car parking and added extensions to the rear of the existing hotel to increase the number of rooms to 210.

Building on the success of their original design for client London Hotel Group (LHG), DMA has designed the additional volumes to "avoid overpowering the hotel's neighbours, allowing the extremely busy hotel to cater for more guests," said the firm.

In addition to the original design, DMA has been responsible for several successful extensions to the busy hotel, the last in late 2017, adding seven guestrooms – four of which have already been built. In their latest design, DMA have added seven rooms (the application for extensions on the first, second and fifth floors creates an eleven additional rooms).

Sited on the High Road in Wembley Town Centre, the Best Western Plus is within walking distance of Wembley Central and Wembley Stadium Stations.

DMA is to carry out Design and Technical Development (RIBA stages 03 & 04) and Construction phase to completion (RIBA stages 05 & 06), with an expected start on site in quarter three of this year.





#### **CULTURAL**

## Feilden Fowles wins railway museum competition

The National Railway Museum and competition organisers Malcolm Reading Consultants (MRC) has announced that the team led by Feilden Fowles has won the international design competition to create the museum's new Central Hall.

Feilden Fowles' team beat 75 others to the commission, which will "transform the visitor arrival experience and integrate the museum's estate in time for its 50th anniversary in 2025," said the architects.

The Jury praised the winning team's design concept for its "elegance, its ambitious energy strategy and its intriguing new visitor journeys."

Inspired by the site's former uses, the design concept references the history of locomotive roundhouses and railway turntables with its central two-storey rotunda, which is clad with recycled patinated copper and lit with high clerestory glazing. An illuminated form that "will look to attract visitors approaching from York Station and the wider city to the south," the rotunda also "unifies the diverse buildings that make up the existing site," said the architects.

Feilden Fowles' design concept was developed with fellow team members, Max Fordham (as building services engineers) and Price & Myers as structural and civil engineers.

The museum, part of the Science Museum Group, is "poised to become the cultural anchor for York Central, one of the largest city centre brownfield regeneration projects in the UK and Europe."



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#### **SITE LINES**

## Adaptive reuse, realised

Ben Heath, principal at Grimshaw, looks at how the practice returned to the Herman Miller factory in Bath to realise its original design intent of adaptive reuse, and harness the building's flexibility to create a new school of art and design

In responding to the significant pressures of climate change on the planet, and the rightly elevated scrutiny the built environment is under in terms of its impact, it is imperative that designers do more with less. Our buildings should perform better, with reduced carbon consumption, and lower financial costs.

The large quantities of embodied carbon within existing buildings cannot be ignored, and simply demolishing them to deliver new, more sustainable structures is rarely a cost-effective solution. The ability for buildings to flex and adapt to change has been at the heart of Grimshaw's thinking, from the practice's earliest work onwards. To borrow Sir Alex Gordon's famous phrase: "long life, loose fit, low energy" – a phrase as relevant today as when he first proposed it – the longer buildings' useful life, the more sustainable they are.

Nowhere is this better illustrated than in the Herman Miller Factory in Bath, completed in 1976 and conceived by its designers Terry Farrell and Nicholas Grimshaw as an "indeterminate building," able to continually change and evolve in response to its current and future users' needs. As the ultimate proof of concept, over 40 years later Grimshaw has built upon the building's original ethos and innovative approach to adaptive reuse, repurposing it into the new School of Art and Design for Bath Spa University.

When contemplating retrofit projects, it is important to consider

location, even before assessing the value of the structures themselves. Existing buildings may be close to established amenities and transport networks – often unlike peripheral development opportunities on vacant sites – promoting low carbon modes of travel, as well as wider wellbeing benefits. This was certainly the case at the former Herman Miller factory, where several bus and key cycle routes connect the site to the centre of Bath, the city's two main railway stations, and the university's student housing. For the new inhabitants, this dramatically reduces the reliance on car travel compared to the previous campus, with walking and cycling now the most convenient means of access for many.

The existing facade's modular system of interchangeable solid and glass panels allowed the elevation to be easily 'retuned' as activities within changed – as it had been several times during the furniture manufacturer's occupation. Beyond flexibility, the system also anticipated the potential need to adapt to future technologies,

## As the ultimate proof of concept, over 40 years later Grimshaw has built upon the building's original ethos





#### INDETERMINATE

The Herman Miller Factory was conceived by its designers Terry Farrell and Nicholas Grimshaw as an "indeterminate building," able to continually evolve







#### VIERENDEEL

New steel Vierendeel trusses, supported by the existing primary steel structure, raise a new cross-laminated timber deck by  $1\,$  metre

allowing the facade to be upgraded and refurbished without major intervention. To this end, we were able to dismantle, repair and respray the existing GRP panels within the building during construction, and replace the existing single-glazed windows with new bespoke double-glazed units, compatible with the retained system, but with improved energy efficiency.

The introduction of a new performative internal lining behind the GRP panels – also following a modular approach and simple fixing – provides protection to the previously exposed panels, encloses additional insulation, and offers a working surface or acoustic absorption. Through these modifications the performance of the facade has been dramatically enhanced, yet the inherent flexibility of the system is retained, along with the embodied carbon within it.

In any retrofit project, the internal environment should offer, at the very least, the expected comfort and quality of a new building. To varying degrees, this requires that designers, clients and consultees are not overly precious about the existing fabric, recognising any constraints to the use of the building which could jeopardise its long-term future. The Herman Miller Factory's existing roof, in poor condition and poorly insulated, was one such constraint, but in replacing it we were able to solve many of the building's key limitations in a single intervention.

New steel Vierendeel trusses, supported by the existing primary steel structure, raise a new cross-laminated timber deck by 1 metre, with the new insulation greatly improving energy performance. Over 100 rooflights, as well as perimeter clerestory glazing, have dramatically improved the natural daylighting within the deep plan building, while the extra height allows a flexible network of services and ventilation to run at high level, above the existing structure.

Partitions can be easily erected up to the existing roof beams where required, responding to the unpredictable but inevitable need for the schools to adapt to the ebb and flow of changing teaching and course requirements, in spaces that now deliver the height and light expected of high quality studio environments. In addition to these improvements to the performance of the envelope and the quality of space, PV panels on the roof, enabled by increased structural capacity, now provide around 10 per cent of the building's required energy.

The climate emergency requires that is not only buildings that adapt, but all who are involved in the built environment, from clients to contractors, planning authorities to designers. Adaptive reuse of existing buildings is an opportunity to be embraced, rather than a risk to be avoided, and throughout this project, Bath Spa University showed the bravery and engagement needed to tackle an ambitious retrofit of a listed building.

The continued flexibility within the design ensures the university can manipulate the building to their current and future requirements. Moreover, the original building, and the energy embodied within it, has been safeguarded for generations to come, without compromise on energy performance or quality of space and use

As with many adaptive reuse projects, the repurposing of an existing building has allowed for a unique new home for Bath School of Art and Design. A building with a depth and history that inspires its current and future users, this aspect of delight can be as critical as any metric measure in ensuring a building's long term sustainability. As Nicholas Grimshaw said shortly after the completion of the Herman Miller Factory in 1976, "If people identify with a building and feel they can change it and live with their own changes, it will mean more to them. A building's performance should be related to how much a person cares for it, a well-loved cardboard house will last forever."

Ben Heath is a principal at Grimshaw







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## ASK THE ARCHITECT

Ondřej Chybík and Michal Krištof answer *ADF*'s questions on how they approach running a practice in Brno, Czech Republic, and the key things they value about their profession



Ondřej Chybík and Michal Krištof of Chybik + Kristof Architects & Urban Designers

### WHY DID YOU BECOME AN ARCHITECT?

OC: I feel that architecture was a part of my life before I decided to become an architect. My father is a teacher at the architecture university in Brno. While I was in high school, I would visit him there often. It was interesting to see a school full of young, talented people working on models, renderings and plans of their designs. The overall atmosphere was attractive to me.

#### WHAT DO YOU LIKE ABOUT IT MOST?

MK: I enjoy the dynamic nature of the work and the possibility of interacting with people from various spheres of knowledge. In the morning I may have a conversation with an engineer about the roof of the airport in Prague – a current project on which we are working, while in the evening I will discuss his production process with a winemaker. It's endlessly exciting and enriching.

## WHAT IS THE HARDEST PART OF YOUR JOB RUNNING A PRACTICE ACROSS THREE PREMISES?

OC: We feel that there is no real challenge in working in three different locations, because each team is different, and engaging with them is always very instructive and constructive to us. We travel by train between Prague, Brno and Bratislava – meaning that the train carriage often becomes our office. In this sense, the hardest part may just be just catching the train.

### HOW WOULD YOU DESCRIBE YOUR MODUS OPERANDI AS LEADERS?

MK: We truly trust our team. We aim to give as much independence as possible to the architects that work with us, to make sure that they contribute to the projects and get as inspired and excited by them as we do. The practice is organised into teams, each having a team leader that is responsible for the project that they are designing. We also believe that if responsibility is shared, then everyone enjoys the process and – as a result – the success, together.

### DO YOU STILL GET TO DESIGN BUILDINGS FIRST-HAND?

OC: We both do everything in our power to continue to design. We try and focus the entirety of our time and energy on it, and are lucky to have found capable people that can manage the administrative and financial side of the business with us.

### WHAT BEEN YOUR PROUDEST ACHIEVEMENT SO FAR?

MK: The office – and building our team – is our biggest achievement so far.





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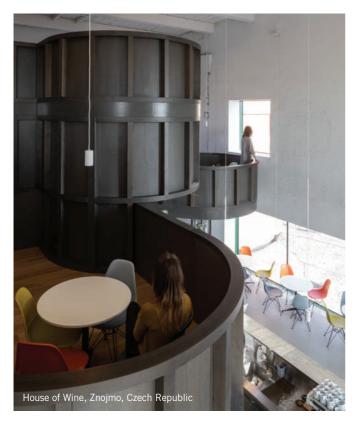














## WHAT'S YOUR FAVOURITE THING ABOUT CZECH ARCHITECTURAL HERITAGE?

MK: As things stand, Czech architectural heritage all layers into a very rich urban lattice. We have recently had the opportunity to build next to a 9th century chapel, where we revisited a technical building that was placed there during the communist regime. For us, the project -House of Wine, in Znojmo - brings together within a fixed form and specific geographical location, a more fluid type of heritage, that of generational interaction within our society. We also believe that many aspects of the built environment that are not currently considered 'heritage' are important to preserve and display, as a means of self-reflection on the society that built them - thereby rethinking the notion of 'restoration.'

#### DO YOU THINK YOUR CLIENTS HAVE AN ACCURATE UNDERSTANDING OF SUSTAINABILITY AND HOW DO YOU EDUCATE THEM IF NOT?

OC: Often we are lucky to work with clients that are visionary and progressive, and make a significant effort to include sustainable practices within their business model. Therefore, the dialogue between

them and us is fluid – as our views align completely.

### DO YOU PREFER MASTERPLANNING OR FINE DETAIL?

OC: We have no preference for a certain scale. We design large masterplan schemes, as our region is currently rebuilding its post-industrial landscape, and also enjoy small artistic interventions, like the Slovak Pavilion at the recent Prague Quadriennale.

### DESIGN COMPETITIONS – A BENEFIT OR A BURDEN?

MK: They are one concrete way to push forward a practice, a way of investing in the future of the studio. We consistently apply or are invited to competitions and no matter the outcome we see that these as a way to reflect on our projects, our principles, improving our process and of course expanding our horizons.

## DO YOU HAVE TO 'ADVERTISE' YOURSELVES HARD TO STAY ON TOP AND WIN JOBS?

OC: Considering that we belong to the generation that was faced with an economic crisis right at the beginning of their careers, we initially had to approach clients directly and make sure that we

sought and received commissions to support the practice. Recently, we have been receiving awards for our work, honours by which we are very humbled, that indirectly 'advertise' our work for us.

## HAVE YOU COME ACROSS ANY INNOVATIVE MATERIALS OR USE OF MATERIALS RECENTLY?

MK: Not a material per se, but recently the idea of reusing materials has become important to our process. This of course extends to the scale of a building, as shown in our recent project House of Wine, for which we kept the majority of the existing structure as a means to reconnect the people that inhabit the town where it is located, with the building and its history and legacy.

### ARE THERE ANY INTERNATIONAL AMBITIONS FOR THE FIRM?

OC: We believe that the society in which we now live is truly global and that our current experience locally in the Czech Republic – which has informed our vision and work – and abroad can speak for our capacity to take on any challenges. We are ready for them, and very enthusiastic about practicing architecture anywhere in the world.





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## **NEW ARRIVALS**

Rounding up the latest movers and in-house appointments across the industry



#### GARY LOO PICK EVERARD

Property, construction and infrastructure consultancy Pick Everard has appointed Gary Loo as its new head of development for architecture. Gary joins the firm with 29 years' experience and specialist expertise in master planning and purpose-built student accommodation, with a portfolio of work spanning throughout the UK and Ireland, including working with Royal Mail Group. Gary will be responsible for business development for the London office's 65 team.



### NEIL ANDREW PERKINS AND WILL

The London studio of architecture and design firm Perkins and Will have announced the appointment of Neil Andrew as director of hospitality. With over 15 years' experience in interior design for lifestyle and hospitality projects, Andrew will bring specialist knowledge in luxury hospitality, residential, and commercial design to the firm. Andrew's appointment comes at a time of expansion for Perkins and Will, having announced new practices in Ireland, Mexico and Canada.



## STEVEN SMIT MVRDV

Steven Smit has been announced as the new director at MVRDV Asia. Smit studied at Utrecht University in The Netherlands and the University of Tasmania in Australia where he received bachelor's degrees in Architecture and Environmental Design in 1994. Based in Shanghai, he oversees MVRDV's Asian projects and clients, working with MVRDV's local team in the city. Active in China and Hong Kong since 2002 at director level, his experience covers the practice of architecture in China from concept to completion. Smit has worked in China with renowned international architecture and engineering studios including OMA as part of the CCTV Tower team in Beijing and PTW as China director during the Beijing Watercube project.





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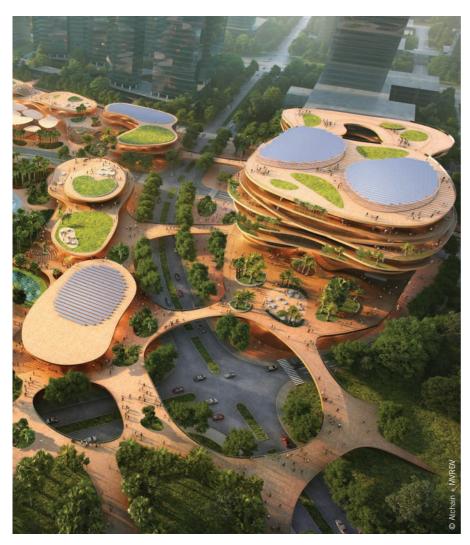
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## SHIMAO SHENKONG INTERNATIONAL CENTRE, SHENZHEN MVRDV

MVRDV has been selected as the winner in a competition to design the 101,300 m², mixed-use Shimao ShenKong International Centre in Shenzhen, China. Located in Universiade New Town, Longgang District, MVRDV's Shenzhen Terraces was selected from 27 entries by international design firms. Designed with sustainability as a focus, the completed project will form the core of the university neighbourhood, acting as a new three-dimensional "urban living room" with more than 20 programmes, including a small gallery, library, and outdoor theatre. The central concept of Shenzhen Terraces is to merge the existing landscape with the new development by using "stacked plateaus" for its various buildings. The predominantly horizontal lines of the terraces look to contrast with the vertical lines of the surrounding high-rises to "bring about a sense of tranquillity through their slow curving shapes," said the architects.



### RECREATION CENTRE, JAURES GRAAL ARCHITECTURE

Graal architecture has delivered Jaures recreation centre in Athis-Mons, France. The purpose of this centre provides the city with an opportunity to equip itself with a facility for small children, and at the same time help to reduce the pressures of the town's growing population. The Jaures complex stands in a residential area comprising a number of period buildings of varying typologies. The building features a 40 metre facade that is composed of curving concrete vails coloured in a pinkish grey, "ensuring a powerful presence in the area," said the architects. The centre includes workshops designed to host a wide range of activities, which have been made as basic as possible to reduce finishing and fitting out costs.



## COURBES, COLOMBES CHRISTOPHE ROUSSELLE

Architecture studio Christophe Rousselle has delivered Courbes, a project of 134 apartments and stores in Colombes, France. The architectural project comprises two buildings with large double-height shops on the ground floor. The apartments serve to "signal the entrance to the town while the moulded volumes give each apartment a unique character," said the architects. The aim was to densify the area, "respecting the comfort of all at the same time." The massive appearance of the building is mitigated by the presence of balconies – "between reflection and transparency" – offering open sky exterior spaces. Over 2 km of curved glazing was required to complete the project.



#### ONE THOUSAND MUSEUM, MIAMI ZAHA HADID ARCHITECTS

One Thousand Museum is a 62-storey residential tower opposite Museum Park in Miami. With views across Biscayne Bay, this popular 30-acre park was redeveloped in 2013 as one of downtown Miami's primary public spaces, and includes the city's new art and science museums. One Thousand Museum's concrete exoskeleton has been designed as a "web of flowing lines that integrates lateral bracing with structural support." The building also incorporates glass fibre reinforced concrete formwork which remains in place as construction progresses up the tower. The top floors of the tower feature an aquatic centre, lounge and event space. Landscaped gardens, terraces and pools are located above the lobby and residents' parking.



## DOLUNAY VILLA, TURKEY FOSTER + PARTNERS

Situated along the coast of the Aegean Sea in Turkey's southwestern province of Mugla, the private Dolunay villa by Foster + Partners has been "carefully sited amid the natural rugged setting, prioritising the spectacular sea view," said the architects. The design uses the natural contours of the site to create a low-rise building that appears as a single storey structure on approach. The main entrance takes you directly to the centre of the villa, with the private family quarters to the eastern side, and the public living and dining areas to the west. The house features a "handcrafted" structural timber roof, designed in conjunction with Swiss firm Blumer Lehmann. The solid structural oak beams rest on steel columns, supporting a large 7.5 metre cantilever, providing outdoor shaded spaces.



## 235 GRAND, NEW JERSEY HLW

HLW was engaged as design architect and architect of record for 235 Grand, a 45-storey rental apartment tower complete with an internal garage, building amenities and retail space. The site of a former coal bunker and previously home to the Hudson County Boys & Girls Club, 235 Grand features a diverse mix of market-rate luxury apartment units, targeting a mix of demographics. HLW was commissioned to design the building and the residential units, while working closely with New York-based interior design firm Bentel & Bentel on the lobbies and amenities spaces. In addition to a lobby mezzanine, the building boasts multi-purpose lounges and a library for residents to enjoy.

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#### **CUPA PIZARRAS SHOWCASES ROOF SLATES AT BUILDING CENTRE**



CUPA PIZARRAS, the world leader in natural slate, has recently launched its new, permanent stand at The Building Centre's products and materials gallery in Bloomsbury, London. Visitors can explore the company's range of natural slate products, including its innovative slate cladding system, as well as attend CUPA PIZARRAS' CPD seminars. CUPA PIZARRAS will also hold small CPD sessions on request and will host quarterly CPD seminars in the evening for up to 50 architects and specifiers. www.cupapizarras.com/uk www.building-centre-cpdseminar.eventbrite.co.uk

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Coopers Fire offers a range of free CPD seminars. Approved by RIBA, the seminars purpose is to educate the fire protection industry and wider building industry about application of fire and smoke curtains in buildings. This fire curtain CPD provides an overview of passive fire protection, fire curtain standards and compliance and applications where fire curtains can be installed. Coopers Fire cover the following subjects as part of the RIBA Core Curriculum; Design, construction and technology, Health, safety and wellbeing, Legal, regulatory and statutory compliance.

