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THE RYE APARTMENTS, PECKHAM, LONDON

Taking on the role of contractor and developer as well as architect brings project risk as well as design reward for innovator Tikari Works

GRANGE UNIVERSITY HOSPITAL, GWENT

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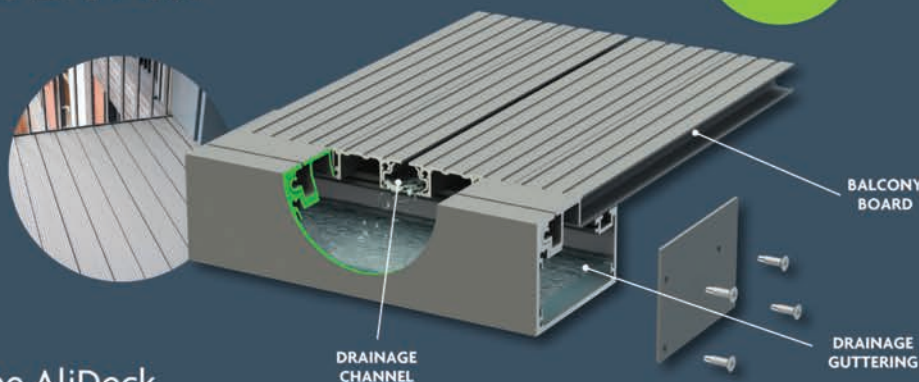
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FROM THE EDITOR



Liverpool has been stripped of its World Heritage status due to developments planned for the city's waterfront. This is obviously a big blow, compounded by the news that came in a few days later that a slate quarry in Snowdonia had been awarded the status by Unesco. However, this chastening move also shows the power, both economic and political, of design when it comes to its effect on high-profile, globally recognised contexts.

The decision was made somewhat obscurely, in a secret ballot held by the Unesco committee in China. However the organisation had previously warned that the developments, which include Everton FC's new stadium, designed by US architect Dan Meis, and the Liverpool Waters mixed use scheme designed by Chapman Taylor. Unesco said the resulting effect on the waterfront would be an "irreversible loss of attributes".

Unsurprisingly, the decision was met with incredulity by the mayor, Joanne Anderson. Liverpool was awarded the in title in 2004 in recognition of its architectural as well as historical importance, joining marvels like the Taj Mahal, the Pyramids, and Canterbury Cathedral.

It's an uncomfortable result of what was a fairly subjective decision of 21 Unesco officials – one that means Liverpool is only the third site to lose World Heritage status since the list began in 1978. Unesco seems to have become more hardline in recent years – stripping Oman's Arabian Oryx Sanctuary of the title in 2007 and Dresden's Elbe Valley in 2009.

The Liverpool decision was made despite 30 figures from "politics, football and academia" signing a letter to the Times in June, pleading with Unesco to show mercy. They made the case that the £500m stadium would bring millions of visitors to one of the city's poorest areas, helping revitalise it and bring in investment. This powerful case ultimately fell on deaf ears, showing the strength of feeling about the perceived architectural damage that the new schemes would cause.

What was until July the World Heritage site stretched from the waterfront, with the famous Liver Building, through the commercial district. The Albert Dock features more Grade 1 listed buildings than anywhere else in the UK. However at some point, schemes need to be considered which will lead such well-loved, or simply well-known districts into a future context. Perhaps these weren't the right schemes, or perhaps they arrived at the wrong time?

James Parker
Editor

**ON THE COVER...**

The Rye Apartments in Peckham saw Tikari Works step into the much-missed Master Builder role as architect, contractor and developer, achieving a high quality, carefully detailed pair of CLT-framed buildings
Cover image © Jack Hobhouse

For the full report on this project, go to page 28

EDUCATION

CPMG designs Secondary Academy in Birmingham for 1,150 pupils



Photography © Willmott Dixon

Christ Church, Church of England Secondary Academy is due to welcome pupils from September, having been completed to create an additional 1,150 school places for the region, to a design by CPMG Architects.

Delivered by contractor Willmott Dixon, the new £19m, three-storey school includes facilities to accommodate 900 secondary level pupils, and a further 250 students in the sixth form. The new building comprises a pick-up and drop-off area for pupils, a sports hall, two full size football pitches and one FA standard 3G pitch.

Traditional materials have been used “in a contemporary manner to create a clean and simple aesthetic,” said the architects, whilst providing ease of maintenance. These include a concrete raft ground floor, traditional brick and block wall construction, and feature render and facade cladding to express the academy’s identity.

The school has been constructed through the Department for Education framework and has been designed to be “both elegant and sophisticated, using robust and durable materials



that will stand the test of time.”

Sara Harraway, director at CPMG Architects, said: “We worked very closely with the school while developing the design, establishing a design concept based around the Trust’s values and the school’s branding. This has seen the introduction of a neutral colour palette, interspersed with bursts of signature blue and yellow feature elements.”

She continued: “The finished school has created a positive, bright, robust, attractive and nurturing environment for pupils, which will also promote a sense of calm and sophistication. Large, high windows have been integrated to optimise natural daylight – just one of many elements designed to promote positive wellbeing in all the building’s users.”

SPORTS & LEISURE

Hornchurch leisure centre set to boost post-lockdown fitness

A “state-of-the-art” leisure centre has been completed in Hornchurch, east London for Havering Borough Council and Everyone Active, designed by sports and leisure specialist practice GT3 Architects as a multi-purpose, accessible space for the local community.

Delivered with Metnor Construction and Paragon Building Consultancy, Harrow Lodge Leisure Centre opened to the public earlier this year in line with government Covid guidance. Spanning two floors and covering more than 6,000 m², the facility replaces the town’s existing sports centre. The flexible space accommodates a wide range of different leisure activities including a 25 metre eight-lane pool with 250 seat viewing gallery, wet changing village, sauna, steam-room, and an onsite cafe opening onto a public plaza.



A separate specialist learner and dive pool offers increased flexibility for the centre. A movable pool floor will also facilitate a range of activities, from baby and toddler classes through to diving lessons, aqua aerobics, and group wheelchair access.

GT3 Architects also worked with international pool expert Myrtha Pools to deliver the facilities – utilising the firm’s innovative prefabricated



© GT3 Architects & David Millington Photography

steel tank technology to create the custom pool.

Harrow Lodge Leisure Centre also houses a fitness suite offering 150 workout stations with floor-to-ceiling windows maximising the park views. Three multi-function fitness studios and a large four-court sports hall lend themselves to a range of activities to suit the needs of Hornchurch’s residents, from badminton to basketball.

REFURBISHMENT

Stephen George + Partners refurbishes warehouse to create modern logistics facility in Aberdeen

Stephen George + Partners (SGP) has announced the completion of the comprehensive refurbishment of a 74,600 ft² warehouse building to ‘Grade A’ standard for logistics, storage and distribution.

Completed at Aberdeen One, a new urban logistics park in the Altens Industrial Estate on the south side of Aberdeen, the architects worked closely with client Titan Investors to reconfigure the existing building. Two units of 28,000 ft² and 40,000 ft² were created, (plus office provision) with the former being a shell only refurbishment and the latter pre-let to FedEx.

In addition to new subdividing internal walls, the external envelope has been reclad with a neutral palette of grey and white cladding, creating a contemporary modern look. Additional level access



SGP Aberdeen One, Units 1 & 2

doors have been added to both units. Unit 1 includes a new external office area, plus eight dock levellers, three of which are to accommodate the double deck trailers of European lorries.

Marcus Madden-Smith, partner at SGP explains: “Aberdeen One is a new area for logistics at the industrial estate, historically well established in the oil and gas industry but equally able to diversify

to meet the growing demand for logistics and distribution hubs in the area. We took the decision to reuse, repurpose and refurbish the existing structure as a sustainable alternative to demolishing it. We developed the size and layout of the units and surrounding service yard to meet the needs of the local market, and the client has already disclosed the likelihood of future phases on site.”



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PRACTICE PROFILE

White Red Architects

Joe Haire, co-founder and director of White Red Architects tells Roseanne Field how the ambitious practice has built on a foundation of a friendship between two undergraduates to place collaboration at the heart of its work

Becoming friends while attending Manchester School of Architecture, Joe Haire and Dicky Lewis had always talked about starting their own practice together. “We were competitive, but worked well together,” Haire says. “It would be accurate to say the practice was originally started out of friendship.”

Despite graduating and finding jobs at other practices (Hawkins\Brown and AHMM in Haire’s case, and Foster + Partners in Lewis’), the idea of co-founding a practice endured. In 2014, they began working together as White Red Architects (WRA), but only in their spare time. For the first year they worked evenings and weekends on “a handful of projects – largely domestic extensions,” explains Haire. “We built and tested systems, and started to learn about business development and running a company.”

The name came from a competition entry Haire and Lewis were working on late one night. “We were frantically sketching with a box of red pens Dicky had borrowed from Foster’s office,” Haire explains (stressing that they were later returned!). “The entry

needed a team name and we saw the answer in the white and red drawings that surrounded us.” They liked its “simplicity and boldness,” he continues.

To avoid it being a barrier to their goal of collaboration, they were reluctant to use their own names for the firm’s moniker. This decision was quickly vindicated as they met soon-to-be fellow director Jesus Jimenez shortly afterwards.

Once they had saved enough money, Lewis handed in his notice and started working full time at WRA, closely followed by Jimenez and Haire. Initially, he says, their primary goal was to “build a platform that would give us the freedom to test and develop our ideas,” including designing in new sectors. He continues: “We liked the idea that the practice could be a vehicle for working with different people to do the work we wanted to do.” A period of tireless networking and cold calling followed, to build up not only a client list, but also market knowledge. “Having started relatively early in our careers we were not bringing established lists of clients with us,” says Haire.



Covent Garden office scheme at 12 Henrietta Street © Freddie Marriage





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Expanding

Since the practice's inception, it's grown to a team of 12 working in their Shoreditch office – including Haire, Lewis, and Jimenez – and four in an office in Mumbai, run by director Bhushan Kapase. “We wanted to build a studio capable of undertaking international work from the start, and we were interested in the contrast in culture and climate that India offered,” Haire explains. Dicky and Jesus had met Bhushan when working on projects for Fosters together in Mumbai and had stayed in touch. “It didn't take long to decide to work together,” the architect adds.

Sharing the workload across the two distant studios, the teams rely on Zoom, virtual reality (VR) and 3D printing “to make the dialogue as effective as possible!”.

Despite being a relatively small practice in terms of employee numbers, the studios take on high profile projects; Haire believes the firm's still modest scale is in fact an advantage. “We're nimble and able to adapt quickly,” he says. “Being younger, we are all digital natives and have always embraced technology to improve our workflow.” Since the practice's inception they've used BIM but also ‘rapid prototyping’ of physical models using 3D printing, which Haire says has enabled both offices to grow by allowing them to be “more efficient and targeted with our time.”

The practice's core values are that they're ‘recognisable, disruptive, memorable, and powerful’ – though he stresses they are “never disruptive for the sake of being different. We know we can offer viable solutions that push conventional boundaries,” he explains. “We offer something unexpected that will push the conversation on.” These are principles that he says also apply to how they work together – and how they look for new work. “We've had to be innovative in order to get in front of decision makers,” he says.

Projects

The practice has expanded its reach across various sectors. To date most work has been in commercial offices, although currently in the pipeline are housing towers in Mumbai, a headquarters and workshop for a bus manufacturer, and high end offices in Mayfair.

Haire picks a Covent Garden office refurbishment for Royal London Asset Management as a project that showcases their strengths, with design's power to attract workers back to offices particularly salient at the moment. “It's more relevant than ever that these spaces have their own character, inspired by their unique locations,” he says. They used Racing Green to introduce a “bold twist of colour” and included arches referencing the nearby London Transport Museum; “From the outset we were determined this would not be the typical spec fit out in white and grey,” he says.

Currently the firm are working on the M-Sport Hotel – a 120 bed hotel forming part of the M-Sport Rally complex in the Lake District, featuring a timber lined entrance hub and a pitched roof emulating the surrounding landscape. It will be reached via a dramatic road bridge reaching across a lake, “snaking like a race track across the water's surface,” Haire explains. He says that this building is “an opportunity to test our developing process as we move towards carbon negative buildings, experimenting with cradle to cradle design and onsite renewable energy generation.”

Recently, the practice was the only UK firm to make the top six in RIBA's Ancient Tree Civilisation and Residence Future International Architecture Design competition, which was “exhilarating,” says Haire, “the whole studio was involved.”

Their design, for an ancient forest in China, featured a new platform between the forest floor and tree canopy which would



12 Henrietta Street © Freddie Marriage

leave both areas untouched. “Arguably any development on the site would be inappropriate,” Haire explains. The buildings would be accessed from the ground via glass bulbs hanging from the platform. “Our ambition has always been to test ourselves by designing in different cultures and climates,” he says. “This competition was a fantastic opportunity to do this and taught us a lot.”

Coping with Covid

Over the last 18 months, real time rendering software has allowed the team to share ideas as they develop, from their homes. “It's immersive and engaging and can easily be paired with VR,” says Haire.

