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CONTENTS

NEWS, VIEWS, INSIGHTS & PRODUCTS

- 04 Industry News
- **14** Ask the Architect: Alia Beyg of Aqua Architecture
- 18 Practice Profile: HLM Architects
- **22** International Focus
- 24 CPD Focus
- 37 Appointments & Company News
- **39** Structural Elements
- **40** Planning & Design

PROJECT REPORTS

26 City limits

Set in a triangular mews in north London, a quirky mixed-use project offers privacy and bright spaces despite a tight urban context. Jack Wooler spoke to architects Tom Byrne and Simon Lilley to get their take on the scheme

32 A new tradition

A new home in a secluded corner of Hampshire combines a highly contemporary form with traditional vernacular touches. James Parker speaks to one of the two architectural practices involved who managed to provide a design that worked for client and planners

FEATURES

49 EXTERNAL ENVELOPE: ROOFLIGHTS

Period dramas

Peter Daniel of The Rooflight Company discusses the minutiae that can't be overlooked when working with historic buildings

71 ACCESSIBILITY & LIFTS

A platform for hygiene

Sean O'Sullivan of the Platform Lift Company discusses why the future of the industry means creating safer platform lift environments in tandem with meeting demand for sustainable, energy efficient products

75 SAFETY & SECURITY

Secure in the knowledge

Stuart Glen of Jacksons Fencing discusses the considerations that need to be taken into account when specifying security fencing

79 LANDSCAPING AND EXTERNAL WORKS: SUDS

Paving for change

In the 'new normal' of the pandemic, outdoor space has taken on new importance, but with the future uncertain, a fresh approach is needed to provide multifunctionality and flexibility to all spaces between buildings. Chris Hodson explains more

achitectsdatafile.co.uk and SearchitectsDF

- **40** Groundworks & Drainage
- **42** External Envelope
- **52** Insulation
- **53** Heating, Ventilation & Services

58 Interiors

- **70** Accessibility & Lifts
- **73** Safety & Security
- 77 Landscaping & External Works
- 82 Classified & Directory

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FROM THE EDITOR



irst and foremost, everyone at the *ADF* team would like to wish you a peaceful and happy Christmas break. After the past few months, I think we all deserve a bit of relaxation, however much it might feel like a slightly more festive version of lockdown!

As we went to press, we heard the fantastic news that *ADF* has been crowned the Property Trade Magazine of the Year. It has been a surreal and concerning year, and we face an uncertain 2021. To be recognised against strong competition for what we do by the Property Press Awards has really helped keep a smile on our faces; this was already there thankfully, as we returned to publishing magazines in November. We may not often see ourselves as a 'property' title per se, but the awards is a broad church, and it's simply very gratifying to receive some high-profile recognition for our team's hard work!

As we start to peer out of the Covid tunnel to what could be a New Year buoyed by vaccines bringing us back to something slightly more normal, thoughts turn to what we can learn from this experience. One of the major learnings from a recent Council for Tall Buildings and Urban Habitat (CTBUH) online event looking at future cities, was whether the stampede away from cities to work from home could provide impetus for architects creating the combined living and working spaces of the future.

While contributors to the session agreed that flexible space was going to be key, developers may not be keen to include large areas of albeit lively coworking space into apartment blocks, when they're looking to maximise the value of every expensive square foot. Conversely, building suburban homes which have enough space to provide quality work environments – which aren't a corner of the living room effectively – may not stack up either.

Working from home makes environmental sense and can be more productive, apart from when face to face idea-sharing or deal-making is a must. However does a national move to developing spaces suited for home-working tie in with the commercial and residential development realities, particularly when land in the right places is so difficult to obtain?

While many may clamour to get back to the commute and the overpriced coffee, many will have readjusted to this new life working from home. Also, Covid is not going to disappear, and public transport is never going to be a reliable platform while the virus remains a threat.

Architect Alison Brooks explained at the CTBUH event that to serve all needs, future urban development "will need to be adaptable, so you can work from home but invite people to have meetings where you live. You want other spaces in the building to serve your working life." She explained how 'vertical neighbourhood' projects are "breaking open typical urban typologies" to provide a much more diverse range of uses in a concentrated area.

Might we see a move to 'very mixed' resi/office developments which have common working spaces – would this be more cost effective than building more work space into new apartments? Servicing a much more flexible future when it comes to work is going

to challenge everyone, but perhaps inspire architects.

James Parker Editor



ON THE COVER...

A contemporary home in a secluded Hampshire location by Design Engine and Paul Cashin Architects combines a minimalist design with vernacular materials to blend into its site. Cover Image © Richard Chivers

For the full report on this project, go to page 32

AWARDS

Strong international showing for 2021 Surface Design Awards



The 31 finalists of the 2021 Surface Design Show Awards have been announced, selected from 100 entries by the judging panel.

Finalists include projects from Germany to Costa Rica and Oman to San Marino. The Krushi Bhawan building in Bhubaneshwar by Studio Lotus was Supreme Winner in 2019, and India has two entries that have made it to the finals. Sustainability was also high on this year's agenda, each entry including a calculation for the carbon footprint of the cladding and other materials used.

In the Light and Surface Interior category, Maida Smiles Dental Clinic by Pedra Silva Architects, Coffey Architects' Apartment Block, Padmanabham by Ritika Rakhiani, Leucos Wall Light by Andra Munro, and Backlit Onyx Staircase by Blee Halligan all made the shortlist. Maggie's Leeds by Heatherwick Studio & Light Bureau, was praised by judges for being "beautiful and comfortable."

Maggie's Leeds also got a nod in the Light and Surface Exterior category, along with US projects Center Street Parking Garage by Marcy Wong Donn Logan Architects & International Parking Design (IPD) and 108 Chambers by Woods Bagot. The finalists for the Housing Interior category included Alpine Retreat (France) by Galuchat and a Beach Home by Hedayat (Egypt) alongside two UK projects, Cabin on the Coast by Studio Evans Lane and Bumpers Oast by ACME, the latter praised by judges as "a contemporary interpretation of a historic building that is well detailed and well executed."

It also made an appearance in the Housing Exterior category, alongside two schemes from emerging practice Alexander Owen Architecture. ACME made it a hattrick in the Public Realm category for its Marsa Plaza scheme in Oman, along with Sayer Street + The Meadow by Jan Kattein Architects with landscaping by BlD Landscape Architects and lighting design by Michael Grubb Studio.

The Temporary Structure category includes Denmark's Folly by KLINK & Rune Bundgaard, Pune's Symbiosis University Hospital by IMK Architects in the selection for Public Building Exterior.

Maida Smiles Dental Clinic made the list in the Public Building Interior category while in the Workspaces Exterior category, 40 Beak Street by Stiff+Trevillion Architects was praised for its use of glazed brickwork. It is also a finalist in the Commercial Building Exterior award with Nayara Tented Camp by Luxury Frontiers and Manchester's Express Building by Ben Adams Architects. The shortlist for the best Commercial Building Interior includes Pedra Silva Architects' Dental Clinic, Silo Restaurant by Nina+Co Design and Buckley Gray Yeoman's 77 Coleman Street.

The Workspace Interior category also includes 77 Coleman Street plus ASA HQ by Marco Vanucci and Shell Homage by Rania Elkalla.

The winners will be announced on Thursday 11 February 2021. To see the full list of finalists for the 2021 awards, which are sponsored by the Business Design Centre, Mass Concrete and USM, visit www.architectsdatafile.co.uk

CONTRACTS

RIBA launches guidance for Client Advisers

RIBA has launched a new Professional Service Contract for Client Advisers which outlines the types of services they may offer, as well as providing guidance on how to appoint a RIBA Client Adviser, as distinct from an architect.

The RIBA Plan of Work 2020 "recognises the strategic role of Client Advisers at the very early stages of a project, before the architect and design team are appointed," said RIBA. It added: "RIBA Client Advisors can play a unique role by enabling informed decision-making to ensure successful outcomes. They are professionals who work client-side to support, advise and direct the client through the life-cycle of a project."

Although a Client Adviser will work for the client, they remain independent from the design team, the body confirmed. RIBA Client Advisers are "highly-trained, experienced architects, specially chosen for their all-round design and quality assessment experience and business knowledge."

The Client Adviser Professional Services Contract can be purchased through the RIBA Contracts Digital tool. For more information on RIBA Client Advisers, and projects they work on, please visit architecture.com







MIXED USE

A 'distinctively Belfast' mixed use development

Designed by FCBStudios, a mixed-use development in Central Belfast that includes three exemplar 'Grade A' and SME workspace buildings plus new public realm has received planning approval.

FCBStudios developed designs for the 167,000 ft² Smithfield Yard development for clients Bywater Properties and Ashmour Development NI that "reimagine a future for the Smithfield area," said the architects. By integrating an existing listed building into a series of buildings of various scales and cladding materials, the "grain of the city is re-established where it is currently eroded," they added. Smithfield Yard provides a mix of retail and workspaces that will support local economies and business within the historic Smithfield Market area, as well as providing "vibrant activity to the surrounding streets."

The North building is the largest of the three buildings, with 112,000 ft² of Grade A office accommodation over eight floors with amenity roof terraces, cycle storage and shower facilities. The ground floor's spacious foyer is animated by retail units, maker spaces and a cafe, arranged around an arcade providing access to the central Yard. The building form reflects Belfast's industrial heritage but is designed to meet modern business needs. Steel framed, it is clad in a combination of brick and pigmented, "sculpturally formed" precast. The design provides large amounts of natural light and a "robust thermal envelope," contributing towards BREEAM Excellent energy targets.

The Gresham building is a five storey

brick-clad office block providing 32,500 ft² of Grade A office accommodation over four floors, with ground floor units supporting smaller retail/food and beverage units. A generous floorplate is "readily sub-divisible, offering a more intimate, modern office for Belfast businesses or smaller international companies that are keen to co-locate with larger corporates in the North building."

The Sawtooth Building is three storeys and $5,000 \text{ ft}^2$ and clad in zinc with a distinctive 'sawtooth' roof, referencing the shed buildings that characterised industrial Belfast's 'backlands' of the past, and bringing in north light to the upper floor. The Gresham and Sawtooth buildings' common entrance foyer leads into The Yard, "ensuring that there is activity at the heart of the development," said the architects.

Sam Tyler, partner, FCBStudios said "Smithfield Yard will create an ecosystem of workplaces from large grade A office to informal co-working spaces." The development includes the refurbishment of a Grade B1 listed former 'Butcher's Building' into a series of smaller workspaces and social areas, which reinstates architectural features such as staircases, cornices, mouldings and roof lights.

"In keeping the heritage buildings, the design not only retains the embodied carbon of the existing building stock but keeps the history and character of the area at the forefront. The new build elements are low energy and designed for a long, flexible life."



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STUDIO OPENING

Todd Architects opens Manchester studio

Todd Architects has opened a new studio in Manchester in response to a growing workload in and around the north west.

The new studio joins the practice's offices in Belfast, Dublin and London, where the firm have delivered a diverse portfolio of schemes, including Ballymore's residential and mixed-use development at Royal Wharf in London and the Kings Hall Healthcare Campus in Belfast (hailed as "the most innovative Health and Wellbeing hub in the UK.")

Arriving at the firm to head up the Manchester office, Seamus Lennon will be supported by a team of over 80 people from across Todd Architects' studios. Prior to his appointment, Seamus spent 12 years at award-winning practices in London before joining IBI Group at their Manchester studio in 2013 where he was responsible for the design and delivery of a wide range of projects including The Glassworks, a £180m town centre regeneration project in Barnsley, South Yorkshire, and Outwood Wharf, a 246-apartment scheme in Salford.

Peter Minnis, Todd Architects' UK director of operations, commented, "Business expansion isn't going to be on the mind of many within the construction industry at present, but given our growing commission base in the north west and the opportunities that we feel still exist in the region, we felt that this was the right time to establish a presence in the city." He added, "We can now uniquely offer architectural services right across Great Britain, Northern Ireland and Ireland, providing expert local advice, underpinned by an appreciation of the particular



regulatory differences that will emerge in each region post-Brexit."

The opening of the Manchester office coincided with the practice gaining planning approval for Beechmere Extra Care, a 132-bed elderly care facility in Crewe which will replace the previous home that was destroyed in a fire in 2019.

APPOINTMENT

AHR appoints Langan as managing director

AHR Architects have announced that Anthony Langan is to be its new managing director, following the decision of Martin Wright to retire from the position after 38 years in the role earlier in the year.

The firm's partners voted for Langan to take on the position, and he took the leading role at AHR in November. He joined the practice in 1990 and has been instrumental in developing AHR's extensive education portfolio. Langan commented: "I'm looking forward to leading the practice and building on Martin's hard work, and I would like to personally thank Martin for all he has given and everything he has achieved at AHR."

The new MD added: "The pandemic is accelerating change throughout architecture and construction. I would like to thank all the staff for their exceptional work during this time, the experience has affirmed our confidence in AHR's teams, processes and technology."

Martin Wright joined the practice in 1982 and during his time at the firm he led the Leeds office, AHR's work in the food retail sector and was chairman for the practice's Central European Board, opening the Warsaw office in 2005. Since becoming managing director in 2014, he has driven the company strategy which included the acquisition of residential specialist practice PCKO in 2016.

"I am exceptionally proud of the practice and enthusiastic about our future," said Wright. "I anticipate another challenging 12 months ahead, but also believe we will progress and continue our evolution to ensure we are able to seize upon the opportunities and exceed our clients' and our own expectations."



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RESIDENTIAL PROJECTS

A refurb of contrasts in Cambridge







Neil Dusheiko Architects has completed the transformation of a Victorian semi-detached house in South Cambridge, in the form of a meticulously designed extension which provides copious natural light, plus a contrastingly dark retreat.

The extension "envelopes the house," said the architects, and a series of skylights provide abundant natural light to the interior. A new garden, designed by Jane Brockbank, links the house with the secluded 'Dark Spa'. The homeowners, a young couple with three children, wanted to extend and restore the house which had fallen into disrepair, including creating a home-schooling area as well as a home working space. They also wanted a new-build outdoor leisure space at the bottom of the garden to house a gym, sauna and spa area.

Working closely with homeowners at every stage of the process, the architects struck a sensitive balance between preserving the historic character of the existing building, situated in a conservation area, and introducing new elements which feel "robust and timeless." The team carefully guided the development of these ideas by running design workshops, building physical and digital models to test spatial ideas, and exploring atmospheres created by different materials. They also produced prototypes and mock-ups of the various components throughout the process, rigorously testing the designs in order to provide a sympathetic addition to the existing property while reflecting the personalities of the homeowners.

Neil Dusheiko said: "We wanted to create a new layer around the older shell of the house so that they would read together. We also wanted to design from the inside out, where the form of the extension would be created by a combination of solving environmental issues [solar and thermal] as well as dealing with the practicalities of everyday life of parents who work from home.

The form was designed using computer aided solar studies and physical models; daylight analysis software was used to shape the sloped roof to minimise the impact on the light of neighbouring properties, while maximising natural light internally and allowing views of the existing facade when moving from the corridor spaces to the kitchen/dining spaces. Petersen Kolumba Brick was chosen to harmonise with the yellow stock brick of the original house and salvaged bricks from the demolished wing.

A timber-clad service core is situated in the centre of the plan and hides all the

storage and utility spaces. The customisable home study area can develop with the children as they grow.

A zinc-clad loft extension contains the master bedroom with views over the garden to the north. There is also a craft room, an extra bathroom and walk-in wardrobe on the second floor. The vaulted roofs are planted with sedum, allowing views of greenery out of the first-floor windows.

The garden space includes a lawn, greenhouse, allotments and a meadow garden, and a footpath made of clusters of Kolumba brick and gravel links to the 'Dark Spa' – recalling the materials used in the house.

In the monolithic spa outbuilding there is an "inward focus," said the architects, "a feeling of detachment from the everyday." It houses a sauna, Japanese soaking tub, shower, gym and meditation room with a fold-down bed concealed within the timber cladding. Walls are clad in dark Sapele timber and floors are made of natural black slate.

The outbuilding is clad in Shoi Sugi Ban charred black timber, recalling preexisting buildings in the garden, and making it "the antithesis of the Sun Slice House, although thoughtfully linked by how the materials are made," said the architects. The house's Kolumba clay bricks are

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formed in coal-fired kilns; the cedar cladding of the spa is also made by charring. "The final surfaces of both are the product of biophilic processes that result in beautiful, imperfect surfaces, as described by the Japanese term Wabi-Sabi," the architects added.