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#### THE IMPORTANCE OF SPECIFYING THE CORRECT PERFORMANCE FLOOR



As part of Harlequin's commitment to protecting the health and wellbeing of dancers and performers, its RIBA approved CPD explains why specifying the correct floor for dance and performing arts is critical to the longevity of a performers career. Using comprehensive data and case studies, Harlequin outlines the key considerations when specifying a performance floor and look at the important contribution the floor makes to performer health and safety. It explores how to ensure you specify the right performance surface. 01892 514888 www.harlequinfloors.com

PENETRATIONS IN BUILDINGS

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As part of Quelfire's mission to educate the construction industry on the importance of passive fire protection, its CPD training course entitled 'Effective Passive Fire Protection for Gaps and Penetrations in Buildings', which has recently gained CPD accreditation, aims to enable more effective design and specification of complete passive fire protection systems. The training session raises awareness of the importance of early engagement, thus ensuring compliant installations, and illustrates the solutions that are available. Organisations that are involved in the design or management of the installation of passive fire protection solutions can request a face-to-face training session normally held at their premises and collect CPD points. The 45-minute 'Effective Passive Fire Protection for Gaps and Penetrations in Buildings' presentation is now also available to view online. Providing flexibility and convenience, working professionals with limited time can plan their learning around other work priorities, instead of the other way around. In addition, individuals and companies with less than 10 delegates (and therefore are not eligible for a face-to-face CPD) can benefit from the online resource. And for those who attended a face-to-face CPD, they can also use this as a recap tool. For more information on Quelfire CPD training please visit the company's website www.quelfire.co.uk www.quelfire.co.uk/cpd-trainingpassive-fire-protection



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BUILDING

## RIVERSIDE LEISURE CENTRE CHELMSFORD

# Playful participation

In designing a riverside replacement for Chelmsford's main swimming pool and gym, Pick Everard followed a brief to increase local community participation. James Parker reports

In 2014, Chelmsford City Council undertook a condition survey on the only sports complex with a pool in the city boundaries, an outdated 1960s building with 1980s additions. This found that the centre could be kept running with a £9m refurbishment, but it would not be able to meet increasing demand; what's more the council had a strong goal to increase participation in sports and leisure in the local community.

The decision was made to retain and refurbish the viable elements of the centre – the 1980s ice rink and sports centre – but provide a new, fit-for-purpose, modern pool and gym to replace the old facilities, driven by the motto of "the best leisure offer for the most people." The £30m works were supported by a £1.5m grant from Sport England, who have "changed focus from an elite sports body to being more about increasing health and participation," says project architect at Pick Everard, Justin Ashworth.

Against this background, it was key to make the building as inviting as possible to the community, and enhance its function as an important public building for Chelmsford. In light of this, the client wanted to appoint an experienced practice, and Pick Everard have delivered a wide array of sports and leisure projects, such as an Olympic legacy project at Hadleigh Park, as well as military training, school pools, and local authority swimming pool refurbishments across the south east.

The replacement pool and gym scheme was originally developed up to RIBA stage 2 by specialist architect Paul Weston, who "helped the council make decisions on strategy, such as around keeping the old pool open while we built the new one," says Ashworth. He adds that the constraints around the phased construction "kind of selected the site for us, because we built on the car park while the old centre was still in operation."

As well as Weston's expertise, the project benefitted from Sport England's input – from helping make the business case robust and futureproofed, to assisting the council with programming at the centre, and "links with clubs and organisations at national level" to help ensure the centre's potential is used to its full.

The organisation also has the knowledge (including via its links with Swimming England) to provide design advice on the pool itself, and Pick Everard worked closely with Sport England technical adviser David Hemsley throughout to ensure that the pool had a robust specification. "It means we are providing the client with a building that has proven finishes and construction methods ones that Sport England know lasts," says Ashworth. He mentions that as well as attending early design meetings and providing feedback, Sport England also regularly attended site progress meetings to ensure the specification was being delivered. He adds: "This building will be used 364 days a year, from 5.30 am until 10







#### COLONNADE

The colonnade gives the centre "added presence, which is important for a civic building," says the project architect

## "I put leisure centres in the bracket of proper civic architecture"

Justin Ashworth, Pick Everard



at night, and a million people a year will go through it; it's getting close to airports and hospitals in terms of the robustness we need to achieve."

#### **Brief & form**

The council wanted a "public-facing, inclusive design" that would also contribute to the wider riverside development in the town, including the major Bond Street retail and leisure development. "It's all part of a riverside quarter that the council has had a long-term ambition to redevelop," Ashworth explains, praising the planning department's work.

The new build accommodation includes a 10-lane 'competition' pool (wider than the standard eight lanes due to the demand resulting from being the only pool in the city), plus a splash play pool, flume, and learner pool. There's also a crèche and soft play, and cafe. On the first floor is a 150-station gym, and a studio dedicated to spin classes, plus two multi-purpose studios.

The scheme's design responds to its forbears on the site, says Justin Ashworth. "We looked at the retained ice rink – it's built on columns with parking at ground floor level. So we made the ground floor of the new build elements as transparent as possible, with solid forms at first floor." This helps explain the strip of glazing running around the building's perimeter at ground floor level, which includes a blue film around the pool helping control glare, and giving a "clean feel." The interlayer

used in the glazing – which also helps connect the building with its surroundings – adds user comfort, warming up in sunlight to prevent cold internal downdrafts.

As part of increasing participation in the centre, the council "wanted the cafe to be public-facing," says Ashworth, whereas in the previous building the cafe was for centre users only. "This is much more a cafe by the river, with a leisure centre behind it, if you don't want to come and use the leisure centre, you can still get a coffee on your way to work."

The riverside frontage to the gym, curved to follow the bend of the river, extends over the cafe to provide a protected external terrace. Further cantilevered forms at first floor house the skate hire for the existing ice rink, and the spin studio; these also signal the two entrances to the building which are directly below them. Further protecting users walking around the facility, a colonnade runs around the building with columns to both the front and side elevations, echoing the pre-existing sports centre.

As Ashworth says, the colonnade "gives the building added presence – this is important for a civic building and also softens the transition between the building, terrace and riverside walk." The architect says that he believes leisure centres deserve to be considered alongside theatres, galleries and churches when it comes to their standing as public buildings. "I put them in the bracket of proper civic architecture that





we want to be proud of. It's a building that's not to be taken too seriously, but it is an important public building." This new addition also creates a new 'gateway' to the city, part of its success being in enhancing the existing riverside walk connecting it to the city centre.

#### **External materials**

Justin Ashworth says leisure centres also enable designers to "have a bit of fun" and the exterior of the building has a playful expression of coloured glass to the gym, and 'bubbles' extending up the pool's facade – celebrating what's happening within. The bubbles have been laser cut in various sizes into white aluminium sheet bonded to a blue sheet behind; the architects hope the projecting roof of the colonnade will protect the bright white exterior from staining.

Also from Alucobond (and supplied by cladding specialists Ash & Lacy), coloured panels cover the cantilevered sections internally and externally, their powder coatings changing from appearing blue to greens or reds depending on the light and the angle they are viewed from. "It almost changes colour with the seasons," says Ashworth.

A further playfulness is bestowed by the vertical louvres that frame the full-height glazing to the gym on the first floor, in a sequence of blues and greens. As well as having pleasant views of trees framed by these colourful brise soleil elements, gymgoers benefit from the solar control they

provide. The east-facing elevation is fully shaded in the hottest parts of the day, enhancing what the low-G solar control glass itself is doing.

As well as the 'blue' glass around the pool, blue external LEDs enhance the exterior at night, making the building glow. In addition, the gym has colour changing LEDs on the interior – which "almost ripples like an octopus," says Ashworth – adding that the building "completely changes at night." To the west elevation are three projecting oriel windows with brightly coloured frames, continuing the language of colourful protrusions.

#### Structural challenges & pool

Digging a pool tank next to a river on a site with difficult ground conditions "presented unknowns at the beginning of the project," says Ashworth. "We worked with main contractor Kier and the piling contractor to develop the design for a contiguously piled structure around all of the pool and basement areas." This worked well, with minimal dewatering of the site being required during the works.

However there was also the issue of an adjacent sewer to contend with – the main sewer serving the whole of north Chelmsford. The building needed to be moved slightly further back from the river, and there were early delays because of other groundwork risks that needed to be addressed.

The pool is constructed of reinforced

#### **WORKING OUT IN COLOUR**

Coloured vertical louvres frame the full-height glazing to the gym on the first floor

The riverside frontage to the gym, curved to follow the bend of the river, extends over the cafe to provide a protected terrace

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#### **COLUMN-FREE**

The architects and structural engineers designed a roof of 'fish-belly' glulam trusses with galvanised steel chords for the pool, to provide column-free views





concrete, render and tiles, and half of its floor is movable for flexibility of use, allowing a variety of classes from learn to swim to 'aquafit' to use it as required. "Lane swimming can be maintained in the deep part, and for competitions the whole pool can be set to 2 metres deep in a matter of minutes," says the architect. A plastic 'boom' runs down the centre of the pool – a box which descends into a trench or ascends to water level in order to provide two different depths as required. Other innovations include an underwater camerabased system that warns lifeguards of users who are possibly in trouble.

There's also a shallow learner pool in addition to the fun 'splash' pool, with the former having sensory features like bubbles and water jets, lights and music, which is not only fun for children but beneficial for profoundly disabled users or even 'chill out' sessions for adults.

For the pool roof design, the architects and structural engineers had the task of "creating an elegant structure spanning over 30 metres, and providing column-free views from the spectator area." The solution was 'fish belly' glulam trusses with galvanised steel chords. The roof's diagonal, self-bracing form allowed cross-bracing in the walls to be reduced and provide a band of clear glass at ground floor "without structural interruption."

It is obviously important to ameliorate acoustic control where possible in pools, and extensive acoustic panelling is found here to make swimming teachers' lives easier. The comfortable acoustic produced "adds to why the building 'feels good," says Ashworth, "although a customer may not appreciate exactly why."

#### Sustainability

With, as Ashworth asserts, it being impossible to guarantee energy efficiency from a passive building for such a use class when it comes to sustainability aspects like ventilation, the focus of the design was instead on minimising solar gain. As well as the glass and brise soleil mentioned previously, the design maximises overhangs to shade the ground floor, and provides deep eaves. The blue film to the pool's glazing absorbs as well as reflects heat, and there are smart sensors to maximise lighting and heating efficiency.

In addition, a retained CHP unit from the existing centre was recommissioned and relocated in the new plant room. This "works efficiently for the heat load of the pool and the centre's hot water requirement," says

Ashworth, topped up by 'smart' gas boilers if needed. Underfloor heating runs throughout the ground floor. The centre's targeted 'Very Good' BREEAM rating will "put it in the top 25 per cent of non-domestic UK buildings for environmentally-friendly design," says the project architect.

When it comes to the copious ductwork required for the servicing of a swimming pool and gym, the architects "as far as we could," kept the ductwork on the roof and out of the internal spaces.

#### Conclusion

Beyond the pool's movable floor and the building's colourful, engaging design, what really marks this project out among sports and leisure schemes, according to the architects, is the "client's commitment to maintaining the long-term quality of the building." Lifecycle, maintenance and safety issues were a "key factor in making decisions," in what was a very robust specification based on specialist sector knowledge, and this should guard the project against the failures that have tainted other such schemes initially lauded for their design.

With the project being a traditional JCT contract, Pick Everard remained in control for much of the detailing, which was a further contributor to a high quality outcome, it being a highly experienced firm. Where site issues did arise, the architects attended in order to directly resolve any queries and questions.

The result is a building which was always going to prove popular due to its key role as the only pool in town, but has exceeded expectations. Admissions have increased month on month since it opened in summer 2019, and the centre's on track for a million visits in its first year of operation. The wide participation hoped for by the client is evident, with elderly pensioners sharing the space with school groups, plus a "very active programme" for disabled users, says Justin Ashworth, adding that this ties into to the intense focus on such users during the design programme, which included an access group dedicated to DDA and similar considerations.

Beyond the strengths of the new spaces and playful exteriors created, the final piece of the jigsaw is the lengths that the staff go to to assist users, no doubt inspired by their bright and colourful new home – in fact this is evidenced by the number of side projects that have been catalysed by the centre's completion. Says Ashworth, "they go the extra mile to ensure users are welcomed and have a positive experience."

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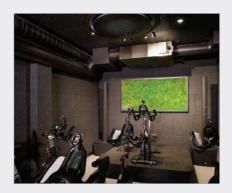




## Heradesign Spins its Acoustic Magic at Cycle Culture

eradesign, from Knauf AMF, has been specified throughout a new generation cycle studio, combining a high-performance spin studio and high street coffee shop in London.

A clever re-design of a former shop, comprising a narrow open retail space with tiled floors and no acoustic separation was implemented. Acoustic consideration was



critical so an isolated sound box was constructed to form the studio with stud walls built to separate it from the café – using a lift shaft model allowing for air and acoustic separation.

Commenting on the project Joe Stuart of Warehome Architects said, "Heradesign was absolutely perfect for this project. it provides excellent acoustic properties and we love the look of its natural, raw wood wool texture. Specified in black it is really striking and importantly the black ceiling gives a sense of width in the café area."

To complement the paired back industrial 'Scandi' design and monochrome pallet, Heradesign in black was specified throughout. In the reception and café areas Heradesign was used on the ceilings providing an attractive contrast to the white tiles, green walls and brass fixtures. In the cycle studio it was used on the walls and ceiling, creating a modern yet intimate vibe, with a living moss wall providing an



attractive and functional focal point.

Manufactured from robust sustainable materials, fire resistant Heradesign has the highest level of sound absorption, Class A, helping improve speech intelligibility and helping create a relaxed atmosphere.

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#### Gerflor evolves its 40 year sport floor



When Ashington Academy's sports hall required updating, the school decided to replace its existing Gerflor Taraflex® sport flooring with a 'like-for-like' Gerflor flooring as the floor, which was still fit-for-purpose, was a little jaded after four decades of demanding use. Given Ashington

Academy's prominent sporting agenda, it turned yet again to Gerflor for a reliable, replacement flooring solution for its hall. "I could see the benefits of using the same flooring again instead of changing it," said Andrew Crosby, Head of Estates, Ashington Academy.

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#### Games areas generate increase in sporting



Getting value for money is critical for schools and clubs investing in sports facilities, and one of the best ways to deliver impact is by installing a Multi-Use Games Area. With traditional built sports halls out of reach of most budgets, a floodlit all-weather sports canopy covering a MUGA will deliver

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### Bathroom model to support "ageing in place"



Housing experts are highlighting that, with the number of over 85s in the UK expected to double in the next 25 years, there is a growing priority to create tailored environments where people can continue to live. Closomat

is already delivering the ethos in the bathroom. Its wash & dry toilets are purpose-designed to optimise hygiene and therefore wellbeing and evolve with users' changing needs. Closomat's Palma Vita wash & dry toilet is the only WC on the market in Britain that can be accessorised to address people's changing mobility and dexterity.

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BUILDING PROJECTS

LINDEN COURT LEWISHAM, LONDON

# A HAPPI medium

Linden Court is PRP's response to the Greater London Authority's call for exemplar housing designed for retirement living. Project architect Mark Walker spoke to Sébastien Reed about how the HAPPI standard was key to the project's success

ADF APRIL/MAY 2020 WWW.ARCHITECTSDATAFILE.CO.UK





The scheme's 53 units are distributed across three blocks arranged in parallel, plus a connecting block to the north

The Office for National Statistics estimates that by 2030, more than one-fifth of United Kingdom residents will be aged over 65, nearly seven per cent over 75, and 3.2 per cent pushing 85. Considering these together means that by the end of the decade almost one-third of the nation's population will be senior residents.

Despite the fact that, in the words of the Greater London Authority (GLA), London is a comparatively "young city," it is expected to follow the national trend and see its population age substantially. By 2029 the number of 'older person households' (aged 65 and over) will have increased by 37 per cent, with households aged 75 and over (also most likely to move into specialist older persons' housing) increasing by 42 per cent. In view of this, Homes England has injected significant funds into specialist housing projects to support this demographic shift.

Answering the GLA's general call for housing for older residents, Lewisham Council's aspiration for a 0.5 hectare site in south east London was to develop exemplar accommodation to help satisfy the burgeoning demand for extra-care residences. 'Extra-care' describes accommodation with 24-hour on-site care provided to residents, and currently represents a market worth more than £2bn in the UK. In addition to the desired minimum of 50 rental units nestled into the

site, the client also required that the building add value to the wider community.

Architect PRP was commissioned directly by Lewisham Council after putting in a bid for the project, the practice having had a strong presence in the retirement living sector since the 1980s, developing so-called 'extra-care' schemes. It now runs a 40-strong office in Thames Ditton which specialises in such typologies.

#### **Initial footprint**

Linden Court houses a total of 35 apartments for rent and 18 for shared ownership – (a 66 to 34 per cent ratio). The scheme's 53 units are distributed across three blocks arranged in parallel, plus a connecting block to the north, forming an E-shape in plan.

PRP's Mark Walker lists several welcome by-products of the E-shaped footprint; four courtyards of varying character, a triple aspect for each of the apartments, and a sheltered entrance for the mews which provide residents with access to the communal areas of the building. Another, less tangible benefit to residents is the privacy provided by flanking walls which obstruct views into the development from nearby buildings.

"The form and massing create optimal orientation," he tells *ADF*. The new block stands at four storeys, with the third floor stepping back from the facade on both the north and south elevations. This

"acknowledges the scale of the adjoining residential development," while creating terraces for larger apartments situated on the roof, PRP has provided generous views to residents and access to outside, with all apartments having balconies, terraces at ground floor level, or larger terraces at third floor level.

All of the flats are south-facing, as are two of the garden courts. The residents' communal facilities, which occupy most of the ground floor of both the central wing to the south and adjoining block to the east, and are shared by older people from the wider community, are double aspect, opening onto south and north facing courtyard gardens. The two remaining gardens to the north are exclusively for residents.

Walker describes the architecture as "contemporary and robust," with crafted, buff-coloured brickwork with deep reveals. He continues: "The scheme successfully integrates into its domestic setting; the rhythm of surrounding Victorian terraces is expressed across the street-facing facade through the fenestration and brickwork detailing."

PRP took a sensitive approach to the language of the design; specifying brick to complement the adjacent residential developments. The subtle detailing on the facade rotates bricks 45 degrees in sections to link each balcony with its adjacent window; externally signalling each rental unit as a separate entity.

Aluminium timber composite windows are paired with fully-glazed cantilevered PPC steel balconies, which jut out at intervals across the buildings' elevations. Slightly contrasting with the brick below, dark timber shingles clad the top floor, contributing to a reduction in the building's mass.

#### Intergenerational engagement

The site sits directly adjacent to Chiddingstone House, which houses a four-storey block of maisonette social housing apartments built in the 1970s, and is just south of the new building. It previously included a large space to the rear set out as drying yards, storage sheds and a row of garages, which was underused by Chiddingstone House residents, and so was reallocated by Lewisham Council for the new development.

Consultation with the residents was undertaken, which included discussion on the re-provision of storage and the protection of the level of parking they



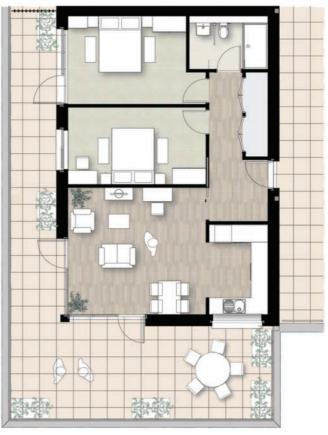
formerly had access to. Walker credits this decision as one of the key opportunities realised on the site, resulting in "a revamped shared external space where parking is managed and children can play safely." The architects hope that the scheme catalyses interaction between people of all different ages in the community.