The practice took on a new studio space in August, and while Haire says it's been frustrating not being able to fully use it, it has given them an opportunity to figure out how best to use the space more collaboratively. It occupies a glazed shopfront on the ground floor of a Victorian brick warehouse, and Haire explains how they have put their ‘model workshop’ at the front, showing their ongoing projects to the public. “We've focused on prioritising an area for equipment for collaboration,” he adds. “When we need more space in the future, the plan is to take additional shopfront space, with perhaps different equipment to allow the team to work flexibly between offices.”

Haire says the key takeaway from the pandemic is the need for flexibility. “For architects the design process is best done in person, but it may be that we can organise this time into focused design ‘sprints,’ allowing us to work more flexibly the rest of the time,” he says. “Working remotely has also got us thinking further ahead about a virtual studio in which we might be able to log in and work together in an online world. Technology is rapidly making ideas like this possible.”

Overall, Haire describes the studio's feelings towards the future as “very optimistic”, saying they will continue to seek opportunities to work with people they believe share their outlook, both in the UK and internationally. “We recognise there are huge challenges ahead and big changes in the way we construct and use buildings, but we also realise that we are uniquely placed to make a positive impact.”

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LAD HEADQUARTERS, CHINA MVRDV

MVRDV has revealed the design for the Lankuaikei Agriculture Development (LAD) Headquarters in Shanghai, an 11-storey terraced office building that brings together high- and low-tech sustainability strategies under a “swooping technological roof” to create a showcase for the agriculture technology company. Located near the lake at the centre of Lingang New Town, the building is conceived as an “agricultural oasis” in a rapidly developing urban area in Shanghai, and one of China’s greenest, smartest sustainable buildings. The building is rectangular in plan, yet it is given a striking curved shape by the series of terraces clad in wood and covered in greenery, that step down to a courtyard and the main pedestrian entrance on the north side. A curving roof structure which follows the shape of the terraces covers the ensemble. On the southern part of the building, this structure supports solar panels, while on the north it is permeable, filtering sunlight but allowing rain to reach the terraces below. The facade is a “pleated arrangement” of solar panels and glass, angled to protect the interior from strong summer sunlight while allowing winter sunlight into the interiors.



APPLE TOWER THEATRE, LOS ANGELES FOSTER + PARTNERS

Apple Tower Theatre, Apple’s newest store in downtown Los Angeles, has opened to visitors. The design seeks to reinvigorate one of LA’s most historic cinemas by “giving the building a new purpose and restoring its lost glory,” said the architects. The design is the result of a close collaboration between the design teams at Apple and Foster + Partners. The design restores the distinctive clock tower and exterior terracotta facades, enhances historic interiors and improves the marquees and Broadway Street elevation, while upgrading accessibility to ensure the building will survive and serve the community long into the future. The restored grand staircase takes visitors to the upper levels, while the lobby opens up to the soaring volume of the main theatre hall at ground level, which has been completely transformed into a “majestic display area.”



THE RING, CHINA LEAD8

Lead8 has celebrated the opening of The Ring in Chongqing; a “ground-breaking ecological retail destination” that features one of China’s largest indoor botanic gardens. The development is claimed as a first for the city, as a place that “intertwines retail, nature, culture and experience.” The 42 metre high botanical garden is combined with interactive sports and culture, and a creative tenant mix to offer a mix of attractions not yet seen before in Chongqing. The development occupies 430,000 m² with approximately 154,000 m² dedicated to the seven-level mall, 14,000 m² to the retail street, 111,000 m² to the ‘super grade A’ office building, and 6,000 m² to the indoor botanical garden. The interior design centres on a ‘Mountain City’ concept; “bringing together natural environments with enriched engagement and experiential opportunities to create a diversified lifestyle offer.” The architects commented: “Environmental protection technologies were used to construct the green ecological experience, producing an oasis for the city.” Complementing the indoor gardens, specialty activity hubs such as the ‘Free+’ dynamic sporting facility and the ‘Open Lab’, a calm public space for reading and gathering, help meet the diverse demands of “changing consumer preferences,” said the architects.



ONE BEVERLY HILLS, LOS ANGELES FOSTER + PARTNERS

One Beverly Hills is a striking and dynamic mixed-use urban-resort in the heart of the famous district of LA. The 17.5-acre site is currently one of the largest and most environmentally advanced projects underway in the United States. One Beverly Hills will add three environmentally sustainable buildings to the site: two residential condominium towers and a third building housing a 42 ‘all-suite’ luxury hotel and 37 shared ownership condominiums. All of this is set around eight acres of botanical gardens that will be planted at the heart of the site. Foster + Partners is leading the One Beverly Hills masterplan with Los Angeles based multi-disciplinary design firm RIOS overseeing landscape architecture. One Beverly Hills will “seamlessly integrate” the existing Beverly Hilton and Waldorf Astoria Beverly Hills into a unified 17.5-acre site. A new 38,000 ft² conference centre will be equipped with sophisticated technology and enhanced with “unique breakout areas” that capitalise on the Southern California weather. Joining the established hotels will be a new 10 storey building that will include 42 ‘all-suite’ guest accommodations, a fine dining restaurant and 37 shared ownership condominiums.



MARINA TOWER, GREECE FOSTER + PARTNERS

The designs for Marina Tower, claimed to be the first ‘green’ high-rise building in Greece, have been revealed. Located in the Agios Kosmas marina area and one of Ellinikon’s first architectural landmarks, Marina Tower will not only be the tallest building in Greece, but also the tallest green beachfront high-rise building in the Mediterranean, said the architects. With “dominant green and water features,” as well as natural light and unobstructed sea views, the building “brings an innovative design approach to the region.” Rising to 200 metres above sea level, Marina Tower will have 200 apartments on 45 floors. Foster + Partners commented: “The key characteristic of the design approach is the creation of a building with a slim silhouette, that harmonically blends with the natural environment and the special character of the Mediterranean landscape.”

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Advanced's MxPro 5 selected for £485M hospital redevelopment project

A fault-tolerant network of fire alarm control panels from Advanced has been selected to protect the 3Ts Redevelopment programme at the Royal Sussex County Hospital.

36 4-loop MxPro 5 fire panels, 46 repeater panels and two custom-built AdSpecials panels from UK-manufacturer, Advanced, are to be installed at Brighton's 3Ts hospital redevelopment as part of phase one of the programme.



Taking a lead role in the cabling, first and second fix for the fire system throughout phase one of the project are EA-RS Fire Engineering Ltd. The Essex-based firm will install Advanced's industry-leading MxPro 5 fire panels alongside bespoke sprinkler indication and ventilation override panels, all linked to approximately 5,000 Hochiki devices.

Chris Goddard, project manager at EA-RS Fire Engineering Ltd, said: "The 3Ts redevelopment project represents a massive healthcare investment for Brighton & Sussex University Hospitals NHS Trust. Configuring protection across a site of this size can often appear daunting, however the MxPro 5's ease of installation and scalability will help to make the challenge of implementing protection effortless."

Amanda Hope, UK business development manager at Advanced, said: "We're proud to be supplying our partners, EA-RS Fire Engineering Ltd, with the equipment



required to ensure that the valued healthcare staff, patients and these state-of-the-art facilities will be protected by a cutting-edge fire system for years to come."

Advanced is a world leader in the development and manufacture of intelligent fire systems. Its reputation for performance, quality and ease of use see its products specified in locations around the world, from single-panel installations to large, multi-site networks. Advanced's products include complete fire detection systems, multiprotocol fire panels, extinguishing control, fire paging, false alarm management and reduction systems as well as emergency lighting.

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Gilberts demonstrates the role of good ventilation in mental health



Balancing the creation of a positive environment for health & wellbeing with the needs of a medium secure mental health unit has been achieved simply yet safely and effectively. Rowan View, Mersey Care NHS Foundation Trust's new £53m secure mental health & learning disability hospital, has been delivered on time despite the two-year building project happening during the pandemic. A key element of the internal environment – the ventilation – has been provided via Gilberts' GPP4 perforated face supply, extract and transfer ventilation grilles. The Home Office-specification air supply and extract grilles ensure the right amount of fresh air, in the right places, for occupant needs throughout the state-of-the-art 123 bed facility in Maghull. The enhanced design of Gilberts' GPP – a 2 mm stainless steel fascia perforated with 2 mm dia holes at 4 mm centres on a triangular pitch – is compulsory where police specifications apply, and is compliant with the requirements of Department of Health Building Note 03-01. Gilberts is open for business, and has just commissioned new, state-of-the-art CNC production machinery, and expanded various production facilities to further enhance its customer offering in quality, value and service.

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Luceco help Trafford General Hospital with further energy savings



Following the success of considerable energy savings as a result of recent lighting refurbishments utilising wireless lighting controls, Luceco was pleased to supply luminaires for further wards within Trafford General Hospital in Greater Manchester. Luceco Wireless Lighting Controls were specified by SI Sealy in association with the Estates and Facilities Department. The design was put forward for an architectural award due to the innovative use of the lighting controls overseeing lighting levels throughout the day and night. With the ward's inhabitants primarily elderly and suffering dementia, the lit environment was programmed to reduce to low levels, but with luminaires never powering down completely. This ensured patients did not become disorientated, their welfare was of paramount importance to the lighting design. Over 250 Wireless Lighting Controlled luminaires were installed in TGH Ward 17/18 including LuxPanels, recessed and suspended Contour, Platinum and Element downlighters. Seamless runs of energy saving cost effective LED lighting can be created with Contour with the added benefit of 100,000 hours maintenance free operational life.

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Revitalising healthcare through healing architecture



Covid-19 has impacted our lives and jobs in so many ways and as we consider the months ahead, and in to 2022, its impact looks likely to continue for some time, with long-lasting changes to building design.

As far as construction of healthcare buildings is concerned, we at GEZE expect to see several trends likely to be implemented during this year alone, specifically to help prevent or reduce infection rates. These include increasing automation technology, reconfiguring waiting areas, improving ventilation and installing flexible partition solutions to “section off” areas or improve comfort.

“Clients and architects across the sector are already considering these design changes in new construction as well as refurbishment to existing hospitals care homes and clinics,” comments Andy Howland, sales & marketing director for GEZE UK. “From even before the pandemic hit, our experienced GEZE teams around the world have been busy helping medical facilities implement practical solutions to cope with higher patient volumes and elevated infection control measures. Going forward we anticipate a continued rise of healthcare construction projects focused on these challenges.”

Touchless Entry and Enhanced Security

To reduce the number of surfaces touched by hand, hospitals and other healthcare facilities are looking even more at automation in 2021. Healthcare facilities are already well



equipped with automated doors, often in entrances and corridor areas, to allow barrier-free movement. In addition to improving infection control, automatic doors continue to allow healthcare facilities to better manage where visitors are permitted to go. If a section of the building must have restricted access, healthcare personnel can automatically lock entry-exit doors rather than having to do so manually and can monitor the status of these doors at all times. A feeling of safety is critical to a feeling of wellbeing in any facility but especially healthcare buildings, when we feel at our most vulnerable.

Socially Distanced Waiting Rooms

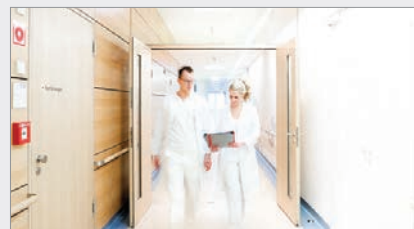
As recently reviewed by the IHF (International Hospital Foundation), space management in facilities has become a critical consideration. Healthcare facilities will look to their supply chain when configuring waiting room areas that allow patients and visitors to wait comfortably with adequate social distancing space. Surfaces in and around these areas will be designed for easy cleaning and sanitisation, with touch-free movement for occupants in these spaces or clever use of movable glazed partitions to separate waiting spaces at busier times.

Socially Distanced Hallways and Larger Rooms

Healthcare facilities handle a wide range of patient health issues, including a broad range of contagious conditions. Facility owners have had to reconsider the design of wider hallways and larger rooms to keep people from passing too close to each other, plus the reduction of the number of people in each room. Where modification to existing buildings is not possible, due to budget or layout, many may turn more to modular construction, adding these as additional and flexible facilities to existing buildings without compromising on the quality or comfort of these spaces or the technology within them.

Updated Ventilation for Better Infection Control

Airborne diseases can circulate through a building's heating, ventilation and air conditioning (HVAC) system. Recent BBC research has drawn further attention to the fact that these can in fact be carriers



themselves to a range of bacteria. Facility managers are looking at other solutions to help maintain optimum air pressure, whilst allowing air from outside the room to infiltrate, keeping potentially harmful particles from entering or leaving the controlled space. Whilst healthcare and commercial buildings would always be required to meet minimum air quality requirements, it looks likely that further consideration will be given to these parameters to reflect this higher need for ventilation. This would make it easier to convert commercial spaces into healthcare facilities at short notice, as we have seen with facilities such as the Nightingale Hospitals, where GEZE provided essential equipment. The BBC also agreed with this need in further studies.

Whatever the challenges facing healthcare construction, there is little doubt that there are several solutions ready and available to help rejuvenate buildings to this new normal.

Healthcare professionals continue to concentrate on the safety and recovery of their patients and equally so, GEZE are prepared to help manage the safety and redesign of their properties, this year and beyond.