The two rows of double-glazed skylights in the extension have been orientated to maximise the solar gain and reduce



the amount of mechanical heating and artificial lighting needed. Alongside this, the insulation levels in the entire envelope have been upgraded to minimise heat loss, with insulated plasterboard to the walls and a combination of rigid insulation and Rockwool to the floors and roof.

Neil Dusheiko said, "This project embodies everything that we stand for as a practice."



He added: "The homeowners really embraced our design process working alongside us, and the results strike the balance that they wanted; a beautiful home which can function for a growing family. The design respects the historic character of the existing building and its surroundings and nods to something new, exciting and intriguing."

SPORT & LEISURE

Plans approved for FaulknerBrowns' pioneering Ice Centre

Plans for London's first ever Olympic size 'Twin-pad' Ice Centre, designed by FaulknerBrowns Architects, have been approved.

The new £30m venue will replace the existing 'Single-pad' Lee Valley Ice Centre which, after 36 years of use, is nearing the end of its operational life.

The facility will include two Olympic size ice rinks with capacity for 800 spectators, plus a gym and exercise studio, a multi-purpose studio, and a cafe. It will double the yearly visitor capacity as well as expand the range of activities that can be run at the centre concurrently.

The site for the new ice centre forms part of the 26 mile-long Lee Valley Regional Park, which comprises a diverse mix of heritage sites, nature reserves and green spaces. The entire site is within Metropolitan Open Land – which carries the same protection as the Metropolitan Green Belt. As a result, the design team was "aware of their responsibility to bring forward a sensitive proposal for the site which protected its unique natural character" said the architects.

"From the outset, one of the main principles of the project was the need to produce as tight and efficient a footprint as possible" said FaulknerBrowns. Locating the ice rinks to each side with the circulation and support spaces between, allowed the building to be reduced to the minimum footprint possible, without compromising the functional layout. Further savings have been made by closely following the curvature of the ice pads with the building line on the external corners.

The building has been designed with a "heavy weight plinth" that responds to the flat surroundings and "anchors the building within the landscape" said the architects. The plinth forms a podium, above which sit the 'ice halls,' which are contained internally with insulated cladding panels to create two environmentally controlled "fridges." These will be wrapped by a



copper-hued, metal-clad band, separated from the plinth, with a curving lower edge revealing the internal volumes.

The new centre is designed to be highly sustainable as well as to provide "environmental improvements that will transform the area," said the architects. Energy efficiency will be maximised through high performance insulation and air source heat pumps. Roof mounted photovoltaic panels will generate energy, and melted ice will be filtered through reed beds and then used to create new wetland habitats on site to enhance biodiversity.

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ASK THE ARCHITECT

Alia Beyg of Aqua Architecture answers *ADF*'s questions on running a 'niche' practice, and what the future might hold for her firm



Alia Beyg of Aqua Architecture

WHY DID YOU BECOME AN ARCHITECT?

From a young age I loved to draw, and I became fascinated by design, so a career in architecture allowed me to do what excites me. Furthermore, architecture that improves the environment for everyone – regardless of socio-economic status – really resonates with me.

WHAT DO YOU LIKE MOST ABOUT THE JOB?

Creative and 'out of the box' thinking is my favourite part of our design process. The Aqua design team and I work meticulously on our layouts and designs to enhance what we create, working to improve both user experience and net value. We translate that into our practice's mission, which is to maximise value with efficiency and smart design.

Our Herringswell Gym residential conversion, in Suffolk, is a good example of where we have added value and maximised the design efficiency through changes to the layout and planning of the approved scheme. This timber-cladded conversion of a gym building has been further enhanced by incorporating green strategies, such as a courtyard garden, green terraces, and bat homes.

WHAT IS THE HARDEST PART OF YOUR JOB RUNNING A 'NICHE' PRACTICE?

Creating exciting architecture has always been the company backdrop, however integrating creativity into basic low budget I believe good communication and coordination is a key focus in my daily work life, not only for our clients but also for the benefit of the end users

projects can often be a challenge. We overcome this through our design process, which starts with creative exploration of ideas to determine the best proposal within the project context. Despite limitations from commercial boundaries, we manage to make each project unique, with its own brief. As a result, our practice has been fortunate enough to take forward a wide range of project types within the residential and mixed-use sectors.

HOW WOULD YOU DESCRIBE YOUR MODUS OPERANDI AS AN MD?

I always like to encourage teamwork and innovative thinking. Creating design excellence is never an individual task, hence why I collaborate, advise and mentor the teams around me, in order to create collective solutions. Without input from my associates and colleagues, the proposals would not evolve to their full potential and utilise all the talent of the workforce. As a result of this, I believe good communication



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We have delivered several unique projects, each exciting and interesting in its own way; I am proudest of the diversity of our projects, styles and concepts

and coordination is a key focus in my daily work life, not only for our clients but also for the benefit of the end users.

WHAT'S BEEN YOUR PROUDEST ACHIEVEMENT SO FAR?

We have delivered several unique projects, each being exciting and interesting in its own way. I am proudest of the diversity of our projects, styles and concepts.

My personal favourite project currently is the Premier Gate development, located in Woking's town centre. This scheme integrates green design strategies to create a large massing with a conscientious approach to climate change and quality spaces.

HOW HAS WORKING REMOTELY BEEN SO FAR FOR YOU, AND NAVIGATING THE PANDEMIC?

These are challenging times, which has forced us to think and work differently as a team. The work environment changed drastically over the past few months, but we very quickly transferred the team to working remotely, sharing and communicating via technology, and minimising the impact of coronavirus. We actually found it to be a more efficient way to work, cutting out travel time and cost. Although it makes the process slower, I may consider these changes over a long term perspective to enable the team to be partially working from home, or having 'home work' days.

At the same time we are aware that the industry is slowing down drastically, with little certainty for the future, hence we would like to work efficiently to ensure that we make it through this time as a team.

DO YOU TAKE A PROACTIVE OR REACTIVE APPROACH TO CLIENTS' BRIEFS?

Always both. The balance between high quality design, innovative and green design, as well as keeping within budget, is challenging. In addition to aiming to exceed clients' expectations, we integrate proposals from other specialist consultants to provide good multidisciplinary coordination. As a result, delivery of our projects are carefully orchestrated to inspire as well as comply, within budget constraints.

IS YOUR ROLE AS A CLIENT ADVISOR AS IMPORTANT AS YOUR ROLE AS A DESIGNER OF STRUCTURES?

One cannot be done without the other, as they are deeply connected. Our residential projects are mostly private residential blocks, or mixed-use schemes, hence we are designing for private developers as well as their local communities.

WHAT IS THE MOST SATISFYING SECTOR TO WORK IN CURRENTLY?

All sectors have their own excitement. However, our current focus is sports and hospitality combined within housing schemes, for a more holistic approach to the work-life balance. Recently we are advising clients to consider a different approach to their development, to provide an asset for the community as a whole.

HOW DO YOU GO ABOUT INTEGRATING RESIDENTS' VIEWS IN SOCIAL HOUSING DESIGNS?

Public consultations during the planning stage, as well as design reviews with local authorities enabling input from local communities, allow us to refine and redesign schemes to a higher quality.

Social housing has similar parameters to the larger housing schemes we deliver. For me this is all about practical applications of design efficiency, housing standards, lifetime homes, and sustainable living, to name a few. The design approach should reflect what's best for the community, never be about just visual impact alone.

Our next big challenge will be to expand the business and go international, as well as continuing to be greener – these are two priorities for us

WHAT IS THE NEXT BIG CHALLENGE FOR YOU?

Our next big challenge will be to expand the business and go international, as well as continuing to be greener – these are two priorities for us. We are exploring potential projects with our international partners. We would also ike to retain a green design focus, considering climate change and sustainable impact on all our schemes; the main challenge is to deliver these goals within commercial constraints.

IS THERE POTENTIAL FOR ARCHITECTURAL BEAUTY IN MICRO-HOUSING?

Micro-housing units are essentially self-contained living spaces with efficient layouts, hence the beauty and flair is mostly in the functional detailing. Combined with good indoor and outdoor amenities, they present a co-living urban lifestyle. The architecture should ideally portray this idea, however, this is not the only solution, or an ideal solution to housing demand.

As a design studio we have studied many typologies and styles of residential developments. On each project, the team spends a lot of time exploring various ideas and options – on 2D and 3D platforms, as well as sketching and refining the scheme. This process leads to the architectural beauty and flair we aspire to, from micro units to mansions.

DO YOU ANTICIPATE MORE Collaboration with other practices?

Certainly. From the start we have focused on creating multi-disciplined consortiums, including collaborating with specialist architects, to bid for large-scale projects. Building on my experience at large international practices and the RIBA, I would combine our practice expertise with other industry specialists to create expert design teams.

WHAT ARE YOUR HOPES FOR THIS YEAR AND BEYOND FOR YOU AND YOUR PRACTICE?

Currently we are completing several projects that are going from detail design to construction, however we anticipate some delays considering the current circumstances.

We hope the future will be exciting for Aqua, as we continue to reach our business goals and objectives, and take on the global arena.

Alia Beyg is founding director and CEO of Aqua Architecture



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PRACTICE PROFILE



HLM Architects

James Parker speaks to HLM's chairman Richard O'Neil to find out how 2020's Architectural Practice of the Year has maintained a keen focus on 'social architecture' over nearly six decades, while continuing to broaden its horizons

LM is a longstanding fixture in the AJ100, having been active for well over 50 years, and picking up awards regularly for its projects, particularly in the healthcare and education sectors.

The firm, which now numbers five studios across the UK, continues to have a strong ethos of social responsibility and a reputation for high quality work in the public sector. This is embodied in its 'Thoughtful Design' maxim, that helps its architects focus on and enhance users' "emotional response to the built environment."

HLM's origins go back to 1963, the year The Beatles released their debut album. Meanwhile, architectural students David Hutchison, Graham Locke and Tony Monk won a design competition for the new Paisley Civic Centre to the west of Glasgow, which led to them forming Hutchison Locke and Monk, in 1964.

The centre was the second largest public sector project since the Second World War and, according to current HLM chairman Richard O'Neil, "the iconic building became the foundations from which our social architecture philosophy would grow." He says that the firm proceeded to build its reputation across its key sectors via not only focusing on solving clients' challenges, but being "mindful of the impact that design can have on people, communities and society." "Since the practice was founded," O'Neil tells *ADF*, "our design philosophy has always put people at its centre, and we have a proud history of producing architecture that helps improve people's lives." He asserts: "We're driven by a sense of social purpose, it's at the heart of everything we do."

He explains how the firm's 'Thoughtful Design' approach aims to exceed clients' briefs, using innovation to think about users' emotional responses, and cites the wide range of awards the practice has picked up as evidence of the success of this. Most recently, it was crowned Architectural Practice of the Year at the 2020 Building Awards, as well as Employer of the Year at this year's AJ100 Awards.

While the approach has stayed very similar over the years, the technology available to help HLM architects "enhance the human experience" of designs has changed dramatically. O'Neil says: "We believe that the successful application of digital technology will transform the design and construction industry and more generally, bring significant economic, environmental and social benefits for all."

When it comes to spreading the net of opportunity within the firm, in 2019 it announced a new board structure. Managing director Karen Mosley commented at the time: "This creates more opportunities for some of our most experienced team members and rising stars across the country."







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Currently, 47 per cent of HLM's architects are women and four of the five studios are led by women

Diverse methods

HLM's five studios are in Glasgow, Belfast, Sheffield, Cardiff and London, all having a dedicated studio lead, and working collaboratively on projects to draw on the practice's pool of expertise. As part of meeting the aim of ensuring diversity among the staff, HLM puts particular focus on "social mobility," says O'Neil, "inspiring people who might never have thought about a career in architecture or even studying at university." Students are supported through their studies with year out placements, and the firm works with the University of Sheffield as a Collaborative Partner Practice.

The chairman says that with the aim of creating an "inclusive and inquisitive learning environment and helping every single person to flourish, achieve their personal goals and feel valued and supported," HLM runs a Diversity, Inclusion and Belonging (DIB) Group. It is also part of the Architecture Trailblazer Group led by Foster + Partners, which has developed two architectural apprentice standards, and "seeks to achieve the right gender balance from the most junior level upwards." In addition, the HLM Academy provides "tailored training and career progression" and allows all staff the opportunity for innovative compressed 'nine-day fortnight' agile working.

Coping with Covid

How has this important firm (which currently sits at number 33 in the AJ100) coped with maintaining workflow in these unprecedented times? Its scale has helped its resilience, says O'Neil: "Being split across five studios, we already had a culture of 'working smart' and in an agile way as one team."

He says that a proactive approach to the situation (led by the IT and HR teams) meant it was able to quickly set up the infrastructure needed to "protect our assets and ensure we were able to continue business as usual with minimal disruption." The chairman adds that despite the challenges, "we have found that we are helping clients, partners and consultants in new ways, enhancing their digital environments and discovering how best to communicate and collaborate."

Some of the momentum is down to clients' positive approaches too, but the picture is mixed: "We've got some really forwardthinking clients who were cracking on under their own steam, but some have found the situation more difficult."

One of the innovations HLM has recently come up with to continue to support its design process during the ongoing 'new normal' is its 'Thoughtful Design Toolkit.' O'Neil reports that this has enabled stakeholder consultation and design team meetings to happen remotely, and allowed projects to progress.

It was developed as a suite of tools that "uses technology and data to help designers work with more confidence that their proposals will deliver the needs of building users." The tools use data to "advance designers' understanding of what people want and need from the built environment," says O'Neil, while helping clients make better-informed decisions about targeting their investment.



Wellness to the fore

I asked O'Neil how much of a challenge it has been to maintain staff's wellness, as well as motivation this year. He asserts that wellbeing has always been high on the agenda, and 2020 has been no different; "our HR team have been amazing at launching new ideas and initiatives. In fact, everyone across the business is playing their part in cascading news, checking in with their colleagues and coming forward with new ideas."

Each studio director has a call with their studio team on a Monday morning to update on what's happening that week. Staff have virtual tea breaks at normal times, and a group within the firm has taken on creation of its 'virtual socials,' which are usually "quite imaginative," says O'Neil. "They've gone to a whole new level using technology, graphics, and morphing of imagery!"

A recent addition to the working week was 'Walk-out Wednesday,' where staff were encouraged to see how far they could walk in 30 minutes at lunchtime, and later share photos as evidence. "We chatted on Teams as we walked," says O'Neil. A mental health first aider has also run mindfulness sessions, and given staff "an abundance of physical, mental and healthy tips."

Key projects

Notwithstanding Covid, the chairman hails 2020 as having been an outstanding year at HLM in terms of creating new digital design and engagement tools as well as securing significant architectural design projects, "particularly those which act as a catalyst for regeneration in innovation districts."

He cites these projects as being "the future," and picks out the National Manufacturing Institute Scotland, a £65m collaborative research facility that was designed with the University of Strathclyde, the Advanced Forming Research Centre, Catapult, Skills Development Scotland and Scottish Enterprise. Another key recent scheme is Ysgol Pen Rhos, a new £10m timber-framed school in Llanelli, which won the National RICS Social Value Award 2020.

Finally, Innovation Centre 7, a £25m new zero carbon innovation centre for the University of Keele, is a sign of things to come, having employed HLM's recently developed in-house environmental performance modelling tools.



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THE VILLAGE, JOHNS HOPKINS UNIVERSITY, BALTIMORE BIG-BJARKE INGELS GROUP

BIG has been selected as the designer of the new Student Centre for Johns Hopkins University, in Baltimore, Maryland. The competition-winning design for 'The Village' is an "open, modern facility envisioned as a social engagement hub for all members of the Hopkins community," said the architects. The 150,000 ft² building negotiates the sloping grade of the site to allow direct entry from all four levels, while maintaining and providing several accessible routes. The entrance will open into a "cascading interior landscape of dining, performance, lounging, and socialising." The mass timber structure will provide a warm and acoustically comfortable environment as light filters in between the photovoltaic roof panels, which will help to meet the university's larger sustainability goals. The new Student Centre will satisfy the university's "long-acknowledged need for a true non-academic gathering spot," and is set to be completed by autumn 2024.



SHUIFA INFO TOWN PROPERTY EXHIBITION CENTRE, CHINA AOE

The main structure of the ShuiFa Info Town Property Exhibition Centre, in Jinan, is assembled from white perforated panels and was designed "like a mountain waterfall, combined with green microtopography" said the architects, to give the building "refinement and cultural significance." A second layer is set outside the main structure, enveloping the building within the perforated plating. The curtain wall sections are slanted, and interlaced inside, and the gap between the sections forms the entrance. The interior of the building is obscured by the white perforated plating, and as night falls, lighting shines through the perforated plates.