The gardens for the later living block are enclosed by brick walls with a porous grateeffect; this allows light and glimpses into them from the shared external space, and

#### STEPPING BACK

The new block stands at four storeys, with the third floor stepping back from the facade on the north and south elevations







#### **DETAILING**

The facade (top image) has sections of bricks rotated 45 degrees to link balconies with adjacent windows © PRP & Richard Chivers

invites members of the wider community inside. Walker notes: "The team was able to retain a hidden but substantial brick wall to the eastern boundary which now exudes charm into the little quiet garden at the rear of the site."

Linden Court's communal areas "needed to be welcoming and appropriately located so as to enable people from the wider community to utilise the facilities without compromising on the privacy of the residents," says Walker. "A horizontal recess expresses a ground floor plinth and visually anchors the building; this detail extends to become a 'hit and miss' garden wall providing security and privacy for the courtyard gardens and forming a new mews space to its southern edge."

He continues: "Dappled light can filter through to the garden, creating welcome shade and a soft, rather than divisive, relationship between the garden and the mews." The architects intended the mews to function as a key node and meeting point for the scheme, offering space for community events, and meaningful intergenerational engagement.

With the elderly being a demographic

seriously vulnerable to loneliness and social isolation, it was also important for the architects that the communal spaces inspired residents and visitors to socialise – "even a cafe bar has been integrated" remarks Walker. To the same end, a cinema, lounge, and hobby room also feature in the programme. Visual connections and direct pathways extend back into the gardens.

#### Culture, care & comfort

The UK Government's 'Housing our Ageing Population Panel for Innovation' (HAPPI) standard was core to the project's design. The standard is composed of a set of design criteria for designing spaces for an older demographic, foregrounding principles such as good light, ventilation, room to move around, and good storage. Walker explains: "The 10 HAPPI recommendations are all fully met in this design and, in our view, to the full benefit of the residents, the building owners and the budget."

Aside from the features themselves, the architects also note the HAPPI standard's unexpected benefits for the working team's culture, commending it as a lever for embracing non-standard approaches for

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"It encouraged everyone involved to embrace what might have been considered to be 'not the norm' for this type of housing"

Mark Walker

#### **PROJECT FACTFILE**

Architect: PRP

Client: London Borough of Lewisham

**Area:** 0.5 Ha **Cost:** £12.6m

**Developer:** One Housing Group **No. of apartments for rent:** 35 **No. of apartments for shared** 

ownership: 18

this typology: "It encouraged everyone involved to embrace what might have been considered to be 'not the norm' for this type of housing," says Walker. He cites as an example, "the visual connection from the interior via glazing to what, on plan, might appear to be small gardens mean that the spaces can be enjoyed from all four levels of the building."

The interiors at Linden Court "surpass London Plan requirements," say the architects. Particular consideration was given to the experience of elderly residents potentially being inside their apartments over a 24-hour period. Overheating, views and access to natural light and ventilation all informed the design of the apartments, balconies and elevations. Heat and noise transfer from corridors and communal areas were also considered in terms of their locations and ventilation.

When it comes to care, smart Tunstall doors and emergency call systems are included in each apartment, aiming to give residents peace of mind 24 hours a day. Flats have also been designed with the option to be fitted with living aids such as grab rails or shower seats, meaning the physical elements of the interiors can adapt with residents' changing abilities. This way, those living at Linden Court can remain more self-sufficient for as long as possible; aiming to grant them with an important sense of agency.

All areas of the building are fully accessible, allowing ease of use for those using buggies, wheelchairs or walking aids. A purposebuilt buggy storage room just beyond the indoor communal area entrance allows residents to stow away their mobility vehicles. The scheme also features 15 parking spaces which run east to west through the centre of the site, in addition to a cycle block for bicycle storage at the western side of the site.

So that residents can navigate the building with more ease, the simple floor plan, along with clearly designed wayfinding, make the interiors well adapted to those with visual and cognitive impairments. Walker remarks: "It's a place where people can 'age in place' knowing that the built environment will not limit their abilities, but will enhance and hopefully uplift their spirits."

The result has turned heads within the housing community, with Linden Court being shortlisted for the Best Older People's Housing Development at 2019's Inside Housing Development Awards. For Walker, the building is "a true culmination of years of thought around how to incorporate the original HAPPI recommendations in a way which benefits those that live there, capital and revenue costs, and the ease of management and maintenance." But, "above all," the architect concludes, "Linden Court is a happy place to live."

# HERITAGE & HISTORIC (INCLUDING ADAPTIVE RE-USE) SUPPLEMENT





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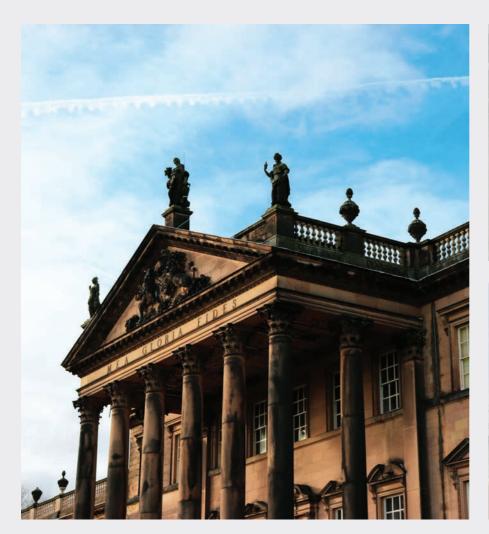
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#### **HISTORIC BUILDINGS**

# Turning back time at Wentworth Woodhouse







Over the years, Wentworth Woodhouse has suffered from decay and was added to Historic England's Heritage at Risk Register in 2016. However, during 2019, huge strides were made to rejuvenate the Grade I listed Georgian stately home in Rotherham, now owned by the Wentworth Woodhouse Preservation Trust.

Emergency repairs to huge swathes of the roof were completed, protecting key areas of the mansion and its riding school against the elements.

Since last summer, over 700 tonnes of scaffolding have encased the mansion's Palladian East Front, and supported a vast temporary roof made of plastic. The scaffolding has enabled roof repairs to be

carried out under Phase One and Two of the Trust's Emergency Works Programme.

Phase One's contractors Aura Conservation finished their work in December, having completely removed and re-slated roofs on the riding school and the mansion's chapel, restored the chapel's ceiling, and replaced roof slates and repaired roof timbers on the mansion's Bedlam wing.

Heritage construction specialists Robert Woodhead are now on site carrying out Phase Two. The largest phase of the Treasury-funded emergency works project, this phase includes the replacement of roofs, plus repairs to high-level stonework, Georgian roof statues and urns.

## Restoration work to Wentworth Woodhouse planned for 2020

- Early 2020 slates have begun to be put back on the long gallery roof, and the last five chimneys will be worked on.
- Repairs to the roof urns are due to begin in spring.
- Currently scheduled to take place this June, highly detailed and intricate repairs will get underway to the stone cornice on the south and north facades of the building.
- Roof work over the East Front State Rooms, the most significant areas of Wentworth Woodhouse, is already underway and is due to be completed in May.

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#### **CULTURAL BUILDINGS**

# Nottingham palace's transformation into new galleries reaches 'major milestone'





Renovation works at Nottingham's famous landmark, the Ducal Palace, are in progress, and 15 km of scaffold tubing has now been removed to make way for the next stage of restoration at the historic site.

Led by Midlands contractor G F
Tomlinson, the Ducal Palace works are
part of the £30m redevelopment of
Nottingham Castle, which is being funded
by the Heritage Lottery fund, D2N2 Local
Enterprise Partnership, Nottingham Castle
Trust and Nottingham City Council. The
project aims to transform the site into a
"world-class heritage destination."

The project includes creating a new visitor centre and a new extension to the

Ducal Palace, where two brand new galleries, named Robin Hood and Rebellion, will be located.

Works to the palace until this point have involved stripping back and returning the site to its original 1870s state, including the removal of the roof following a number of modifications since the 19th century. The original Ducal Palace building burnt down in 1831, and was rebuilt in 1875 and later opened as a gallery in 1878.

The scaffolding has been progressively removed over the course of eight months, with the northern temporary roof being taken down in June, the southern temporary roof removed in December, and the last section, located over the colonnade, removed at the end of January.

As well as the new galleries, the refurbished palace will include a showcase of the castle's array of fine and decorative art collections. It will also feature interactive stations for archery, "enabling visitors to experience the castle's history in an interactive fashion," said the firm. The castle grounds will be remodelled and access to the cave network hidden within the rock beneath the castle will be improved. It is expected to attract around 350,000 visitors in its first year.

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# Former Pub to Community Hub: Selectaglaze Supports

ext to Bellingham Station in London, the Fellowship Inn was Grade II Listed by Historic England in 2013, as an example of a complete inter-war public house. Despite the Listing, parts of the building excluding the pub area fell into a state of disrepair but have been rescued thanks to, the Electric Star Group, Phoenix Community Housing and the Heritage Lottery Fund.

The Bellingham space relaunched in June 2019 as the 'Fellowship and Star' and functions as a pub, microbrewery, cinema, theatre and comedy venue, music hub and rehearsal area. The pub will also be home to charity 'Lewisham Music', which provides after-school instrument tuition and rehearsals for the Borough's schools on the first floor.

Given the vital repairs and conservation works the site was to undergo, it was necessary to improve the acoustic efficiency of the original crittal single glazed windows



which could not be removed due to conservation restrictions.

Architect Thomas Ford and main contractor Ash Constructing contacted Selectaglaze, as an essential element of the works was to ensure a reduction of noise ingress and breakout from the building.

Selectaglaze installed a total of 32 units across all four floors of the Inn. The majority of the openings were fitted with Series 15 horizontal sliders, which is a mid-range

horizontal sliding system with more robust but still slender framing sections allowing discreet treatments of larger windows. The original curved windows in the cinema were treated sympathetically, utilising Selectaglaze's Series 15 units, combined with Series 40 curved fixed light units.

Near to an external staircase serving as a fire escape, Series 40 fixed lights offering 30 mins fire integrity were installed to protect the route in the case of an emergency. The Series 15 horizontal slider was specified for windows in the performance venue on the ground floor, the rehearsal and music production rooms. A Series 41 side hung casement was also installed to treat a small window in the rehearsal room.

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#### COMMENT

# Drawing on history

Graeme Winestone of architects gpad London talks through the importance of preserving the original character of a historic site in heritage refurbs, alongside engaging with the local community and adapting to each project

ne of the cornerstones of our work at gpad is that we never approach the design of a building the same way twice. A lot of our work is refurbishment, and every project is different, therefore you need to adapt.

The first step always needs to be extensive analysis and research into the history of the existing building. The original use and purpose of the building must inform what its next chapter will look like. This includes an understanding of how the spaces relate to each other, and how they inform the detail of the design as well as the building fabric itself.

We analyse every unique challenge closely in order to establish a challenge hierarchy. Before embarking on a design, we need to have an idea of the order of importance that potential problems need to be dealt with. However, this is not to say there are no common themes in our process.

#### Meeting the challenges

The existing building will be part of the local area's character and identity, therefore when proposing a development on a historic site,

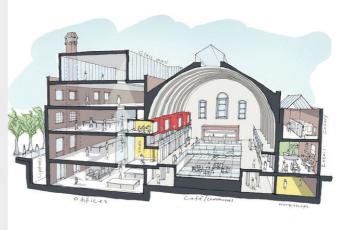
the views of those in the area are of paramount importance. Some may remember the building when it was first in use, while others revere its history.

With the adaption and re-use of historic buildings, you need to be very open to collaboration, perhaps more so than with new build. We engage the local area, council and community by working closely with heritage consultants, planners and members of the public, so they all get their voices heard.

In any given project there will be multiple stakeholders. The key to finding the right level of sensitivity is to understand exactly why the building is valued and prized. Winning the support of the locals is essential; therefore the proposal must befit its memory and worth.

Another obstacle we often face is how to upgrade an old building to meet the more rigorous aspects of current regulations, whether fire, safety, thermal efficiency or structural considerations. Occasionally it can be tricky to marry this with retaining the existing character. Heritage consultants are invaluable during the analysis stages, and their feedback on our proposals genuinely helps to avoid detracting from the original design.





#### **HAGGERSTON BATHS**

The goal of the project was to return the 1904 baths to its former glory, including restoring original elements like Edwardian steam boilers and ironwork arches



#### STYLUS

Originally a gramophone factory, the refurbishment of the building in London's Old Street gave it a "coherent identity" while upgrading spaces to provide contemporary flexible workspace for the 'Silicon Roundabout' area

#### **Haggerston Baths**

One of my favourite heritage projects of ours was Haggerston Baths in Hackney, originally designed by Alfred Cross as a public bathhouse and swimming pool. Opened in 1904 and unfortunately closed in 2000, it had been in use for nearly a century. Despite being derelict and disused when we began work on the proposal, local residents were enthusiastically engaged with the redevelopment of the council-owned landmark.

Our goal was to return this magnificent space to its former glory, while preserving its original character. The key elements of special interest, such as the Edwardian steam boilers and ironwork arches in the main pool hall, were to be restored while ensuring the space remained relevant to the patterns of use and interests of the community as it is today.

We proposed a positive community environment with an emphasis on spaces that could be used by everybody. Careful consideration was given to the physical interaction between spaces, remaining respectful to the key heritage elements. Yet the refurbishment simultaneously needed to retain a link with the community through providing spaces for a variety of activities; education, sport and art.

With a broad, inclusive approach, the building was to incorporate exhibition space, dance studios, a cafe, and children's workshops. We also proposed a sympathetic contemporary extension containing a mixture of office, retail and leisure space, while retaining the community focus. As with any intervention on a historic building, it was necessary to develop a language through which the new elements could interact with existing ones.

The main atrium and pool hall, with its technically impressive eight-bayed steel-arched roof, became the centrepiece of the internal landscape, crucial in retaining visual connections through the new and existing spaces. The swimming pool itself was repurposed as a sunken floor cafe area. The concept was a 24-hour building with the different spaces being used by a variety of people throughout the day.



It can be immensely rewarding to find the overall vision which draws on the history of a building, while reinventing and repurposing the architecture to create a new destination suited to meet the demands of today's society

#### Stylus. Old Street

As a constellation of different eras, any historic city such as London gives an architect much to work with. History needs to be used to enhance the character and, as well as being flexible, you need to make clear what is old and what is new.

One of our workspace refurbishments, Stylus in Old Street, was originally a Victorian gramophone factory. The brief centred on creating a coherent identity for the building, while upgrading it to provide the 'Silicon Roundabout' area with contemporary flexible workspace.

Allowing the existing building to fundamentally influence our design concept was crucial despite the fact that the only original element retained was the front facade. We alluded to the curious anachronisms of the 'steampunk' movement to mediate between the 19th and 21st centuries, creating a unique space that blends its industrial past with the surrounding tech city.

One of the features underscoring this approach is the bespoke reception desk, titled 'The Dream Machine.' Custom-made and designed with Mamou-Mani Architects, it consists of 3D-printed glowing flutes attached to a salvaged goods lift motor.

Such projects illustrate one of the most exciting aspects of being an architect. It can be immensely rewarding to find the overall vision which draws on the history of a building, while reinventing and repurposing the architecture to create a new destination suited to meet the demands of today's society. Sites will have idiosyncrasies, which sometimes pose challenges, however as we all know, restrictions spur our creativity.

Graeme Winestone is associate at gpad London

## Icynene makes a splash

High performance spray foam insulation from Icynene has been used in the restoration of an outdoor swimming pool at a Grade 2\* listed Georgian Country House in North Yorkshire.

The 15.0m x 5.0m concrete pool is at Brandsby Hall, an imposing Georgian Country House on the edge of the Howardian Hills north of York. Now in the process of major renovation and improvement, the owners wanted to restore the original 1930's outdoor swimming pool which had fallen into dis-use over the years.

When presented with the restoration project, Main Contractors, Paradigm Developments of York found the 1.5m deep concrete pool buried in the walled kitchen garden, filled with soil and bearing a healthy crop of rhubarb.

Rob Wood, Director of Paradigm explains: "We emptied the pool of tonnes of soil and debris and dug out around the external concrete walls intending to install rigid PIR [polyisocyanurate] insulation boarding, hard up against the outer faces. As it turned out, when the pool was built, no external formwork had been used so the wall faces were rough and uneven. this meant our idea was a non-starter".

For a solution, Paradigm turned to in Bradford based insulation specialist Home Foam Ltd who recommended the use of a spray foam insulation system from Icynene.

Kevin Wood of Home Foam takes up the story: "The external faces of the pool walls were too variable for PIR boarding so spray applied insulation was the obvious choice. We had the walls sand blasted and washed to create a clean and sound surface and applied



When the pool was built, no external formwork had been used so the wall faces were rough and uneven

a 100mm thick layer of high-performance closed cell insulation foam, sprayed directly on to the exposed concrete"

Home Foam used Icynene IcyFoam Select, a low environmental impact, closed cell spray foam which is applied using a pressurised gun system. The foam is applied as a two-component mixture that comes together at the tip of a gun forming a foam that expands within seconds of application, filling all voids, gaps and difficult to reach spaces. The foam creates a moisture resistant envelope with outstanding levels of thermal efficiency, even under this challenging outdoor environment.

The searching nature of spray applied foam enables it to form a moisture and airtight seal around the complex network of heating and filtration components required to bring the pool up to modern standards. Something that would be virtually impossible to achieve using rigid board insulation.

Icynene describes IcyFoam Select as a low environmental impact foam system with a Global Warming Potential [GWP] of 2 and an Ozone Depletion Potential [ODP] of 0 [Zero]. They say these figures reflect a huge improvement in safety over traditional closed cell foams which were far more damaging to the environment and are now rapidly losing favour.

After installation, the excavation behind the walls was carefully backfilled with pea gravel to assist drainage and the pool deck professionally landscaped.

Rob Wood concluded: "We were really impressed with the speed of installation and how Icynene coped with the complex geometry and uneven surfaces. The whole job was completed in less than a day and it's a system we will definitely use again on other projects."

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Icynene insulation is applied as a two-component mixture that comes together at the tip of a gun forming a foam that expands within seconds of application



Icynene forms a moisture and airtight seal around the complex network of heating and filtration components and brings the pool up to modern standards



BUILDING PROJECTS

## KINGSTON ACADEMY LONDON

# Old school meets new school

A historic school in Kingston upon Thames has added a contemporary extension providing new functions on a constricted site. Jack Wooler speaks to Viola Maffessanti and Steve Westcott, associates at project architects astudio, on how they achieved this

he £15m Kingston Academy 'regeneration' and extension project has been completed – the astudiodesigned project intended to both enhance a historic building it also occupies, while expanding its function through new and flexible spaces.

Though contrasting with the 1880-build brick building (arranged around a quadrangle and formerly the Tiffin Girls School), the extension takes influence from its existing counterpart and the local vernacular. Its red and brick-hued external panels in particular are designed to reflect the surrounding buildings.

Besides its bright, patchwork panels that display a gradient from red to white, the most notable visual feature on the approach to the finished Academy's facade is the extensive glazing incorporated.

This provides a significant level of daylighting, and allows for long sight lines across the school, helping to illuminate and connect the flexible spaces the architects have created.

These were among the school's key goals – with astudio working closely with the client to ensure that these aims were delivered in what was a constricted site.