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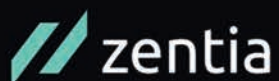


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**BUILDING
PROJECTS**

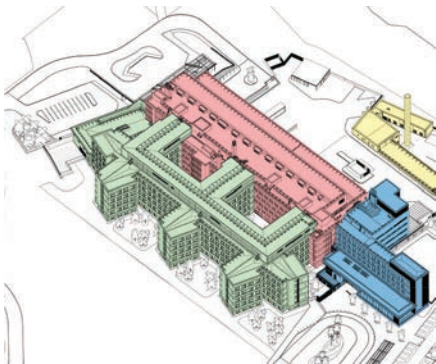
**THE GRANGE UNIVERSITY HOSPITAL
GWENT, WALES**

Critical path to success

A new critical care hospital in south Wales has been designed by BDP for optimum efficiency to attract the best staff, while achieving an accelerated programme to meet the challenge of Covid. Adrian Hitchcock takes Jack Wooler through the project



“The building slowly reveals itself; it’s quite low key for such a large development”



DIFFERENT DISTRIBUTION

The programme is split into three vertically-planned functions: inpatient (green), treatment (pink) and diagnostic (blue)

A new 450 bed specialist and critical care hospital has been constructed in South Wales by global interdisciplinary design practice BDP to sit naturally among the sweeping hills of the valley it resides in, and to bring functional benefits to its patients, workers, and project team.

Secured under the Welsh Government’s Designed for Life Strategy, which sets a long term framework for improving National Health Services, Grange University Hospital is intended to provide care only for the most critically ill patients and those requiring the most complex care.

Users will spend time in this facility only for the duration of the critical intervention necessary – being moved as quickly as possible back to their local general hospital, and eventually home. This means the NHS is able to deploy its most highly skilled clinicians – and the most serviced and engineered facilities in the area – into one location, creating a “centre of excellence.”

Procurement

Through a short form, competitive bid, BDP and contractor Laing O’Rourke were appointed to take the outline business case forward. With the NHS board having complex needs and strict deadlines, a ‘modern methods of construction’ (MMC) strategy was developed to meet the client’s strict timelines, and BDP were challenged with providing sufficiently detailed models for the builder to achieve the pace required.

The team designed three distinct zones built around a central spine, on the axis of the listed Grange House and its adjacent walled garden. Each of these zones have been designed and built as separate volumes, allowing them to be constructed simultaneously, enabling the installation of services to be as smooth as possible, and even giving the construction team the ability to complete the project six months early to help tackle the pandemic.

Blending with the landscape

“Just like a country house,” says Adrian Hitchcock, director at BDP, “when arriving at the hospital from its main access route, the building slowly reveals itself; it’s quite low key for what is such a large development.”

The access road rises through a deep cut in the landscape to the new hospital, constructed on a man-made plateau along one side of the escarpment. This site offers views across the valley to the west and to the Monmouth hills to the east.

Once belonging to Grange House, with its historic stained glass windows and a walled garden, the estate provides a mature landscape, “giving it very much a country park feel,” says Hitchcock.

BDP worked with the health board, planning authority and local residents to choose what was a “perfect spot” in order to maximise the far reaching views, while simultaneously allowing the building to



remain discreet from its immediate residential neighbourhood.

The architect's brief included the need to make the most of the prospect towards the east, to the valley. The building's spine was therefore placed along the north-south axis, following the ridgeline and same axis of the house and its walled garden – the latter being brought into the landscape scheme as a place for staff to gain some respite between shifts.

The team also utilised the sloping topography by dropping all the services of the building, including an energy centre, logistics and servicing, to a lower floor level than the hospital's main zones.

The landscape parkland extends right up to the base of the building on the western side – where the wards look across the landscape to distant views across the valley. On the eastern side the site has been cut to accommodate the logistics and primary energy plant. This is tucked away behind the treeline, so is “not evident in distant views into the site,” says the architect.

Circulation

Heading inside, the architect explains the “very simple” circulation routes, with visitors always traversing north-south along the ground floor axis. Moving from the entrance, the design leads visitors to the ward accommodation – avoiding the diagnostic and treatment patient flows – via the visitor lifts which exit into inpatient

visitor lounges, from where they can be escorted to their relatives.

According to the architect, this routing was decided early on: “There are very critically ill patients who will likely journey backwards and forwards from the inpatient zone to the diagnostic and treatment zone several times a day for various interventions, and we wanted to avoid that crossflow between visitors and inpatient movement.”

As such, the hospital streets on the upper levels – where the inpatient wards and the diagnostic and treatment zones are located – are exclusively for bed and trolley traffic. “That’s really good from both a privacy and a dignity point of view,” says Hitchcock. It also simplifies things for staff; “You haven’t got the complication of visitors looking for destinations in what is a clinical zone.”

Separating functions

Unlike more common hospital typologies, where differing zones are split vertically in a tower and podium solution, the building's three separated zones, inpatient care, diagnostics, and treatment, have been stacked ward on top of ward, all leading from different parts of the central axis.

“In this configuration,” explains Adrian, “there’s an interdependency from the outset between the design of the different zones, their superstructures, and the engineering and services work behind them.” He adds: “While atypical, building each section of a

“We wanted to avoid that crossflow between visitors and inpatient movement”



“From the outset there was an interdependency between the design of the different zones”

zone side by side is a simpler solution.”

He explains further construction benefits of repeatable stacked templates; the engineering and services can be “straightforward all the way up.” Separate construction teams can work alongside each other in a “quasi-independent way,” with teams on one section not reliant on the other.

This also allowed for greater design flexibility, with differing superstructures on each zone providing dedicated structural arrangements, grids, services and distributions. All of these were built with column grids spaced far enough out for them to change over time with the changing modalities of specialist medical equipment.

“Having these separated zones – without the added pressures of mixing differing building services – allows the spaces the opportunity to flex over time,” he says.

Interior layout

When it came to the layout, the architects naturally began with NHS guidelines, which set baseline standards for elements such as space and ergonomics. However, Adrian tells me that as part of recent moves under its “Designed for Life Framework,” the NHS intends to capitalise on supply chain expertise and learning, which allowed them more design freedom.

As a result, while the hospital contains 15 wards (with some specifically for critical care, cardiology and paediatrics) their 32 beds include 24 single ensuite rooms and just two four-bedded bays. There are 470 inpatient rooms in total in the hospital, plus 11 operating theatres and an intensive care department that consists of individual

rooms separated by glass screens, enabling nurses to monitor two patients simultaneously.

The architects’ expertise bore fruit in the creation of a repeatable single ensuite bedroom – developed through some of BDP’s previous healthcare schemes, but adapted for the Grange University Hospital. “The latitude we had for this project was to develop this repeatable design by testing the NHS’ space standards and the equipment necessary for each room – and optimising the engineering and space allocations for both patient and staff benefit for the higher dependency patients,” explains Hitchcock.

Where previous Designed for Life projects have adopted the arrangement of ‘bathrooms between bedrooms,’ this would have added travel distance for nursing staff; the architects here therefore set out to shorten that distance allowing staff increased time with their patients.

“We organised patient rooms in clusters around the nursing care in a very direct way,” says Hitchcock, “with blocks of eight single bedrooms around the team that will be supporting those eight patients.”

Heavy usage

As with the layout, many of the internal finishes were dictated by NHS guidelines, which focus largely on cleaning, maintenance, and longevity – due to the heavy usage they must endure, and the significant lifecycle costs of the NHS estate. Adrian tells *ADF* that, as opposed to being hamstrung by these guidelines, BDP in fact spent “a long time” working with various suppliers and manufacturers to improve on the health board’s minimum standards.

The architects’ ambition was to not just specify materials that could “simply accommodate” the high footfall moving through the building, but to ensure that each element would “look as good over time as they did on the day they were installed.”

“We attached a lot of importance to that concept, because the environment you experience in a healthcare facility – whether consciously or not – can really affect the way you feel,” says Adrian. “If it’s poorly maintained and the materials are not delivering as they should, then that can affect one’s perception of the care they are likely to receive.”

Modern methods

One of the “big challenges” introduced in designing these spaces was reportedly brought to the practice by Laing O’Rourke

was their MMC strategy, with both the Health Board and the construction team keen to use pre-assembled components wherever possible.

This led to a strategy of 'Product-Led Design,' with a detailed understanding of the potential and constraints of the manufacturing process to inform the development of design. For example, while essentially only three different types of precast facade panels have been utilised, different aluminium window configurations set within the standardised openings produced more "interesting and lively facades" than would have been possible under a more "cookie-cutter" approach."

To enact this, the practice's use of BIM provided a system whereby panel geometry could be transferred seamlessly to the manufacturing team from architectural design models. The teams embraced paperless methods here, reviewing panel geometry and data in 3D and communicating using BIMCollab.

The MMC elements that were eventually included within this strategy were wide-ranging, including reconstituted stone, insulation and load bearing inner skin sandwich panels incorporating pre-installed windows, precast concrete columns, precast concrete sheer walls, hollow core prestressed plans, precast stairs, bathroom pods and vertical services riser modules.

The team also used virtual reality "extensively" for interior design reviews, progress reporting and briefing on the client's monitoring team, as well as for a virtual tour website created for hospital staff orientation – which also proved useful for the construction team.

According to Laing O'Rourke, these methods combined provided a "measurable improvement in productivity overall," saving 42 weeks or 23% of the programme as compared with a traditional build, as well as the reduction of health and safety and waste issues.

With the vastly increased need for rehabilitation demanded by Covid, this system even allowed the construction team to bring the Grange's completion forward by some six months. Besides the speed of the MMC used, this was also made possible by focusing on completing the inpatient care zone (the area most needed in the area through the pandemic), as representing a different entity from the other zones, and one which didn't rely on the others.

Making a difference

Looking back on the success of the project,



Hitchcock attributes much of it to MMC, the in-depth modelling process behind it, and the benefits brought to the construction team.

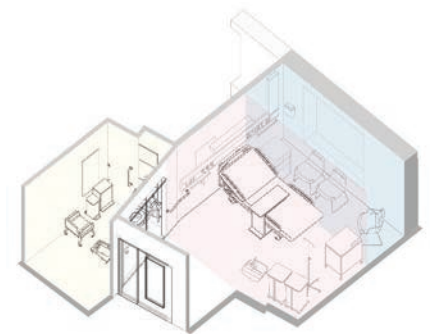
Despite this, he warns that achieving success with MMC against the complex needs of NHS facilities is not as easy as "cutting and pasting," and that there were many aspects of realising the project's ambitions, particularly in financial terms, that proved a significant challenge.

"There is always a huge amount of scrutiny as to how money is spent, where capital is released, and in all areas of the design. It can be tough sometimes – but it's worth it to be a part of such important projects and their contributions to society," he says.

After working in the healthcare sector for over 30 years, and for a practice celebrating its 60th birthday this year, Adrian knows more than most "the crucial part of the fabric of our society" healthcare provides, and believes that through design in this sector, architects are able to "make a real difference to the critical points in people's lives."

While he says it can be "frustrating" enduring the slow fruition of such large scale projects, he tells me there is "real joy in the degree of engagement with the building's users and the benefits design is able to bring to them."

"Ultimately, healthcare is a large part of our civic fabric in the UK, and at the heart of a lot of communities," he concludes. "They are hugely important to us as a collective, and the pandemic has heightened that appreciation." ■



- Clinical Zone
- Family Zone
- En-suite Bathroom

PROJECT FACTFILE

Construction cost: £350m

Floor area: 55,000 m²

Client: Aneurin Bevan University Health Board

Architect: BDP

Contractor: Laing O'Rourke

Engineering team: Aecom and WSP

Ceilings: Rockfon

Vinyl: Polyflor

Dry lining supplies: British Gypsum

Windows & curtain walling: Kawneer

Prefabricated steel beams: Peikko

Colourful, Practical Door Protection for Radiology Department



The Northern General Hospital in Sheffield chose Yeoman Shield fire rated door protection systems to refurbish doors in the Radiology Department.

The configuration and refurbishment of the department was undertaken to improve

patient flow, the overall environment and to rationalise inpatient and outpatient areas to satisfy privacy, dignity and capacity issues.

Yeoman Shield's (Harrison Thompson) directly employed fixing operatives, who have been assessed as being competent to install

such passive fire-resistant products by FIRAS, installed fire rated door protection panels, PVCu clad Glazing Bead Units and Door Edge Protectors to various doors throughout the unit.

The addition of these products will prevent impact damage, extending the lifecycle of the doors in turn reducing the amount of time and money spent on repair and replacement, whilst contributing towards an aesthetically pleasing environment.

The doors in the hospital's radiology department were required to be colour coded to reflect the actual department area functions e.g. Fluoroscopy rooms denoted by Yellow.

With a wide colour palette available from Yeoman Shield, the door protection was able to be supplied in corresponding colours, adding to the design and function of the department.

For more information on Yeoman Shield fire door rated door protection products and fire door services go to their website.

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Many hospital buildings of traditional construction have ill-fitting windows which are not only draughty and poorly insulating but admit dirt and dust from outside leading to problems of cleanliness and discomfort.

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Selectagaze secondary glazing not only

creates a warmer environment but achieves very high levels of sound insulation. The speed of patient rehabilitation is important, with sleep playing a major part in the healing process. Selectagaze secondary glazing systems can reduce noise levels by 42-45 dB with standard glass and even higher levels achieved with thicker glass.