GRAND MOSQUE PRAYER HALL, ALGERIA KSP JÜRGEN ENGEL ARCHITEKTEN

KSP Jürgen Engel Architekten has announced the completion of the Prayer Hall of the Grand Mosque in Algiers, the world's third largest mosque. The interior of the Prayer Hall with its central dome is also divided by pillars, which reach heights of up to 45 metres; the space is able to host up to 36,000 worshippers. Aside from the dome, which measures 50 metres in diameter and reaches a height of 70 metres at its apex, the major landmark of the complex is the minaret, which soars to 265 metres, making it not only the highest structure in Africa, but also the tallest minaret in the world.



AQUATICUM WATERPARK, HUNGARY BORD ARCHITECTURAL STUDIO

Aquaticum Waterpark in Debrecen, designed by BORD Architectural Studio, has reopened as a "unique multidimensional waterpark" whose design focuses on the "life-giving aspect of water and a forest environment." Water and flora appear on both horizontal and vertical surfaces and create an unusual composition of spaces which "introduce the visitors into this water world in a truly unique way," said the architects. The long, single-storey entrance connects a new pedestrian pathway and the waterpark like a bridge. The entrance building includes the changing rooms, the restrooms, the shops and a colourful food court. The long, flat volume of the building "settles in the landscape," and the building's green roof resembles the shape of a wave.



MITOSIS, AMSTERDAM GG-LOOP & ARUP

GG-Loop, working alongside Arup, have released their vision for Mitosis, a "multi-functional regenerative collective housing complex" in Amsterdam. GG-Loop's vision was to "deepen the understanding of the relationship with nature" in the design of the complex, which will be composed of prefabricated CLT modules, and explores how buildings can "grow, evolve, heal and self-sustain." Due to its flexible structure and grid formation, Mitosis will be able to host a variety of typologies that are customisable to the residents' needs. The complex is made up of a combination of off-grid single-family detached houses and high-density mixed-use urban clusters that incorporate public functions such as education, leisure, wellness, and retail. Mitosis will generate spaces that "respect both the environment and its inhabitants, reconnecting both in a balanced ecosystem."



ASTRAL TOWER, BULGARIA STARH

Astral Tower by STARH is the tallest building in Varna, Bulgaria, reaching 140 metres. The mixeduse project's design was developed in two volumes of a similar size – a horizontal and a vertical one. The building's rounded corners and attenuated vertical tectonics "give the illusion of a disappearing building silhouette," said the architects. The facade has integrated LED lighting strips along all vertical elements, and using light design and engineering they are turned into changing abstract animations and light shows at night. The "classic structural scheme of a tube in a tube" allows for a full 360-degree view from all 40 floors of the Black Sea and the city.

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THE OLD DAIRY BLOOMSBURY

City limits

Set in a triangular mews in north London, a quirky mixed-use project offers privacy and bright spaces despite a tight urban context. Jack Wooler spoke to architects Tom Byrne and Simon Lilley to get their take on the scheme

The Old Dairy is a mixed-use scheme located in a tight triangular parcel of land tucked away in a private mews, not far from the bustle of King's Cross station. Its name comes from the nowdemolished building it replaces – a defunct 1930s dairy.

Covering just 0.2 hectares of land, the project offered multiple challenges, from its constrained size, to site access and services, to the listed structures that enclose it which required careful treatment.

Now completed and sold, the project includes two commercial units to the west of the site, and a metal-clad terrace to the east, the latter made up of two houses and 13 apartments all arranged over three storeys.

Simon Lilley, director at executive architects Stanhope Gate and Tom Byrne, senior architectural technologist, at the firm, met *ADF* to discuss how the project's discreet design tackled a dense context, and how both ends of the Design & Build contract were hampered by that context.

Form

Approaching the scheme from the overlooking St George's Garden – a former 18th-century graveyard – the industriallooking zinc-clad homes lie below, the classic London yellow stock bricks of the Grade II listed Regent's Square rising behind its shifting roofline.

Referencing the original dairy building's peaked roofscape, the homes required careful design consideration to ensure they fitted harmoniously into these complex as well as compact surroundings.

The building's distinctive envelope displays folded triangular extrusions of interlocking panels intended to reflect the site's industrial heritage, as well as blend with its leafy context. Making as much use of the tight footprint as possible, the homes offer generous floor to ceiling heights, especially in the lower ground floors, and a range of garden spaces and inset roof terraces. They are punctuated by long windows, resulting from "a highly considered daylighting strategy."

Inside, the interiors – designed by architects 1508 London – continue the stripped back, industrial feel of the building's exterior. The homes offer a light timber palette with wooden floors throughout and exposed concrete staircases in each of the two townhouses, as well as high levels of discreet glazing – to introduce plenty of light while crucially keeping onlookers' gazes out.

An organic feel

The design of this project was initially headed up by another practice, S333, who provided the initial concept and took it through to an approved planning application – originally for two commercial units and five houses. Stanhope Gate were appointed later to revise the project, "changing it within the spirit of what had already been designed," explains Simon, "but elevating it."

He tells me that the main design concept remained the same – to retain the character of the site's former dairy. The Stanhope team however rearranged the plan and achieved new planning permission to increase the site's density, as well as privacy.

To retain a link to the former building's character, the practice wanted to introduce an "organic feel," to the design, which is most evident in the "faceted form of the plan," says Simon. "It really responds to its context, which is very green," he says. "The vertical nature of the tree trunks for example was an inspiration in the design process, and part of the idea behind the vertical folds in the cladding."







Metal envelope

While the previous application did include metal cladding, the scheme's envelope was originally specified to be bronze. Simon tells ADF that the Stanhope team instead opted for a Pigmento Brown zinc from VMZinc, in preference to bronze for both budgetary reasons, and because "with bronze you get a transitional period in the weathering process where it doesn't look great."

The architects looked at polyester powder coated aluminium too, "which would have been cheaper," he explains, "but it felt a little too industrial." They decided in the end that the zinc material chosen "had more depth" to the surface, "particularly when you see the light falling

on it – it's a little more lively." Though successful and visually impressive the architects tell me that

impressive, the architects tell me that there were many challenges in the creation of this envelope, including trying to achieve the concept in reality.

"If we had a joint in the wrong place," Simon says, "if the wrong type of joint was used between panels, or if there had been a profusion of heavy rivets to hold it all together, it would have killed the purity of the concept."

Tom tells me that to address these concerns, the architects engaged with the cladding manufacturer VMZinc before they went into the revised planning process to ensure it could be built as designed: "They put a specification together before we went to the contractor for pricing – they even recommended a thicker gauge of metal to prevent a waning effect – it's a lesson we've learned before; it's crucial to work closely with manufacturers."

Simon adds: "The devil's in the detail, It can make or break a project."

Context

Besides just the cladding, great thought was given to the project's context, with the architects and planners focused on balancing residents' needs with avoiding too much building volume.

When amending the plans, Simon tells me that gaining the biggest size and presence possible for the building on the site drove the concept in the client's mind, but there were many challenges to achieve that in such a small footprint in a busy part of the city.

"We had to have a buffer to prevent overlooking, while being careful to avoid overdevelopment, which is often a problem in central London," Simon explains.

It was imperative to planners, the practice, and potential buyers alike that the design ensured privacy for residents. As such, the building was set back from the perimeter of the original building, to prevent overlooking from or to the gardens or the adjacent terrace. Much of the glazing was specified as tall but modestly scaled apertures – which just punctuate the facade – so that residents and outsiders are always at an acute angle of each other (especially towards the park), and along the northern boundary the original dairy building's gable wall was retained to ensure that all views from that side were protected.

Gaining this balance reportedly took several months to achieve, including lots of back and forth between the project team and Camden Council's design office.

Daylighting

Of course, with such a strong emphasis on designing for privacy, consideration had to be paid to ensuring daylighting wasn't compromised. Utilising Velfac glazing systems, the architects aimed to introduce as much natural light as possible without hampering the privacy aspects the design had achieved.

On the lower ground floor especially, Simon explains, "the idea was to maximise the amount of glazing we could get." The interior architects specified white walls, enhancing the available light levels to the maximum.

To mitigate the extensive glazing here, the original scheme had a system of adjustable louvres, but Simon tells me that Stanhope believed this to be "a bit fussy and prone to failure." Instead, the practice specified simpler screens, as well as the angling of the glazing, which combined reportedly aid the sightline issues "significantly."

To further increase the natural l ight available where it was needed, skylights were specified. "Had we not introduced these," Simon explains, "I think it would have been a bit on the gloomy side in places."

He summarises: "Each level and home responds to different requirements, ensuring that no one's missed out."

Collaborative construction

Though it wasn't without its challenges, the construction process behind the scheme was "a collaborative success," according to the architectural technologist.

"In the beginning, we discussed various methods and materials for the structures themselves," he continues, "we considered precast planks at one point, for example, but getting them in was going to be difficult, and we also looked at not using as much concrete, but the extra time it would take didn't match the client's aspirations."



After talking to the multiple contractors involved and deciding on the best route forwards together, the finished homes were formed with a reinforced concrete frame from the basement up to first floor level, with a steel frame over to form the pitched roof.

One structural challenge presented in this construction process was the retention of the existing north and west walls, for which the team undertook reinforced concrete underpinning. Alongside this, contiguous piling close to the south and east boundary was necessary to allow the basement works to progress with minimum disruption to the adjoining structures, which were being monitored throughout for any movement.

"If the wrong type of joint was used, or if there had been a profusion of heavy rivets, it would have killed the purity of the concept"





Simon tells me the conserved wall on the park's side caused further issues throughout the project. There was a lot of planting, weeds and trees that had seeded between the wall and the two skins, so the team had to peel this away to expose what was left, as well as remove damaged bricks, and replace it with lime mortar and reclaimed bricks. In addition there was the challenge of conserving the wall as best as they could while minimising the cost of the process for the developer.

Energy use

Another challenge in the implementation of the project's design was integrating services, given the highly constrained nature of the site. Tom explains: "Placing the services was difficult – pushing the rainwater tanks back without doing much deep excavation (specified in the planning process) meant that we didn't have space for a transformer, and we had to go back and forwards a few times to ensure that we wouldn't need one."

The architect says the team's design was right on the threshold of regulations in terms of requiring a transformer, and as such had to retrospectively design an energy strategy to stay within the parameters. Where the original scheme utilised ground source heat pumps, the architects instead had to substitute a system with a lower electrical demand, which ended up being a communal gas air absorption heat pump.

Despite this perhaps slightly less ecological specification, the team hit Code Level 4 for the homes, and received a high BREEAM score of Very Good for the commercial units. The latter however was not final, as the team only constructed an "insulated shell," and this necessarily changed during fit out.

Enabling them to reach this target were various sustainable methods, including high U-values in the walls, high levels of airtightness with insulation tape and seals to the windows, and low water usage fittings in the bathrooms and kitchens.

Success

Looking back, the architects both view the project as a "huge success," especially in the face of its many challenges.

"It boiled every inner city complexity into one," says Tom. "Party wall awards, site access, ecclesiastical exemptions, conservation, drainage, contaminated soil... the list goes on."

According to Tom and Simon, however, it was all worth it, and the client was reportedly very pleased with the results.

"The fact is that their units have sold, so they were obviously happy, but even far before that, the planners and the potential residents were hugely supportive of the scheme and the spaces we wanted to create," says Tom.

"It definitely stretched us," Simon adds, "but the result says it all."



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WOODCOTE HOUSE, UPHAM

BUILDING

A new tradition

A new home in a secluded corner of Hampshire combines a highly contemporary form with traditional vernacular touches. James Parker speaks to one of the two architectural practices involved who managed to provide a design that worked for client and planners

estled in a secluded valley in the South Downs National Park is a strikingly modern house, whose contemporary design displays vernacular touches such as brick cladding, but also remains something of a coup for its designers. Planning permissions are rare in such a setting, however despite its crisp, rectilinear looks, the building made it through on appeal.

Located just north of the village of Upham, near Winchester, Woodcote House replaces a series of brick buildings that had fallen into disrepair, including Herdsman's Cottage, the original dwelling. Work started in 2017 on a new fourbedroomed house, designed up to RIBA Stage 3 by Winchester practice Design Engine, with the completed design delivered by Paul Cashin Architects.

Together with the small cottage, a garage and barn were demolished to make way for the new house, its footprint covering the combined square metrage of the buildings it replaces. The planning permission that got through at appeal also included a basement, which would have no visual impact, however this was not built in the end, as it wasn't needed by the clients.

The couple, involved in the agricultural heavy plant business, already owned the site and buildings, which sit "in the middle of nowhere," says delivery architect Paul Cashin.

The derelict state of the existing buildings meant that it would not be cost effective to refurbish them. However, the push to create a low-profile but substantial, monolithic modern home – one which would fully exploit the great views – was driven by the architects.

The clients contacted Design Engine, a well-known practice locally, having seen director Richard Rose-Casemore give a lecture, and asked him if the firm would be interested in taking on the project. However, with the firm normally specialising in larger schemes particularly in the education sector, and substantial overheads, they decided to offer it to former Design Engine architect Paul Cashin, who had formed his practice in 2012, to deliver the precisely detailed design. "I have a good relationship with them, we have collaborated on a number of projects," he tells *ADF*.

Avoiding the main contractor route in favour of a local builder and other subcontractors proved to be a bonus, with the building firm (Wickham-based Baker Newman) producing the goods in terms of attention to detail for a high-end finish. Cashin knew of them after they refurbished a townhouse for a friend, and thought "if this couple is willing to put their faith in a young architect maybe they'll do the same with the builders." He is full of praise for their work, also that they were "really flexible about the costs, and the programme."

The original plan was for the builders to tackle the envelope, however after introducing them to the owners, "they ended up doing the whole project and did a great job." They did it "on a kind of construction management, informal basis; a labour plus materials approach, and open book," says Cashin.



"Nothing in the house is symmetrical apart from that loggia window"





Having designed a dramatically modern brick and glass structure however, the task was to get it through planning, which was not to be underestimated. Planning was refused at the first time of asking – "you just don't get to do that in the South Downs," says Cashin. It was won on appeal with the help of a planning consultant, who made the argument that it was not a brand new dwelling but a replacement. This 250 m² replacement would be around 250 per cent bigger than its predecessor on the site, with the council's nominal limit being around a 35 per cent increase, says Cashin.

A further argument was made that helped tip the balance, namely that the footprint rule was based around creating 'affordable' dwellings in the region, but "no-one was going to be able to claim this was affordable housing stock," says Cashin, "so the policy was void." He counsels: "You don't argue against the policy, you argue with the reasons behind it. If you can do that, the inspector has a bit more subjective awareness."

Form

Inspired by contemporary European houses, such as in Switzerland, Holland and Belgium, the architects set about creating a striking, minimalist form that would also hunker down in this gently ascending hillside site, with trees sitting behind it. Replacing the barn and double garage would be a "low-profile single storey element which tries to bury itself in the hill a bit," says Cashin.

Attached to this, there is a two-storey volume which stands where the demolished cottage was. From a distance, the silhouette would be similar to that of the former Herdsman Cottage as a result. However, the house departs from tradition in many respects, particularly its flat-roofed boxy profile, forming a somewhat unexpected contrast with the brick elevations.

The monolithic nature of the resulting composition was fully intentional, presenting an abstract, "sculptural" overall look, says Cashin, the building being viewable from all sides due to its isolated location. The long, "low slung" rectangular ground floor is terminated by the cuboidal block housing the bedrooms, which cantilevers to the north side. In addition, "openings are carved" out of it, adding to the sculptural effect, particularly the rectangular oriel window that sits at the top of the stairwell framed like the other apertures by very slim, dark aluminium. Cashin says that looking at the





work of Belgian architect Vincent Van Duysen helped "give a steer on how to get the finer details right," and the precise framing of the brick elevations using the specially fabricated aluminium copings shows the fruits of this attention to detail.

The low-rise section of the building, which sits further down the hill and is accessed externally by short flights of steps to north and south, largely comprises a loggia which encloses the open kitchen/dining/living space. The glazed door folds back to open four central panes – two are fixed at the edge – allowing access to a sheltered patio and outdoor dining area adjacent to the entrance on the south side, and a large lawned area to the north. In total there's around a 7.5 metre possible aperture on either side.

Despite the apparently very formal nature of the plan, "nothing is symmetrical apart from the loggia window," says Cashin.

Materials & engineering

While the focus was on creating a dynamic, modern family home, at the same time, says Cashin, "we were always conscious of trying to bring the old house into the new." Therefore, brick was the obvious choice for the exterior, with the geology of Hampshire being of chalk and clay, and a Michelmersh Freshfield Lane rustic brick was chosen for virtually the entire cladding, bar a couple of aluminium panels.