#### A viable project

Having worked in the area previously on schools in the Kingston and Richmond area, astudio successfully won a tender by developer Willmott Dixon, and began working with them and the client (the school and its trust) to make the project viable.

Steve Westcott, associate at astudio, says that when they joined the project,

"Willmott Dixon had got to a point where they couldn't make the numbers stack up – it was quite an odd site."

Viola Maffessanti, fellow associate at the practice, tells me that "approaching the existing building, the area felt quite abandoned – it was mainly car parking, and not particularly interesting.

One of the first challenges that the architects spotted here besides the financial issues was the size of the site, in relation to the client's goals.

As Steve puts it: "We were looking at 1,200 pupils on site, which presented constraints in terms of the space available – it felt a bit oppressive."

He continues: "There was also a public route through the school that people didn't like to use – we had to incorporate reviving this into the design as well."

Another of the main challenges presented to the architects at this stage was that the school would be active throughout the planned works.

Viola comments: "It was certainly a challenge to build it in relation to the existing structure, because in the end it had to be one school, but at the same time create opportunities for new activities that the previous space couldn't achieve."

"Really," she says however, "the main challenges were opportunities – and the opportunity presented to us was to create an educational hub."

#### An educational hub

The creation of the 'hub' was necessitated by access to the school being "quite demanding," and as such the creation of a



The extensive glazing provides a significant level of daylighting and allows for long sight lines





The finishes were specified to be quite similar throughout the corridors in the new and old elements, so there is less differentiation

STEM academy would, as Viola puts it, "pick up on the challenge of creating a school that could be contemporary in an older space, but matching the requirements of a modern school."

Steve adds that the STEM requirements were a key part of the brief, but that a lot of the associated functions would not have been suitable for the existing spaces: "That was why we came up with the diagram that surrounded the existing courtyard, adding an extension that – while in a tight footprint – could host bigger, flexible spaces around what would then be an internal courtyard between the old and new."

"We considered the courtyard as a symmetry axis," explains Viola, "and mirrored the existing building there to what became the new project."

The architects then designed a corridor here between the volumes, interconnecting the brick building at various points under a glazed roof to the new functionalities, including a sports hall, new classrooms, a 'STEM harbour' of four new laboratories, and a large atrium in the centre.

#### Interior design

Going inside, the now connected buildings consist largely of "simple and neutral colours," with most of the surfaces left exposed.

This simple colour palette was in part inspired by the school logo, with greens and blues across the interior intended to help communicate the school's identity.

The material palette also was used to help blend the two volumes. The finishes were specified to be quite similar throughout the corridors in the new and old elements, so that there is less differentiation between the two – the walls, floors and other elements recurring through these meeting points – as Steve puts it, "making the two parts feel like one."

According to Steve however, such finishes were not the priority for the architects, but instead "the quality of the spaces, in terms of the geometry and daylight rather than the finishes."

"Enough to create a great finish of course," he clarifies, "but we needed to spend the money wisely, and we thought there was more value in its function."

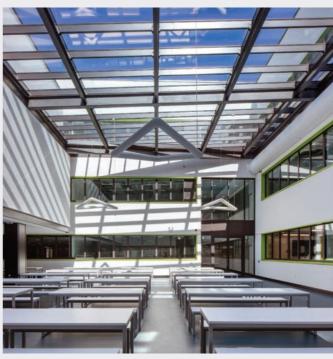
#### **Quality spaces**

With quality spaces being key, the architects focused not just on the visual aspects of this interconnection, but also the ways in which they could best maximise the available space.

The team created bigger group spaces that could be divided, for example, and designed break-out spaces off of corridors that double up as meeting or performance areas.

"That kind of sums up how we achieved the brief with the restrained budget," says Steve, "offering as much benefit as possible to the school as we could."





The central atrium was one particularly complex aspect of this flexibility, surrounded in glazing and allowing views into many of its surrounding classrooms.

This atrium was intended to combine three key functions – a library, a dining area and a science demonstration space – the architects "engaging heavily" with the school to achieve this.

#### Long conversations

Within these "long conversations," says Steve, the structural engineers were closely involved to ensure that the end result was achievable: "There are a number of components to the atrium – a 'floating box,' which houses the demonstration space, the bridges that link in, and there's the roof around it – that meant there were a lot of difficult connections for the team to get their heads around."

Viola agrees, adding: "it was probably the most complex space of the school structurally."

In the end, their goals were achieved. Steve believes this is in part due to the team starting out with a "very clear concept for the building," which was retained throughout, and the collaborative process with the school and the construction and design teams.

"We had to make sure the design was flexible, and could evolve with the process," he adds. "Conversation was key."

There were some constraints that

cropped up of course, including the designers "having to accept" a column to hold the atrium up from the ground floor.

"There was a really nice process with the end user to understand and try to meet their ideals as much as possible, but within the constraints," says Viola. "It's a very enthusiastic school, headteacher and school trust; they have a very strong ethos and drive."

While the design process was centred around making the building necessarily dense to incorporate the functions required, this also had to be done without obstructing the available natural light as much as possible – something the architects were very passionate about.

#### **Daylighting**

"Daylighting is of course one of the most important aspects of architecture in general," says Viola, explaining the building's glazing and its take-in of natural light, "especially for education."

As such, the architects designed as many opportunities for daylighting throughout the building as possible.

The central atrium is the outstanding example of this – the extensive glazing around it bringing daylighting not only into the space itself, but into the classrooms and labs facing it.

Other areas however proved more difficult to light, where there was no way to provide openings towards the natural

#### DAYLIGHTING

The architects designed as many opportunities for daylighting into the new extension as possible



#### CONTRASTS

The exterior of the extension was designed to contrast with the existing building but also play off its colours

you a feeling that you're connected to the surrounding area."

This feeling is emphasised by the nearly floor to ceiling glazing specified in the

light. In order to work with this, those

- are located in the dimmer areas, and functions such as teaching space located in

the brightest spots.

natural light - such as the changing rooms

According to Viola, "the glazing was also

an opportunity to have views that are both

benefits – and towards the outdoors, giving

towards the indoor area - providing a

visual connection as well as supervision

functions that don't require as much

classrooms – which reportedly has already had a "very positive impact" on the level of concentration and comfort of the students, as well as their teachers.

#### Collaborative technology

The project took a large degree of collaboration to achieve all of its various goals, the architects tell me, praising the structural engineers and M&E teams in particular for their contributions.

Steve believes that "collaborative technology" in particular was one of the most important factors in making this all possible.

He says: "We used a mixture of BIM and VR so that we could 'drop people into' the space, and communicate it quite succinctly to both the client and design team."

One example that Viola gives here is how the team managed to convey the reduction of the structure to "just four columns."

She says: "We introduced an important cantilever on the corner of the building as part of this, and it was really helpful to have CGIs made up to communicate how

this would look in reality."

According to Viola, the school were so impressed with the 3D demonstrations that they asked the architects to contribute to an event they'd organised for the children in their own and surrounding schools, as well as a 'women in architecture' event – asking the team to present the project to them and explain what architectural engineering is all about.

This was reportedly of particular benefit for the STEM-focused school, "fostering an education in that field to them," and demonstrating future technologies.

Another example of successful collaboration was with the subcontractors, as Steve explains: "The roof lights around the central zone were fairly complicated in terms of geometry and connections, but we were able to work with through the main contractor to display the detailed 3D model so that the sub contractors could get it on point – exactly how we wanted to have it."

#### **Evolution**

The architects then tell me of a tour they recently took of the school with its headteacher, saying that the feedback the received from everyone present was "outstanding."

The teachers were reportedly especially impressed with the quality of the spaces they now have, which are already improving on their day to day teaching life.

According to Viola and Steve, the community too has gained, not just in the school's main functions, but from the public pathway that has been widened, made safer and more accessible.

Both the architects agree that, as discussed, it was partly due to the strength of the original plans that this was able to be achieved, but also in ensuring that the plans not be so rigid as to constrict the scheme or its input from the various contributors.

"While you always set out with a brief at the start of a design process, it does evolve," says Steve. "It's a new school, a new trust – so the school is learning about their educational philosophy and their vision through the process, and the design had to adapt with it."

Viola adds: "It was definitely a learning process – on one side it has been difficult to meet these requirements, but on the other side we are more confident that what the school finally got is what they actually need."

She concludes: "At the end of the day, this is what architects are always trying to achieve."

#### **PROJECT FACTFILE**

**Client:** Kingston Academy / Kingston Educational Trust

**Architect:** astudio **Project cost:** £15m

Structural engineer: Elliot Wood Environmental / M&E engineer:

Anderson Green

**Acoustic engineer:** MACH Acoustics **Landscape architect:** Colour-UDL

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# Getting the balance right

Tracy Pomfret of George Barnsdale & Sons talks through the benefits of customisation in timber windows, when trying to strike the balance between designers' vision and planning departments' requirements in heritage projects



The best manufacturers will have built and programmed their systems in such a way that customisation is possible and most requirements can be met



Invironmental concerns among architects have seen timber windows and doors become an increasingly popular choice. In the case of heritage and historic properties, 'like for like' replacement is very often specified. In such cases, the need to balance the architect's vision for a project with the demands of the planning and conservation officer and the current Building Regulations has never been easy.

Manufacturers have tried to develop their manufacturing processes to deliver a standard product range that can be easily performance tested and replicated in a far more cost-effective way than those made the old, labour intensive way – by hand.

Traditionally, a bespoke joinery company would make you anything you wanted in any shape and size. That was before tested thermal performance data, PAS24 and acoustics entered the arena. Unfortunately, those days are gone.

Today, if a developer wishes to convert a Grade II listed building into luxury apartments in the heart of Westminster, they are likely to be told they must retain the original facade, repair the timber windows or replace with like for like. They are also expected to ensure that whatever changes internally, the exterior of the building must retain its original aesthetic. Since the developer will want to sell the apartments at a high price to discerning clients, they are likely to have also asked the architect to ensure the windows incorporate the highest possible thermal and acoustic performance. For manufacturers, this is a real challenge.

Most of the leading timber window companies have set up their systems to be fairly standardised, which often means there is little room for customisation. Architects often find themselves being asked to compromise on the vision they have been working up for the last two or three years.

The best manufacturers will have built and programmed their systems in such a way that customisation is possible and most requirements can be met. For example, a

large sliding sash window can be made to accommodate 25 mm single glazed acoustic glass, and adorned with replica sash horns. The data is already in the system to show it will deliver the required security, weather performance and acoustic requirements despite it being a bespoke product.

Sometimes a compromise will still need to be made. Single acoustic glazing is never going to offer the same thermal performance as a double-glazed unit, for example. This can lead to discussions between planning and Building Control; and as we know, planning usually wins this one.

In terms of sustainability, while manufacturers use FSC certified timber, many still find themselves with a lot of waste since their systems and processes haven't been optimised to reduce it. A few companies are geared up to use multiple section sizes, meaning they have far less waste as well as being able to offer the customer many more design options and profiles. This means that customisation is possible without compromising on efficiency, enabling more competitive pricing.

For companies are not currently able to offer high levels of customisation, it is possible to do the development work and invest in the external testing, but there is no guarantee the window will pass, and then it's back to the drawing board. This can really slow down the process and is a risk for the project management team.

Some projects require variation in glazing by facade, such as acoustic performance, different interfaces and varying levels of security. This makes customisation even more challenging for manufacturers used to making a standard tested product.

When it comes to commercial fenestration, there is only one thing that can be guaranteed – balancing ever changing Regs, planning restrictions and aesthetic requirements isn't going to get any easier!

Tracy Pomfret is marketing manager at George Barnsdale & Sons

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# Bring on the heritage Code of Practice

Michael Hallé of Welsh Slate discusses the challenges around re-roofing heritage buildings, and why Historic England's Code of Practice is sorely needed

To most of us in the roofing industry, heritage roofs are an interesting diversion from the run-of-the-mill roofs we come across. But coupled with the challenge and prestige of working on heritage roofs comes the fact there is often no precedent or British Standard regulation to guide the specifier or for them to comply with. This is because in the former case they have not been re-roofed before, and in the latter, because the current British Standard does not cover heritage roofs specifically.

BS 5534 gives recommendations primarily intended for the design, performance and installation of new-build pitched roofs, with the heritage get-out clause: "The recommendations contained in this British Standard might not be appropriate for the re-slating or re-tiling of some old roofs, particularly where traditional and/or reclaimed materials are used."

It is quite rightly used by the industry as the best practice for quality roofing, but like most industry standards the technical aspects prompt discussion – heritage roofs were constructed based on learned experience of very local conditions whereas British Standards are a generalised standard taking into account national conditions and practices. So it is reassuring to hear that Historic England is making headway on a Code of Practice for heritage roofing.

Chris Wood, senior architectural conservator for Historic England's Building Conservation and Geospatial Survey, said: "Before we can produce the Code of Practice we need to finish the technical guidance needed to support it. We are near to finishing Parts 1 and 2, which we will be sending out for review in the next month or so.

"The proposed Code of Practice will take a few months as there is likely to be quite a lot of consultation and review."



Vernacular roofing consultant Terry Hughes, who will produce the first draft, said: "This advice is needed because the trend to standardisation since the 1940s when CP142 was written, and as exemplified by British Standards, is that roofing has become just that: everything is standard; the same wherever you are, particularly for metamorphic slates.

"And what has been lost is the variety of roofscapes which were a response to the local materials. The knowledge of how they were slated has often been lost as well. There is a need for these old roofs to be carefully looked at and understood before they are repaired or re-slated. All too often the roof is stripped without doing this, and then replaced with what is incorrectly thought to be the detailing, or a so-called improvement."

Historic England's use of the term 'Code of Practice' is telling and rightly so, as it would seem there cannot be a "standard" for heritage roofs as they are rarely, if ever, standard. This myriad of variations, even within local areas, is the main reason

When it does come to replacing a heritage roof, steps should always be taken to carefully record the way it has been set out

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this has not been pursued with any seriousness before.

Each heritage roof is individual, or has components that are. They tend to be covered with local material because vernacular roofing was often carried out with local fissile stones, particularly slate as it was the most naturally available and relatively easily worked or produced.

The type and method of covering roofs from pre-Roman occupation to 1919 changed significantly due to available materials, transportation, mechanisation, tools and experience. Heritage roofers have relied on learning processes and details that have been passed on, as they will be able to do through the new Code of Practice.

In addition, sourcing the replacement new material can be a big issue, particularly in the case of stone roofs that were often produced from local quarries that are no longer operational. However, good-quality second-hand material from the local area may well be an alternative that is viable, and heritage guidelines from some local authorities and national parks, for example, can help clarify traditional local roof details.

The most common type of heritage roof

we get called in to advise on tends to be large-format slates with random widths and diminishing lengths. These types of roofs are often known as Rag Slate, London Rag or Queen Rag and the largest slates will often be 40 inches long. These can still be produced, but the material needed for such large slates is not always as readily available due to the limitations of a naturally formed rock. In cases like these, as much warning as possible is always helpful to a manufacturer.

When it does come to replacing a heritage roof, steps should always be taken to carefully record the way it has been set out. Photographs taken perpendicular to the slates with a scale are useful for checking details later. Details such as valleys, hips and abutments are important because often these will have been slated to work with particular sizes of slates.

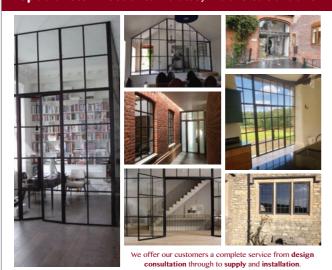
Until Historic England's Code of Practice is published, specifiers and clients can turn to the most comprehensive recent book – the English Heritage Practical Building Conservation volume, Roofing (2013).

Michael Hallé is commercial director for Welsh Slate



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# Glazing systems that work

Michael Metcalfe of Pilkington UK explains how modern structural glazing systems can help bring historic buildings into the 21st century

eritage buildings often define the UK's towns and cities. As historical icons, it is our job to protect and preserve them or, better still, integrate them into the modern built environment.

Yet, how to do this is often the cause of major headaches for architects, designers and developers. Though our iconic heritage buildings may have weathered the storm of development across the ages – and actual storms – the job of rejuvenating them is a tough one.

Councils and authorities place a huge emphasis on heritage buildings being preserved as close to their original state as possible. However, making them fit for modern use often requires at least a small level of modernisation.

#### Spacious, usable and well-lit

While heritage buildings are often fascinating and extremely beautiful structures, they can have severe limitations when it comes to achieving benefits that come as standard in many modern buildings. These include areas such as level access, natural interior light, energy efficiency – as well as just a simple lack of useful floor-space.

People's expectations for the buildings they occupy – and the amenities that are required – have changed drastically over the past 50 years or so. Whether it's modern kitchen or bathroom facilities, family spaces, AV installations, or any other facilities commonly found in modern buildings, it's often impossible to fit it all within the envelope of a heritage building.

For that reason, it's often necessary to extend or add to older buildings if they are to truly compete with a new, custom-built alternative. Doing this sensitively, in a way that preserves the character of the original architecture can be a significant challenge, and this is where structural glazing can be used to create elegant solutions.

#### Minimal intervention

The frameless, self-supporting nature of many of these systems is perfect for making additions to heritage buildings without

burdening the original structure. The crisp aesthetic lines also beautifully complement most heritage spaces.

Whether you plan to enclose a previously outdoor space or link a new space to an existing one, frameless glazing allows this to be done with minimal aesthetic impact on the existing architecture.

This is especially important for heritage buildings, where significant restraints are placed on materials and how they are to be used to improve the existing structure.

#### Preserving essential character

Tulsa Central Library in Oklahoma had a similar issue: they wanted to expand the indoor space available to readers in the 1960s-built modernist building without fundamentally altering its muchloved appearance.

This was achieved by creating structurally glazed 'boxes' – nicknamed the 'Jewel Boxes' – which provide modern and spacious areas flooded with natural light but with a minimal impact on the appearance of the facade.

#### Breathing new life

The best structural glazing systems are not only beautiful and elegant, they are also a strong and robust option when working to protect heritage buildings. The 230-year-old Attingham Park Country House has a unique glass and cast-iron roof – designed by renowned Regency architect John Nash – sitting above the picture gallery.

In order to protect the roof against the elements for years to come, frameless glazed units were installed above the historic roof as a protective layer which would also ensure the natural light continued to flow through. Now both the gallery and the historic roof shine.

The glazing, which is supported by slim steel trusses and held in place by the Pilkington Planar system of stainless-steel fittings, bridges the gap between old and new – much like the system itself.

Michael Metcalfe is commercial sales manager at Pilkington UK





The best structural glazing systems are not only beautiful and elegant, they are also a strong and robust option when working to protect heritage buildings



## **Retail Therapy – Decorative casing solutions for retail**

Decorative casings solutions, such as column casings and wall linings, are a fundamental part of contemporary retail design. In addition to providing a practical method of concealing interior and exterior structural steelwork they also add to a building's aesthetics, style and shopping experience.

his combination of practicality, versatility and decorative design has been at the centre of the wide range of retail projects that have been undertaken by Peterborough based casing solutions specialist, Encasement Ltd.

For almost 15 years, the company has been manufacturing and supplying column casing and wall lining solutions to a diverse range of retailers covering the grocery sector, homewares, clothing, furniture stores, restaurants and automotive dealerships

As Encasement's range provides architects, specifiers and designers with a wide choice of materials and finishes to choose from, as well as bespoke shapes and dimensions, it's unsurprising that its products are used by many well known brands, including Debenhams, Porsche, Kia Motors, Tesco, ASDA, Oak Furnitureland and Greggs, as well as major retail parks and shopping centres across the UK.