Besides environmental improvements, Selectagaze secondary glazing also helps with secure environments such as mental health units where there is a need to protect patients from self-harm. Also, pharmacies and laboratories where sensitive or dangerous materials are stored and used can benefit from secondary glazing, as well as data centres where patient information is kept. A range of products tested to PAS 24 and Loss Prevention Standard LPS1175 are available.

With 50 years of experience working within hospitals and healthcare establishments Selectagaze is the leading secondary glazing specialist and tailors its



windows to each client's needs

Established in 1966 and Royal Warrant Holder since 2004, Selectagaze has a wealth of knowledge from working on all building types. The company offers a wide range of tested products covering acoustic and thermal performance as well as protection against intruder and blast mitigation. A free technical advisory service is offered and RIBA approved CPDs are available to architects and designers.

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Twinfix find the solution at Liverpool Heart & Chest Covid-19 Testing Facility

When Liverpool's leading specialist heart and chest hospital trust wanted to set-up a drive through Covid-19 testing facility, Twinfix were approached by Actua to find a solution to provide shelter within their client's Covid testing pick up points.

With its team of experts in polycarbonate and roof-glazing fields, Twinfix works on developing the best, newest and highest quality products. A family business, Twinfix has been involved in the polycarbonate roof-glazing market for 32 years.

The area was a small courtyard and the proposal was to create a turning circle where vehicles could drive in and pick up their testing kit and drive out, the canopy would provide shelter for the vehicles while doing so.

There were further complications as the area is also used for general hospital deliveries therefore meaning the height of the canopy needed to facilitate lorry/wagons.



With the hospital's requirements in mind, Twinfix designed two bespoke structures spanning a total of 82 m²:

Section 1: Free standing duo-pitch canopy completely independent of the building.

Section 2: Wall mounted lean-to mono-pitch canopy with vertical glazed screen to side & front elevation.

Section 1 comprised of galvanised steel posts with upper aluminium sub-frame roof, whereas, the full structure of Section 2 was manufactured in aluminium.

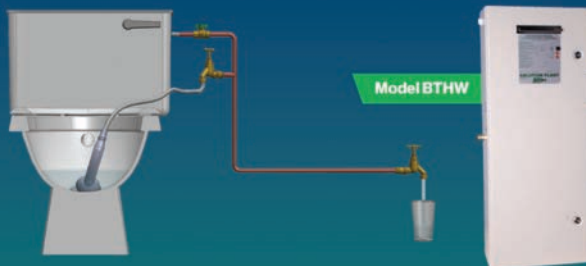


Both structures were fitted with non-fragile Multi-Link-Panel roof-glazing system glazed with 25 mm clear polycarbonate.

Joe Astley, capital projects officer at LHCH commented: "The trust is very pleased with the services received. From a quick turnaround in manufacturing to a trouble free and speedy installation, Twinfix did a great job at LHCH."

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The impact of good acoustics

Light, air, acoustics and spatial organisation are recognised as essential elements when designers work on medical and healing facilities. This is because they have an impact on the treatment of body and mind. Now a wealth of information is available from Trolldtekt, a leading developer and manufacturer of acoustic ceiling and wall solutions. This is available in an online series of articles which focuses on visions and practices opportunities and pitfalls within healing architecture. Trolldtekt's natural and inherently sustainable panels are available in a variety of different surfaces and colours and contribute positively to a building's BREEAM, DGNB and LEED ratings. Available in various sizes and in four grades from extreme fine to coarse, the panels can be left untreated or painted in virtually any RAL colour. Samples, case studies and technical guidance are available from Trolldtekt.

www.trolldtekt.com/news/themes/healing-architecture



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Images © Jack Hobhouse

**BUILDING
PROJECTS****THE RYE APARTMENTS
PECKHAM, LONDON**

Taking full ownership

In a project that saw a return to the Master Builder approach, Tikari Works took the role of not only architect, but also developer and contractor on a CLT-framed residential scheme in Peckham – achieving a high quality result in the process. James Parker reports

A new development sitting adjacent to Peckham Rye park in south London may not at first glance appear to be dramatically different from other architect-designed schemes. Perhaps this belies its biggest claim to fame – that the architects, Tikari Works, not only designed the two-volume project, but also acted as developer, and contractor.

Ty Tikari, who founded the young practice in 2014 with his wife Nicola, explains to *ADF* how a big driver for the design – with the architects having full control over the brief – was to avoid it looking like ‘standard housing.’ “We talked about the generic nature of a lot of housing at the moment, and tried to avoid that.”

The practice was in an unusual position, with jurisdiction over many aspects of the project, but this also increased its exposure to risk dramatically – commercially as well as in terms of construction. However, what is now an innovative business model has been Tikari’s *modus operandi* since founding. It has resulted in a clutch of well-regarded schemes such as the Pocket House, a family home on a tiny site which won the RIBA London 2019 Award.

This all-encompassing responsibility, reminiscent of the Master Builder arguably last spotted in Victorian times, also meant that the stakes were raised to create a design that would break some new ground in the fairly conservative residential sector, says Tikari.

He tells *ADF*: “If we are going to take on the role of client, contractor and architect we should be trying to explore what’s possible with housing rather than produce what you would do with a separate client and contractor.” To not do this would be “a missed opportunity,” he adds. Setting the rules also meant synthesising all of the elements – commercial, legal, construction and marketing, “so they are all working in concert, rather than having separate voices all going off in different directions.”

The fully integrated role turned out to be invaluable on this high-profile scheme, allowing the firm to make sensible ‘buildability’ decisions early on, because it was thinking ahead about the construction ramifications of design choices. In fact, underlying many of the aesthetic design decisions was a strong sense of pragmatism, befitting a developer’s eye. This is perhaps most evidenced in the internal spaces by the exposed CLT frame, which while offering a distinct look also represents a streamlined approach to construction, benefitting the project as a whole.

The results are a pair of largely timber buildings finished with a high degree of attention to quality and detail, but yet without the lofty price tag that might be expected. The well-crafted and spacious apartment buildings came in at around £2400 per square metre; “pretty respectable for this level of quality and the scheme’s bespoke nature,” says Tikari.

Site context

Peckham, like so many formerly downbeat areas of London, is now firmly in the semi-gentrified category. EU regeneration funding since the 1990s led to investments such as Will Alsop’s Stirling Prize-winning Peckham Library, completed a mile to the north of the Rye Apartments’ site, in 2000. 2019 it was London’s fastest-growing borough in terms of prices – on average houses are now fetching £619,000.

The Rye Apartments sit at a prominent corner at the top end of the park, on the busy junction where East Dulwich Road crosses Peckham Rye. Including a pair of split-level three bedroom apartments in each block, as well as a mix of more conventional one and two-beds (10 apartments in all), the scheme offers something different to London buyers.

Tikari admits that developers “typically try to avoid three-bed flats,” as less saleable, preferring smaller units in greater volumes. However he says that as well as presenting a “more interesting architectural expression to work with,” the larger apartments would also plug a gap in the local market for a more affordable offer, but providing similar floor area as three-bed houses in Peckham.

The practice purchased the site with no planning permission, containing a set of five garages and a dilapidated 1950s two-storey building which had seen various uses from an office to a nursery, before being converted into three flats. Says Tikari: “It made sense to do a new sustainable scheme on the site, rather than trying to retain and extend a poor quality building.”

The lack of having a separate developer client meant the architects were freed from responding to a typical residential brief. Instead it was a “negotiation between the financial considerations and architectural aspirations, and trying to see where those two things fit together.” By the same token, Tikari says that they “try not to do anything which is purely a decorative or superfluous gesture – to find an expression





“We wanted to see what other opportunities we could offer in terms of spaces”



which is performance based, whether that is environmental, commercial, contextual, or just atmospheric.”

Form

The idea for two separate, but linked low-rise buildings emerged from a close look at the local context and building scale, which constitutes a “mixed grain” of 1980s and earlier council housing, and retail, with grand red brick Victorian and Georgian terraces further south along the park. “So it made sense to have two buildings responding differently,” says the architect; The larger front building contains six apartments – two two-beds on the ground and first floors, and two split-level three beds on the second and third floors. The rear building has four apartments – two one beds on the ‘lower ground’ and two further three-bed split levels on the upper ground and first floors.

The site has three aspects, making it “quite exciting architecturally to deal with,” he adds. It terminates a “tapering” block, and the architects did several massing studies to see how to create a fitting “end stop.” In addition, windows had to be minimised on the long south-facing

elevation, so an overall composition was needed that would offset this.

A “sculptural” approach was taken to the two blocks, which ended up as forms tapering at upper levels, one with a pitched gable roof echoing adjacent houses, the other a more ‘modified’ gable. Within a constrained site, the architects struck a balance between maximising floor space for owners, and ameliorating light issues for neighbours, while achieving as much as possible for residents (amply aided by the large windows at high level).

The result was a monolithic exterior with horizontal bands of clay shingles encasing both walls and roof. This was partly making a virtue of necessity as height restraints and the eave lines of the former Victorian bank next door meant that the front elevation could not be as high as originally planned. The roof appears more as a steep section of cladding, signalled by cranked windows that wrap around the otherwise invisible junction between wall and roof. The form is then truncated to create a flattened, mansard-like effect.

There are flush structural bonded windows to front and rear, which crank vertically over the junction between wall and roof. This gives a more personalised identity to the building, but also has a performance benefit, especially to the rear, as the crank allows light to penetrate deeper into the plan. It also gives users the opportunity of having two different obscuring blinds.

A concrete plinth

With the frame being of CLT, and the site sloping around 1.5 metres from front to back, a continuous concrete retaining wall was created, linking the two buildings as part of a ‘plinth.’ This also created a new datum line which enabled four level gardens sitting between the two blocks in a courtyard created by the retaining wall.

This approach avoided “having the two sculptural forms meeting the ground in a slightly awkward way,” says Tikari. It would also create a buffer zone which would be more resistant to any damage at street level than the shingle cladding, for which replacing any individual units would be a major headache due to the way it’s laid. The architects decided to go for fair-faced shuttering to the wall, rather than bring in another trade to clad it.

While reinforcing the idea of “unity and community” between the two buildings, using the wall to create a protective ring around the scheme, the architects also

wanted to bring light through into the gardens. So in some areas there are punched rectangular holes, creating a lighter visual feel as well as interest internally. The goal was that this feature would also prevent graffiti, however local artists have focused on the solid section around the bin and bike store to the front, leading the architects to replant the green roof with hanging plants, in an attempt to screen it as much as possible.

The shingles (in part chosen as they would work on both walls and roof, and provide a ventilated rainscreen) represent a very common sense cladding approach, while providing a “natural warmth” that ties in with neighbouring properties. “From a construction point of view it’s very low tech, no specialist trades required,” says Tikari. The C-shaped clay forms are hung in traditional fashion off cross battens, and fixed by two screws. As contractor, the architects brought specialist tradespeople on to the job for certain roles, however carpenters and brickies worked throughout the project: “there’s more incentive for them to do a good job,” says Tikari, as they are not handing over to someone else.

This is thought to be the largest volume of Petersen shingles yet featured on a UK project: Tikari says that the effect of the reddish brown expanse helps the building “sit quite softly within the context.” However the extensive use of the material, wrapping the forms, also “creates a bit of tension.” He adds, “it’s familiar and unfamiliar at the same time, which is something we really liked about it.”

CLT & interiors

Explaining the overall thought process behind the construction, which fed into the use of factory-assembled CLT, Tikari says: “Right from the beginning we were working quite volumetrically. A lot of the key decisions and the spaces that resulted came from working in that kind of sectional approach, rather than just an extruded floor plan approach typical in housing.”

The architects wanted to “avoid generic spaces” and see “what other opportunities we could offer” - and CLT was part of the solution. Achieving it became a negotiation between commercial pressure to maximise the amount of floor space, and environmental and contextual pressures eg getting light in, and avoiding the creation of shadows over neighbours.

The duplex-style three bed flats are designed as “terraced houses on the top of each building” They have vindicated the

architects’ approach, being the quickest to sell, despite the project having the misfortune of completing just as Covid took off in March 2020. They have terraces facing into the courtyard, one side offering “sweeping views of London.” They are cut into the roof, which as a result ‘hugs’ the terraces, increasing the sense of privacy, and making them highly usable spaces.

The concrete cavity walls have PIR insulation cast into them, and in both ground floor flats of the larger block they have been left exposed internally, enabling residents to “read how the building is constructed,” says Tikari. He said this was an important goal throughout, exemplified by the CLT frame being exposed internally. The only coating is white-tinted Envirograf fire protection, bringing the structure to Class 0/spread of flame. The walls are insulated with mineral wool, on sustainability grounds.

The internal layout in each block is simple: a “very efficient” plan based around a CLT stair and lift core, with apartment entrances off it. All the timber panels arrived on site in eight deliveries – (including floors, roofs, staircases, and lift cores, as well as “75 per cent of internal finishes,” says Tikari. This highly controlled, low-waste approach also produced a structure that sequesters around 237 tonnes of carbon.

A further benefit of CLT was that due to its predictable dimensional accuracy, Tikari Works were able to order windows and kitchens before the frame arrived, “because we knew that the tolerances for openings would be very small.” He adds: “We knew that what we drew would be what got built.

In addition, Tikari says that with the architect taking the lead role, there’s a “huge benefit” to having all of the components provided by one package and one subcontractor (Eurban). Lastly, all of the plugs and sockets openings are prerouted in the factory, so that the electrician turns up onsite and “just needs to connect A to B.”