However fitting with the designers' aim of "looking to the past to help inform contemporary design," the joints were raked out by 10 mm to offer greater relief to the walls – "much more depth and variety," says Cashin. He adds: "We always think of every detail, even at the very beginning of a project."

The structural engineer specified a steel truss frame, due to the need for a cantilever, and some large spans (up to 11 metres). The walls are brick, but some brick slips were used, such as for soffits. The cavities are extra-wide at 250 mm, hiding all the guttering within them to avoid impeding the exterior aesthetic, as well as housing copious insulation to counteract the large amounts of glazing.

The building has been designed to meet Code 4 of the Code for Sustainable Homes, with nighttime purge ventilation thanks to the 8 metre high stairwell to an openable roof light and a tilt/turn window to the north side of the ground floor, providing a chimney effect. Water is supplied from a borehole and aquifer.





PROJECT FACTFILE

Architects: Design Engine (Stages 1-3) Delivery architect: Paul Cashin Architects (Stages 3-5) Contractor: Baker Newman Building Structural engineer: Gyoury Self Landscape designer: Andy McIndoe Building control/Code 4 assessors: Butler and Young Lighting designer: Intelligent Lighting Solutions



'I was always conscious of trying to bring the old house into the new"

Internal arrangement

With great views to the north and west, glazing was maximised in this project, particularly for the living areas on the ground floor. The spaces here are organised in a simple, linear way around a central corridor that's open to the living space and which forms a spine leading from the front door at one end to the stairs at the other.

There is an uncovered car port to the west of the house, which, says Cashin, "could be converted to a further reception room later on."

Interiors

The open plan layout "supports modern living," say Design Engine Architects, but it can also be "conceived of as a series of distinct zones." Ascending the stairs, the rooms "increase in intimacy and privacy," culminating in the first-floor master suite.

The ground floor is split level due to the gradient, and up just a few steps of the staircase are the two ground floor ensuite bedrooms (one of which is currently being used as a home office). The staircase leads up the oriel window which has a view to the east, and two bedrooms with ensuites on the first floor. The split level helps add to the feeling of privacy, with the lower staircase marking a boundary between living and sleeping.

The property has bespoke joinery such as for the fireplace and bathrooms, and curtains, on silent tracks by Silent Gliss. Despite the fact that the property is not overlooked, the owners wanted some ability to control their interiors, and moderate heat loss. They also offer security benefits, says Cashin, "they can shut the whole house down when they are away travelling which they do a lot." He is a firm advocate of bespoke curtains over blinds, as they are "much more luxurious," and believes they are "coming back" as an option for contemporary properties. "Interior designers often like them, they keep reverberant sound down, stop heat escaping and wind coming in, and they can be quite pleasant to look at or hidden away in a pocket."

The glazing to the bathrooms is breathtaking in that it is completely clear, and floor to ceiling in the case of the master ensuite. Cashin: "Technically, it should be obscured, but there's no one to look in!" There is the concession of some brise soleil to shield occupants of the freestanding bath from the road to the north west, otherwise there's an uninterrupted view of the landscape.

The precise details to the interior are perhaps most visible in the timbertreaded staircase, which has a recessed handrail plus a shadow gap, providing an unspoilt minimalist view up and down, and avoiding snagging clothes. There are no architraves around the full height doors, but shadow gaps instead. There is space between each riser and the treads are illuminated with soft LEDs to provide a low light to the space. "It took a lot of time to get right, and a lot of conversations with the builder, but they did a great job."

The colours of the interior are a "yellowish white" which the client preferred, and which the architects were "slightly worried about," but now "really like." The ceilings are level throughout the spaces, so there are sharp lines, which the colour softens. The clients have provided their own, slightly quirky furniture, acquired from their global travels.

Conclusion

As well as achieving a decidedly modern building in an unspoilt rural landscape, the project is notable due to the trust placed in the architects by the client to have free rein, and the level of commitment to quality which repaid this trust. "If you had a client that was in any way controlling I don't think it'd be anywhere near as good." Cashin adds: "It was good they knew they didn't know anything, them being honest about it was a real strength."

The collaboration between client, architect and contractor was "very open," says Paul, "everyone worked in a very candid way. Projects can break down if people don't trust each other.

Part of the reason Paul Cashin was very thankful for the mutual trust which characterised this project was that it was a very early one for his practice, and he had little track record with which to convince the clients. "I didn't have any work to show them when we were appointed, everything else we had done hadn't been at that level. So we had to rise to the challenge, and we just got stuck in."
Kemper System bolsters technical sales team



Kemper System, the cold-applied liquid and built-up roofing system specialist, has appointed a new Technical Sales Manager. Tom Wilson from Tamworth, Staffordshire, joins the team to help build client relationships and offer technical advice and guidance both on and off site for projects in the south of England – from Stoke on Trent down to Cornwall. Bringing with him almost a decade of experience, Tom worked his way up at tapered insulation provider, Gradient, starting with the production team and moving up to the technical department as a CAD Technician, and then onto the Sales and Commercial team (Internal & External) at the company. In his new role as technical sales manager at Kemper System, Tom will be responsible for ensuring projects are running smoothy with the correct product specification, and guide specifiers and contractors through any challenges during design stage, as well as on site during, and post installation. Commenting on his new position, Tom said: "Kemper System is such a well known and trusted liquid waterproofing manufacturer, it's a delight to join their team."

enquiries@kempersystem.co.uk www.kempersystem.co.uk

Stertil Dock Products launches coloured dock shelters



Following successful use throughout mainland Europe, **Stertil Dock Products** now offers bespoke coloured curtains for its range of dock shelters to customers in the UK.

The Stertil range of dock shelters is used extensively to support loading and unloading operations at thousands of installations including distribution centres, warehouses, manufacturing sites, retail outlets, transport hubs and many other locations. In these applications, the shelters provide a universal and flexible solution by ensuring optimal sealing on vehicles of varying types, heights and widths.

Having earned an enviable reputation for quality and reliability over many years, Stertil has become increasingly involved in designing and developing bespoke solutions to help promote customers' branding. This has involved the incorporation of logos and colour schemes to reinforce corporate identities and the introduction of bespoke coloured dock shelters is a continuation of this process.

For more information, please visit the Stertil Dock Products website.

0870 770 0471 www.stertil-dockproducts.co.uk

Fastflow prepares for the future



Fastflow Group has restructured its business in a move designed to ensure the company is 'fit for the future' and able to adapt to the changing marketplace. It will also cease using the Fastflow Group name and instead be known as **The United Living Group**. It follows

the successful merger last year and the creation of a new business. The Group will have combined revenues for the financial year ending 31st March 2020 of £400m, with 2021 revenues budgeted to be £420m. The new streamlined business is made up of the three distinct service pillars that together will deliver a broad range of integrated services.

01332 665522 unitedliving.co.uk

HR Prof Fire Retardant for Wood



HR Prof Fire Retardant for Wood, from Fire Retardant UK, has a Classification Certificate from BM TRADA for wood species assessed against EN13501-1:2007-A1:2009, EN 13501-2:2007+A1:2009 and the BM TRADA A-MARK

Scheme Technical Document "Verification of FPC and classification of products with a higher reaction to fire or fire resistance requirements according to EN 13501". HR Prof certificates from: BM TRADA, BRE, TUV, MEKA Forest & Wood testing Institute and SP Laboratories of Sweden on Spruce, Pine, Western Red Cedar, Scotch & Siberian Larch, Redwood, Thermowood and Oak, to Euro-class B-s1-d0.

0800 7833 228 www.fireretardantuk.com



A trusted history. A digital future

It has been a story almost three years in the making, from 2017, with the initial sale by Armstrong World Industries, through to completion of its acquisition by Aurelius Equity Opportunities earlier this year. Now Armstrong Ceiling Solutions, the leading UK manufacturer of mineral fibre ceiling systems, has unveiled its new identity which will take it into 2021 and far beyond. Graham Taylor, director of sales and marketing at the newly renamed Zentia, reintroduces the business behind the brand.

oving to a new brand identity has been something of a personal journey for me. The Armstrong brand has been a constant through my working life. I have lived and breathed it for more than three decades. Which is why I was truly honoured and excited to be presented with the opportunity to lead the rebranding project for our new business.

We found ourselves in a unique position: with a strong and established past – and a future that's ours to reimagine. To make the most of this, we needed a brand that builds on our heritage, but also gives us a fresh start, opening up new opportunities for us to explore together with our partners, staff and customers alike.

But the reality of it is, we are still the same people you've always done business with; we bring you the same products you've always trusted and specified; we will still manufacture in Britain, as we have since 1966; and we will provide the same support you depend on, and that you can continue to rely on with Zentia – a very positive base on which to build.





Our vision is to take those positive traits you have clearly valued and add more agility and boldness to our approach. We will take bold decisions and act swiftly where required. We will respond to the changing environment and market, whilst fully embracing the digital world.

We were Armstrong; now we are Zentia. We've gone from A to Z, introduced a bright and dynamic colour palette and centred our business around our new brand AXIS - four key elements which underpin our new direction. In the process, we've created a new brand that marks a pivotal evolution for our business.

Our AXIS is what drives us. It differentiates us and makes us strong. The four components of the Zentia AXIS are Value, Solutions Provider, Responsibility and Continuous Improvement, and they're the four things that we promise to live, breathe and promote in everything we do and for every customer.

Value

We see that Value is about more than just price. We are driven to create environments that set higher standards for wellbeing, productivity and happiness. At the heart of this is our commitment to deliver quality products and solutions that will inevitably drive excellence through our supply chain and to exceed the expectations of all those involved, as well as the end user.

Solutions Provider

Being a Solutions Provider is about more than having a broad range of products and systems. Range is important, but so is agility and expertise; the ability to not only provide a product but provide a solution. As a complete ceiling solutions provider, this is what every partner can expect from us. We apply our heritage, pride and passion to deliver unrivalled problem-solving support.

Responsibility

We take responsibility for our actions and we aim to do more with less. We look at everything we do with an ethical mindset and scrutinise our activity so that we can continually improve our social, economic and environmental values for ourselves, our



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partners and our stakeholders.

Continuous Improvement

We focus on relentless progress and performance enhancement across our business, our solutions and the environments we help create. One key aspect that helps us do this is our digital-first mindset. As we pioneer digital services and supply chain support, we want to continually improve and make it easier than ever to do business with us.

This is such an exciting time for us as a company – creating a new identity for the business, a new ethos and new mindset. It's not something that you experience a lot in your professional life, you might even say it's a once in a lifetime change. It brings more strength, more power and more enthusiasm to our team, and I expect also to the market.

As Zentia, we draw from decades of leadership in the ceiling space, where we've become a trusted partner to specifiers, contractors, architects and interior designers who appreciate the exceptional quality of our products and the expertise of our people.

Now, we're taking what we do well and harnessing technology to ease and add value to what you do. With digital collaboration, specification and support, we're leading the way into a smarter future – that starts today.

0800 371 849 www.zentia.com

Design Flexibility & Performance from Scotframe



Al-U-Therm PLUS® wall panels achieve 0.08 W/m²K – probably the best U-value wall in the world. Couple this with Scotframe's expertise & track record and the sky really is the limit when it comes to design of buildings that tick all the boxes on your clients' wish lists.

Key to achieving this extraordinary performance is that the insulation is injected in off-site, quality-controlled factory conditions. The foam expands into every nook and cranny, providing a best-in-class BR443 U-value correction factor of zero. As well as excellent thermal insulation performance, details are available to minimise thermal bridging and give excellent airtight fabric levels.

The Scotframe Val-U-Therm® building system was originally launched in 2011 and has been used in over 8,500 homes with an excellent track record. A UK market leader in full timber frame packages for new housing and commercial projects, Scotframe exclusively offers the Val-U-Therm PLUS® closed panel building system. This is accepted by financial institutions, NHBC, Premier Guarantee and Checkmate – the panels have a 60-year minimum service life.

Because it's a hybrid of the best aspects of SIPS and timber frame technology, coupled with the latest advances in material science, it offers much flexibility and innovation in the design and build process. The unique combination of design opportunities includes:

- Can be used for walls, roofs and floors
- All types of design and architecture, even curved walls and roofs
- Can be thermally engineered to perform as an optimum combination
- Unrestricted elevational treatments brick, stone, render, cladding, tile, timber, etc.
- All interior finishes and treatments
- Large-span roofs with vaulted ceilings, if required
- Dramatic open-plan layouts offering lifestyle flexibility
- Extensive glazed features and uninterrupted roof-space living areas
- BBA accredited building system, including in-fill panels in other building systems

Couple this with its exceptional thermal



performance and sustainability, Val-U-Therm PLUS® provides a straightforward and cost-effective way for architects to hit energy efficiency, air permeability and other environmental targets. It offers a fit-andforget, future-proof solution, whatever level of environmental specifications are required – for example, 'A' rated Energy Performance Certificates, PassivHaus or the highest levels of energy saving and carbon neutrality.

The patented Val-U-Therm PLUS[®] is also inherently sustainable due to careful sourcing of raw materials with a minimal environmental impact. Scotframe's timber is sourced from FSC and PEFC sustainably managed forests and the insulation in Val-U-Therm PLUS[®] panels is based on renewable vegetable oil, has zero ozone depletion potential and is CFC, HFC and HCFC-free with a Global Warming Potential of less than 5. This means it has a BRE Green Guide A/A+ Rating – the same as straw bales or sheep wool yet is hydrophobic offering flood mitigation.

From the UK's first PassivHaus for rent (which won a Green Apple Award) to examples that significantly exceed the PassivHaus standard, Scotframe has been leading the way using Val-U-Therm[®] technology in energy efficient building for many years.

The Maryville PassivHaus delivered a total primary energy demand of 69 kWh/m²a (exceeding the PassivHaus requirement of 120 kWh/m²a). This 'Fabric First' approach is also suitable for commercial buildings – the Rocking Horse Nursery at the University of Aberdeen, which caters for 78 pre-school children. achieved an air tightness of 0.475 ACH.

Hence Scotframe homes and buildings are warm and draught-proof in winter, cool and well ventilated in summer, healthy for all the family and enjoy remarkably low energy bills. Scotframe Val-U-Therm PLUS[®] allows the construction of typical family homes that can cost less than £95 a year to heat.

The great news is that building to these high standards is not necessarily more expensive or time consuming using Scotframe Val-U-Therm PLUS[®]. Edinburgh Napier University compared the cost per square metre of superstructure using 10 different building systems.

Scotframe Val-U-Therm[®] cost £1092 when built to PassivHaus standards, while the other nine systems ranged from £711 to £1138 when built only to existing Building Regulations. It took 65 days to build a Scotframe home to PassivHaus standards; the other 26 homes ranged from 49 to 126 days to build, again only to Building Regulations.

So, if you are looking to design a dream home or superlative building – think Scotframe Val-U-Therm PLUS[®].

Scotframe Timber Engineering and Val-U-Therm are proud to be part of the Saint Gobain Group of Companies.

01467 624 440 www.scotframe.co.uk

ASSA ABLOY unlocks BIM potential



Building Information Modelling (BIM) is rapidly changing the way we build. Providing architecture, engineering and construction sectors with the tools they need for more efficient planning, design and building processes. To enable BIM's full

potential, the industry needs effective tools and software, and when it comes to doorsets and ironmongery in particular, using applications such as Openings StudioTM from ASSA ABLOY Project Specification Group, can truly unlock the potential of BIM. The software application integrates with commonly used design platforms and enables project design teams to seamlessly develop complete door requirements.

ukspecification@assaabloy.com

Winter weather is no bother with Norbord



We all know this year has been especially challenging for construction. As the country battles to recover, **Norbord** is on hand to ensure the weather isn't going to stop the nation's resilient builders getting on with the task of producing new homes. The CaberFloor range of panels can speed up the build process and cut down on the time spent cleaning up ready to hand the finish homes over at the end of the

project. To find out more about Norbord's products, download product brochures from the Norbord website.

www.norbord.co.uk/housebuilders

Cavity wall reveal closer benefit



There is potential for greater differential movement as cavities widen between a timber inner leaf and a masonry outer leaf. This is because of the see-saw effect wherein upward or downward movement becomes more pronounced as it becomes more distant from the notional central pivot point. The Type WCA Cavicloser

(Wide Cavity Applications) uses ties to secure into the masonry outer leaf whilst fixing into the timber inner leaf is mechanical via the friction-fit side section which benefits potential drying-out movement provision. Visit the **Cavity Trays** website for more information.