Encasement's column casings range includes 'Circa' and 'Quadra', which are manufactured from pre-formed plywood, together with the metal 'Forma' range, 'Polyma' and 'Gypra' casings, which are moulded respectively from glass reinforced plastic (GRP) and glass reinforced gypsum (GRG).

In addition, the 'Metza' range is a specialised solution that provides up to 2





hours fire protection. Originally designed for mezzanine support columns, Metza is also used in food retail fitted with corner protectors to resist scuffing and damage caused by shopping trolleys.

While every Encasement column casings is suitable for interior use, its 'Polyma' and 'Forma' ranges are also widely used for exterior retail projects, due to their inherent weather resistance and durability.

Available in aluminium or stainless steel, 'Forma' casings offer a diverse range of options and can be specified as circles with diameters from 250mm up to 1000mm and in square, rectangular or hexagonal forms, as well as unique custom profiles. The choice of finishes is also very wide and in addition to PPC coating options in any RAL colour, various brushed, anodised, embossed and textured finishes are also available, including Rimex.

Strength, durability and colour choice are also features of the 'Polyma' GRP range. This manufacturing process allows a high degree of design flexibility with shape; size and colour options all open to specification to meet bespoke project requirements, as well as standard profile options.

The versatility of 'Forma' and 'Polyma' makes them a common choice for retail projects and the high degree of freedom they offer enables major brands to specify colours that not only adhere to their brand guidelines, but also add to the customer experience.

However, where casings are needed for

interior use only, the company's 'Circa' and 'Quadra' casings allow circular, square and rectangular profiles to be specified while also providing a wide range of finish options with the most popular being decorative laminated finishes. In addition to resisting damage, scuffs and scratches, they also provide the specifier with a diverse palette of finishes including plain colours, wood grains and metallics, as well as textured and real wood veneers.

Alongside the company's column casings, its 'Vecta' system provides a high quality solution for interior wall linings, bulkheads and reveals and is widely used in supermarkets, automotive retail, restaurant and food brands including Tesco, Prêt a Manger, Mini and Greggs.

Encasement's Managing Director, Martin Taylor, explained: "By offering six different column casing ranges and the 'Vecta' decorative wall linings system, specifiers are able to source a range of specialised interior finish products from a single company, supported by high levels of experience in this sector."

He added: "Column casings provide a perfect mix of practicality and aesthetics and we've taken a lot of care to ensure our range meets both of these key criteria. We also have our own contracting arm, which enables us to offer a full supply and install service to support contractors"

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# Five things you didn't know about underfloor air conditioning

## 1. It increases your floor to ceiling heights in Refurbishments

Underfloor air conditioning systems make use of the space beneath a raised access floor for the distribution of air. This eliminates the need for most of ducting and pipework used for traditional, ceiling-based air conditioning systems, and leads to an average usable space saving of 15 per cent.

## 2. It minimises waste and boosts energy efficiency

Not only does underfloor air conditioning offer significant savings on construction materials, installation costs, fit out and reconfiguration costs, the system's modular and flexible design also minimises waste and energy consumption. As there is no ductwork required, underfloor systems operate at very low pressure encouraging energy efficiency. Underfloor systems can offer up to 30 per cent savings in energy costs and a 29 per cent reduction in CO<sub>2</sub> emissions when compared to

ceiling systems.

#### 3. It's completely modular and flexible

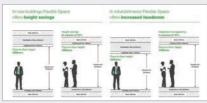
Underfloor air conditioning systems are inherently flexible and modular in design. Equipment is installed at floor level, making it easy to install, maintain and re-arrange to suit the demands of today's agile workspace. The 'fantiles' can easily be relocated within the raised floor, offering huge savings compared to ceiling-based systems when reconfiguring and adapting workspaces.

## 4. You get more consistent cooling than with downflow ceiling systems

Contrary to what you might think, underfloor air conditioning actually offers superior temperature control. Traditional ceiling air conditioning systems are often the cause of office arguments, because they are either too hot, or too cold, or cause a draught.

Underfloor solutions create minimal draughts and allow for individual control of temperature





and fan speeds.

### 5. It reduces the total height of New Builds

By utilising the existing raised access floor, underfloor air conditioning systems can actually reduce the total height of new build properties by up to 10 per cent. This saving can be so considerable that it has allowed some buildings to add an additional floor to the original design.

So, if you are looking for ways to boost the energy efficiency, flexibility, and open up space on your next project, why not consider an underfloor air conditioning system.

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#### Sauter Automation appoints Chris Reid as new UK MD



Sauter Automation Limited (SAL) has appointed Chris Reid UK managing director, taking over from Mark Clinch, who has been appointed VP, Head of Sales and Marketing for the Sauter Group. Reid, said; "It is a great time to join the Sauter 'Family' with Modulo 6 and the Smart Actuator range both coming to the UK this year. These are innovative products which will see us take a big step ahead in the building automation market." "We are delighted that Chris has joined and believe that his energy and experience will be key to our continuing growth. In addition, his extensive FM experience will allow him to contribute to the ambitious growth plans of Wren Environmental (SAL's Technical FM business)," said Clinch. Chris has over 20 years' experience of work on energy management solutions and field based engineering services delivery. His previous role was Head of Sustainability Operations for Mitie Energy's UK business. Mark has over 25 years' service with Sauter. In his new position, he takes responsibility for Sauter's subsidiary businesses across key European region alongside support for these functions in the Middle East, Asia Pacific, Africa and the US.

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#### Longfloor have launched game-changer



Longfloor has launched a game-changing development for the construction industry, a revolutionary approach in the way liquid cement screeds are applied, a

global first which will fundamentally enhance the way liquid cement screeds are used.

Darren Williams, Longfloor General Manager said: "The screed industry has witnessed a sea change in favour of cement-based liquid screeds but for many years has attempted to develop one which flows well, dries quickly and is as easy to install as possible. We are very excited to announce an industry first. The future is grey!"

01629 540 284 www.longfloor.co.uk

#### FAAC UK is pleased to announce growth



FAAC UK is pleased to announce its growth and opening of a business unit specifically focused on access control. John Mortin (Dip.GAI Reg.AI M Inst.AI Dip.FD) has joined the team and is promoting the new Magnetic Business Unit which adds pedestrian barriers and turnstiles to the already solid range of barriers and other

automated access products that specialise in energy saving qualities (Safe and Green Tech) provided by the FAAC Group. John states: "I am looking forward to continuing this role with FAAC UK Ltd with their fantastic range of products within the Magnetic Business Unit".

john.mortin@faac.co.uk www.faac.co.uk

# SIMONSWERK UK Announce the **Opening of a New London Showroom**

14-16 JULY 2020

IMONSWERK UK Ltd are delighted to announce the opening of a London showroom at 45 Great Sutton Street in the heart of Clerkenwell. Conveniently located right in the heart of London's design district.

The UK is a key market for the SIMONSWERK Group with London being known for its trendsetting community of architects and designers who work on global projects.

The new London showroom has been created to provide our customers, architects, and designers with the opportunity to experience our products first-hand. The goal is to showcase our products and inspire and share our expertise, as well as to offer a meeting place to discuss projects, product demonstrations and CPD presentations. Ideally located just a short walk from Farringdon tube station. The showroom is nestled in the heart of a thriving design community near trendy restaurants and bars.



SIMONSWERK share the showroom with Wilkhahn a leading German manufacturer of office furniture. The showroom is split over two levels where the entire TECTUS Concealed hinge system and the TRITECH solid brass product range will be available to see.

The showroom will be launched in time for

the Clerkenwell Design week, the UK's leading design festival from 14th to 16th July 2020. Visitors to the showroom will be able to see all the latest developments in hinge technology.

0121 522 2848 www.simonswerk.co.uk

# **Knauf AMF** is the place to find Armstrong metal products in the UK and Ireland

e are excited and proud to let you know that Knauf AMF is now the place to find ARMSTRONG Metal Ceilings, Metal Mesh Ceilings, Metal Canopies and Metal Baffles in the UK and Ireland.

This iconic, superbly engineered portfolio of products is available in the UK exclusively from Knauf AMF for new and existing projects. Metal is versatile, durable, almost maintenance free and really packs a visual punch. It also works really well with our other ranges, including HERADESIGN and mineral tiles. We see it as a natural progression in our aim to offer the most innovative and comprehensive range of

aesthetically-led, acoustic ceiling and wall solutions for any interior.

"Until now our presence in metal ceilings has been modest. The addition of Armstrong's metal portfolio will enable us to grow in this exciting area. Customers will experience the specification expertise and project support they expect, but with the added integration and convenience of a single-stop solution provider. Knauf AMF with Armstrong metal promises to be a gamechanger." Peter Symons, UK Commercial Director Knauf AMF.



It is business as usual for those looking to specify from the Armstrong metal portfolio. For more information or to discuss a new or on-going project, please contact the team by phone or visit the website.

0191 518 8600 portfolio.knaufamf.com



# Five Tonnes of Plastic Saved from Landfill in 2019 by Award-Winning Recycling Service



n innovative and unique recycling service set up by Newton Waterproofing has saved 5.174 tonnes of plastic from going to landfill in 2019.

The UK's leading independent designers and suppliers of guaranteed waterproofing and damp proofing systems had 223 bags of HDPE membrane returned to them throughout the course of the year as part of the scheme.

By recycling waste plastic into new products instead of manufacturing from new HDPE, during 2019 alone Newton have prevented 5.944 tonnes of CO2e emissions from being released into the atmosphere; the equivalent of burning 1.96 metric tonnes of petrol and saving enough energy to make 826,200 mugs of tea.

Furthermore, since the scheme's launch in 2017 it has successfully prevented over 13.7 tonnes of plastic from going to landfill, equivalent to preventing 15.746 tonnes of CO2 from entering the atmosphere.

It's no surprise, then, that the service has won six awards in just over two years, including the 'Charles Darwin Award' from the British and Irish Trading Alliance (BITA); the 'Commitment to the Environment Award' at the Kent Excellence in Business Awards (KEiBA); the prestigious 'Innovation of the Year' award from the National Building Awards; and the 'Sustainability' award at the Property Care Association Best Practice Awards.

Newton Waterproofing's Managing Director Warren Muschialli said: "Our innovative recycling service had another tremendous year in 2019 and, as well as the environmental benefits, we also saved 223m³ of skip space on site, equivalent to more than 24 full skips and therefore 50 skip journeys. This obviously delivers further emission and cost savings."

The closed-loop scheme works in collaboration with the company's Newton Specialist Basement Contractors (NSBC) who collect waste off-cuts of plastic membrane on their projects.

The waste is then collected by Newton at the same time as making deliveries of new materials, therefore preventing additional emissions from transporting the plastic.

Finally, the material is chipped into small granules by Newton, then collected by a national recycler for reprocessing and reusing to make new products for the construction industry.



"We are proud to operate what is the only recycling service in the waterproofing industry," added Warren.

"With the Government setting a target of net-zero carbon emissions by 2050, it presents the construction industry with a wonderful opportunity to make a difference."

Newton Waterproofing design and supply guaranteed waterproofing and damp proofing systems for all structures, from large-scale commercial developments to new build and existing domestic properties.

01732 360 095 info@newtonwaterproofing.co.uk

# New venture Belvedere Stone joins forces with BAL

aunched in February, Belvedere Stone is part of the Lovell Stone Group, a family-owned company who own and operate 5 quarries in the UK. The company has taken its significant knowledge and technical expertise and applied that to source stones from around the world.

Belvedere Stone offers a collection of excellent quality, hard-wearing and versatile stone products. Stones are sourced from historical areas around the world from the Tuscany region of Italy, to the mountains of North Western Vietnam. Each stone takes its name from the surrounding cultural landscape – from the Taishan Mountains of Southern China, to the ancient Egyptian palace complex of Malkata.

Belvedere has partnered with BAL – the market leaders in the UK for full tiling solutions – who offer high quality fixing materials; adhesives, grouts, sealants etc, plus industry-leading technical support, RIBA-approved CPD seminars, NBS specifications

and on-site project consultancy.

Using their experience in the specification sector, Belvedere compiled a shortlist of the best adhesive manufactures operating in the UK. They interviewed and scored each company on quality, technical competence and warranty to find the most professional company, with research providing a clear winner in BAL.

On the partnership with BAL, Simon Willmott, Technical Sales Manager at Lovell Stone Group said: "Belvedere Stone's world leading expertise in stone is matched by BAL's world leading expertise in adhesives, allowing us to provide complete and robust NBS fixing specifications for Architects and contractors.

"Being able to provide one specification for complete installation eliminates any incompatibility between products, and by being involved in projects at the design and specification stage, we offer warrantied systems alongside reduced build ups, reduced build programmes and reduced budgets."





Allan Garland, Specification Manager at BAL said: "We are delighted to have entered into this partnership with Belvedere Stone to provide a one-stop solution for their natural stone tiling products."

To find out more about Belvedere Stone and their range of stone products visit www.belvederestone.com

01782 591100 www.bal-adhesives.com



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# Houses of Parliament perfectly protected thanks to Newton Waterproofing

ne of London's oldest and most historic buildings has been given the very best protection by Newton Waterproofing.

The leading independent supplier of structural waterproofing systems, which celebrated 170 years in the industry last year, provided the perfect waterproofing solution for the Houses of Parliament.

In fact, Newton's 170-year history, which is older than the current Palace of Westminster structure, is tied in with the Houses of Parliament, having provided materials and contractors on both damp proofing and waterproofing projects on the building on several occasions in its history.

When the original John Newton set up the company in 1848, one of his first major projects was supplying the plasterers' hair for the Palace of Westminster, which was still being rebuilt after burning down in 1934.

For the most recent project, Newton's Specialist Basement Contractor MacLennan Waterproofing was approached to specify a guaranteed waterproofing solution for prestigious London landmark's new basement.

MacLennan decided to bring the job to Newton as the project required the design



and installation of an external waterproofing system, an internal cavity drain system and a polyurea roofing system - and Newton's product range was perfectly suited to the project requirements.

Externally, Newton's innovative 'Type A' 403 HydroBond membrane was applied extensively to ensure the necessary waterproofing around the basement.

Internally, Newton 508 and 520 membranes were both applied floor-to-ceiling as part of Newton's complete System 500 cavity drainage solution.

With the finished solution in place, the waterproofing was completed by the application of both a polyurea coating and further drainage membrane to the roof deck of the basement.

The result is a waterproof basement fully compliant with the requirements of BS 8102:2009, coupled with guaranteed protection against water ingress.

Newton Waterproofing's MD Warren Muschialli explained: "With many historic and listed buildings not benefiting from modern forms of protection, they are often subject to the detrimental effects of damp which must be treated with products that meet with the stringent Listed Building Requirements.

"For historic and listed buildings, cavity drainage systems are ideally suited for this application. When installed by qualified contractors, the systems depressurise and collect water that enters the structure, before removing it safely.

"Internal finishes are isolated from the water, leaving a dry and habitable space for the occupier even in the most demanding situations."

The Houses of Parliament is yet another project that shows the utilisation of multiple Newton Systems to great effect.

And Warren added: "We have a rich history with the Palace of Westminster and both Newton and MacLennan were privileged to be the companies chosen to share in securing its future." 01732 360 095 info@newtonwaterproofing.co.uk



# Leadax sets the example for making the circular economy work for cities

lobal circular economy leader and CEO of Leadax, Roeland van Delden presented his closed-loop strategy that is already impacting cities worldwide, during the Futurebuild exhibition in London. Sustainable companies like Leadax, are developing circular products that use waste as a raw material to create and produce recyclable and sustainable waterproofing building materials.

Features such as cost price, quality, capital and scalability are important to change the way our economy works, however as Mr van Delden described in his presentation, it is all about mindset and being creative. " Just do it" was the main advice he gave. His idea of modifying PVB-waste to reuse for circular building materials like Leadax was a bold move, but it works extremely well. PVB is the foil that is used in laminated glass (e.g car windows or safety glass). Large amounts of polyvinyl butyral (PVB) waste are being buried every year, up to 1,500,000,000 kilos each year in Europe alone and Leadax is using this waste to create their sustainable building materials.

#### **Designed for reuse**

Current products for waterproofing buildings aren't sustainable, have a large carbon footprint and are (often) toxic. To be aligned with the UN sustainability goals to create a sustainable environment there had to be a solution. Part of this solution is not only using waste as a raw material, but 'closing the loop,' which is why all Leadax products have been designed with reuse in mind.



#### The new lead

The first innovative product from Leadax is an alternative solution for the toxic and often stolen heavy metal lead which is still being used in construction as a flashing material. This Leadax product is already being sold in 15 countries globally and contributes to the environmental well-being of our society. Daniel Marshall, Sales Director of Cromar Building Products commented: "We are proud to be part of this exciting journey to contribute to a more sustainable and safer building environment as the exclusive distributor for the UK."

#### Making an impact

Large scale reduction of CO2, increasing

autonomy of resources and technology, decreasing large amounts of waste, creating new jobs in the cleantech and developing sustainable solutions for toxic materials like lead, are all achievable. Working together at a multi-level cooperation of international stakeholders with the right mentality can make a real impact.

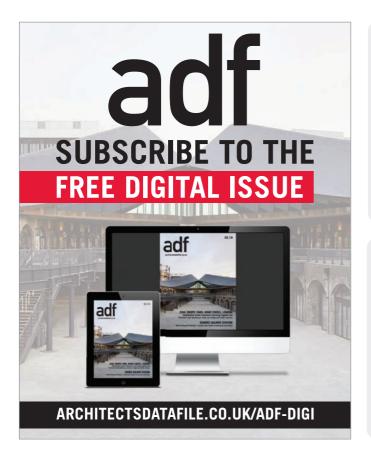
Mr van Delden concluded that he is excited about Leadax vision for the future and the role it will play in developing a global circular economy.

To find out more about Leadax products visit the dedicated website www.leadax.co.uk

01977 663 133 www.cromar.uk.com







#### Saniflo brand identity evolves



Saniflo, a leading designer and manufacturer of macerators and pumps, is updating its brand identity to align with parent company SFA. As well as refining the font and tweaking the colour of the Saniflo name itself, two

teardrop shapes have been added to reflect the movement of water and the SFA Group branding has been added to the overall logo. The result is a modern, sleek logo that retains the pedigree of the Saniflo name. It is currently being implemented across all promotional resources and has gone live on the website with immediate effect.

020 8842 0033 www.saniflo.co.uk

#### **Protech VOC Flex awarded BBA Certification**



The A. Proctor Group is delighted to announce that its' Protech VOC Flex high performance membrane has been awarded a BBA Agrément Certificate. Following extensive research and development, Protech VOC Flex was introduced as a high performance VOC membrane, part of the Group's comprehensive range of ground gas protection products.

Protech VOC Flex is a six-layer flexible proprietary reinforced VOC gas barrier suitable for use on brownfield sites that require protection from dangerous contaminants such as hydrocarbons.

01250 872261 www.proctorgroup.com



Goldsmith Street wins RIBA Stirling Prize

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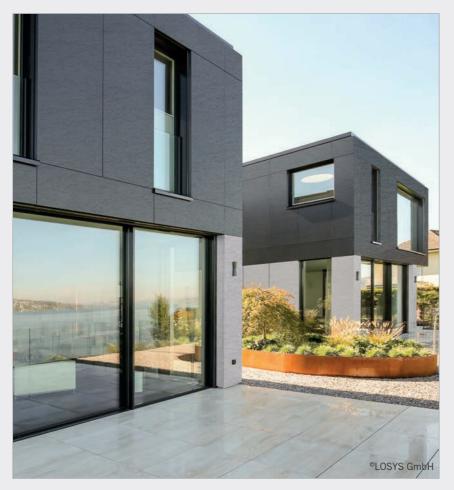








# **ALUCOBOND®** rocca — The Rugged Look of Stone — New Surface Series Launched







A LUCOBOND® rocca from 3A Composites GmbH, is a new range of four surface designs which takes its inspiration from the rugged stone formations and features that have shaped the natural world for millennia.