The only caveat is that “you need to draw more, and deeper into the programme; you are coordinating the light sockets at the same time as coordinating the groundworks, due to the lead time. Once you build that into the thinking, it’s manageable.”

Conclusion

The architects from the office were onsite almost every day, part of the reason this project achieved a level of quality that has



“We were able to operate efficiently with the CLT because we knew that what we drew would be what got built”

PROJECT FACTFILE

Client, architect and main contractor: Tikari Works

Project team: Ty Tikari, Nicola Tikari, Nick O'Reilly, Ewelina Krol

Structural engineer: Webb Yates

M&E and acoustics: Syntegra

Specialist craftsman: VT Construct

CLT subcontractor: Eurban

CLT manufacturer: Stora Enso

Shingles: Petersen Tegl

Gross internal floor area: 880 m²



seen it pick up awards, such as the Gold Award at the Wood Awards 2020. The level of oversight, and management of the project meant “much closer day to day co-ordination” between design and build than normal, says Ty Tikari.

He says it stands in contrast to a major current problem, “especially for the younger generation, of never actually visiting a building site, a real disconnect between what you draw and what actually happens.” This didn’t mean there was architectural indulgence on this project, it was run as efficiently as possible, “with the minimum number of parts and people required,” with an attendant sustainability as well as cost benefit.

With design, development and construction continually overlapping on this project, the architects were never ‘pushing problems down the line to be dealt with eventually’. Rather, the impact of design decisions had to be considered in real time with the commercial and construction sides of the project. This is the nature of a role that is akin to having complete control. The irony is that it would take something way outside of their control, like Covid, to present a major setback to this highly successful scheme. ■

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New study highlights wellbeing benefits



Considering in the developed world, around 90% of our time is spent inside – something that's been exacerbated in recent times by the Covid-19 pandemic – it is more important than ever to assess wellbeing while indoors, and the recently launched whitepaper by Stora Enso in collaboration with the Technical University Munich demystifies the role building materials play in this. The analysis reviews multiple areas of research, such as wood's ability to reduce stress and boost productivity levels. Visit the website to view the 10 key well-being benefits of building with wood in the full whitepaper.

info.storaenso.com/wood-house-effect

Siderise achieves Gold at awards



Siderise has been recognised with a Gold Award at Mind's fifth annual Workplace Wellbeing Awards. Ranking 21st out of the 114 organisations who took part, this award means it has successfully embedded mental health into its policies and practices and demonstrated a long-term, in-depth commitment to staff mental health. Siderise is committed to ensuring the wellbeing of its staff at all levels of the company. This is done through a variety of company policies and initiatives – including a Stress Policy, Flexible Working Policy and those covering workplace grievances.

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Vent-Axia shows 'Sustainable is Attainable'



Vent-Axia is sharing how it is taking measurable actions to deliver healthy indoor air sustainably which in turn is helping its own customers make sustainable attainable. With the construction industry working hard to meet Net-Zero targets by 2050 it is important the whole supply chain works together to reduce carbon emissions which means specifiers working with suppliers that are reducing their own carbon footprint. Vent-Axia is committed to helping make sustainable attainable for its customers by taking action to reduce its environmental impact as part of a group wide initiative.

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Helping healthcare to heal

GEZE has launched 'Helping Healthcare to Heal' an initiative created to recognise that putting patients at the centre of hospital, clinic and doctors' surgery building design can help in the process of healing and recovery. Equipment and materials specified and installed within the building can actively contribute to and promote well-being.

In creating the initiative GEZE looked at addressing areas that encourage recovery and provide patient comfort:

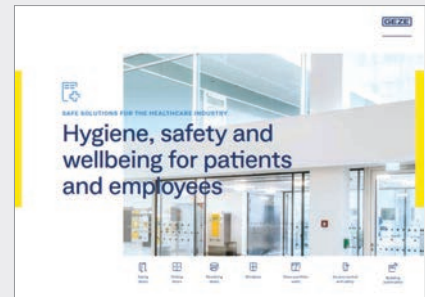
- Prevent environmental stresses such as noise from slamming doors or lack of privacy without creating barriers.



- Enable patients and residents to be as close to nature as possible through outdoor views, sufficient sunlight and fresh air.
- Give patients and residents a feeling of control by being offered opportunities to access outside spaces and move around safely and contact free, not feeling imprisoned but protected in the building.

There is more information available on the GEZE UK website or alternatively GEZE have produced a comprehensive brochure for the healthcare industry that looks at providing solutions for the hygiene, safety and well-being of not only patients but employees as well. It reviews each area of a healthcare building in detail identifying the issues of each, whether it is comfort, safety, hygiene, attractive design, sustainability, accessibility or fire safety and provides advice on overcoming them. It can be downloaded from the website or by contacting GEZE UK on marketing.uk@geze.com.

Andy Howland, sales and marketing director said "The Covid-19 pandemic has brought an intense focus on all aspects of



healthcare in the UK and as we look ahead it's likely that its impact will continue for some sometime with long lasting changes to the building design of hospital and healthcare facilities. At GEZE we support clients and architects as they consider these design implications in new construction and refurbishments to existing buildings."

01543 443000

www.geze.co.uk

Going for gold with 220 lifts



The 200 m high, 58-storey Newfoundland apartment building, at the forefront of Canary Wharf, is the latest addition to the capital's skyline, heralding the area's move to the residential market. With prices starting at £1,928, a certain level of finish throughout the building is expected, and the lifts are no exception. Commercial decorating contractor E Poole wanted to create a gold effect on all 220 lifts, in keeping with the complex's luxurious feel. To complete a project of such scale on a tight deadline, it was agreed to wrap the lifts with vinyl, with the work being awarded to Omnia Vinyl Ltd, a Swindon-based company specialising in lift car refurbishments. E Poole chose PA-046, from the 3M DI-NOC Architectural Finishes range, to create the desired effect, which was supplied by **Architextural**, part of the William Smith Group 1832, a leading supplier of self-adhesive films. The product's ease of use and high-end feel meant the whole project was delivered two days ahead of the agreed 35-day accelerated programme, with a finish befitting such a prestigious address. Follow Architextural on Instagram at [@_architextural](https://www.instagram.com/_architextural)

01833 690305 www.architextural.co.uk

New 19mm collated flooring screw banishes squeaky floorboards for good!



Floor fitters and home owners alike will be all too familiar with the curse of squeaky floorboards. Time after time the culprit is the fasteners; nails working loose over time. While it's well known that screws provide a tighter grip power by pulling the boards together, fitting 6mm plywood to underlay has long presented a dilemma. The conventional 25mm timber screws used to fasten flooring carry a risk of damaging underfloor electrical cables or puncturing water pipes. The alternative use of 19mm nails, however, can cause the plywood subfloor to lift from the floorboards. Construction products manufacturer **Simpson Strong-Tie** has developed an affordable solution: the groundbreaking new 19mm MTHZ19E collated underlayment screw. Designed for Quik Drive auto-feed screw system, the MTHZ19E allows fast and secure underlayment to subfloor installations, with a sharp point for fast start and a trim head for a neat finish. Fasteners Sales Manager Natalie Dixon explains: "This new shorter length alternative to traditional flooring screws prevents the tip from protruding through the floor boards when fixing 6mm plywood, making it a safer way to fix to subfloors."

01827 255600 www.strongtie.co.uk

Virtual city for solutions and expertise



Dow has recently introduced an interactive on-line portal to showcase innovations and established performance-enhancing technologies for building facades, in an inspiring and animated way. Named Building Science Connect, specifiers and application specialists can navigate a virtual city environment for easy access to Dow's product catalogue and discover how DOWSIL™ Technologies and Innovations can help meet the challenges of safe, sustainable and modern building design. Users can also connect with Dow's team of Technical Specialists who can share product knowledge, experience and specific project advice.

dow.com/highperformancebuilding

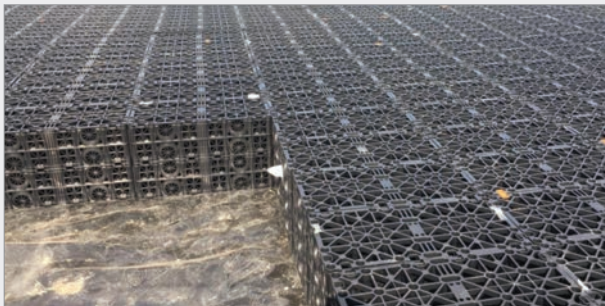
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monthly CPD Focus and fortnightly ADF Newsletter offer updates on products, services, events, and learning opportunities available from a wide variety of manufacturers and suppliers.

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StormCrate55 controls surface water

When it came to the management and control of surface water run-off at a caravan showground in Hull, StormCrate55, an engineered Sustainable Drainage System from Brett Martin was up for the challenge. Having previously used StormCrate55 to successfully manage stormwater on a number of other projects, installer Catalogue Engineering undertook the installation for groundworks contractor Evabuild in order to reduce the risk of flooding on this trafficked site during periods of heavy rainfall. Manufactured from 100% recycled plastic, 523 m³ of the StormCrate55 modular units were clipped together in a brick bond pattern to create a three tiered underground attenuation tank. With a loading capability of 562kN per m³, their high strength provided more than enough vertical strength for this tarmacked area at the showground. The use of StormCrate55 has ensured this showground will have a proven rainwater attenuation solution for the long term.

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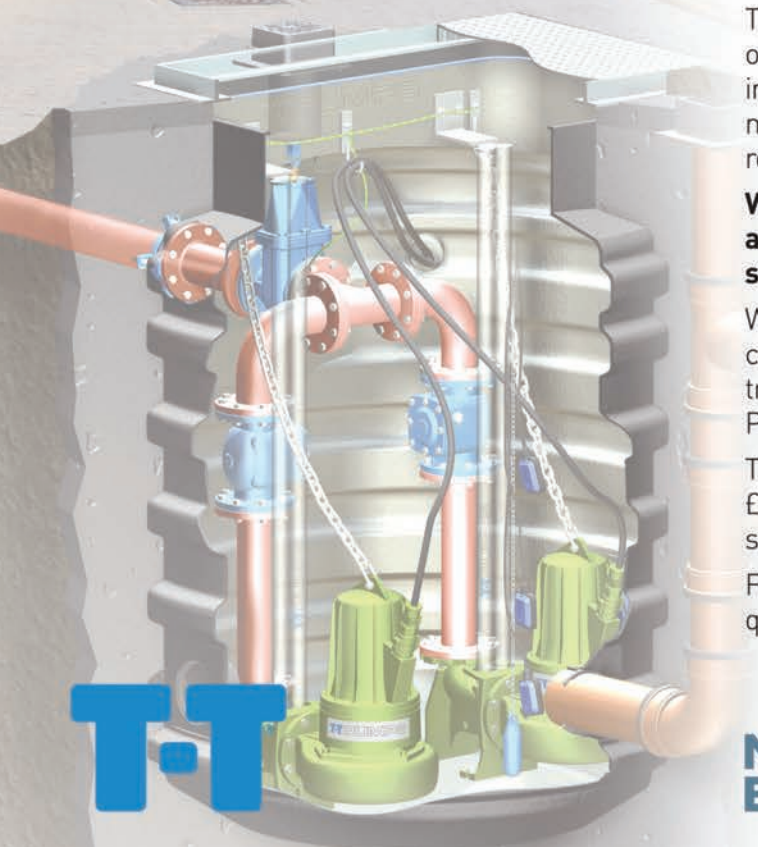
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Building acoustic, thermal and waterproofing performance into school roofs



Roland Jackson, commercial director of Soprema UK, the specialist in building envelope solutions, discusses the importance of combining waterproofing performance with acoustic properties, extended service life and low maintenance when specifying school roofs.

When specifying school roofs, the priority considerations are usually cost and service life. The cost and disruption of refurbishing a roof in any environment is onerous, but in a school setting, where budgets are limited and there are operational and safeguarding issues when work is required on site, a low maintenance robust solution is critical.

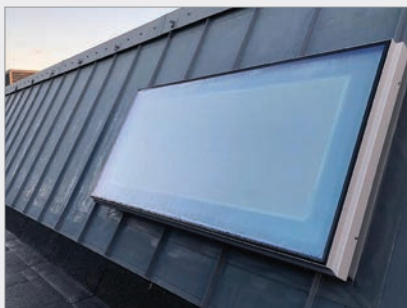
But the build cost and longevity of the roof are not the only considerations for new build school projects. The roofing system should be compatible with the structure, fast and easy to install in line with challenging school build programmes and compliant with all relevant standards. It should also be tested as part of a complete roof build-up, specified as a single solution with a joined-up warranty, to ensure it delivers safety and performance, backed by technical support.

But what constitutes performance in a school roof and how might the wrong choice adversely affect the school environment?

Lightweight Challenges

Single ply roofing systems are often the system of choice for school build projects because they are easy to install and offer speed of installation, particularly over large roof areas, with the flexibility to enable installation on curved surfaces. Ease and speed of installation also offers cost benefits, due to a shorter programme and reduced labour requirements.