01935 474769 www.cavitytrays.co.uk

Packaged Sewage Macerator



JTPumps, has released a new Packaged Sewage Macerator pumping stations for the Domestic and Commercial markets to complement other packaged pumping station. If a property doesn't have gravity flow it will need a pumping station, and these can come in all sorts of sizes from very small for an outbuilding or garden room to very large which are ideal for houses and office. If you

are not sure of the size of the pumping station required, that's not a problem just call JTPumps and they be happy to help you get the right station for the job.

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Adding longevity to the sustainability debate

It is a fundamental of good design that buildings and structures should be safe and that measures to enhance their environmental performance should not compromise this essential requirement. Steve Thompson, managing director for specialist steel framing manufacturer EOS, adds longevity and building performance to the safety versus sustainability debate.

Buildings should not only be inherently safe but should also be constructed to last a long time and therefore be inherently sustainable. Buildings are responsible for almost half of the UK's carbon emissions and around a third of its landfill waste. This means that the UK's sustainable development targets cannot be met without a major change to the way in which buildings are designed, constructed, and operated. National targets for carbon emission reductions and the drive for buildings that are 'low carbon' in operation present a huge challenge to the construction industry - a challenge which the steel construction sector is playing a major part in overcoming.

Steel can be recycled or reused endlessly without detriment to its properties. This unique characteristic gives steel a high value at all stages of its life cycle. The recovery infrastructure for steel recycling is highly developed and extremely efficient and has



been in place for decades. Current recovery rates from demolition sites in the UK are 99 per cent for structural steelwork and 96 per cent for all steel construction products – figures that far exceed those for any other construction material.



Steel's superior strength-to-weight ratio means a little steel goes a long way, giving architects complete flexibility to innovate and create new and exciting buildings. Low and zero carbon buildings as well as buildings with high BREEAM ratings are readily achievable using steel construction.

When the cost of operating a building for 30 years can be four times greater than that of designing and constructing it, it is no surprise that those who own and maintain buildings are keen to find in-use savings. Now we have more sophisticated research available, the equation of 'build them high build them cheap' – simply does not stack up from an owner operator's perspective. And this is why steel framing systems are favoured by the build-to-rent, education, healthcare and other public sector bodies.

Safety, quality, and sustainability are at the very core of our organisation. We have the capability to meet the exacting demands of the construction industry and have invested in developing a range of tested and warrantied systems that are manufactured to stand the test of time and offer the highest safety and energy performance throughout the long lifecycle of the building.

eosenquiries@etexgroup.com www.eosframing.co.uk

UK manufacturer supports replacement of unsafe cladding systems

Three years after the Grenfell Tower fire disaster there are still many high-risk residential buildings with some form of dangerous cladding. The government has also revealed that local authorities are taking or have taken enforcement action against the owners of at least 30 buildings with Aluminium Composite Material (ACM) cladding.

In response to the tragedy, the government brought into force new Building Regulations with further amendments coming into effect in November 2020. Reference is made to BS 8414 the British Standard describing test methods to assess fire safety of cladding applied to the external face of a building. Within the regulations however it clearly stipulates that with building of 18 metres or more in height, any insulation product, filler material (such as the core materials of metal composite panels, sandwich panels and window spandrel panels but not including gaskets, sealants and similar products) used in the construction of an external wall should be class A2-s1, d0 or Class A1 or better.

In 2017 the Ministry of Housing, Communities & Local Government set up a Building Safety Programme Fund to repair unsafe residential buildings over 18 metres – this fund now stands at £1.6 billion. In a recent report the National Audit Office (NAO) revealed that tower blocks housing students are having dangerous cladding removed faster than those of owner-occupiers or private tenants. The NAO claims that only 149 of the 456-buildings identified have had unsafe cladding removed. But they have identified vast differences across sectors with 66.7 per cent of student blocks and 46.8 per cent of social housing buildings having had



cladding replaced when compared to 13.5 per cent of all private residential accommodation.

There are numerous supply-chain-related challenges facing the construction industry today. The COVID-19 pandemic has further delayed some retrofit cladding programmes due to global manufacturing and supply chain issues which has also impeded new high-rise residential build programmes. These problems can further jeopardise construction recladding schedules.

At the forefront of quality technical building envelope solutions, all PSP Group's manufacturing processes take place in the UK within precision-controlled advanced factories in Shildon, County Durham. The company offers a range of A1 and A2 rated non-combustible cladding systems and has the technical ability to manufacture bespoke solutions to competently replace unsafe cladding.

Heath Hindmarch, chairman of PSP Group said: "Many developers do have good intentions and are keen to complete the replacement cladding work but are struggling to find the right compliant systems and trusted manufacturing partners. As the leading manufacturer in our field, we work closely with our clients to build longlasting working relationships. We invest in the latest technology and have tried and tested cladding systems to meet the latest regulations and we are keen to help making these buildings safe."

The new Building Regulations state that all materials which become part of an external wall or specified attachment in a building which is more than 18m or more in height, must achieve European Classification A2-s1, d0 or Class A1, classified in accordance with BS EN 13501-1:2007+A1:2009 entitled 'Fire classification of construction products and building elements.' The British Standard classification is not included in the new regulation, and therefore terms such as 'class 0' and 'limited combustibility' will no longer be applicable to buildings which fall within the identified categories.

PSP – Panel Options and Support

PSP design and manufacture a comprehensive range of integrated metal rainscreen facade systems that can be adapted to suit specific client needs to provide a visually stylish solution for almost any building.



- Matrix SF rainscreen systems are high tolerance fabricated panels supplied in thicknesses up to 4mm and up to 6m long but this is dictated by the material type and panel size.
- Matrix SFC rainscreen systems are available in a range of finishes and thicknesses, with fire rated cores and are ideal for providing a flat panel in large format modular grids.
- Matrix IP rainscreen systems were developed to provide a single skin panel solution based on narrow face widths that can be laid vertically or horizontally. The panels can be roll formed or CNC folded.

Matrix SF, Matrix SFC and Matrix IP are CWCT tested systems that can be manufactured from numerous noncombustible materials and finishes including:

- Solid aluminium classified as non-combustible
- · Pre-coated classified as A1 fire rated
- Composite materials classified A2 fire rated
- Post powder coated classified A2 fire rated
- Solid Zinc classified as non-combustible
- Anodised steel classified as non-combustible

PSP Group manufactures all products using state-of-the-art fabrication equipment and a range of metals that are suited to an array of customer requirements. With a safety-driven strategy at the company's core, each system is tailored to individual customer specifications.

info@pspuk.com www.pspuk.com

Centre Square Buildings One & Two make a bold impression with ALUCOBOND® panels

entre Square is the collective title for the 'heart of Middlesbrough' development, a stunning and transformative project of civic space combining old and new with a mix of buildings designed to bring a renewed vibrancy to the city.

When complete, Centre Square will offer leisure, residential, commercial and retail opportunities as well as arts and numerous green spaces. To fulfil the area's business aspirations, ultimately five office building are planned with the Ashall Property owned buildings One Centre Square due for completion August 2019 & Two Centre Square, completed July 2019.

Both One & Two Centre Square were the creation of Seymour Architects; One Centre Square being a four-storey office building with a net internal area (NIA) of 60,000 ft² and Two Centre Square a three-storey office building with an NIA of 30,000 ft². For both constructions the brief was to design modern, impactful structures. One Centre Square, for example, has an external white brick frame, which extends from ground to the third-floor level. A number of elements are arranged asymmetrically within each structural bay to provide visual interest; the elements include curtain wall, angled brickwork and iridescent cladding. A fully glazed penthouse storey sits above and is set back from the brickwork frame. Two Centre Square adopts the same strong white brick frame, with curtain wall infill, forming the base or plinth that the two upper floors rest upon. Curtain walling extends from first floor to the roof parapet and the building is provided with its character by fins that extend from the curtain wall mullions. The spacing and frequency of the fins increases with height and are formed in a cladding material that embodies two iridescent colour pigments, so that as the material is viewed from



different angles, it changes colour. Both the plinth and the finned curtain walling form an uninterrupted wrap enveloping the whole building.

With vitality, vibrancy and regeneration the key motivators behind the projects, the buildings required a facade and finish to match, which is why ALUCOBOND® A2 was chosen for the cladding on both buildings finished in the company's 'Dessert Gold' for One Centre Square and 'Amazon' for Two Centre Square. Both finishes work in unison with the facade to stunning effect.

Fabricated by CA Group and installed by Topside Group, approximately 3,000 m² of ALUCOBOND® A2 was used chosen for its non-combustible properties, whilst facilitating the most envelope expanding architectural demands its mineral-filled core meeting the strict requirements of the fire regulations globally and finding Application on a wide range of project types. Both buildings are Grade A BREEAM, which means they meet the



very highest standards for energy efficiency and sustainability.

And both buildings have received critical acclaim from both the local community and business sector.

Paul Herbert, Sales Manager: 07584 680262 Richard Clough, Business Development Manager: 07760 884369 www.alucobond.com

PROJECT DATA

Project: One Centre Square & Two Centre Square Location: Middlesbrough Facade material: ALUCOBOND® A2 spectra Desert Gold + Amazon Construction system: Tray panels screwed Buildung Owner: Ashall Property Architects: Seymour Architecture Fabricator/Installer: CA Group/Topside Modular Engineering Year of construction: 2019 Copyright pictures: Ashall Projects (MB) Ltd

Latest news, views and more



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monthly CPD Focus and fortnightly ADF Newsletter offer updates on products, services, events, and learning opportunities available from a wide variety of manufacturers and suppliers.

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Magply doubles up on shoreline property



A striking new three bedroom beachfront home on the East Sussex coast has been designed to not only respect its location within an area of Special Scientific Interest, but also withstand the challenging weather conditions as well as shifting sands, with

Magply boards specified as part of both the roof and wall construction. Magply offers a fire-safe and environmentally friendly alternative to conventional plywood or OSB products. Additionally, the unique production process keeps the chloride content to just 0.01 per cent, enhancing both stability and long-term durability.

01621 776252 www.magply.co.uk

Structura brings Shakespeare's first theatre back to life



Structura UK, the fabricator and installer of glass curtain walling and specialist refinishing expert, has completed an intriguing project at 'The Box' on New Inn Broadway, London and it's a project full of firsts! The location is the site of 'The Theatre', Shakespeare's first polygonal purpose-built theatre and precursor to The Globe. It is also the first site where Structura has combined curtain walling with Accoya wood panels. Combining five floors of exhibition space and offices, the whole front facade has been supplied and installed by Structura. An open plan ground floor and basement features an exhibition run in conjunction with the Museum of London, with artefacts celebrating its place in history as the site of the original Shakespeare theatre. Architects Gallus Studio have also drawn on many Elizabethan references for this project from Juliet balconies to specifying the timber grid framings. In order to test fully the innovative use of timber and glass, Structura had to build a rig for CWCT air, wind and impact tests. A series of experiments were then conducted using wind generated from an old Spitfire engine and wrecking ball impact.

www.structura-uk.com/kalwall



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THE SASH WINDOW workshop

Using daylight to create a brighter future

By Russell Ager, managing director, Crittall Windows

s winter approaches and the days shorten many people – office workers, students, home owners - look back on the long days of summer with a sense of regret. Daylight flooding into workplaces, schools, and homes has a positive impact on our daily lives, and that is not just a vague feeling, it's a scientifically proven fact and one that architects and designers are keen to exploit.

The 2017 Nobel Prize for Medicine went to three American scientists for their work on understanding circadian rhythms – the 24hour cycle also known as the internal body clock. Daylight suppresses the hormone that induces sleep and the ultraviolet wavelengths in natural light have a positive effect on the body's immune system. In other words, daylight induces wakefulness, cognitive function, productivity, general health and healing. No wonder in a recent – 2018 – survey 80 percent of UK office workers said daylight was important to them.

This, for a growing number of architects, is a clarion call for natural light to be recognised as a powerful design tool. A report by US practice HMC Architects comments: "As the importance of sustainable design grows, passive strategies like daylighting have become critical in reducing the impact of the built environment."

And they continue: "Today, we have more tools than ever to harness daylight. From innovative reflective materials to advanced computer modelling, architects are using modern technology to light buildings more efficiently. When you embrace these systems, you'll create a brighter future."



The most obvious component for assisting this design outcome is the window taking account, not just of its scale and positioning, but also its frame and glazing. The UK's Building Regulations Part L1A, address the issue in an oblique manner while considering the balance between the insulation of a building and its energy demands. The Regs point out that: "Limiting the glazing on a project will increase the building's reliance on artificial lighting, increasing the house's demands." But, conversely, energy "Overglazing might reduce the overall thermal insulation of a building." So there's a delicate balance to be struck.

A plentiful supply of natural daylight, not merely into but throughout a building, good insulation but adequate ventilation, and



acoustic control all form parts of this elaborate jigsaw. Steel window manufacturer Crittall is in a unique position to offer complete solutions to these cross-cutting issues so as to provide specifically tailored environmental conditions, whether the end result is a office complex, a university, a hospital or a home.

The hallmark of a Crittall window is the slender steel frame that is so much slimmer – and therefore admits so much more light – than the alternative window systems that use PVCu, timber or aluminium. All these alternatives require significantly larger profiles due to the basic differences in the frame material and their relative strengths.

Crittall has a solution to offer whether the particular project demands a high performance, thermally broken steel system or a traditional rolled steel profile, both of which enhance the thermal performance of buildings, assisted by the windows' excellent weathertightness and an extensive choice of



glazing to control solar gain as required.

The use of such fenestration forms an important part of an architect's passive daylighting strategy and addresses the issue of 'collecting' light into the building. But further options are available from Crittall to assist in the 'distribution' of natural light through the interior of a building.

This can be achieved by incorporating Crittall Innervision[®] glazed interior partitioning screens, a seamless transfer of that increased level of natural daylight throughout the building reaching even the most remote working areas.

The performance of glazed interior screens can be further tailored to finetune levels of acoustic insulation, light transmission, thermal insulation and natural ventilation control to suit individual clients and applications.

As with its exterior windows, Crittall Innervision[®] screens are similarly manufactured using strong narrow steel frame and glazing bar profiles to offer maximum design flexibility without compromising the design intent.

They have been used in offices to provide acoustically separated working environments, in hotels, restaurants and homes to open-up the appearance of internal space while creating privacy and comfort without shutting out the light of day.

Passive daylighting strategies are a significant design tool for making buildings more environmentally sustainable while ensuring their occupants – whether pupil, patient, clerk, guest or resident – benefit from being inside. So, it's time to do away with daylight robbery!

01376 530800 www.crittall-windows.co.uk



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Wraptite®, from A. Proctor Group, has successfully undergone independent testing to confirm its performance compliance with the requirements of the current standards on airtightness as outlined by the Centre for Window and Cladding Technology (CWCT). Tests were carried out for both Air Leakage (Infiltration) and

Air Leakage (Exfiltration). In all cases, the product passed the tests and achieved results which were significantly below the permissible values for air leakage as outlined in the CWCT standard.

01250 872261 www.proctorgroup.com

Steel windows from ASWS shine in school



Associated Steel Window Services (ASWS), has completed a project which saw the full refurbishment of over 70 steel windows and the manufacture of ten new ones at Alexandra House, having recently been converted to accommodate the expansion of St Paul's Church of England Primary School.

Matthew Cox, commercial director, Ash Contracting, comments: "Overhauling the windows was a substantial element of the project so we had to trust in the specialist knowledge of ASWS. They were very responsive and worked closely with us and the architect".

www.asws.co.uk



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Huge benefits for Anglesey modular homes



The superior airtightness performance of the Wraptite membrane from the A. Proctor Group is delivering huge benefits to both the in-factory and on-site construction of a series of new modular social housing for Anglesey Council. Wraptite is the only self-adhering vapour permeable air barrier certified by the BBA.

Applied externally on the outside of the structural frame, Wraptite simplifies the process of maintaining the envelope's integrity, as there are less building services and structural penetrations to be sealed.