Rocca, from ALUCOBOND®, is stripped of all colour, with its unique visual character revealed only by light refraction on its surface to present an almost raw primal beauty that is in tune with the natural landscape.

Four shades are available within the rocca range; the soft jet black of 'Graphite', the rugged terrain of 'Dolomite' anthracite, the weathered iron-grey of a 'Meteorite', the crisp silver-white of 'Quartzite' and all finishes feature a perceptibly textured structure where light is broken up naturally into the widest range of shades. Uniquely, the surfaces seamlessly shift between defined and vibrant or softer and subtle, depending on the viewing angle or how light falls on to it – not unlike that of natural stone.

ALUCOBOND® rocca is ideal for all building facade applications or can be used to give individual character and aesthetic to structures such as balconies or entrance areas, where architects seek that enigmatic natural stone look.

Like all ALUCOBOND® composite panels, rocca is both durable and long-lasting being resistant to weathering, erosion or corrosion for a look that will endure the lifetime of the building.

info@alucobond.com www.alucobond.com



# Galvanizing the sustainable finish

alvanizing has long been recognised as the most sustainable finishing process available, and with the ever-evolving emergence of new technologies, it is increasingly becoming even more-environmentally friendly.

Steel is a vital raw material in many industries across the world, but as a metal, it is highly prone to corrosion. In fact, it's estimated that worldwide, one tonne of steel turns to rust every 90 seconds, which means that for every two tonnes of new steel



produced, one is made simply to rust.

Galvanizing protects steel from corrosion by coating the metal with zinc to prevent it from rusting. Clean steel components are dipped into molten zinc at temperatures of up to 450°C, where a series of zinc-iron alloy layers are formed by a metallurgical reaction between the iron and the zinc. Unlike other finishes, the process of galvanizing results in minimal waste, as any zinc that doesn't instantly form a coating on the metal remains in the galvanizing bath and is subsequently re-used.

A further benefit of galvanizing is its low whole-life cost. The process only needs to be carried out once, and will result in corrosion protection that can last up to 70 years without the need for any time or resource-intensive maintenance or replacement, thus improving economies of scale and savings in energy. Galvanized products, once constructed or installed, can also be removed, re-galvanized and re-used, as well as being easily recycled with steel scrap in the steel production process.

Ongoing Development continues to



achieve more sustainability. One such method is the re-use of 'waste' heat from furnaces involved in the galvanizing process, via a system of ducting it through heat exchanger units, which provides heat for both degrease and pre-flux tanks. Low flume fluxes have also been developed which ensure that emission limits are achieved with minimum use of energy-consuming abatement equipment.

With its sustainable qualities, long life-span and cost-efficient whole-life savings, hot dip galvanizing can clearly be considered one of the most environmentally-friendly finishing processes available.

01902 601944 www.wedge-galv.co.uk

# Comar launch ECO LT window & door systems

omar profiles have thicker walls providing extra strength and durability for the British market, ensuring that Comar performs. Designed specifically for the British Market and offering a truly British engineered solution.

Comar ECO LT sightlines have been minimised whilst not sacrificing product performance.

With low U-values, energy ratings of A++ and Document Q compliance with Secured by Design status this is a feature rich system which guarantees a quality installation.

Comar ECO LT is a lightweight version of the ECO range, but the aluminium profiles wall thickness has not been sacrificed, ensuring guaranteed long-term performance. Due to Comar's robust British design the size and weight limitations surpass the competition on a size by size basis.

#### 5P.I ECO LT - Aluminium Window System

Comar 5P.i ECO LT Aluminium Casement Window System has both internally and externally glazed options. With the resurgence of slim aluminium high security externally beaded with sloped beads minimises the sight lines and maximises daylight. The square chamfered profiles are a distinctive feature of this system, keeping the square look of a truly aluminium solution.

For Ovolo feature the ECO range seamlessly suites in: No matter the situation Comar 5P.i ECO LT delivers.

#### 7P.i ECO LT - Aluminium Door System

Comar 7P.i ECO LT Aluminium Door System has both inward and outward opening options in single or double door combinations. There are two thresholds available high weather performance and low-rise for seamless balcony terrace integration. Comar 7P.i ECO LT door has been designed to provide high performance solutions for today's specification demands. Utilising Comar's trademark P.i. (Polyamide Insulation) thermal break technology, it delivers superior thermal performance with an aesthetic edge.

Aesthetics come from its slim 55mm profiles, seamlessly integrating with the Comar 5P.i ECO LT casement window system. Comar



7P.i ECO LT has been tested to BS 6375 which ensures the door performs well against the rigours of the British weather, reducing draughts and providing excellent weather proofing.

Security concerns are alleviated with the Comar 7P.i ECO LT door exceeding the requirements of PAS 24:2016.

For further information, please email projects@parksidegroup.co.uk

020 8685 9685 www.comar-alu.co.uk

#### **Stunning FINish from Metalline**



Metalline has produced a range of bespoke 3D twisted fins that will when complete take centre stage on the exterior of the redeveloped Minories Hotel in the City of London. Fabricated offsite at Metalline's state of the art manufacturing facility in Cannock, these 42 metre height fins were produced in 3.5 metre lengths with a depth of over 800mm. Manufactured in two parts, each

element was assembled using a combination of aluminium stud welding and bonding techniques developed by Metalline. They are finished in dark and light bronze PPC to mimic an anodised effect.

01543 456 930 www.metalline.co.uk

#### Magply boards offer safe support



A development of five stylish townhouses in East Sussex, three of which feature the traditional finish of slate hanging, fixed across Magply boards with horizontal battens, providing a substrate offering excellent weathering and fire resistance, as well as a

secure fix. Pivotal to the specification was the need to create a wall zone which can resist the passage of fire from outside the structure. This is a role to which Magply is ideally suited: frequently being specified for flat developments and buildings in very close proximity to neighbouring properties.

01621 776252 www.magply.co.uk

#### New additions to Sto's facade paints



The introduction of two new products has extended the range of applications that can now benefit from the StoColor Dryonic® family of iQ – Intelligent Technology – facade paints.

StoColor Dryonic® S and StoColor Dryonic® Wood have joined the original StoColor Dryonic® G facade paint to provide a wide range of solutions that protect all types of facade finish from the effects of weathering. The StoColor Dryonic® paint is the result of over 20 years of research by Sto into the field of biomimetics, where new products and solutions are inspired by principles from the natural world.

0141 892 8000 www.sto.co.uk/bionics

#### **Noncom Non-Combustible Cavity Trays**



Prefixed Noncom, non-combustible cavitrays and caviweep-vents are available from Cavity Trays of Yeovil – the longest-established cavity tray company in the UK. NonCom products are manufactured from approved A1 materials, and have the advantage of being robust and holding to shape.

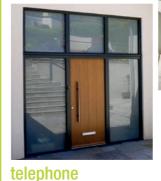
They are difficult to damage and importantly, they will not 'feed' a fire. Tray products can also self-support, and may be used in external wall cavity construction with masonry or non-masonry inner skins.

01935 474769 www.cavitytrays.co.uk

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# Adding clarity to curtain wall design

Andrew Cooper of Senior Architectural Systems takes a closer look 'behind the curtain wall' to reveal the key issues specifiers should consider when choosing aluminium fenestration solutions

luminium is robust, durable and fully recyclable – a perfect partner for modern-day projects where specifiers must find ways to reduce both the financial and environmental cost implications. The material's inherent strength is another reason for the enduring popularity of aluminium curtain wall systems, as it allows large spans of glazing to be supported within much narrower frames, giving the slim sightlines that many building designers prefer.

The design flexibility that aluminium systems offer, particularly in terms of powder-coating – achieving an almost limitless spectrum of colours and finishes, is also a major selling point, but curtain walling must perform as well as it looks.

#### Monitoring movement

A key part of the specification process is to understand how the curtain wall system will respond to potential building movement.

Although curtain walling carries no deadload other than its own, or the possible attachment of sunshades or signage, wind load pressures can affect it. It's also important to consider any further deflection caused by live or imposed loads that may occur throughout the operation cycles of the building, such as the movement of workers, equipment or furniture. This deflection, if not calculated correctly, has the potential to cause the sealed units to break.

Any potential movement must be calculated and accommodated, through the careful specification of different box depths or grid sizes, to ensure that the specified curtain wall system is suitable. Approved Document A provides guidance on the loading, support and fixing for curtain walling and other wall claddings, and early



engagement with your chosen fenestration systems supplier can be key to achieving compliance.

#### Cap choices

Different capping options for curtain walling systems also help create the desired aesthetic, and there is a wide range of configurations to choose from. The use of caps conceals the exterior pressure plates that are used to secure the glass infill panels in place to achieve a more uniform facade.

A fully capped system creates the traditional 'grid' design, but caps can also be used horizontally along the transoms to

A key part of the specification process is to understand how the curtain wall system will respond to potential building movement

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help make a building look wider, or vertically along the mullions to give a structure a greater sense of height.

For large glazed facades where a flush finish is preferred, a capless curtain walling system is ideal. Also referred to as 'silicone sealed,' this type of system can create a 'frameless' look, as there are as no face caps to interrupt the exterior view.

#### Drainage design

Further flexibility is available in terms of drainage solutions, with a choice of mullion and zone drained curtain-walling systems. Mullion drained systems are becoming increasingly popular as they can be quicker to install on site and they offer more flexibility for integration with sloped glazing systems.

However, the type of drainage used will depend greatly on the specific requirements of a project and consideration will need to be given to the way the curtain walling integrates with other systems, such as cladding, in terms of the design of the membranes, seals and drainage paths. With this in mind, it's always advisable to seek advice from the systems manufacturer prior to work commencing on site.

#### Thermal targets

Many fenestration systems on today's market can help achieve ultra low-U values, but the real test of a product is how it will contribute to the overall thermal performance of a building. For example, careful planning at the design stage is required to ensure that the quest to achieve low U-values doesn't lead to overheating problems.

As it's more expensive to cool a building using air conditioning than to heat it, it is important that the right balance is found between thermal performance, solar gain and light transmittance. Cold spots and condensation caused by thermal bridging should also be avoided.

Again, this is where collaboration with the systems manufacture can help, particularly as there is often a considerable difference in the thermal performance requirements of both residential and commercial schemes, and it is therefore important that system variations can be offered to meet the requirements of either building type.

Andrew Cooper is national specification manager at Senior Architectural Systems



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#### Garador's timber effect garage doors look like real wood



When it comes to choosing between a natural timber garage door and a timber effect one, you might be swayed more toward the timber effect version given how realistic the appearance of the surface finish is. Garador offers two "timber effect" steel garage doors in their up and over garage doors range, where a foil-coat is applied to the surface of the steel for a realistic appearance and durable surface that will last well. This gives the impression of a real woodgrain texture on the surface of the door, but has a lower price point and requires less maintenance than a timber door, which would require regular staining and treatment to help protect it from the elements. There are two models to choose from, Wentwood and Sherwood, each available in either Rosewood or Golden Oak timber effect. The wide profiled design is perfect for modern developments and new homes. Prices start at £719 (excluding vat) for a Wentwood garage door with canopy lifting gear. Contact Garador for more information on Garador's timber effect garage doors, including their Wentwood and Sherwood models, or any of the Garador solid red cedar range.

01935 443 709 www.garador.co.uk

#### Saint-Gobain Glass launches high performance solar control glass



Saint-Gobain Glass has introduced a new double-silver coated solar control glass with a neutral appearance and 75 per cent light transmission, to realise the current architectural trend for large expanses of glass that provide high levels of natural daylight. COOL-LITE® SKN 183 & SKN 183 II, annealed and to-be-tempered respectively, not only satisfies the demand for beautifully, neutral glass for facades, it also delivers a range of building performance enhancements, considering the benefits of high light transmission and thermal insulation, along with low internal and external reflectivity. In the UK, building operations accounts for around 30 per cent of CO<sub>2</sub> emissions, mainly from heating, cooling and electricity use. In the drive to achieve net-zero carbon buildings, the consistent use of high performance, coated glass as part of a building facade is necessary. Constructing a robust and energy efficient glazed facade creates a healthy environment for building occupants whilst helping to minimise the effects of building operations on climate change. The COOL-LITE® range already pushes the limits for the highest light transmission combined with the best solar control.

uk.saint-gobain-building-glass.com/product/sgg-cool-lite-skn-183



#### AluK aluminium windows chosen to replicate Crittall originals



AluK's 58BW ST aluminium windows replicate the look of steel frames so successfully that they were approved to replace the original Crittall windows in a landmark redevelopment project which has just been completed in central Birmingham. Herbert House, a 115-year old 52,000 sq ft commercial building in the Colmore business district, features 316 windows in the 58BW ST system and three suited doors in the GT55 system, all in a standard AluK Anthracite grey finish. They were fabricated and installed by AluK's Luminia Select Partner EYG Commercial, based in Hull. They form part of AluK's versatile 58BW window range which allows fabricators to manufacture a huge range of traditional and contemporary window designs and configurations using a core range of profiles and ancillaries. Floor to ceiling windows are an integral part of the design scheme in many of The Lightwell's 77 one and two-bedroom apartments, penthouses and duplexes which surround a central courtyard, so the slim sightlines of the 58BW ST are crucial in maximising the natural light coming in.

01291 639 739 www.aluk.co.uk

#### Senior's fenestration systems make a stand



Complementary and high-performance aluminium fenestration solutions from Senior Architectural Systems have helped create harmony at The Strand Hub, a new awardwinning mixed-used scheme in Rochdale. The glazing package includes Senior's SF52

aluminium curtain wall system and SPW501 aluminium commercial doors. Senior's robust SPW501 aluminium commercial doors provide safe and secure access to the retail and community buildings, with the slim sightlines afforded by Senior's popular SF52 aluminium curtain wall system helping to maximise the use of daylighting.

www.seniorarchitectural.co.uk

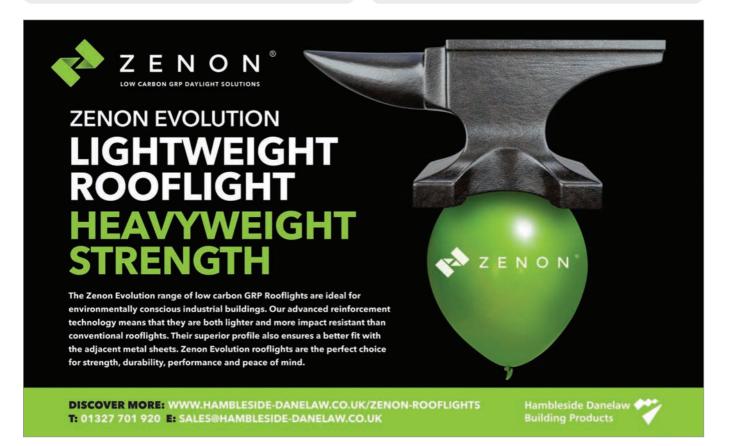
#### Polar protection from membranes



High-performance products from the A. Proctor Group have been selected for use in the construction of a British Antarctic Survey building. The BAS Signy Cummins Hut is designed to provide a fully fabricated, fit for purpose hut, which can be easily erected to provide short-term

accommodation for two British Antarctic Survey operatives to carry out incredibly valuable research in extreme polar conditions. Following the risk analysis, the recommendations adopted included Roofshield® for the roof and Procheck® 500 as a VCL for the walls.

01250 872261 www.proctorgroup.com



#### **Koolduct offers mature solution**



The Kingspan KoolDuct System has provided a space-saving ductwork solution at Lancashire-based cheesemaker, Dewlay Cheese, helping to supply cool air to three new cheese presses. Kingspan KoolDuct boards feature a premium insulation core faced with aluminium

foil which can be easily assembled into lightweight ductwork sections up to 2.95 metres in length. This simple fabrication approach was particularly beneficial on the project due to the restrictions of the site.

01544 388 601 www.kingspanductwork.co.uk

#### **Sontay works with Standard Control**



Sontay has joined forces with system integrator, Standard Control Systems to deliver a Building Management System for the Department of Agriculture, Environment and Rural Affairs (DAERA) new headquarters in

Northern Ireland. Standard Control Systems selected the Sontay AV-WAD wind direction sensors along with the SC1000 CO2 Smart Communication Space Sensors. The AV-WAD sensors are a core part of the natural ventilation system and measure external wind speed & Direction. The sensors are tailored to suit any application and offer complete environmental sensing within a single unit.

sales@sontay.com

#### Titon's hardware exported in Poland



Over 300 sets of **Titon** window hardware have been fitted as part of the ongoing refurbishment of the Rother's Mills buildings on Mill Island, located in the historic old town of Bydgoszcz, Poland. The products installed include Overture E handles, Kenrick Standard Espags, top hung Venture hinges and Capture safety restrictors, which were all

supplied onsite by Titon's Polish distributor, AGAS. Daniel Obara, Export Manager at Titon said: "This is testament to the versatility and quality of our hardware portfolio, as we offer a wealth of handles, espagnolettes and hinges suitable for a wide range of applications."

0800 970 4190 www.titon.com

#### Therma V Monobloc heat pump R32 range



LG Electronics has added its latest Therma V air-to-water heat pump to its popular range, operating on the low GWP R32 refrigerant and available in 5kW to 16kW 1Ø and 12kW to 16kW 3Ø, in a wide operating range of between 10-135Hz and water temperatures up to 65°C without an electric heater. It comes with an energy label rating of A+++.

The unit has excellent performance at low ambient temperatures – 100 per cent at -7°C.

uk.aircon@lge.com partner.lge.com/uk

#### Improving building envelope performance



Armatherm™ is one of the leading suppliers of structural thermal break materials for the construction industry. The company's goal is to provide architects, structural engineers and building design professionals with effective solutions to

prevent thermal bridging. Armatherm™ structural thermal break materials minimise heat loss at balcony, canopy, parapet, masonry shelf angle and cladding connections.

01274 591115 www.armatherm.co.uk

#### Titon introduces high performance air brick



Titon has introduced the new FireSafe<sup>™</sup> Air Brick – a non-combustible compact inlet/outlet grille suitable for new and refurbished houses and apartments. Designed with architects, mechanical engineers, contractors and local authorities in mind, the product is an

upgrade of Titon's (plastic) Q Plus High Flow Brick and can easily be built into external walls during construction. For added versatility, there are optional sizes; single brick sizes, single brick and half (330mm x 60mm) and a double brick (204mm x 128mm).

0800 970 4190 www.titon.com

#### Pegler increases valve offering



Continuing on from the launch of its hugely successful bespoke valve configuration service, Pegler, one of the UK's leading integrated piping system manufacturer, has launched a mini modular valve solution to support

contractor efficiencies within fan coil units. The mini MVS is part of a standard range by Pegler and has 12 configurations. It is available as left or right handed, with strainer or without and comes in the standard three flow variants, low, standard and high. Also included is a choice of indicator either for heating or cooling.

www.pegleryorkshire.co.uk

#### New homes builder chooses Stelrad



Acorn Property Group has selected Stelrad's Compact with Style radiators for its new development at Bonvilston, near Cardiff. The design of the radiators with the horizontal line on the fascias, mirrors the design of the doors being utilised in these three, four and five bedroomed homes that

enjoy the benefits of village life. The en-suites and bathrooms feature Stelrad's Classic Towel Rails. Stelrad is seeing an increasing number of developers – especially regional developers upgrading the radiators they use in new homes from standard panel radiators to premium panel or even designer or decorative styles as in this development.