Single ply systems are also ideal for use with the type of lightweight structures used to construct most school buildings. But it's important to note that compatibility with lightweight structures involves more than loading. Sound can reverberate more easily through lighter structures, creating issues with acoustics from noise outside and from reverberation caused by sounds within the building. The design style of many schools, with large atriums and open plan spaces, may exacerbate issues with noise, so it is essential to consider the acoustic properties of the roof build-up as part of a complete assessment of



performance throughout the service life of the roof covering.

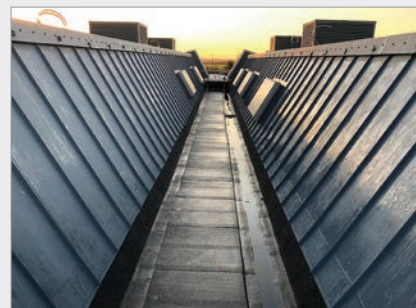
Why are Acoustics so Important in Schools?

Schools are rarely quiet places, but for learning activities, there is a need to impose quiet without the disruption of noise travelling from elsewhere in the building or from outside. The Government's BB93 Building Bulletin explains minimum performance standards for the acoustics of school buildings, but specification should always take into consideration the particular building design and location. For example, a school situated in a busy urban area, under a flight path or adjacent to a railway line, will need to be able to control much more demanding levels of external noise than a project in a rural location.

BB93 also outlines the different levels of acoustic performance required in various areas of the school building. Part of the difficulty of specifying for contemporary school buildings, however, is that spaces are often designed to be flexible or multi-purpose. Moreover, it is possible that the requirements of the school may change over time, within the service life of the roof build-up, causing some locations to be repurposed to environments that need greater acoustic control. As a consequence, it is wise to ensure maximum acoustic protection across the entire roof where possible.

Optimum Build-up Performance

An acoustic insulation installed onto the substrate prior to installation of the thermal insulation is the most effective way to limit external noise and prevent reverberation within the building. This provides additional



mass to the insulation layer, absorbing noise from outside the building, including rain, traffic or aircraft noise for example, along with reverberation from within the building.

Soprema has tested a complete roof build-up, comprising Soprema Tecsound, a synthetic acoustic membrane based on a high-density polymer, A1 non-combustible stone wool insulation and the Soprema Flagon extruded PVC waterproofing membrane. The acoustic membrane also performs the role of the air and vapour control layer, reducing the number of stages involved in the installation.

The roof build-up is suitable for lightweight structures, including modular builds, and offers flame-free, odour-free installation with fewer laps thanks to the increased width of the extruded membrane sheets. When a fully-bonded Flagon single ply is used in combination with the Tecsound acoustic membrane, the specification avoids the need for any mechanical fixings, which can sometimes provide a path for sound to reverberate, maximising the benefits of the build-up. The Tecsound acoustic solution can even be used as part of the wall build-up to further enhance protection from nuisance noise.

Top Class Schools

With so many areas of the UK struggling with high demand for school places, there is significant construction activity within the education sector for both new build schools and extensions. Specifying a roof build-up that combines long-term protection against the elements, high levels of acoustic control and low maintenance is key to creating top class schools.

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The future of maintenance processes in Basement Drainage

More than just a high-water level alarm, the AlertMaxx2 EC acts as a smart solution bringing your whole basement drainage system together. Designed to put homeowners in control, it captures real time data, allowing access to monthly health reports on equipment and alerts users via messaging services before any issues arise.

Acting on a basic function, a high-level alarm or sump pump high water level alarm, alerts homeowners when dangerous high-water levels are detected in the sump pump system. When excessive levels of water are detected in the sump pump, a float within, will tip up, sending a signal to the alarm control box. The visual indicator will illuminate, and an alarm will sound.

Basement drainage systems fitted with a AlertMaxx2 EC can now benefit from a range of smart features that keep them running at peak performance and advise of any changes to the pump activity – giving you all the advantages on your side.

The AlertMaxx2 EC offers a “Plug and Play” (PnP) facility which permits the High-Water Level Alarm the ability to adapt with minimal intervention by the user. Any user can simply download Sidewinder software using the QR code on the AlertMaxx2 EC with automatic connection and monitoring of the sump pump system.

The AlertMaxx2 EC is an extension of Sidewinder Technology that helps you keep your sump pumps up to date. Once the AlertMaxx2 EC has been registered with Sidewinder Technology through WIFI connection, homeowners will have access to monthly health reports on the condition of their basement sump pump system and regular algorithm information providing differential patterns of high-water levels in the sump pumps to be detected. This means that before any issues arise, the monitoring parties will have identified the issued and any required work plus any upcoming work that might be best bundled together.

Kevin Dodds, managing director at Delta Membrane Systems, a strategic basement waterproofing thought leader, uncovers how digitising and operationalizing maintenance of equipment can improve reliability and efficiency of Type C, cavity drain waterproofing systems and



optimize end-to-end value chains: “Predictive maintenance is one such solution that helps lower operating and maintenance costs by facilitating proactive servicing and repair of assets, while allowing the more efficient use of repair resources.

“Sidewinder Technology delivers innovative software that maximizing customer value to streamlining servicing and boosting efficiency, Sidewinder clients make better decisions and avoid costly repairs should their property be empty at the time a visual or sound alarm occurs.

“The unfortunate truth is, that home emergencies do happen. Even those who prepare for worst case scenario, such as high-water levels in basements, may still suffer catastrophic losses in the event of a flooded basement. These types of emergencies

devastate homes, individuals, and families. A flooded basement is often called a disaster for a reason. The structural integrity of a basement can be severely damaged, leaving it uninhabitable. The AlertMaxx2 EC reduces the risk of these disasters occurring, especially if a property is not occupied at the time of emergency.

“Collaborating with our partners at PPS Group throughout the pandemic, we have embraced the opportunity of developing the AlertMaxx2 while avoiding component shortages and we are delighted to be launching the Updated AlertMaxx2 EC High Level Water Alarm on Monday 2nd August 2021.”

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Conserving authenticity

Lewis Proudfoot of Cliveden Conservation looks at moisture management in historic buildings, and why he believes lime should be the default material for repairing traditional structures



Building limes have been used for thousands of years and should be the default material for the repair of traditional structures

The challenge of maintaining and repairing historic or traditional buildings often comes down to how well we manage water ingress. Poor moisture management in a building is often the main cause of deterioration to masonry or timber, which is why water is known as a key ‘Agent of Decay’ in old buildings. The presence of damp in walls and floors is the chief headache for many historic building owners. The problem is often exacerbated by inappropriate intervention following poor advice, or a misunderstanding of the nature of how traditional buildings are constructed.

Large or small, any historic building constructed of masonry – be it brickwork or stone – will have been built with local materials using lime mortar. These materials were relatively soft, weak, flexible and

permeable. A building’s ability to manage water ingress was down to the architectural detailing of drips, overhangs and rainwater goods that keep moisture away from walls in the first place, and secondly, by the natural abilities of lime mortar to make masonry resilient to the two forms of water-related decay – namely frost, and the less well known, but more common, salt attack.

The issues of freeze-thaw damage are well known – when moisture becomes trapped within a masonry unit or joint and then freezes, it expands – causing damage to the surrounding material. But the damaging crystallisation of soluble salts onto the surface of materials after evaporation is less known. This is the reason that lime mortars and renders are so effective at managing moisture in buildings: softer than the surrounding masonry units, with high porosity and a good free lime content, an appropriate lime mortar will act as a poultice, drawing moisture away from masonry units and out onto the surface of the wall to evaporate.

The damaging salt crystallisation (which will always occur) will do so at the surface of the joint rather than on the stone or brick, and the erosion will be to the sacrificial mortar. Repointing, re-rendering and shelter coating are therefore essential and normal aspects of good building maintenance, safeguarding the important masonry elements and allowing moisture to move away from the building.

The use of cements, hard NHL mortars, waterproofers and membranes can stop moisture movement – either trapping it in a building, thereby increasing the window of frost susceptibility, or causing damp walls to absorb more salts from the atmosphere.

Case study: St Michael’s

Generally, water always finds a way out, and it will choose the route of least resistance. We recently worked with Caroe Architecture to complete a small scheme at

St Mary & St Michael's Parish Church, Trumpington, Cambridge. The internal stonework in a side chapel was in a poor state, especially some lovely carved corbels below a monument. The cause was moisture in the wall – entering from outside and below, but because the lower section of the wall had been previously rendered in a hard cement, all the evaporation occurred on the surface of the soft clunch stonework, causing serious damage. This cement render came off in sheets, exposing the historic masonry construction, with previous lime renders still evident in some areas.

The damaged string course and window sills around the chapel were replaced or repaired with a hot mixed lime mortar, and the walls were lime washed. The four carvings were consolidated with lime mortars and sheltercoats. The stone that was replaced was crushed to form the aggregate used in making the hot-mixed repair mortars and limewashes, ensuring a perfect colour match with the historic fabric.

The damp walls were visibly drying out during our time on site, and the permeable render that was applied further aided a far more effective form of moisture movement

rather than impeding it like the solid cement had. In doing so, the ongoing erosion to these important carvings has been halted, ensuring their longevity and appreciation by future generations.

Conclusion

Building limes have been used as the principal binder for mortars and plasters for thousands of years and should be the default material for the repair of traditional structures. There are different sorts of lime and different ways of preparing and using them; the selection, specification, preparation and use of lime mortars requires knowledge and skill.

To raise awareness of building limes, generate discussion and share knowledge, The Building Limes Forum (BLF) was set up in 1992 to bring together a community of lime enthusiasts, practitioners, and professionals. Being a member provides access to a wide body of accumulated experience and expertise and an opportunity to share knowledge.

Lewis Proudfoot is managing director of Cliveden Conservation and committee member of the Building Limes Forum



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JACKODUR® ATLAS is the foundation for success

An amazing self-build property built on a JACKODUR® ATLAS foundation slab has won the Small Project Category of the 2021 Passivhaus Awards.

The property, Larch Corner, is located in Warwickshire and predominantly features modern timber engineering in its above ground construction. However, the building is based on JACKODUR® ATLAS foundation system from JACKON.

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In this particular property the floor has a U-value of 0.101 W/m²K and the building overall is claimed to be the most airtight house in the UK and the third most airtight house in the world, exceeding current building regulations 244 times over!

Thanks to the elimination of heat loss through the floor of the structure, JACKODUR® ATLAS plays a critical role in helping Larch Corner achieve its net zero credentials. The owner and builder says that he was able to turn off the heating system in the house, provided by an air source heat



pump and photovoltaic array, in March and hasn't needed to use it since.

JACKON'S expertise in the creation of building materials for low energy buildings goes far beyond the manufacture of foundation systems. The company has over 60 years' expertise in manufacturing both XPS and Expanded Polystyrene (EPS). While JACKODUR® ATLAS uses XPS, the company's THERMOMUR® Insulating Concrete Formwork (ICF) EPS system can be used in combination with it, to create highly energy efficient buildings.

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Don't get in a spin

James White of Record UK breaks down the various factors to consider when specifying a revolving automatic door

Revolving doors are a great way to create a grand, visually stunning and welcoming entrance to a building. They also prevent unwanted air infiltration, reduce energy costs and contribute to a superior indoor climate, making them a popular choice for architects, specifiers and end users.

As with all automatic door systems, the key to success post-occupancy and overall client satisfaction, is correct specification from the early design phase. This is where the manufacturer's specification managers enter the equation offering technical advice and support in the design and integration of the revolving door to all involved.

After all, if the revolving door becomes a barrier to access due to incorrect specification, it may lead to dissatisfaction once in operation due to queues forming at peak times. To avoid this and ensure success, there are many factors that should be considered.

Floor space, occupancy and peak flow

The theoretical pedestrian flow rate of a revolving door is dictated by its proposed internal diameter, quantity of wings, and peripheral speed (constrained by regulation EN16005). Therefore, an understanding of the predicted demand at peak times is essential to determine the minimum diameter of revolving doors required, as well as the overall number of units.

As an example, a typical four-wing automatic revolving door with a diameter of 2400 mm, rotating at 0.77 m/s or 6.12 rotations per minute, would have a throughput capacity of approximately 31 people per minute or 1,900 people per hour, based on one person occupying each segment.

Of course, a large influx of workers will enter an office building between 8:30 am and 9:30 am each morning. A single revolver might quickly become overwhelmed when large volumes of pedestrians arrive at the same time. A pass door may be needed as an alternative point



of entry – somewhat defeating the indoor climate benefits intended when selecting a revolving door. This is particularly relevant during inclement weather conditions and additional doors should be considered to remove the risk of queues forming, especially considering the current need for social distancing.

As an alternative, a high throughput 360° curved sliding door system might be a consideration or even as an addition when pedestrian footfall demand might overwhelm a revolver's capacity. A curved sliding door offers relatively unimpeded traffic flow, it can be used on an emergency escape route and can create a very similar aesthetic to a revolving door. It is more challenging to control the indoor climate with this type of system but the addition of a warm air curtain, reduced opening width in the winter and interlocking the inner and outer doors (where possible) can help to negate this. The added benefit of a curved slider is that you do not need a separate pass door.