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Revolutionary multi point locking



The aesthetics of slimline steel windows are set to be even more stylish and impressive now as Steel Window Association member, Steel Window Fittings, has launched a range of revolutionary concealed, multi-point locking systems specifically for W30, W40 and W50TB window profiles. With this new system, security is greatly improved, durability is enforced and larger windows can be designed and produced. The concealed system is

driven by a single key-locking or non-locking handle that is available in five different designs and seven standard finishes.

www.steel-window-association.co.uk

AkzoNobel powder coatings shines through



AkzoNobel reveals Brave Ground as the Color of the Year 2021. It's a warm and grounding neutral shade that gives us the courage to embrace change - and it's been translated into colors and finishes specific to the powder coatings market. Brave Ground Interior and Gris Sable 2800, as well as the colors in

their four complementary color palettes, are part of the existing Interpon range. The neutral colors work especially well for exterior applications, while the bolder colors can really bring interiors to life.

www.akzonobel.com/en/about-us/colourfutures

Dowsil 791 defies the Firth of Tay's weather



Playing a key role in the striking V&A Dundee museum's unusual facade were Dowsil 791 and 895 glazing sealants. Manufactured and supplied by The Sherwin Williams Company, the sealants were specified to help resist the gale force winds and rain that blow into the location across

the Firth of Tay from the North Sea. The Sherwin Williams Company, manufacturer and distributor of Dowsil products in the UK, provided all of the technical and test data necessary to confirm the suggested Dowsil products' compatibility with the facade materials.

0114 240 9409 specification.sherwin-williams.co.uk

Period dramas

Period properties are aplenty in Britain but with their age comes a plethora of issues for architects. Peter Daniel of The Rooflight Company discusses the minutiae that can't be overlooked when working with historic buildings

There is no binding definition of what a 'period' property is, but properties of every past era will present their own challenges. The first thing you need to think about when working with period properties is the simple fact of when it was built.

Is the property a Georgian townhouse, Victorian terrace, or Edwardian red brick? You could even be lucky enough to be working with a Tudor or Jacobean country house. The typical problems of each period can vary quite drastically. Victorian terraces generally suffer from a lack of light and low ceilings, making natural light a priority, whereas Georgian homes were often constructed quickly so you may find yourself needing to fix poor construction work before any cosmetic changes can be made.

And that's no mean feat, because even cosmetic changes can be a challenge in period properties. If your client has bought their period property thinking "a splash of paint here, knock a wall through, massive extension and it'll be perfect", you'll need to warn them to think again. In most cases, you will need to get permission before making any changes at all to a period property, even for things as simple as a lick of paint, and relying on retrospective building control approval is a dangerous game that can result in serious consequences.

The Conservation Officer is the gatekeeper to any work, whether the property is Grade I, Grade II*, Grade II listed or even just in a conservation area, and you and your client really need to get your head around what level of permissions you need and how to go about it. The Listed Property Owners' Club is lobbying the Government to seek the simplification of the planning process, but until that happens it is critical that these time delays are factored into the overall project and the local Conservation Officer is kept on side.

Another good reason to encourage your client to be on good terms with their local Conservation Officer is they may find themselves falling foul of the rules before they even make any changes. An unfortunate loophole in the rules means that the present-day owner of a period property that's listed or in a conservation area is responsible for any and all changes that have been made without permission, even those made by previous owners. Putting in plans for a new extension might attract attention to problems neither you nor your client even knew existed. The best way to avoid this problem is through an early survey, but it pays to have the Conservation Officer on side!

In terms of the work itself, the biggest factor comes from changes in how we live. Period properties just aren't built for modern living. Thermal efficiency is a consistent issue and one that does not have a quick fix, but even seemingly small things like getting the WiFi to spread throughout the home can be a challenge and need accounting for when you're thinking of extensions.

Modern products address these issues; Mesh or Whole Home WiFi systems are designed for thick stone properties with odd layouts, for instance. Likewise, a great deal of work has gone into making modern rooflights look authentically traditional, while performing thermally like a modern window should. It's a time and money saver to research and mitigate these problems at the start of a project, rather than retrospectively.

In terms of who should do the work, 'normal' contractors will probably not be the best option for period properties; often it's safer to entrust the job to specialist craftsmen who have extended depth of knowledge and the specific skills needed for the job at hand. That's not a criticism of modern contractors, it's more that the way



Installing 'modern' features to a period home like rooflights isn't difficult, it just takes the right person and the right product



All in all, renovating a period property is a balancing act, and meeting older structures and characterful features with a client's modern lifestyle is no mean feat



buildings are built has changed enormously over the years. For example, lead flashing is difficult on old roofs, even if they have been restored, and a non-specialist roofer may not have the required knowledge to tackle the challenge. A good tip is to encourage your client to ask their neighbours who they've used for their own period refurb projects.

All in all, renovating a period property is a balancing act, and meeting older structures and characterful features with a client's modern lifestyle is no mean feat. Obviously open floor plans, concrete, steel, and smart technology – the cornerstones of the modern home – won't work in a period property. But modern desires can be accommodated within the constraints, such as natural light. Bi-fold doors might be a contemporary trend that wouldn't work for a Victorian property, but rooflights certainly would, after all, the Victorians invented them!

Our Conservation Rooflight is modelled after the original Victorian cast-iron skylight that will maintain a period property's character while meeting the requirements of an Article 4 Direction. The version made by the Victorians had a vertical split bar to the centre to keep the glass panes in place which is no longer necessary due to developments in fixtures, which now means rooflights not only look great on the outside but also appear frameless on the inside.

Installing 'modern' features to a period home like rooflights isn't difficult, it just takes the right person and the right product. Again, the Conservation Officer will have the final say, but the products are out there that will inject modern design into a period home. Working around rafters in the roof of an old building can be a challenge because over the years they may have warped, and were often not built parallel, which can prevent windows from sitting straight. But with experience comes the knowledge to work around these nuances and will result in a stunning finish.

Working with period properties certainly takes more time and presents more challenges than renovating, or building, a modern home. However, the payoff for the extra care taken is huge, and the end results will be stunning.

Peter Daniel is product innovation director at The Rooflight Company



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Kalwall sheds light on Research & Development



A £4m extension to the globally recognised Advanced Forming Research Centre (AFRC) at the University of Strathclyde has used Kalwall[®] to solve an interesting problem. The Centre houses Europe's largest forge - to be precise an 8.5m high 300-tonne hydraulic press forge - along with the associated isothermal, cooling, furnace and manipulator plant. Kalwall was used on the original structure. The addition of the new extension has seen a Kalwall clerestory surround added to bathe the interior with diffused daylight. A clever system of removable 6 x 5 metre Kalwall rooflights has been installed allowing for the craning out of the plant machinery to service and maintain when needed. The rooflights not only allow for this vital function but, similar to the clerestory, cast daylight deep into the building below. The use of Kalwall means that natural diffused daylight is transmitted deep into the interior space. This means there is an even balance of light throughout with no hotspots, glare or shadows, therefore removing the need for any blinds or shutters. Its properties also mean there are less issues around solar gain as the unique composition reduces inward radiation and conduction five times more effectively than glazing.

www.structura-uk.com/kalwall

BMI systems raise roofing performance



Market-leading guarantees and technical support, in addition to pitched and flat roofing requirements made BMI the top choice when it came to refurbishing Crowngate Apartments in Birmingham. A BMI flat roofing system comprising areas of BMI Sealoflex liquid waterproofing and BMI Icopal bituminous waterproofing and insulation was specified for the flat

roofs, and BMI Redland Cambrian tile on the pitched roofs. The Welshmade Cambrian tile slate replicates the original slate roofing, and so meets Birmingham City Council's conservation policy whilst offering a robust modern material that withstands severe weather conditions.

marketingukandi@bmigroup.com www.bmigroup.com/uk

Restoration in robust conditions



The BMI Redland Rosemary Clay Classic tile proved ideal when sensitivities surrounding conservation and heritage environments were paramount. When architect Gordon Delgano wanted to refurbish his mid-terrace house in an architecturally distinguished area of Glasgow, it was to the Rosemary Clay Classic

tile he turned. As Gordon says: "The tiles were originally Rosemary directly fixed to timber sarking and, after more than 80 years, some tiles were slipping due to nail fatigue, so it was time to consider replacing," he says. "And I really wanted to replace it like for like."

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Marmox underpins school redevelopment



Both phases to the refurbishment and extension of the teaching and other facilities at a South London school are making full use of the insulating and loadbearing capabilities of **Marmox** Thermoblocks. The main contractor's site agent, Nick Thomas, commented: "We have

had experience of using Marmox Thermoblock on a number of projects in the past and find them very straightforward to incorporate into different types of construction." Marmox Thermoblocks are formed from sections of XPS (extruded polystyrene) encapsulating two rows of high strength, epoxy concrete mini-columns.

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Balanced acoustics for high profile building



A StoSilent Distance acoustic system from **Sto** has been used to create a balanced and practical acoustic environment for a major London landmark building. Bracken House was the first in England, and the second post-war building, to receive listed status. The premises have

recently been extensively refurbished, while preserving the original style and character. This involved the installation of the StoSilent Distance acoustic system in the atrium area, to create an environment that functions efficiently from an acoustic perspective, while also blending seamlessly with the area's new, updated appearance.

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Here's how Hobbits insulate their homes

hen J. R. R. Tolkien conceived the Hobbit trilogy and the quaint under-hill house in which Bilbo Baggins lived, he probably gave little thought to how to keep his lead character warm in winter. After all, Hobbits wear cosy waistcoats and have furry feet to keep them snug. And the open fire, flickering in the grate would give enough heat to ward off the winter chill.

But what about insulation? Ah yes, insulation. Just like in the days when the majority of the UK's housing stock was built – little thought was given to home insulation back in Baggins's time.

Now, fast forward to the 21st century and things have changed – especially for Matthew Wright of Hobbit House Ltd, builders of what must be the coolest garden structures in middle earth.

He describes his Hobbit Houses as "durable and versatile garden under-buildings which are perfect for everything from entertainment spaces, to yoga rooms, home offices, glamping pods and just about anything you can imagine!"

If you take a look at the Hobbit House website you will see what he means. His company designs, builds and installs the most amazing, authentic looking under-hill Hobbit Houses that perfectly reflect Tolkien's concept of the Shire – a rural idyll that was once a corner of Worcestershire, close to where the author grew up.

Hobbit Houses are custom made below ground buildings constructed to an incredibly high standard of fit and finish. However, building them to modern day specification brings its own set of challenges, as Matthew Wright explains.

"Hobbit House structures are large diameter polyethylene cylinders that have a double-thickness wall in the form of a tubular spiral. This twin-wall spiral structure gives excellent strength and rigidity and is completely waterproof. On the other hand, it is difficult to insulate" says Matthew.

He continues. "Clearly, conventional internal insulation such as mineral wool and the like would be out of the question as it would eat into the living space area. We also tried polystyrene beads, blown into the spiral. This gave us reasonably good insulation levels but we couldn't be sure of complete fill around the spiral cavity"

Recently, the Company won a contract to build a Hobbit House for a school in Birmingham where the structure was to be used as a children's underground library. For this project, they needed to achieve even higher level of insulation.

According to Matthew Wright, a few options were considered but none satisfied the performance criteria or were able to work with the complex curvature and structural intricacies of Hobbit House construction.

A solution was found through spray foam insulation specialists Icynene. Icynene



A Hobbit House; the most amazing, authentic looking under-hill structure that perfectly reflect Tolkien's concept of the Shire.





The outer shell is twin-wall spiral structure that gives excellent strength and rigidity but is difficult to insulate.

Hobbit Houses are custom made below ground buildings constructed to an incredibly high standard of fit and finish.

proposed its Icyfoam Fill, a cavityfill system of high performance, foaminjected insulation.

Icynene Icyfoam Fill is a two-part system where the components come together at the tip on an injection lance. The chemical reaction creates a foam which expands one hundred-fold in seconds, completely filling the cavity and sealing tiny gaps and structural voids, eliminating any potential cold bridging.

Appropriate U-value calculations were undertaken by Icynene technicians at the Hobbit House factory in Mansfield. Icyfoam Fill was shown to exceed the required levels and foam was injected through small holes drilled through the polyethylene skin of the structure, completely filling the 110 mm wide spiral cavity of the 3.0 m diameter cylinder.

According to Icynene, the foam is so "searching" in nature that it can also be used in partially filled cavities where previously installed insulation systems may have failed or not completely filled the inter-leaf voids.

Icynene Icyfoam Fill is a closed-cell insulation medium which had originally been developed in Canada to cope with their extreme winter temperatures. Unlike its open cell cousin FoamLite, which uses water as its blowing agent that creates an air-filled cellular structure which allows the treated building to "breathe naturally", Icyfoam Fill uses an HFO blowing agent with an extremely low Global Warming Potential [GWP2] and an Ozone Depletion Potential [ODP] of 0 [Zero].

This closed cell formulation completely seals the structure, helping to prevent air and moisture transmission and provides outstanding levels of insulation where breathability is not a requirement.

The insulation of the Library Hobbit House was completed in less than a day and, according to Matthew Wright, the combination of the Icynene insulation and the soil and grass roof which completed the installed structure makes this the most thermally efficient project to date.

All in all, these are coolest garden buildings you could ever think of. Cool in summer, and cosy warm in winter. The very best of both worlds – real and imaginary.

For more information on Hobbit Houses please visit www.hobbithouseltd.co.uk

info@icynene.co.uk www.icynene.co.uk



Icynene foam was injected through the polyethylene skin, completely filling the spiral cavity of the cylinder.



Icynene foam is so "searching" in nature, that it can also be used in partially filled cavities.

ROCKWOOL delivers specialist fire protection for Grange University Hospital



A combination of **ROCKWOOL's** non-combustible stone wool insulation and certified FIREPRO[®] products have been specified to ensure the Grange University Hospital, a new specialist healthcare facility in Wales, can achieve the highest levels of fire protection.

ROCKWOOL worked with main contractor, Laing O'Rourke and passive fire protection contractor, Optimum, to ensure effective firestopping throughout the critical care centre. Approximately 25,000 penetration seals were installed throughout the scheme using certified products from the ROCKWOOL FIREPRO® Range. Opening its doors ahead of schedule in November 2020, ROCKWOOL supported Central Roofing South Wales Ltd in delivering non-combustible insulation for critical areas of the external envelope. While the facade benefited from the installation of ROCKWOOL RAINSCREEN DUO SLAB® in the through-wall build up, ROCKWOOL HARDROCK® Multi-Fix Dual Density was laid on the metal deck roof areas to ensure regulation compliance.

01656 868 490 www.rockwool.co.uk/sccc

Clyde Radiators launches new website



Clyde Radiators, specialists in bespoke heating solutions, has relaunched its website to make it easier than ever for customers to obtain quotes and specifications for any residential or commercial project. The new website includes details on the entire product

range, including two new aluminium offerings; Apex, a horizontal aluminium radiator, and Vertex, a vertical model. Both feature a curved top profile and are available in a large number of size options. The Linear flat panel range is a robust and cost effective solution, available in 34 sizes with a grooved front for an effective design touch.

01342 305550 www.clyderadiators.co.uk

Significant interest in heat pumps



Over the past twelve months LG has seem huge interest in its Therma V air to water heat pump range that will only increase after the recent announcement by the Prime Minister. There have been a number of new additions to the range including the new R32 versions of the Therma V Monobloc – of particular interest as these can be installed without the need of

having F-Gas qualifications. Heat pumps offer a well-established, proven renewables technology.

08448 471 402 www.lg.com/uk/heating-awhp



Thousands look to adapt office spaces



Demand for underfloor air conditioning systems has soared as developers and landlords scramble to reconfigure office spaces in the wake of the coronavirus pandemic. AET Managing Director, Glan Blake Thomas,

comments: "The huge benefit of an underfloor air conditioning system is that they are inherently flexible, and can be changed to suit new room layouts within minutes. Our unique Fantile[™] units are installed to sit in-line with the finished floor, and can be easily repositioned at any time without the need for the significant, and costly, building works usually involved in repositioning ceiling-based ductwork."

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Helping deliver flagship workspace



Teamwork and design agility has empowered delivery of a flagship office block. Light, airy and clean, open spaces were key design objectives for the office

block. To fulfil that, and help achieve the Excellent target BREEAM rating, ventilation specialist Gilberts Blackpool collaborated closely with architect AEDAS and engineering consultant Hannan Associates to devise a bespoke solution for the five floors of offices, and reception. Because Gilberts is solution focussed, it had the ability and agility to cost-effectively conceive and develop an alternative, validate its performance within its test lab and then manufacture to order.

01253 766911 info@gilbertsblackpool.com

Panasonic welcomes grant extension



The UK government has announced an extension to the Green Homes Grant. The grant will now run until March 2022, this bridges the gap to the Clean Heat Grant and aligns with the end of the RHI timeframes. The move was welcomed by Panasonic as Tony Lathey, UK Pre

Sales Manager for Heat Pumps at Panasonic said: "We have seen strong interest in our air source heat pumps for heating and hot water provision but extending the grant programme will ensure that more homeowners can access funding for their home energy improvement schemes and we anticipate this will greatly assist the market."