0844 543 6200 www.stelrad.com

# Assurance for your heating systems, all year round

rrow Valves Ltd have introduced new product packages – specifically for commercial heating systems. Installations need to be designed so that we control the maximum temperature that the system reaches, but we also need to have adequate management in place should this maximum be exceeded. These include the Autofill Pressurisation unit, featuring:

- Category 4 backflow protection: complies with water regulations for filling of "non-house systems", negating the need for a filling loop
- Pressurisation Unit is Only 300mm Squared: meaning it is extremely compact, saving space
- No integral tank: reducing risk of legionella
- All components accessible: completely serviceable
- Volt-free high and low cut out switches: adjustable to suit requirements on site

Now available as a package complete with suitably sized expansion vessel, a tried and true package for heating system management:

- Simplifies specifying and buying: one item to be priced and procured, saving time
- Combined warranty: commissioning and servicing of the unit and charging the vessel can be completed at the same time – offering support and peace of mind
- Quality assurance from one supplier
- Price saving offered for the package

Arrow Valves Ltd can provide help with vessel sizing – our website features a handy guide to vessel sizing, based on a radiant system with a flow and return of 82°C / 71°C and a static head of 10 meters. We can provide you with a more accurate calculation based on more system parameters: static head (m), flow and return temps (c), boiler output (kw), working pressure (bar) if you can provide these values.



For more information please call or visit the website.

01442 823123 arrowvalves.co.uk





#### Fresh air – the essential resource

With new homes being built to stricter airtightness standards, providing a mechanical ventilation with heat recovery (MVHR) solution is becoming more of a necessity rather than an option, says Grant Holmes of Ubbink

egislation changes to Part L & F of Building Regulations are looking to further improve ventilation and airtightness standards. Airtightness is all well and good, but if we cannot provide sufficient 'fresh air' circulation, we will not be improving the actual indoor air quality of our homes. Therefore, it is vitally important that a good quality MVHR system is included from the very start of the design stage, and not just as an afterthought.

Every household needs an adequate supply of fresh clean air to ensure a healthy environment and to prevent increased levels of humidity, which can cause mould. It will also remove bad odours such as cooking smells and other allergens or irritants, while also protecting the envelope of the property – all of which can lead to health issues if the supply is insufficient.

To prevent these issues, a controlled ventilation system is strongly recommended,

and with a 'System D' solution for example, homes will get a balanced airflow as the air is mechanically supplied and extracted to and from the building. This type of system is being specified more and more, and becoming the self-build market's preferred choice for ventilation requirements.

Also, the desire to build more homes to the Passivhaus standard is growing in popularity, and with the costs to build a home to this level decreasing over the years, this approach to housebuilding is certainly on the rise. As part of achieving such a standard, a high quality MVHR system is a must. Key benefits of using MVHR are:

- Providing a constant flow of air, enabling 100 per cent balance in the supply and extract of air, with no airflow mix between the fresh air supply and foul air exhaust.
- Recovery of 90 per cent of the heat from the extracted air – used to warm up the supplied air though the MVHR unit's

Every household needs an adequate supply of fresh clean air to ensure a healthy environment and to prevent increased levels of humidity, which can cause mould When specifying a controlled ventilation system, it is not only the unit you need to be aware of but also the ducting, as this is an integral part of any system



- highly efficient heat exchanger.
- The systems have high thermal efficiency coupled up with low electrical energy consumption, resulting in exceptionally low cost, and energy efficient systems.
- No build-up of air pollution and vastly improved indoor air quality through filters within the units. There are various filter options relating to specific allergies and families' needs.
- Removes bad odours while preventing mould, fungus and dust mites.
- Preserves the dwelling fabric with constant ventilation.

The number of flats and apartments being built has risen over the last decade, including in built-up areas. The traditional wall and floor-mounted MVHR units are often too big to service these spaces, so smaller units have been introduced onto the market to enable this technology to be used in new urban developments. The smaller units have the same features and benefits as the larger units, which are used in homes of two or more bedrooms, but on a smaller scale.

When specifying a controlled ventilation system, it is not only the unit you need to be aware of, but also the ducting, as this is an integral part of any system. There are many systems in the market from various manufacturers, all with different characteristics such as semi-rigid, radial duct systems.

All systems have their own benefits, but the key function to look at when specifying is the air leakage risk, and this can be determined by the class it has been tested to; D being the highest class. Systems that require less connections will be more airtight, making the full system more efficient, providing optimal results with lower pressure losses. Other issues that a semi-rigid radial duct system can eliminate include cross talk from one room to another, and noise levels through the ducting.

In conclusion, there is a growing demand for quality MVHR systems, plus a desire to include a high performance, low energy consumption unit, complemented by a superior duct system whose benefits include ease of install (less connections), extremely low noise levels and the elimination of any cross talk. This would be the ultimate solution for all home owners.

Grant Holmes is national key account manager at Ubbink



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#### Partnership delivers certified solution for smoke safety "the proper way"



Peace of mind that smoke evacuation will work is the result of technological developments in a specialist building services partnership. Leading independent smoke control specialist Baiceir is now using the latest fully compliant smoke evacuation damper- Gilberts' Series 60- as standard. Believed to be the only vent of its kind designed and manufactured in the UK, Series 60 offers what Gilberts claims is the biggest standard range of EN13501-3 compliant fire-tested dampers for smoke evacuation shafts and risers. "Having a smoke damper certified to the latest, highest Standards completes the loop for us," explains Baiceir managing/ technical director Andy Baker. "It means every element of the smoke evacuation systems that we design, model and install is accredited to meet the latest and most rigorous requirements, whether a single stairwell or a complex multi-tower development." The Series 60 smoke damper is the first innovation of the new decade from Gilberts, but continues a reputations for innovation that stretches back over 40 years, and encompasses ventilation solutions for interior and exterior natvent, hybrid and mechanical systems.

01253 766911 info@gilbertsblackpool.com

#### **Encourage independence with Horne**



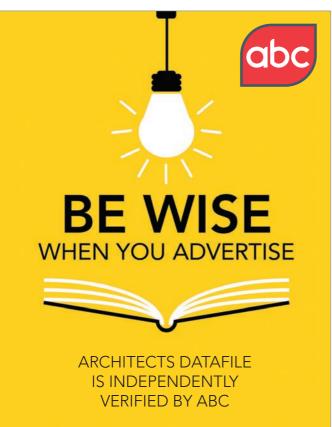
Horne's CARE shower, in use widely across the NHS, extra-care, dementia care and Changing Places facilities, now offers enhanced inclusive design, providing additional support and encouraging further independence for its users. The robust yet lightweight rail is a brand-new design; a durable core of anodised aluminium, treated with hard-wearing polyester paint, is fixed to smooth and tactile solid injection-moulded elbows and wall fixings. The riser grip/release mechanism epitomises inclusive design; combining fishing-reel technology for a finely controlled friction grip and a custom-designed spring for its low-force release. Wheelchair and shorter users can also pull on the mechanism release extender to lower a high-set shower head. Painted an inclusive deep orange colour, the rail offers valuable support and optimum visibility – colour and contrast – especially useful to our ageing population. Showers featuring the new orange riser rail are now in production. Showers featuring a white version of the rail will also be available in a matter of weeks – and will replace the current design.

01505 321455 b.link/CareShower



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#### Viega Prevista: The new generation of pre-wall bathroom technology



Viega has introduced a new generation of pre-wall bathroom technology with the launch of Prevista. It features a newly redesigned pre-wall element alongside award winning flush plates that mix classic design, bold new ideas and the latest innovations. At the heart of Prevista is a new cistern that has been developed in collaboration with customers and builds on the success of the previous Viega pre-wall systems. The Prevista pre-wall element is compatible with all Viega Visign flush plates, providing design freedom without compromise. Prevista has been designed for easy installation, long-term reliability and superior flexibility. The frame is height adjustable, as standard, to allow up to a 60 millimetre adjustment to meet the needs of customers. It also features a universal shower toilet connection, providing simple compatibility with this increasingly popular choice of WC. The range of Visign flush plates provides architects with a choice of designs and materials to suit every project and trend, from discreet and minimalist to modern and bold. Visign flush plates project quality while supporting or even enhancing the design of any bathroom or washroom.

0330 111 4568 prevista.viega.co.uk

#### Sustainable steel enamel shower surfaces



The Kaldewei Cayonoplan shower surface adapts to many different structural requirements. For instance, if adequate height is available it can be installed at floor level or can be easily installed directly on top of the floor tiles. Thanks to 22 different dimensions, its laterally-positioned

waste outlet and ultra flat tray support for the easiest possible assembly, the steel enamel Cayonoplan is the ideal solution available in a generous range of sizes, 100 per cent recyclable and comes with a 30-year guarantee. Also available in exclusive matt shades from the Coordinated Colours Collection, shown here in Lava Black matt.

01480 498053 www.kaldewei.co.uk

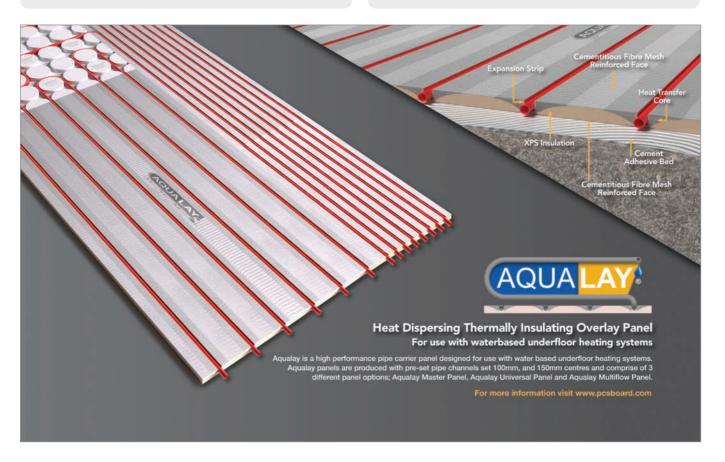
#### Intense and bold beauty in black



BLANCO UK's award-winning SILGRANIT® PuraDur® range of sinks and taps continues to impress with more and more customers opting to embrace its distinctive

charms. Customers now have the option of black when considering a SILGRANIT® colour. Made of up to 80 per cent granite, SILGRANIT® PuraDur® is incredibly strong. The engineered stone-like material is scratch-, heat-, impact-, light-, and acid-resistant so all SILGRANIT® PuraDur® sinks are able to withstand temperatures up to 280°C and do not discolour due to domestic acids or light.

www.blanco.co.uk

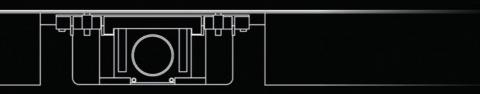




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### Revamp, don't replace

Lindsay Appleton of William Smith Group looks at how vinyl wrapping can enhance interior designs using architectural finishes, as part of the trend to reuse and recover furniture on sustainability grounds, rather than rip out and replace

The trend for upcycling shows no sign of abating; clients are increasingly looking to upgrade their interiors on a budget, and without the upheaval of ripping out and replacing furniture.

Such an approach also taps into the trend for sustainability that continues to be big news; it is better for the environment for venues to make use of what they already have and give it a new lease of life, rather than replacing it wholesale and sending old furniture and fittings to landfill.

This is where vinyl wrapping processes come into their own, providing a fresh new look, in a multitude of styles, quickly and easily. Wrapping is a simple approach – an existing surface is covered with a selfadhesive film. Architectural finishes are highly engineered, durable films, designed to look and feel like real-life materials. The films are applied with heat, by skilled installers, to provide a realistic, hardwearing finish. This allows clients to create bespoke furniture using less expensive materials, wrapping them to look like authentic marble, wood or concrete. With thousands of finishes available, the possibilities are vast.

#### **Emerging markets**

Vinyl wrapping has taken markets in Japan and the US by storm, and is becoming increasingly popular in the UK, marking a shift from the traditional model of ripping out and replacing interiors.

One of the reasons behind its success is down to firms' Corporate Social Responsibility (CSR) approaches, and a shift in attitude toward using sustainable solutions and methods within the construction sector.

Wrapping meets the needs of the industry to boost their CSR activity; covering doors instead of replacing them and producing waste is a powerful statement for any stakeholders.

#### **Diverse applications**

Architectural films can be used on a wide range of surfaces, including walls, lifts, doors and furniture. Such films are conformable for 3D applications, meaning their use is not limited to flat surfaces. Almost any surface can be wrapped, making films ideal for commercial environments. What's more, they can even be applied over existing substrates.

As the surface finishes are conformable, they can be applied to curved structures to create eye-catching designs. This provides a key advantage over laminates that require edge banding, whereas films offer the opportunity to wrap fully over edges to completely seal them.

With texture set to be one of the key looks for 2020, along with statement ceilings, wrapping offers a sustainable, easy-to-use way to tap into the latest trends with minimal disruption

#### **Environmental benefits**

On average, it costs seven times more to rip out and replace interiors. Refurbishment with architectural films is a way to upcycle existing fixtures and fittings, rather than sending them to landfill.

It's a budget-friendly option for architects when costs are being squeezed, allowing businesses to refresh a venue more frequently or at a lower cost. Wrapping is also highly durable – lasting for an average of 12 years on interior surfaces – meaning it can work out more cost effective over the lifetime of the product, when compared to fabric, paint or veneer.









#### Less day-to-day disruption

Recovering with vinyl's also easier for businesses, as vinyls are applied insitu, with no noise, mess or waste – allowing the premises to stay open throughout. Little equipment is needed, with minimal prep, meaning less downtime and inconvenience.

All finishes are fire tested and meet building regulations. And as the product is a PVC solution, it is fully water and heat resistant, as well as and hygienic, all of which are important in high-traffic venues such as gyms, bars and restaurants.

#### Keeping up with trends

With thousands of designs to choose from, architectural films are fast becoming the goto solution for venues such as hotels when managers want a makeover.

With texture set to be one of the key looks for 2020, along with statement ceilings, wrapping offers a sustainable, easy-to-use way to tap into the latest trends with minimal disruption.

Virtually indistinguishable from the real thing, wraps can recreate the look and feel of concrete, marble, stone, metal, wood or solid colour effects, using over 1,000 patterns and finishes.

#### Virtually indistinguishable from the real thing, wraps can recreate the look and feel of concrete, marble, stone, metal, wood or solid colour effects

With the industrial trend set to continue into 2020, businesses can obtain the aesthetic using a concrete wrap on walls and ceilings to provide a robust, gritty feel. Alternatively, the great outdoors can be brought inside with the dry wood collection from 3M DI-NOC architectural finishes, which looks and feels like the real deal – at a fraction of the cost.

With a world of possibilities at their fingertips, companies looking to reduce costs and improve their sustainability would be wise to look at upcycling using self-adhesive finishes to refresh spaces with minimal disruption to the business.

Lindsay Appleton is marketing manager for Architextural, at William Smith Group

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#### Style divides space at iconic Pavilion

The Tower Gardens Pavilion in Skegness has been completely refurbished to create a multi-use council facility. Delivering flexibility to the main hall, partitioning expert Style was contracted to install a Dorma Hüppe Variflex moveable wall, successfully creating one large and one smaller room that can accommodate two events running concurrently. A sustainable and cost-effective option, the Variflex carries an environmental product declaration (EPD) in accordance with ISO 14025 and EN 15804. In addition, its elements are manufactured separately to the frame, which means only the panel facings need to be changed in the future, to match a new interior décor for example, or if one becomes damaged or scuffed. Working with GF Tomlinson Building Limited, and Core Architects, Style recommended the versatile Dorma Hüppe Variflex moveable wall as the most practical solution.

www.style-partitions.co.uk



#### **Q-Range Wide**

Q-Range Wide Stair Nosings are Quantum Flooring Solutions' answer to the conventional double-tread versions. This unique design features a single, extra-wide layer of slip resistant tread across the whole surface of the carrier. Q-Range Wide offers a larger area of grip than any other available product. This greater surface area helps to minimise slips, trips and falls on staircases. Crucially, the wide band also offers higher visibility of step edges. These benefits make Q-Range Wide ideal for public buildings with high footfall, such as hospitals and schools. For commercial and public buildings, cleanliness can also be a huge problem. Q-Range Wide is easy to maintain, making for clean and safe lines on every step surface. To see how Q-Range Wide could help in your design, email to order a sample.

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Products available nationwide via our merchant partners. Why not visit our website or contact us directly for more details on our products and services.

#### How can you eliminate contamination risk?



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view to hygiene, starting with the ultimate hygiene of touch-free taps, showers and urinal controls through to disinfection solutions for drinking water hygiene and complete room decontamination.

paul.musgrove@conti.plus conti.plus

#### Seeing things from above



As the distance from ground level increases, patterns, textures and colours reveal themselves upon the canvas of the earth. And it is this new perspective which inspired Forbo Flooring Systems' design team to develop its new carpet tile collection: Tessera Earthscape. The heavily textured composition, combined with its natural organic design, creates a warm and inviting surface that will complement a range of interior trends.

Tessera Earthscape benefits from a premium multi-level loop pile, which provides comfort underfoot and an opulent textured aesthetic.

01773 744 121 www.forbo.com/flooring/en-uk

#### Ideal Standard releases new BlueBook



Ideal Standard International, one of the world's leading manufacturers of bathroom and washroom solutions, has published the latest edition of its celebrated 'BlueBook'. Containing more than 5,000 product listings, the industry renowned catalogue is the largest index of

its kind. The 6<sup>th</sup> edition of Ideal Standard's BlueBook features an unparalleled wealth of useful information for architects, designers and merchants working across a spectrum of residential and commercial projects. Products from both the Armitage Shanks and Ideal Standard brands are listed alongside detailed specification diagrams.

01543 413204 www.idealspec.co.uk/resources/brochures.html

#### Latest news, views and more



If you like to be kept informed of all the latest news, views, and promotions for the architectural community, the ADF email newsletters can offer you regular updates straight to your inbox. The weekly Editor's Choice newsletter includes top news stories curated by the ADF editorial team, while the

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#### **Hunter Douglas goes to Top of the Shop**



Hunter Douglas Architectural scored a full house when it supplied a solid wood grill for the new £7m offices of a leading online bingo company, Tombola Ltd. Hunter Douglas Architectural was specified to supply more than 850m² of solid wood grill

ceiling in American white oak for the underside of the roof. An internal roof lining was also added to provide warmth to the interior space. The complex design meant the grill panels followed the triple roof pitch and the roof windows, the installation team had to work around many services within the roof space.