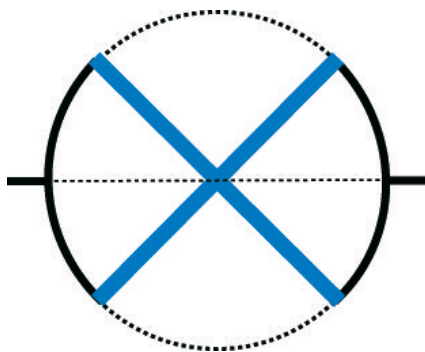
Delays caused by sensitive protective equipment

Revolving doors are safer than ever but to ensure their safety in use they must



REVOLVING DOOR 'DANGER POINTS'

- A: Main Closing Edge
- B: Secondary Closing Edge
- C: Opposing Closing Edge
- D: Leading Edge
- E: Leading Mullion
- F: Outer Stile
- G: Trailing Mullion



CHOICES

The classic four-wing revolver is the most popular choice, being particularly suitable for higher volume, two-way pedestrian traffic flow in commercial offices

comply with EN16005 which states the minimum required measures to protect pedestrians using an automatic door system. A specification manager should be EN16005 certified and carry out a risk assessment on every automatic door they specify to ensure the door system will be safe in operation and suitable for the application.

On a revolving door there are multiple danger points (highlighted in the image above) which are protected by a combination of ESPE or PSPE sensors (electro-sensitive protective equipment/pressure sensitive protective equipment) which, when activated, are designed to stop the rotation of the door to prevent injury. These are sensitive sensors that need to be easily activated. A sensor on the bottom of the revolving wing will, if it catches someone's heel, stop the automatic door. After a short delay to remove the person's foot from the door, the door moves again.

The sensors are there for a very good reason; however, if the door segments are too small and people are shuffling through them, these sensors can be easily activated resulting in frustrating delays and unimpressed end users.

Choices

The classic four-wing revolver is the most popular choice, particularly suitable for higher volume, two-way pedestrian traffic flow requirements in commercial office applications. It also offers improved indoor climate control due to the construction of the leading mullions and wings that form an improved seal.

A three-wing offers a slightly lower throughput capacity and narrower clear opening but offers more comfort as there is more space in each segment and is therefore better suited to low traffic environments. Comfort can be further improved by integrating a warm air curtain with either electrical heat or warm water fed into the canopy.

A manufacturer will also assist with the integration of the system into the facade of the building using either glass to glass, glass to metal or metal to metal facade connections, depending on the positioning of the door system and facade construction.

Security

There are typically two types of security required. Physical – break-in attempts – requiring testing to standards such as EN1627 incorporating RC1 – RC6 and PAS 24, and LPS 1175 incorporating ratings from SR1 – SR 8.

Secondly, operational security relates to 'anti-piggyback' and 'anti-tailgating' technology to prevent unauthorised access.

Automatic operation

One automatic option, an overhead drive, enables the designer to incorporate a warm air curtain and lighting into the solid roof canopy of a revolving door maximising user comfort. In-floor operator options (where floor space allows) are available for automatic curved sliding, revolving and linear sliding door systems. When combined with an all-glass type construction help the designer deliver a minimal aesthetic, maximise light transmission and help to create the ultimate wow factor.

To summarise, it's vital to ensure the requirements of both the building envelope and building owner are met at the specification stage. Getting advice from a manufacturer's specification manager enables a specifier to avoid misunderstandings which can lead to safety issues, delays in installation, and time and money being wasted.

James White is specification manager at Record UK

Crittall spans the Globe

A major live arts venue, that in its heyday hosted The Beatles, Buddy Holly, the Rolling Stones and Cilla Black, has been restored to its art deco glory with the help of Crittall windows.

The Globe, Stockton, is the biggest live entertainment venue between Leeds and Newcastle and will re-open shortly with a capacity of 1,650 people seated or up to 3,000 standing.

The re-birth is eagerly awaited as the theatre has been closed for the past 45 years. A major refurbishment and restoration programme has been led in recent times by Stockton-on-Tees Council, supported by grant aid from the National Lottery Heritage Fund.

The Grade II listed building dates from 1935 and was designed by architect Percy L Browne. Crittall windows were installed originally, and these have been replicated in the restoration by the use of bespoke Corporate W20 profiles finished in Turkish Blue.

Crittall also supplied its Cold Formed Doors for the three entrance doors and



an additional power assisted door for disabled access.

Anthony Dillon, managing director of main contractor Willmott Dixon said: "It has been fantastic working on the restoration of the Globe Theatre, breathing new life into a really iconic building for the community. We look forward to seeing it

become a cultural hub once again for future generations to enjoy."

The theatre will play a central role of the Tees Valley Combined Authority's ambition for the sub-region to be named City of Culture 2025.

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Sto chosen for another major project



A new residential project has been completed with the use of a Sto external wall insulation system and Sto brick slip finish, to create a visually striking new development. The Arden Gate development, from specialist residential developer Court Collaboration, provides an excellent example of Sto's ability to deliver full integrated facade solutions for high-profile developments of this type. "We had recently specified the StoTherm Mineral system and Sto's Resin Brick Slips for an adjacent building and been extremely pleased with the result," explains Doug Brown of project architects Corstorphine + Wright.

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Magply boards sheath structure to school

The new Sugar House Island Primary School in Stratford is making full use of the strength and stability to Magply MgO boards, which carry a full set of internationally recognised accreditations including BDA certification and which are widely specified for their excellent fire performance. To date, four full pallets of the 12mm version of the Magply boards have been delivered. The Project Supervisor for Openwood Facades, Sam Crockett, commented: "Although we have used small quantities of Magply before on other jobs, this is our first major project featuring them and we are finding them very straightforward to cut and fix." Magply offers a fire-safe and environmentally friendly alternative to conventional plywood or OSB products. The unique production process keeps the chloride content to just 0.01%, enhancing both stability and long-term durability.

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TORMAX concealed door drive creates timeless automatic entrance



OAG Ltd specified TORMAX UK to install their iMotion 1401 underfloor operator to a swing door on a Grade II listed building within the Woolwich Works development, Greenwich. Featuring elegantly arched brickwork, a row of three swing doors give entry into one of the creative community spaces, with one door providing clear and easy access for everyone, thanks to the TORMAX automatic door drive. The iMotion 1401 is ideally suited to period properties where an externally situated operator would detract from the aesthetics of the building. Concealed in a steel box situated in the floorspace below the door, the Swiss-engineered motor has been precision-designed for a long-life span and exceptional reliability, featuring none of the working parts that generally need replacing, such as gears or brushes. TORMAX offers a complete service from bespoke entrance design to manufacture, installation and ongoing maintenance and service. With over 60 years working in the automatic door sector, TORMAX has solutions to meet the needs of almost any entrance requirement.

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Perla Windows joins SWA



London-based Perla Windows has joined the Steel Window Association (SWA). Perla Windows is one of the UK's most prestigious suppliers and installers of steel and aluminium fenestration systems for interior and exterior windows, doors and facades.

The company operates in the UK and Europe and deals directly with architects and developers. The team prides itself on innovation, design and meticulous planning within pre-defined budgets. Director, Nick Vassilopoulos, comments: "We felt it essential to join the SWA as, by working with them, we can always be a step ahead of the game".

www.steel-window-association.co.uk

Rooftop solar solution powers R&D facility



A new aerospace research facility at Prestwick in Scotland has included the largest installation to date of the innovative new AluPlusSolar system developed by Kalzip®, with the photovoltaics being integrated into the manufacturer's standing seam roof.

AluPlusSolar is a versatile and highly energy efficient lightweight system that has been developed in conjunction with BIPVco who supplied the panels for bonding onto the Kalzip® 65/400 roof sheets. The latter were rolled to length on site for Fowler McKenzie's teams to install directly across the full span of the barrel-vaulted structure.

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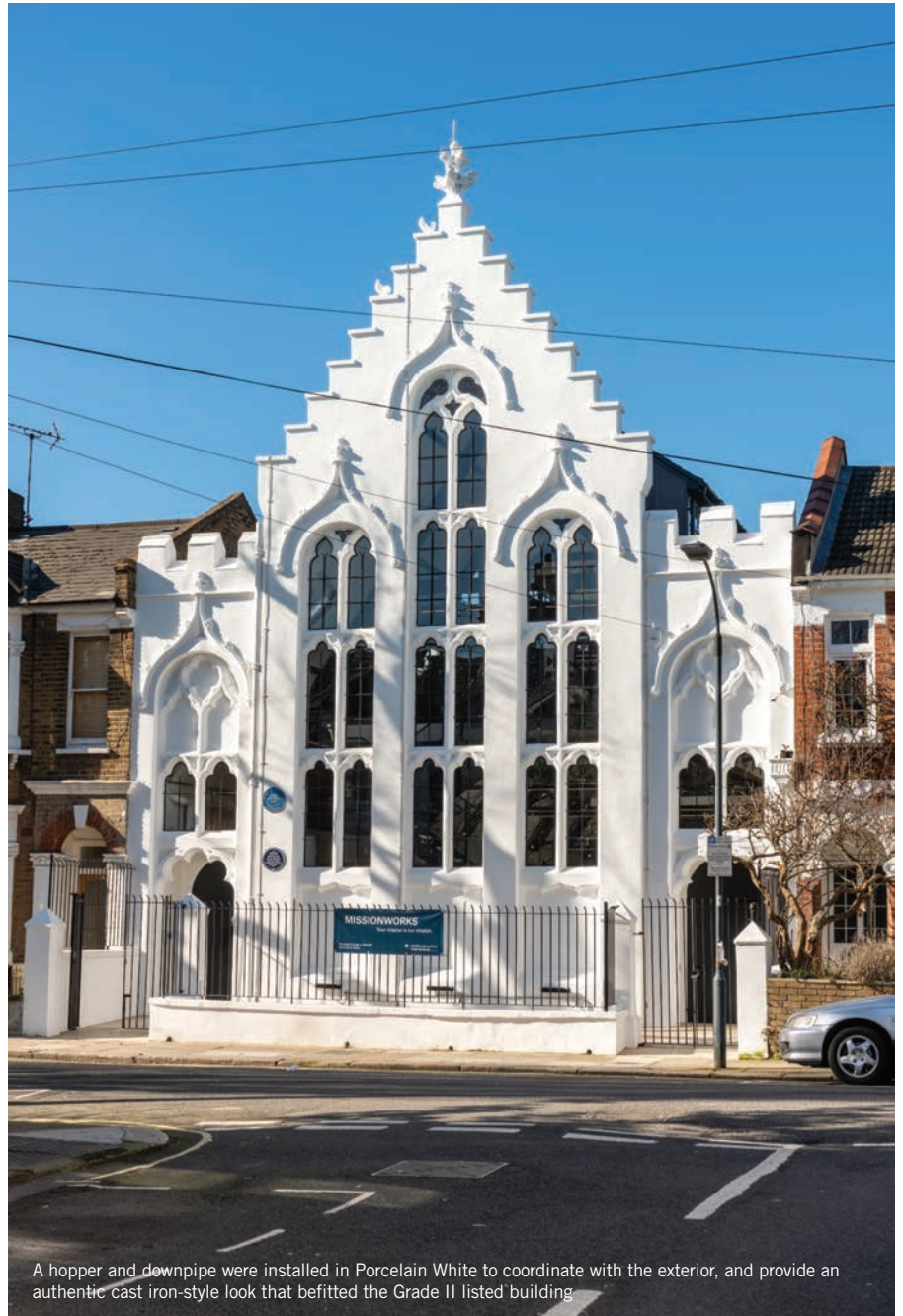
A sensitive restoration of a dilapidated but listed 'Mission Hall' in west London posed a series of challenges, not least ensuring that external fixtures such as rainwater goods met strict authenticity criteria. Neil Davies Architects report on the project

The task of transforming a Grade II listed hall with a varied past in Hammersmith to an open-plan co-working office space, included maintaining the distinctive original exterior fabric of the building. This was a key part of giving the building a long-term future, together with a reimagined interior. The design approach taken enhanced the entire building whilst preserving its special historic interest and character.

Situated in Liffey Road in the Bradmore Conservation Area of Hammersmith, the building was completed in 1883-4 and designed by noted 19th century architect Hugh Gough. While originally built as a church hall, it was also used as a working men's club, a kitchen feeding the poor, and since the 1960s a studio workspace of a scenic artist specialising in backcloths for stage and film. When the studio closed in 2014, the building was used temporarily as a workshop and for storage, as well as a boxing gym prior to the recent category A redevelopment into 7000 ft² of office space.

The building had suffered from years of neglect and disrepair prior to its renovation. The roof and guttering leaked and there had been some rooflights installed that were not compliant with its Grade II status. Furthermore, with this historically significant building in a poor state of repair, the highly decorative east and west facing Venetian Gothic facades required sensitive and accurate restoration in order to retain their heritage value. Similar in appearance, these two elevations are detailed with crenulations and sculpted finials, and ogee-shaped drip mouldings with detailed finials and stops. Three striking lancet windows are made up of individual trefoil lights (some with coloured glass) and there are cusped door arches.

One of the challenges was the fact the hall was landlocked with four domestic residences sharing a party wall. The changes to the elevations included repairs



A hopper and downpipe were installed in Porcelain White to coordinate with the exterior, and provide an authentic cast iron-style look that befitted the Grade II listed building



The design approach taken enhanced the entire building whilst preserving its special historic interest and character

to brickwork, stonework, external joinery and various glazing to the existing fenestration.