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01952 290 498 www.contourheating.co.uk

Architectural beauty combines form, function and aesthetics



There has always been a relationship between design and the marrying up of form, function and aesthetics. While popularity of materials and styles comes and go over the years, how products look, feel and perform is constant. This interesting interplay is explored in the latest online theme from **Troldtekt A/S**, the Danish manufacturer of acoustic panels. Comprising expert articles, white papers and interviews, the 'Architectural Beauty' theme looks at the concept of architectural beauty and the importance of aesthetics in leading certification schemes for sustainable building. It acknowledges that it is not always possible to harmonise the aesthetic with the practical but that there are some ways in which they can be combined to provide value to a building while enhancing its beauty. Acoustic product manufacturers, such as Troldtekt, embrace this relationship and are at the forefront of practical, aesthetic and high performance products and design. Troldtekt's wood wool panelling is a perfect canvas allowing architects and designers to realise their most creative schemes, safe in the knowledge that acoustical performance will not be compromised.

www.troldtekt.com/news/themes/architectural-beauty





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Hunter Douglas Architectural's awardwinning HeartFelt[®] modular felt system is an innovative solution for creative and playful ceilings and walls. Suitable for use in multiple environments, the system has superior acoustic performance and is easy to install on specially designed carriers. Since its launch in 2017 as a

linear panel, demand for Heartfelt[®] has grown and thanks to its increasing popularity, the global architectural products company has introduced a rounded panel and a baffle to the portfolio.

01604 648229 www.hunterdouglas.co.uk

Design-led interiors for living services



A dilapidated former care home has been transformed into award-winning supported living flats by social care provider Precious Homes. Interior Designer Penny Green worked with **Altro** to select a range of flooring options to deliver flexible solutions in different application areas throughout the scheme. Penny chose Altro Ensemble[™] modular flooring system - luxury vinyl tiles, in four modular sizes that can be mixed and matched to create unique designs

from colour blocking to geometric patterns. It also brings the benefits of 15dB sound reduction and added comfort underfoot.

01462 489 516 www.altro.co.uk

Rocking style from Keller



Fully embracing the trend for solid, industrial aesthetics in the home is the new Rock Solid kitchen from Keller. Stone and steel are at the heart of this superb professional-look kitchen which addresses the fashion for stone, black

metal and dark grey in homes; especially in kitchens and bathrooms with all the ancillary accessories and appliances available today. The island is wrapped completely in ceramic while the graphite structured lacquered unit fronts and extractor in metal framework complete the uber-cool scheme. The sturdy black inlay handles complement the rough texture of the unit fronts while the hob is integrated seamlessly into the worktop.

www.kellerkitchens.com

Crown Paints appointed NHS supplier



Crown Paints has been given Awarded Supplier status by NHS North of England Commercial Procurement Collaborative as part of its Estates

Consumable Products framework agreement. With a portfolio of completed contracts, and a successful track record of working on numerous NHS projects, Crown's place on the prestigious framework agreement was secured after demonstrating how its high-performance paints and coatings are fully compliant with the needs of the healthcare sector and how the company's in-house technical expertise can identify solutions to reduce costs and extend maintenance cycles.

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The timeless elegance of white doors

S implicity in design is often thought to be the secret to creating timeless fashions and one way to achieve that desired blank canvas, is by using flush white doors. This opportunity to rejuvenate and add a fresh clean look to interiors has now been given new impetus and inspiration with the introduction of the White Collection from Vicaima, a selection of quality interior doors for home, hospitality and commercial projects.

Bringing together some truly distinctive finish options in white, the collection demonstrates that this fundamental hue is not actually a single colour, but has in fact a myriad of sheens, surfaces and shades to



suit every application. In addition, doors can be customised to allow even greater decorative freedom, with the inclusion of face grooves and inlays, together with many glazed patterns.

The White Collection includes Lacdor in White and Pure White shades, with its ultra- smooth lacquered paint finish; Dekordor SD in White Smooth and Woodgrain finished foils; Dekordor HD White, a continuous pressure laminate for demanding areas and for those who still prefer to paint their own doors, Primed 2 Go, with its revolutionary surface that requires no face sanding or priming and which will accept paint straight onto its smooth face to achieve an excellent end result.

Where performance criteria is demanded, The White Collection is also available in fire, acoustic and security solutions. And as care for the environment is paramount in our minds, everything is covered by FSC® certification. Products can be supplied as door only, door and matching frame assemblies or even as corresponding wardrobes.



For a copy of the new White Collection brochure or for further inspiration and trend-setting ideas, visit the Vicaima website.

07584 392770 www.vicaima.com





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Claypaint transforms listed property



Paragon is a grand Grade 1 Listed Georgian Terrace designed by Thomas Attwood and built in 1768. Situated in Bath city centre, it is surrounded by period architecture. Guinness World Record holder and Britain's fastest snowboarder Jamie Barrow, decided to take on a slower challenge to fully renovate a two storey apartment in the terrace. Jamie re-plastered the apartment in lime to ensure it remained breathable. He said: "In the basement of a Grade 1 Listed building, there were obviously some damp issues. As we were not allowed to damp proof these buildings, we had to use breathable materials, which is why we used lime plaster on the walls." Jamie decided to use **Earthborn** Claypaint due to its high level of breathability, thick creamy consistency and ease of use. He added: "We initially used a lime wash as this is what was suggested but after many coats it just wasn't covering well. This is when I looked into what breathable paints are available and came across Earthborn Claypaint. I decided to give it a go and after just 1 coat it covered amazingly and gave a really nice luxury feel. That is why I am now using it on my other projects."

01928 734 171 www.earthbornpaints.co.uk

UNILIN Evola brings the perfect blue to KafKaf



UNILIN Panels, has helped to create an Instagrammable Parisian hotspot at KafKaf, a Middle Eastern inspired coffee bar with an interior by design studio Fairly. After just a few months of opening in the 11th district of Paris, KafKaf boasts an online community of some 15,000 followers and has become a favoured meeting place for the local community. UNILIN Evola decorative finishes have been used in a scheme created by studio Fairly, unusually developed before the bar's location had been decided. The original colours and high-quality finish of UNILIN Evola HPL panels, notably in Persian Blue, captured the aesthetics of KafKaf and fitted with the sustainable goals of Fairly. Offering a finish that delivers impressive durability and low maintenance, UNILIN Evola is ideal for the busy cafe, with the decor's matt finish to giving the colour an authentic richness. "The most important reason for choosing UNILIN Evola for the bar and counter was that perfect blue hue. It was precisely what we wanted." said Adeline Paty, co-founder of design studio Fairly. "In addition, we always recommend solutions to our customers that have the smallest possible CO₂ footprint.

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A firm but silent foundation

With its roots in foundational flooring materials and 100 per cent improved sound absorption, Rudiments is the latest carpet tile collection From IVC Commercial. From stone floors to artistic textile coverings and roughly shaped wood planks, Rudiments presents three carpet tile designs grounded in flooring materials to which we are intrinsically connected, connecting us with nature and history in a surprising way. Basalt, a random organic pattern that adds texture across large areas is inspired by the mineral-rich formations of volcanic rock, while Teak's more structured pattern owes to the light and shade thrown by oiled wood blocks in arbitrary geometric arrangements. For Jute, IVC Commercial has created a subtle all-over texture inspired by the earliest hand-woven organic floors. The foundational designs of Rudiments are available in all 12 colours that use tonal combinations to create harmony. The Rudiments collection is also the first to feature IVC Commercial's new EcoFlex™ Echo acoustic backing.

info@ivc-commercial.com www.ivc-commercial.com



Norcros Adhesives makes venue a reality

Norcros Adhesives has helped in the creation of a superb new venue for weddings and other large gatherings near Hythe in Kent. The Port Lympne Hotel, owned by the Aspinall Foundation, adjoins the Port Lympne reserve - a breeding sanctuary for rare and endangered animals. Early in 2020 the owners needed to carry out a refurbishment of the Function Room in order to improve its suitability as a wedding venue. Due to the fact that the existing floor was solid and also due to the very tight timescales involved, the decision was taken not to remove the existing tiled surface, but to tile over it. The first critical stage was to level the existing floor, which was carried out using Norcros Pro AF Low Prep Self Smoothing Levelling Compound. This new product is ammonia and latex-free, and is suitable for use on most substrates without the need for priming. It is specially formulated for use over old adhesive residues including bitumen, historically a problematic material to bond to. There is no need to prime or remove firmly bonded residues. This greatly reduces the time usually required for preparation of a substrate to be levelled.

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Yeoman Shield protects with style at new dental facility





hen Leeds Teaching Hospitals NHS Trust earlier this year approved capital funding to convert a disused area of Chapel Allerton Hospital into a new dental facility, they engaged with Yeoman Shield wall & door



protection specialists to provide durable yet attractive wall protection that would achieve the interior fit-out brief.

The project was managed by The Leeds Teaching Hospitals NHS Trust, Bridger Carr Architects and main contractor Bermar Building Co. Ltd., with Yeoman Shield supplying and installing the wall protection elements.

The unit will have amenities to accommodate a 13 – chair dental facility for the provision of dental treatment for adults and children with the flexibility to be used for student training as part of the link with Leeds University School of Dentistry.

Due to the mixed use of the new unit the project team were keen to provide an environment that would be suitable for all users and uses.

The project required an attractive yet durable interior design that contributed to the wellbeing of both service users and staff members alike.

In the waiting and corridor areas, which would experience heavy footfall and require wall protection, it was important to create a décor that was not sterile and cold but one that would create a calm soothing environment for clients who may become nervous before their dental treatment.

Yeoman Shield, along with providing standard FalmouthEx wall protection panels

in mid grey and contrasting Guardian Handrails, supplied and installed Imagery panels that had specifically chosen designs reverse printed on to clear protection panels.

The artwork was chosen with both adults and children in mind and, with collaboration between all involved, Yeoman Shield were able to deliver a finished product that showed the artwork in perfect colours, definition and quality.

Designs included playful birds, cheerful flora and fauna along with calming green hues of forestry and foliage.

The reverse method of printing for the protection panels served to shield the decorative design from any impact damage with the smooth surface being conducive to thorough cleaning, maintaining high hygiene standards without detriment to the colourful images.

The overall effect of the décor was welcoming, fresh and bright offering break out areas that were inviting for colleagues of the dental unit and other hospital departments to use for meetings, breaks and study time.

For more information on Yeoman Shield Imagery panels or any other of the wall & door protection products available, please visit the website.

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A platform for hygiene

Sean O'Sullivan of the Platform Lift Company discusses why the future of the industry means creating safer platform lift environments in tandem with meeting demand for sustainable, energy efficient products

ift phobia' used to be about feeling claustrophobic or fearing a lift would break down – now it is about breathing in germs and having to press control buttons which have been touched by other people. As the pandemic has progressed, various specialised lift sanitiser products were launched which potentially worked well for a passenger lift but when it comes to a platform lift, the criteria is slightly different because of its structure.

One of the best solutions we have discovered for an enclosed platform lift is an air purifier, which is designed to work in conjunction with normal cleaning procedures. It circulates the air within an enclosed platform lift through a process of disinfection and purification. The system is activated using biological recognition technology, so the air is purified from the moment a passenger enters the lift until the moment they exit, and it uses a leak-free UV Photo Catalyst, obliterating more than 99 per cent of viruses and bacteria.

Soon we may see other technology available with platform lifts such as voicecontrolled lifts and contactless buttons. But in the meantime, other measures which could be put in place include using antimicrobial technology for manufacturing lift buttons, or simply spraying an antimicrobial coating on surfaces.

Supplementing existing cleaning regimes of platform lifts with the introduction of hygiene products like the ones mentioned is undoubtedly beneficial for environments with high footfalls such as hospitals, care homes and schools, especially if more wheelchair lifts need to be introduced because of reconfigured layouts. For instance, architectural barriers such as steps of differing levels could get in the way of introducing accessible one-way systems.

Creating Covid-safe workplaces and public spaces is top of the agenda for our customers, therefore as an industry, we need to have robust solutions in place. The other big requirement is the growing need for not



only new energy efficient and sustainable platform lifts, but the ability to refurbish an existing product.

The benefits of refurbishing & upgrading

Upcycling is not just reserved for furniture; it is possible to upgrade an existing platform lift. Giving a platform lift a complete overhaul is not only a sustainable way of prolonging its lifespan but it also improves safety features, boosts energy efficiency and maximises functionality. What's more, it is a cost-effective way to modernise dated appearances or worn materials and introduce new features such as glazed panels, stylish finishes and enhanced lighting. Another big advantage is that everything, including the pit, can be Creating Covid-safe workplaces and public spaces is top of the agenda for our customers, therefore as an industry, we need to have robust solutions in place





cleaned down, surfaces can be sprayed with an antimicrobial coating, and an air purifier can be installed.

Vertical platform lifts are incredibly energy efficient compared to passenger lifts, but the running cost of an older platform lift can still be greatly improved by replacing batteries, changing standard lighting for energy efficient LED, and reducing power standby times.

Are platform lifts still on the up?

The demand for vertical platform lifts is still growing because of the many advantages they offer over a passenger lift. They are much cheaper, more energy efficient – it is now possible to have a platform lift with a motor size of 0.55 kW instead of a typical 2.2 kW platform lift – and they are easy to install. Today's platform lifts are also designed to be compact, for example, there is one currently on the market which is only 1560 mm deep x 1250 mm wide but is still compliant with Part M of the Building Regulations.

There is also a choice of drive systems: hydraulic, chain driven or screw and nut, which all come with their different merits. However, a chain system might be a good

One of the best solutions we have discovered for an enclosed platform lift is an air purifier

choice currently as it requires minimal maintenance and there is no need to lubricate the chain during its lifetime.

Although this year has been challenging, the platform lift industry has proved its ability to move with the times as we can create cleaner and healthier environments for all passengers, promoting safety and minimising risk. At the Platform Lift Company, we can advise on other ways to upgrade disability access provisions within a building and save energy without the costs of replacing your lift. However, when a new platform lift is required, today's choice of products not only look great, but offer outstanding performance, incorporating the latest technology to keep passengers safe.

Sean O'Sullivan is managing director of the *Platform Lift Company*



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Automating swing doors provides a safe, secure and convenient option for users providing access for those less able. FAAC UK are pleased to announce the FAAC A951 DDA Automatic Toilet Door System which now comes as standard with

Contactless Activation switches, the system comprises of an Operator, Push/Pull Arm, Safety Sensors, Fingerguard, failsafe magnetic locking system, green break glass unit, and an emergency override key switch, in one simple and easy to install kit. The Disabled person's toilet door system can easily be integrated into an existing or new swing door and delivers a comfortable and easy to use solution.

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addition, the upper cover can be closed immediately after entering the loft, therefore preventing the loss of warm air into the cold attic.

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'Just enough' is no longer enough







The Grenfell Tower tragedy is once again making headlines. The latest news from the enquiry makes for uncomfortable – if not chilling – reading for most in the building industry. Architects, specifiers and contractors who opt for more cost-effective solutions but don't fully understand the rules or implications, manufacturers who 'manipulate' official testing and market products that aren't fit for purpose. It's construction as it is rather than as it should be. We saw it in the Lakanal House fire in 2009 and we're seeing it again now.

It is now apparent the wrong cladding was put on the building for thermal and appearance improvements. It was also fitted incorrectly, which resulted in accelerating the fire.

But it's not just the cladding at fault – an endless list of errors has been uncovered. There was only one staircase (and so one escape route) rather than two, which would have allowed fire fighters unimpeded access to do their job while tenants got out. There was no complete sprinkler system. Annual inspections weren't carried out to check the integrity of the building. The main gas supply wasn't turned off until hours after the fire started. It was a particularly hot day and many windows (and perhaps doors too) were open, encouraging the spread of fire rather than compartmentalising it.

The debate about value engineering versus 'over-engineering'

In an ideal world - where everything performs as we'd like it to - we can rely on 30 minutes to get in and out of a burning building safely. We can rely on 'value engineering' products and systems to 'just' meet requirements and work together effectively. But in the real world, small product variations and the myriad of variations in how a building is built or maintained add up and eat into our safe time. The sum of small individual product (and human) variations can turn a safe outcome with a comfortable margin into a near-miss or catastrophe.



We need to seriously rethink our attitudes to value-engineering and over-engineering. We need to know that the buildings we live in, visit and use every day have a comfortable fire safety factor built in.

At Enfield, for example, we deliberately 'over engineer' our Fire Doors so they have extra safety time built-in to every door. In tests sponsored by MHCLG, Enfield's doors passed with a reassuringly large margin: 'opening in' exceeded the time by 19 per cent and 'opening out' by an exceptional 70 per cent (51 minutes). Watch the fire doors being tested at www.enfielddoors.co.uk.