01604 648229 www.hunterdouglas.co.uk

#### Frontier Pitts new Terra Bridge Bollard



With a large range of shallow bollards already within our Planet Bollard range, Frontier Pitts is excited to introduce our shallowest bollard yet! Frontier Pitts have created a bollard system to provide protection that is able to sit within the

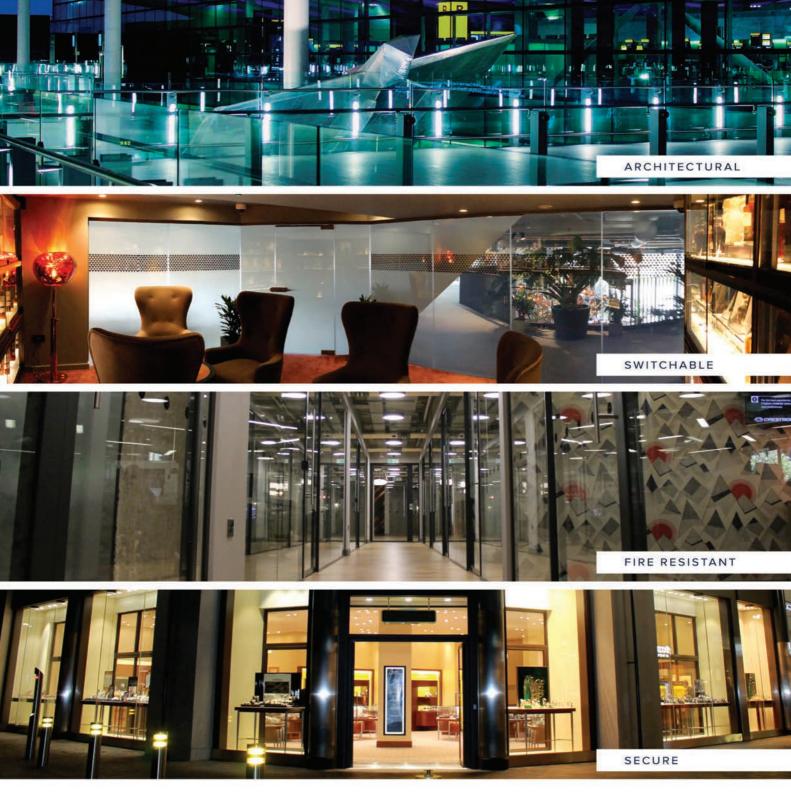
bridge kerb structure with an ultra-shallow foundation of just 75mm required. An array of eight Terra Bridge Bollards were impact tested to IWA 14 stopping a 7.2t vehicle travelling at 30mph at a shallow attack angle of 30-degrees to simulate a realistic bridge attack. The Terra Bridge Bollard test resulted in zero penetration.

01293 422800 www.frontierpitts.com





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# Enhancing Passive Fire Safety CHECKM at Trinity Baptist Church



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Managing the project from conception to completion, our delivery teams collaborate closely with architects to determine product specification, efficient manufacturing, and a timely final product installation and certification.

Alufire's fire resistant glazing products are

used extensively throughout the UK and Europe. With office owners investing further in passive fire solutions, we are proud to showcase our recent project at Trinity Baptist Church in Croydon, London.

#### TRINITY BAPTIST CHURCH – CASE STUDY

Client: Trinity Baptist Church Location: Croydon, London Products utilised: Vision Line partitions, classic line/classic line doors

Fire resistance: EI60

Total weight of the construction/glass - 7111kg

Area: 147.5M2 (15877 FT2)

Status: Built

As Alufire's sole UK supplier and installer,









Checkmate Fire were contracted to carry out the installation of all internal and external fire-resistant glazing at Trinity Baptist Church in Croydon, South London.

Working efficiently to timescales and budget, Checkmate supplied and installed a range of our Alufire Fire-Resistant Classic, Vision Line and glazed doors, resulting in improved fire safety and a stunning interior.

#### WHO SAYS CHURCHES CAN'T BE MODERN?

#### **PROJECT ANALYSIS:**

Trinity Baptist Church, from the outside, looks like an average modern church. On the inside though, it has been constructed like a stadium, with huge openings that enable masses of natural light to enter the central hall of the church.

#### THE RESULTS:

Our longest ever Vision Line partition was installed on Trinity Baptist Church. A whopping 28 meters of Vision Line partition was installed on the back of the central hall of the church. Moreover, for this project, we also used Alufire Classic Line and Classic Line Doors

Our products improved the fire-safety of the building, and created a distinctive and impressive church interior, with lots of natural light.

01422 376436 www.checkmatefire.com

# UK's tallest residential tower to be protected by Advanced fire panels

lobal systems leader, Advanced, is celebrating being specified on yet another landmark development in London.

The installation of Advanced fire panels at the Landmark Pinnacle marks another tall-building win for the manufacturer who, in 2019, announced its specification at Western Europe's second tallest building, 22 Bishopsgate.

Standing 75 floors high at the head of the South Dock in the heart of Canary Wharf, the Landmark Pinnacle will, on completion in 2020, be the tallest residential building in Europe with more habitable floors than any other building in London, the UK and Europe. With prices starting from £480,000 and amenities including a roof garden, gym, private dining facilities and a cinema, London's latest skyscraper, at 239 meters tall, will offer stunning views across London and the surrounding counties.

Four market-leading 8-loop and two 4-

loop intelligent MxPro 5 fire panels alongside three repeater panels specified for the tower will be installed by Bedfordshire-based Firelec Controls Limited – responsible for the design, installation, testing and commissioning of the fire system. The MxPro 5 panels, that last year were certified by FM Approvals to the EN54 standard, will be networked with the tower's BMS using BACnet, include a custom graphics package and link to over 140 AOV vents and sprinklers with phased evacuation between floors.

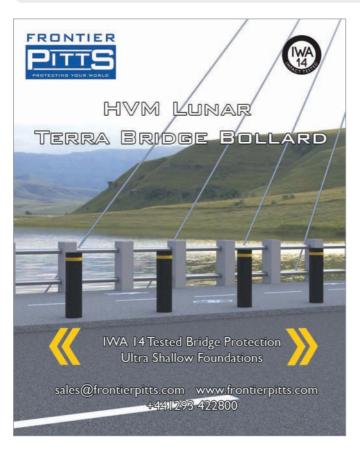
The MxPro 5 is the unbeatable multiprotocol fire system. Approved to EN54-2,4&13, it offers four protocols, Apollo, Argus, Hotchiki and Nittan and a completely open installer network that benefits from free training and technical support. Panels can be used in single-loop, single-panel format or easily configured into high-speed, 200 panel networks covering huge areas. MxPro 5 panels are backwardly compatible with existing MxPro



4 networks and include a host of features including AlarmCalm complete false alarm management and reduction.

Advanced, owned by FTSE 100 company Halma Plc, have an impressive history of protecting some of the most prestigious and iconic sites across the globe, including London's Shard, Istanbul's Hagia Sophia and Abu Dhabi International Airport.

0345 894 7000 www.advancedco.com





### Get on board with fencing trends

Fencing products are now seen as an integral part of a garden's overall landscaping and an important aesthetic choice. Here, Antony Reed of Birkdale looks at the latest fencing trends and explores design choices that can garner highly aesthetic results

n the past, fences were only ever used to divide boundaries, aid security and provide greater privacy. However, increasingly, fencing is being used as a way to bring structure to a garden and add a sense of texture. A rising trend in the design of outdoor spaces is the combination of both traditional and modern materials within a single space. With a range of options available, even the choice of fence posts can be a stylish way to add an interesting dynamic to an outdoor environment, especially when complementary materials are selected. Combining traditional wooden fencing with the more modern skeletal aesthetics of steel, for example, can create a fence with the best of both worlds.

Similarly, it is also increasingly popular to mix reclaimed, repurposed or recyclable materials in exterior spaces. Sustainable designs are rising in popularity and as such, consumers are becoming more and more inclined to choose recycled or recyclable materials over virgin products. While wood is often favoured in these circumstances as a product that can be easily repurposed, the use of metals like steel or aluminium are also ideal materials for this design choice as they can be recycled at the end of their usable life span.

If a mix of materials is not the desired aesthetic, there is now a range of powder-coated steel fencing products on the market, which allow for the incorporation of colour trends to an outdoor space. Currently one of the most popular exterior design trends is anthracite grey which provides a sleek alternative to black and lighter greys and also complements concrete, metal and wood finishes. With anthracite windows, doors, paints, guttering and steel fencepost all readily available on the market – it is now possible to coordinate all exterior accessories within a sophisticated colour scheme.

If a more unusual, statement colour scheme is desired, it is also possible to create a striking fencing design using two-



tone fencing panels or by opting to use only gravel boards as panelling, in alternating or bold colours. As with fence posts, gravel board options have always been limited, designed to serve a purpose but without aesthetic appeal. By opting for composite gravel boards, over concrete, a wider range of attractive colours and finishes are available. Opting for two-tone designs using complementary coloured gravel boards can generate a subtle but stylish effect; but darker shades should always be lower in the eye line to help garden features like floral arrangements take prominence in the forefront.

Fundamentally, fencing can still be used to compartmentalise a garden, creating new areas that can be given dedicated uses, for example the traditional fruit and vegetable patch. Similarly, fencing can also be used more creatively to form 'chill out' areas, or to create dedicated zones for hosting or barbequing. Introducing low-rise fencing can allow spaces to be sectioned off without affecting visibility or making a

Setting aesthetics and design aside, when it comes to selecting a fence, it is equally important to get the material right to ensure it will last the test of time

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space feel claustrophobic or smaller than it is.

Setting aesthetics and design aside, when it comes to selecting a fence, it is equally important to get the material right to ensure it will last the test of time. While wooden fences are aesthetically pleasing, versatile and available in a range of styles, wooden fence posts are particularly susceptible to rotting and warping. Steel is a far more durable fence post option, tested to withstand high-wind speeds and they will not degrade over time. Steel fence post solutions can also provide greater scope for colour scheme matching as they are available in a range of long-lasting colour finishes that can be coordinated with post caps, gravel boards and capping rails in the same finish to complete the fencing system.

With a growing trend for liveable outdoor spaces, a new emphasis is being placed on interesting garden design in the development of newbuilds. As such it is important that architects understand that there are now new ways to easily incorporate colours and materials into exciting on-trend designs. Furthermore, it is possible to do so through the use of longlasting and reliable fencing products, which will not degrade over time, ensuring that the desired aesthetic of the outside space is one that will last.

Antony Reed is DuraPost product manager at Birkdale

#### **EverEdge at 25**



At EverEdge we are celebrating 25 years of being 'The Edging Company'. EverEdge was founded in 1995 in Staffordshire with the simple mission of making garden edging easier, more attractive and long enough to last a lifetime. Over the 25 years EverEdge has grown to become a supplier of edging products, planters and custom steel walls with architects and landscape architects specifying EverEdge products for projects such as hospital car parks, podium and roof gardens, schools, and public parks. EverEdge use steel as our product of choice because it is durable, flexible when required and, importantly in the current climate, is a material that can be easily recycled once it comes to the end of its life. All EverEdge products can be specified in a wide variety of finishes including powder coated, hot dip galvanised, and in Cor-Ten weathering steel. EverEdge offer an unrivalled service to architects offering technical and layout drawings for all projects, CPDs, help and advice on designs as well as site visits and after sales care. We pride ourselves on the quality of the products we supply and the service we offer.

01630 417120 www.everedge.co.uk

#### New Norcros Rock-Tite capitalises on external porcelain and stone tile trends

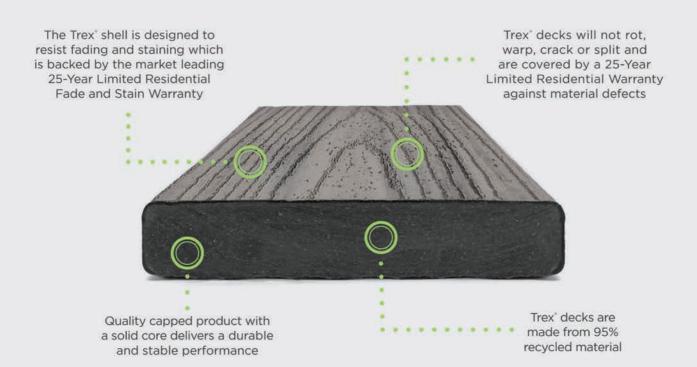


Norcros Adhesives is launching a new 3-part system for fixing increasingly-popular 20mm external porcelain and stone tiles, called Norcros Rock-Tite Exterior Porcelain & Stone System. The Rock-Tite system comprises a Primer, a Mortar and a Brush-In Grout. It is designed for use by landscapers and garden designers, as well as tile fixers, and capitalises on a key trend in the tiling market currently. This is where internal tiled space is being extended to terrace or patio areas outside a building, which is part of a long-term lifestyle trend to enhance living areas by making better use of external space. The new generation of 20mm porcelain and stone tiles brings a number of advantages. The key benefit is that they allow a seamless transition from internal to external space, which is totally in accordance with the leading fashion trend of the moment. Porcelain tiles are also moisture, rot and frost resistant, resistant to UV rays, are easier to clean and offer better slip resistance than timber decking. Like all products from Norcros Adhesives, the new system benefits from a lifetime guarantee.

01782 524140 www.norcros-adhesives.com

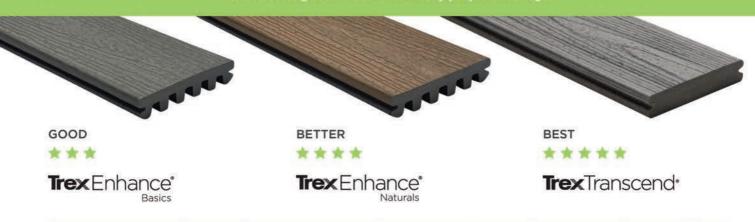


#### THE SECRET IS IN THE SHELL



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#### Luceco lights new RTA Bus Stations in Dubai



The RTA in Dubai has been working towards Expo 2020 and have put in place many enhancements to the already impressive public transportation system. Luceco has become the preferred lighting manufacturer for several new RTA bus stations including Union RTA, Al Ghubaiba RTA, Al Kifaf RTA, Silicon Oasis RTA, Business Bay RTA and Al Quasis RTA Bus station. Luceco has provided both interior and exterior lighting solutions for these new transportation hubs. Cost effective, energy efficient luminaires supplied included the Via Road Lantern for the internal road networks. Manufactured with vandal resistant die-cast aluminium housing, Via has post-top (60mm) or side-entry mounting and the option of car park or street optics. IP65 rated Atlas Bulkheads were installed in mechanical areas, providing an alternative to traditional 28 and 38-watt 2D compact fluorescent fittings and Eco Climate Array in service rooms and multi-storey car parking facility. The external lighting concluded with contemporary by-directional Architectural Wall lights; a surface mounting LED luminaire designed for a creative lighting effect whilst delivering functional lighting to the exterior space.

01952 238100 www.luceco.com/uk

#### Simpson Strong-Tie's Fastener Range Goes Premium



Introducing the brand new Premium Fasteners range by leading construction manufacturer Simpson Strong-Tie; featuring superior strength nails and screws to cover almost every application and showcased in the newly released Premium Fasteners Catalogue. Europe's leading range of superior nails and screws includes stainless steel, structural and collated options. "We're excited to launch our new Premium Fasteners product collection" explains Jesper Hebbelstrup – European Fasteners Product Manager. "Quality and reliability is our top priority. The fastening system you choose is as important as materials and finishing touches; cheap nails and screws can cause decking to loosen over time causing uneven surfaces. Fasteners can even deteriorate over time if used an inferior quality product is used. We've got the Premium Fastening systems you need to guarantee longterm performance and safety, whether you're fastening connectors, structural timber, CLT, concrete, light gauge steel, flooring, roofing or cladding." The Premium Fasteners Catalogue is packed with technical information and installation advice and available now at the company's website.

01827 255 600 www.strongtie.co.uk



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#### **Arbor introduces Trex Lighting range**



Arbor Forest Products, exclusive UK distributor of Trex, the world's number one decking brand, has unveiled the new Trex lighting collection. The Trex Lighting Collection features a versatile range of three lighting options which can be used in isolation or together to suit any deck and to create the desired ambience. The range includes the recessed deck light, which sits flush with the surface of the deck; the stair

riser lights for use on raised decks; and finally the post cap lights for use with Trex railing posts. The lights are available in black and bronze colours and feature high-performance energy-efficient LEDs.

01469 532 300 www.arbordeck.co.uk

#### **Crawley regenerate with Resiblock**



Crawley Borough Council have placed their trust in Resiblock and the Resiblock Resiecco product, following sealing works of over 2,100m² of paving as part of Queensway Regeneration. The project, which saw Queens Square extended throughout Queensway and

The Pavement, saw Crawley Borough Council install Concrete Block Paving in both pedestrian areas and newly created car parking spaces. The council determined these areas were to be sealed to prevent paver destabilisation caused by associated trafficking.

mail@resiblock.com



#### Earthborn doubles silicate colours

Exterior masonry is probably the toughest test of all for a paint. It needs to be durable and weatherproof, as well as good looking and not all masonry paints were born equal. Ecopro Silicate Masonry Paint is a highly durable, breathable and weather resistant mineral paint, which is also is virtually VOC and toxin free.

Earthborn believes its Ecopro Silicate Masonry System is the most advanced masonry paint available and in response to a growing demand, it is increasing the colours available from 24 to 48.

The system comprises a primer and paint, which together form a chemical bond with the underlying mineral substrate. The result is a very hard wearing, water and weather resistant barrier, yet it is highly breathable, which prevents moisture damage within walls.

Now, both the primer and all of the 48 paint colours are available to order from the Earthborn website in 100ml tester pots, so the whole system can be tested on site.

01928 734 171 earthbornpaints.co.uk/silicate-colour-card-trade



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# Green-tech helps enhance biodiversity at Tottle Brook Watercourse in Nottingham



ottle Brook is a small watercourse which flows in a south west to north east direction in Highfields Park, Nottingham. The project's goals were to enhance the biodiversity value of the Brook by creating a new wetland habitat and improve the form (shape) of the watercourse.

Nottingham City Council commissioned Dobson UK, a leading provider of landscaping, grounds maintenance and amenity weed control services to undertake the work.

Funded by a £50,000 grant from the European Regional Development Fund and Nottingham City Council, the aims were to make improvements to Tottle Brook which would create an enhanced environment for wildlife, improve biodiversity and create new habitats to attract new wildlife to the area.

Dobson UK turned to Green-tech for advice and supply of 120 metres of gt Coir pre-established Log Rolls to act as an additional flow director to the Brushwood Faggots and Gravel Beaches they also installed.

gt Coir Log Rolls help reduce and control erosion along water course edges, such as rivers and lakes. A cost-effective solution, the gt coir logs provide a barrier to be built up against in the water environments and allow for vegetation, grasses or stone to fill in the river or lake bank that is eroding away. These were supplied pre-established with UK native species but can be supplied unplanted.

In addition, Green-tech supplied a large number of Biodegradable Sediment Entrapment Mats known as RiverMat. RiverMats are suitable for use in natural and artificial channels; they are secured to the bed of the water course and placed downstream of the disturbed area. They lie flat and trap sediment borne along the bed on the current. The effect of disturbing sediment can have a harmful effect on wildlife and plant habitats, smothering vegetation, insects and fish. It can also block drains, culverts and headwalls, and reduce the depth of pools. Sediment build up against structures can also be detrimental to the integrity of bridge and dock piers. Being flat, the RiverMat does not cause disruption of the water flow or affect the current but does effectively control the Downstream Sedimentation which is a common problem when civil engineering works for drainage, flood alleviation or other work on the watercourse is carried out.

Green-tech also supplied tree planting sundries and 14kg John Chambers Wildflower Seed for wet and damp soils which will cover an area of approximately 3000sqm.



John Chambers Heritage Wet and Damp Soils Wildflower Mix is from the Heritage Range. Renowned for the quality of its seed, the Heritage range retains the original recipes created by the business founder John Chambers. All seed supplied is of optimum quality, will provide exceptional germination and is cleaned by hand to ensure that only pure and uncontaminated seed arrives at a project. Every Heritage mix supplied is available with a certificate of authenticity, listing the species, origin and recipe for the mixture.

The main work at Tottle Brook was completed at the end of December 2019 with follow-up landscaping work scheduled in 2020.

Lauren Dobson, Business Development Manager for Dobson UK comments; "With access being an issue on this project, especially with the added difficulty of the extremely wet weather, Green-tech worked with us to overcome this. We were very happy, as always, with the quality of product and the service provided. Towards the end of the project we spotted a Little Egret which had not been seen in the area for a long time so we're delighted that the project is proving fruitful already."

01423 332100 www.green-tech.co.uk

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Trinity Baptist Church, Croydon, UK

# Making fire-resistant glazing the main event

Go to page 99 for more details