Of course, fire isn't all you need to consider when specifying doors. Our PAS 24 enhanced security door sets, for example, are available with 30 and 60 minute fire resistance, 33dB acoustic reduction and a choice of quality ironmongery and finishes that all meet or exceed requirements.

For the architects, specifiers and contractors we deal with - as well as their clients and building users– noise is also important, particularly for offices and flats. Anti-bacterial finishes (hygiene coatings or high-pressure laminates incorporating silver ions) were increasingly being specified on doors in high traffic areas to help prevent the spread of disease, even before the Covid-19 pandemic. Eco-credentials and sustainability are high priorities. And security remains a crucial consideration for internal entrance doors.

The same principle stands: whether a product has one or multiple standards or requirements to meet, it should do so with a comfortable margin. 'Just enough' just isn't enough.

If events over the past few years initiates a lasting change in our thinking as a nation, we'd all sleep a lot safer.

020 8805 6662 www.enfielddoors.co.uk

Secure in the knowledge

Stuart Glen of Jacksons Fencing discusses the considerations that need to be taken into account when specifying security fencing

Specifying fencing for safety and security purposes requires careful consideration of key components that will ultimately determine whether the chosen solution will stand the test of time, and serve the purpose it was designed for.

The type of fence that should be specified depends on the application. For perimeter security, look for steel fencing that has been designed to British Standards and is galvanised or zinc alloy coated for longlasting protection. The main types of perimeter security fencing are welded mesh panels and vertical bar railings, and there are many variations of each. Both can offer good visibility and do not impede surveillance, are aesthetically pleasing, and offer excellent security against climbing and attempted breaches.

For welded mesh panels, wire thickness is a key indicator of quality and compliance with the various British Standards. Welded mesh fence panels are almost always sold with a protective coating covering the wire. Some manufacturers measure their wire diameters after the coating is applied. A smaller diameter wire with a heavier layer of coating will not provide the same structural strength and resistance to cutting as a product made from heavier diameter wire, even though both will be shown as being the same diameter.

When choosing vertical bar railings, look for fencing with welded pale-through-rail construction (the pale being the upright itself). Pales that are affixed on the front of rails can be easily removed to create a gap in the perimeter, while pales which are inserted through rails and welded have no visible fixings, and create an extremely secure fence.

For areas where children are present, such as play areas, the safety of the fencing is just as important as the play equipment within. Look for RoSPA-approved designs, and fencing designed to BS EN 1176 with anti-trap properties. Fencing that can't be easily vandalised is essential to avoid creating an unsafe scenario of broken fencing and hazardous nails sticking out.



Where noise reduction is required in addition to security, look for tested acoustic barriers with an anti-climb flat profile, no gaps that would allow sound to escape or which would provide a foothold, and a solid construction to increase privacy. There are also LPS 1175 rated versions available; these are an ideal choice for data centres.

The height of the fencing specified will depend on the type of property it is securing. School perimeters should ideally have fences of between 1.8 metres and 2.4 metres, while high security sites such as data centres and utilities generally require fencing of at least 3 metres, and prisons may have at least 5 metre high fencing. Playgrounds will require much shorter fences at a minimum height of 1 metre to allow for independent play, without creating an intimidating environment. With all of us trying to make more responsible, sustainable choices, it's important to choose fencing that has a traceable supply chain, and which offers a long guarantee





With any type of fencing, the most vulnerable areas are the fixings and panel connectors. Screws, bolts and rivets should be tamper-proof to prevent them from coming loose and compromising security, or being removed manually to gain access. Similarly, panel-to-post connectors should be concealed to ensure that whole panels cannot be removed from the posts. All fixings should be galvanised or stainless steel for added protection against corrosion.

With all of us trying to make more responsible, sustainable choices, it's important to choose fencing that has a traceable supply chain, and offers a long guarantee. A 25 year guarantee demonstrates the manufacturer's confidence in its products, and their dedication to providing reliable, long-lasting products that reduce their carbon footprint.

Where visible deterrents are necessary, or where there is a risk of climbing – e.g. buildings, trees, or lamp posts could be used to gain purchase – security toppings can be added to the fence. Barbed wire is a costefficient option with a suitably menacing appearance, while rotating spikes ensure that even the most prepared would find it impossible to gain access by climbing. Warning signs must be visible where fence toppings are in place, and these act as an additional deterrent by themselves.

Gates should always be considered at the same time as fencing, and should match the type of fencing to guarantee consistency of security, as well as providing a polished appearance. There are many types of gates available, from swing gates, to tracked or cantilever sliding gates, or bi-folding gates that offer rapid access. Access control devices should be chosen to suit the type of gate and security level of the site, such as card readers, key fobs, digital pads, and key locks. To increase safety, separate gates should be installed for vehicles and pedestrians. This will also increase security - having smaller entrances for pedestrians reduces the need to open vehicular gates to allow them access, and avoids leaving large gaps in the perimeter. When specifying automated gates, it is essential that they are CE marked, and all Door Hardware Federation safety standards and guidelines should be strictly applied to ensure full safety compliance.

Stuart Glen is UK sales manager at Jacksons Fencing



Titan Lite protecting movement joints



The fire protection of critical movement joints within the main floor slabs of the new Midland Metropolitan University Hospital has consumed some 1,000 linear metres of Titan Lite 120/60, as a well proven and widely specified passive fire protection product. The managing director of Flynn Interiors, Jim Flynn, commented: "Titan Lite is a very good material covered by all the

required certifications for the most demanding situations. Although we have a lot of experience of installing Titan Lite and other Firefly systems on previous jobs – suspended from soffits in ceilings and cavities – we have never used it in exactly these conditions before."

01706 758817 www.tbafirefly.com

C-TEC's fire system raising the grade



C-TEC's Hush Pro BS 5839-6 Grade C domestic fire detection and alarm system has been chosen for three tower block developments in Manchester. Selected for its cutting-edge technology and capacity to align with the building's fire strategy, Hush Pro will integrate with the site's BS 5839 part 1 landlord system to offer higher levels of fire protection than the Grade D unmonitored battery alarm systems typically used in

domestic installations. Hush Pro reports open and short circuit faults and operation faults back to the fire panel and even allows management and maintenance companies to remotely monitor the system.

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record CLEAN automatic doors are ideal when the highest level of hygiene is required in healthcare facilities. With hermetic sealing helping to minimise the transmission of bacteria via airflow and easy-to-clean qualities, CLEAN doors are particularly suited for use in operating theatres and

cleanroom environments. With a wide variety of materials to choose from for the door cores and surface finishes as well as the design of the frame and sealing system, you can build on the basic record CLEAN model to make it suitable for all types of applications.

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A new discovery in smoke protection



Students at University of Salford will discover a new approach to being safe when the campus re-opens in September. **Gilberts'** "first of its kind" Series 60 damper has been chosen by leading smoke control systems company Baiceir to protect the 14-storey Discovery Quay development. Some 26 dampers – each capable of providing up to

two hours' fire integrity – have been incorporated into the common corridors to protect the two stairwells within the \pounds 24.5m building, comprising 400 student bedrooms and ancillary communal space.

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GeoCeramica paving tops off Greenford Quay development

Brett Landscaping has supplied its GeoCeramica porcelain paving for the roof terraces and public spaces of a major new mixed-use development in London, overlooking the Grand Union Canal.

More than 1400 m² of GeoCeramica has been installed across the communal areas of the £151 million Greenford Quay development, with 150 m² used to provide a highly aesthetic finish to the communal roof



terrace on the tallest tower in the scheme.

Project architect HTA Design required a high-quality paving system that would complement the curated gardens across the podium courtyards and upper terraces of the development, and a system that could meet the strict specification requirements for use on tall buildings.

The architect worked with the technical team at Brett Landscaping and chose to use the GeoCeramica range of porcelain paving. The range provides the look and finish of natural stone, while containing modern paving technology suited to the demands of the project.

Brett Landscaping were able to demonstrate that not only would the Fiordi GeoCeramica system provide a finish that met the aesthetic requirements of the upper terraces of the project, but that it could meet the loading requirements and ensure its suitability for the building's design.

GeoCeramica is a hybrid porcelain and



concrete paving flag tile with a pre-bonded cementitious water permeable drainage layer.

For the roof-top areas GeoCeramica has been installed on a pedestal system. This is made possible due to the inherent dead weight of each hybrid flag tile and its individual strength characteristics. The product could meet the technical brief without compromising on the aesthetics offered.

A further 1200 m^2 of the GeoCeramica Impasto and Fiordi paving was supplied to provide footpaths and private terraces on the podium landscapes. These provide a high-end finish to the communal amenity gardens at first floor level.

0345 60 80 577 www.brettlandscaping.co.uk



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Paving for change

In the 'new normal' of the pandemic, outdoor space has taken on new importance, but with the future uncertain, a fresh approach is needed to provide multifunctionality and flexibility to all spaces between buildings. Chris Hodson explains more

A part from temporary measures for social distancing, the pandemic has triggered a fundamental rethink about our paved environment. Issues raised in the past, but put on the backburner, are being revisited, including 'active travel' – increasing walking and cycling – 'low traffic neighbourhoods' reflecting previously adopted 'home zones,' and reinvented high streets responding to the growth in online shopping. A range of wider concerns also need to be addressed, such as flooding from rainwater runoff, vehicular pollution in drains and watercourses, and urban overheating.

Modular paving

Combining established techniques and new innovations, modular concrete paving systems are ideally placed to meet these challenges, whether on new or retrofitted schemes. Adopting the principles of modern methods of construction, factory-produced modular concrete paving delivers fast, lowcost installation, with limited intervention for retrofits. Importantly in these uncertain times, layouts can easily be altered and modular concrete paving taken up and re-used to meet changing demands.

These principles generally apply to all precast concrete block, flag and kerb products. They are fully engineered and manufactured under sustainable, controlled conditions – consistently providing accurate sizes, colours and textures, as well as slip/skid resistance and other performance characteristics. The distinct, modular units and designed variations in colour, texture

Modular concrete paving offers urban designers the freedom to create real 'places for people' that are both multifunctional and adaptable to change and shape can break up areas visually, giving visual interest and a human scale not possible with monotonous, formless materials.

So, modular concrete paving delivers a unique combination of predictability, safety and accessibility for all, with scope for endless variety in shape, scale, colour and texture to enrich the urban environment. It offers urban designers the freedom to create real 'places for people' that are both multifunctional and adaptable to change.

Paving by design

One example of inspired design enhancing the urban realm is the regeneration of the Brownfield Estate in east London, surrounding Ernő Goldfinger's iconic, brutalist Balfron Tower. Here, concrete block and flag paving clearly defines footways and 'defensible' space, as well as highlighting public spaces. Housing block entrances are announced with strongcoloured concrete flag linear paving, shared surfaces right across the adopted street itself.

A key consideration today is storm-water flood prevention – particularly with climate change – and concrete block permeable paving is uniquely placed as an essential, multifunctional sustainable drainage (SuDS) technique. In addition to paving, it also provides an inherent drainage system that requires no additional land take for water storage, treatment or conveyance. This technology eliminates pipework, gullies and manholes, and generally costs less than conventional drainage and paving.

Capturing pollution

But equally important to flooding is the long- and short-term damage caused by pollutants in surface water runoff to the biodiversity and health of our rivers and streams. The Greater London Authority 'Road Runoff Water Quality Study' concludes that "London's roads are harming London's rivers" and proposes SuDS features to manage runoff pollution





from the most damaging roads. On any trafficked surface, concrete block permeable paving offers a real opportunity to address this major problem by trapping vehicle pollution.

Permeable paving can provide a completely level, well-drained, firm and slip-resistant surface accessible to all, without the need for cross-falls, channels, gulleys or other interruptions. Rainwater 'ponding' is eliminated, reducing the risk of ice forming on the surface and preventing splashing from standing water.

But it also allows water to reach tree and shrub roots, despite providing a hard surface above: in fact, the Code of Practice for accessibility in the external environment, BS 8300-1:2018, calls for permeable paving instead of tree grilles. And it can also help reduce 'urban heat island' effects, i.e. evaporation of rainwater within the paving. This is in addition to the high albedo – or heat reflectance – offered by modular concrete paving.

Retrofitted permeable paving

Bringing these issues together, an awardwinning, exemplary SuDS scheme near Australia Road, London, demonstrates the

Permeable paving can provide a completely level, well-drained, firm and slip-resistant surface

multifunctional benefits of retrofitting permeable paving in place of conventional surfaces. Its design, by Robert Bray Associates, introduces the concept of concrete block permeable paving as a thin overlay to existing streets, removing rainwater straight from the surface without gullies and providing some water attenuation and treatment before discharging to adjacent, well-planted SuDS basins. This innovative concept opens up wider possibilities for all hard surfaces.

Modular concrete paving offers designers the potential to create safe, attractive and comfortable urban spaces for the postpandemic environment, with maximum flexibility to meet future challenges and minimal interventions with retrofit, while reducing flooding, pollution and urban heating.

Chris Hodson is a consultant to Interpave



Paving gone for a Burton? Not with Resiblock!



Following the successful use of **Resiblock** at the world-famous FA Academy at St Georges Park, Staffordshire Borough Council did not have to look far for the solution of sealing Station Street, Burton. The Station Street Project saw the

installation of a mixture of new textured concrete block and slab paving to help define pedestrianised spaces from delivery vehicle routes. Resiblock and the '22' A.F product ensured Asset Protection by matching the key client request of providing a sustainable solution which would ensure low future maintenance costs.

mail@resiblock.com

Weatherproof your paving



As temperatures get lower, puddles and ponded water freeze, having the potential to not only damage your paving but also poses a serious risk of falling and injury. Weatherproof your paving and stay safe this winter with permeable paving

solutions from **UltraScape**. UltraScape perma-bed bedding mortar has been specifically designed with permeability in mind. This innovative bedding mortar is proven to reduce water related pavement failures as any rainwater will drain away naturally, rather than sit on top of the stone, or worse, stay within the joint, freeze, expand and then break out – allowing you to enjoy your paving for years to come.

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Raising the roof at Maggie's Centre Leeds



Green-tech is incredibly proud to have supplied the landscaping materials for the new rooftop garden of the Maggie's Centre Cancer Charity which is situated in the grounds of St. James's University Hospital in Leeds.

The charity's 26th UK centre was designed by award-winning landscape designers Balston Aguis. It was inspired by Yorkshire woodlands and features native English species of plants, alongside areas of evergreen to provide warmth in the winter months.

BALI registered contractor Swinburne Horticultural Services Ltd undertook the roof garden build and all the landscaping works.

A well-established family run business with over 30 years' experience installing and maintaining landscapes throughout the North-East, Scotland and Yorkshire; Greentech has worked with Swinburne for many years supplying their projects across England and Scotland.

The outside space at Maggie's Leeds is as important as the inside. Inspired by founder Maggie Keswick Jencks' love of gardening, Maggie's Centres work closely with the architect and interior and landscape designers from the very beginning of each project to make sure there is a strong connection between the outside and inside space. They ask their landscape architects to use plants that will add colour, scent and interest throughout the year.

Leeds Maggie's Centre is roofed by three overlapping gardens which step down and overhang to shelter communal areas. The



challenge was to span and enclose the level changes and reinstate the site's greenery. In this way, the hospital does not lose its last green space – it is lifted up, filled with woodland plants and made more accessible and inviting.

Swinburne Horticultural Services installed the rood garden and created the landscape vision over several months. During this time Green-tech supplied 270 m³ of Green-tree Roof garden intensive substrate which equates to 150 dumpy bags and gt Roof Drain which provides a lightweight continuous drainage layer across the roof structure. It collects and stores water to irrigate the plants during low rainfall periods

300 tonnes Green-tree 12mm premium top soil was supplied for the general landscaping areas, along with 44 tree anchoring kits, Mona irrigation pipes, compost and bark mulch. In total 23,000 bulbs and 17,000 plants were planted which all help to provide a tranquil environment; a calming space for all to take time out and enjoy the nature around them. Visitors are encouraged to participate in the ongoing care of these.

Brian Watson, landscape architect from Swinburne Horticultural Services Ltd comments, "We worked closely with Greentech as we had to work around challenging delivery restrictions. Being in a city centre and the hospital's own restrictions meant it was imperative that Green-tech made each delivery to a very specific and tight timescale; which they did successfully. They used Moffett equipped artic trailers for easier unloading. The roof top garden looks amazing and has been well received. I would happily recommend Green-tech."

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