The building's (non-original) asbestos roof was also replaced with traditional natural slate tiles, which would likely have been the original material treatment. Conservation style rooflights were installed to the central area of both pitches of the roof to draw light into the main

space and to minimise visual impact on the original and decorative iron roof structure. Internally, new mezzanine floor plates increased the workspace provision to 7,000 ft² and were naturally lit via the new rooflights and the existing clerestory lantern overhead.

The existing rainwater hopper and downpipe system on each facade was of a poor quality and featured painted plastic with no detailing. A porcelain white cast iron style hopper in the Gothic design was specified from Brett Martin to provide period authenticity and detailing, replicating the five arched windows on the front of the facade. A 105 mm round downpipe in Porcelain White was also installed to match the white painted cement render of these distinctive facades. This rainwater solution remained architecturally true to the original features of the building.

With this redevelopment and restoration now complete and the future of the former Mission Hall now secured, the use of modern materials has fitted seamlessly with this listed building, and ensured an architecturally sympathetic appearance was achieved.

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A fresh appreciation

The pandemic has increased appreciation for fresh air as well as natural light; Tracey Jackson of Howells Patent Glazing explains how rooflights can be the practical answer

The pandemic has changed the way owners feel about their homes.

Lockdowns have provided ample time and opportunity to spot weaknesses and areas in need of improvement.

Working from home and home schooling were significant triggers. Data from UK property website Rightmove reveals a demand for bigger houses with spare rooms and extra areas to work from home. Brits are craving space and flexibility from their homes, but this doesn't have to mean moving house.

Data shared by Google showed the search term "house extension" reached an all-time high in 2020. Natural light is often a major driver, as extensions can bring light deeper into homes.

Yet it isn't as simple as adding more windows or increasing the expanse of glazing. New build extensions must comply with Part L; Approved Document L1B recommends the total area of windows, roof windows and doors shouldn't exceed 25% of the floor area of the extension, "plus the total area of any windows or doors which...no longer exist or are no longer exposed."

While areas of glazing over 25% may be permitted under certain circumstances, the Regulations suggest that where practical, either the U-value of windows should be improved or other compensating measures be applied, e.g. more roof insulation, upgrading the boiler, or replacing windows.

All such measures will improve the energy efficiency of the home and offset the resulting heat loss from the glazed areas in the extension. But this comes with added expense. Studies show that rooflights provide at least twice as much light than a similarly sized vertical window and three times as much as a similarly sized dormer window. This makes them an attractive proposition for those designing and building an extension.

At a time when we are more conscious of our mental and physical wellbeing, there is growing appreciation for the natural world and its benefits. Natural light is a key example; it is important for our immune

systems; it boosts our Vitamin D levels and maintains the daily cycle of activity and sleep (our circadian rhythm'). It is hugely beneficial for our physical and psychological well-being, and it helps us to focus and generally lead a happier and healthier life.

It also has financial rewards. A building with high levels of natural light can help keep energy costs down by reducing the demand for expensive artificial light. Rooflights, for example, bring light into the heart of the home, illuminating spaces which might otherwise be gloomy and unwelcoming, without the need for electric lighting. This is particularly important in areas dedicated to tasks such as home offices and kitchens.

A breath of fresh air

Ventilation is another important consideration when designing a home or extension. Fresh air is as important as natural light in aiding our well-being, not least during the pandemic. Keeping a home, or indeed any building well aired, is not only good for reducing stress and anxiety levels, but also proven to aid concentration.

Once again, rooflights provide a practical solution. Some manufacturers offer vented options which allow for controlled, natural ventilation. These vents are operated using motors which are often hidden from view, and do not impede the aesthetics.

Controls vary from a simple open/close switch to remote controls and digital control panels. Some offer a built-in external rain sensor and internal thermostat – essential with our unpredictable weather!

Guidance from the British Lung Foundation advises us to open windows or skylights for 5-10 minutes several times a day, especially if you're cooking or using the shower. To assist in this, vented rooflights offer a functional solution for those wishing to create the ultimate happy and healthy home.

Tracey Jackson is business development manager at Howells Patent Glazing



Waterproofing specialists seal leaky basement

Waterproofing specialists, Severn Damp & Timber Preservation, installed a range of Triton Systems' materials to deal with water ingress around two skylights, formed within the concrete roof deck over a domestic basement that extended into the garden.

Following the report of visible signs of water ingress into the basement, a



waterproofing solution was designed to seal around the skylights and to encourage surface water to drain away.

The gravel was removed around the skylights and the exposed brittle and cracking plastic damp proof membrane was cut back. The area was then jet washed. Mortar incorporating Triton Trimix Resin, a water and salt resistant additive, was then injected around the skylights to fill any gaps. A bottle cove fillet of Triton Fillet Seal was then applied around the skylights and coated with two coats of Triton TT55 – applied as a waterproof slurry, extending over the deck to one metre around each. A screed, incorporating Triton SBR latex admix (to improve the durability and water impermeability of the mix) was then applied around the skylights and across the whole deck area, with falls laid to prevent standing water.

Finally, two coats of Triton TWS Fastcoat were applied (over a primer coat) followed by Platon Double Drain protection and drainage



membrane installed over the coated areas. TWS Fastcoat is a single pack, moisture curing polyurethane elastomeric resin. It cures as a fully bonded and seamless layer, offering continuous and flexible protection, capable of withstanding minor building movements without cracking.

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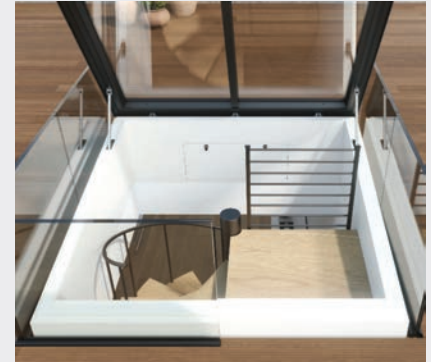
In densely populated urban areas of the cities, where the number of floors in housing is sometimes limited and private gardens are rare, a rooftop terrace or patio is becoming a popular design choice. For such rooftop projects, a new dimension of roof access is offered by the LAMILUX Flat Roof Access Hatch Comfort range, designed to give a generous daylight intake in attic apartments alongside convenient access to the roof terrace creating an air of grace and beauty both internally and externally. Featuring unrestricted use as a natural ventilation device and convenient access to the roof terrace, the indoor climate also benefits from the high energy efficiency of the range thanks to the thermally broken frame and excellent air tightness values.

The fourth, and newest addition to the Access Hatch Comfort repertoire the Square, makes it possible, for the first time, to also use spiral and platform staircases underneath. Until now, access to the roof was



limited to straight stairways due to the elongated rectangular shape of the roof access hatch range. The Square only takes 45 seconds for the concealed hydraulic drives to silently open the 4 m² glass element of the skylight by 70°.

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Contemporary Kings Mews receives superior airtightness solution



A series of four highly attractive newly built townhouses in London SW4 has been fitted with the high-performing Wraptite® air-barrier from the A. Proctor Group. The Kings Mews development offers the latest stunning contemporary homes from Falconet Property Development. Beach Seakins, managing director at Falconet commented on how the selection of Wraptite has benefitted the development both in terms of its thermal performance and the ease and speed of application: "Using Wraptite has meant that we could achieve superior levels of airtightness, while at the same time maintaining enhanced protection from water ingress and in controlling condensation. "The self-adhesive nature of the membrane removed the additional time, cost, and equipment which would have been required in a traditional installation, speeding up the install substantially. We are delighted with the performance of the Wraptite membrane and will be looking to specify this for our developments." Wraptite is the only self-adhering vapour permeable air barrier certified by the BBA. 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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Marley Alutec provides the answer



Demonstrating its versatility and ease of installation, Marley Alutec's Evoke composite aluminium fascia and soffit system has been supplied to a residential project in Killin, Stirling where it was cut and formed on-site

from standard sheets to meet the requirements of the project. Marley Alutec's Aligator Deepflow rainwater gutter system was also chosen for its strength, durability and simple installation process. Marley Alutec's Evoke is more durable than conventional sheet aluminium and has a 50-year functional life expectancy with minimal maintenance.

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Innovative use of Marley Alutec's Evoke



Marley Alutec's Evoke roofline solution has been selected for a custom new-build property within a conservation area in Ipswich. The composite aluminium system was chosen to provide a durable, low maintenance, modern look that would complement the surrounding area. The design features three-step bargeboards on the gable edges, created using two pieces of Evoke and a separate dry verge system with each set back approximately 50mm from the previous layer. Evoke systems have a functional 50-year life expectancy and are finished in a polyvinylidene fluoride (PVDF) architectural grade paint.

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ADF AUGUST 2021

Waterloo Air Products at the University of Birmingham School of Engineering



Waterloo answered the challenge of heating and cooling the impressive double-height atrium at the University of Birmingham's new £46.5m School of Engineering building by installing Thermally Actuated Swirl Diffusers (SDACH) at high level (up to 20m). These variable swirl diffusers automatically sense the temperature of the air supply and adjust the blade angle accordingly without the need for a power supply. Optimum comfort conditions were achieved for all the office, study and workshop areas by using Fixed Blade Swirl Diffusers (SDFC). These aerodynamic ceiling or duct-mounted diffusers were suited to the high heating and cooling differentials of the building's range of occupied spaces. Used throughout the project in both ceiling and sidewall applications were Louvre Faced Diffusers (DF41), Eggcrate Grilles (GC5) and Airline Linear Grilles (ALG) which are available in the wide range of special options and finishes that made them so well-suited. Matt Mayo, NG Bailey's Mechanical Project Engineer for the School of Engineering, said: "We approached Waterloo for this project because we knew they would be able to supply high quality, high performance products."

01622 711500 www.waterloo.co.uk

Transform HiB's Tranquil compact bathroom range with new choice of handles



Leading bathroom supplier HiB Novum has extended the popular Tranquil range to offer a new range of chamfer handles.

Available in chrome, black and brushed brass finishes, the chamfer handles are available as an optional alternative to the standard chrome handle included in the furniture range.

Offering more flexibility and style options, the new chamfer handles complement Tranquil's white and anthracite compact bathroom furniture and Link unit finishes, creating a fresh aesthetic.

Ash Chilver, Sales Director at HiB says: "The new chamfer handles give designers more choice to transform the bathroom space and create a look with a touch of personality. The Tranquil range already offers an opportunity for customisation, thanks to the Link open storage solution which expands the combinations of the Tranquil unit to over 30 possible configurations. We wanted to extend this personalisation with a choice of handles and brassware finishes. The new chamfer handles really enhance the look of the range as well as being functional."

020 8441 0352 www.hib.co.uk

Kingspan provides tapered roof solution



Situated at the heart of the prestigious North Cambridge Research and Design Cluster, the Maurice Wilkes Building offers five floors of Grade 'A' office space topped with Kingspan Thermataper TT47. The tapered insulation system, which combines

rigid flat packer boards, tapered boards and pre-mitred hip and valley boards. With thermal conductivities as low as 0.24 W/mK, it provided an efficient, lightweight solution for the roof of the Maurice Wilkes building which eliminated the need for a structural fall on the roof.

01544 387 384 www.kingspaninsulation.co.uk

AET's sustainable answer



Many commercial office buildings are designed with ceiling-based air conditioning systems but are they truly sustainable? For changing occupiers, moving pre-fitted systems, and adding additional duct work is often required, resulting in an expendable amount of waste.

AET Flexible Space's system offers the answer to this problem – by using the floor void as a plenum, when the new tenants take ownership, they can reconfigure the existing equipment easily and effectively. For more information please visit www.flexiblespace.com/blog-the-sustainable-answer-by-matthew-edney

01342 310400 www.flexiblespace.com

Waterloo strengthen product offering with new displacement range



Waterloo have strengthened their product offering by replacing their displacement range with the full portfolio of Swegon displacement products. By integrating a range of airborne products from the Swegon group, the supplier of air terminal devices can deliver the widest range of room unit products in the UK market.

The new range of displacement terminals are made to effectively discharge air at low velocity to ensure good comfort in rooms. In large spaces such as airports, theatres, factory floors, open offices, and supermarkets where a traditional mixed system can fall short; using a displacement system can have significant advantages on indoor air quality and efficiency.

Rooms with high ceilings can benefit from substantial energy savings by installing the displacement terminals with Varizon®, as only the occupied zone needs to be cooled from the low level of displacement installation. By integrating selected airborne products from the Swegon group, Waterloo is now in the position to offer the strongest and widest range of room unit products on the UK market.

01622 711500 www.waterloo.co.uk

SALTO XS4 One electronic lock now available in dark bronze finish



With a large variety of models designed to fit any building's needs, the XS4 One electronic escutcheon fits virtually any door, including wooden and PVC doors as well as those with narrow metal frames.

Until now, the Dark Bronze finish was only available for the XS4 ANSI models but this attractive contemporary finish has now been extended to the XS4 One family as well.

The new Dark Bronze option for the XS4 One product range compliments today's design trends and blends perfectly with both white and dark doors, modern style and decoration.

With a large variety of models, XS4 One electronic escutcheons are all totally wire-free and networked through SALTO Virtual Network (SVN) and BLUEnet Wireless network for access control in real-time and compatible with smart phone mobile access.

They are simple and fast to install without having to replace or drill the door. High



security protection is provided via high resistance, hardened anti-drill plates to protect the wiring and reader area. Hardened axes and floating steel balls provide additional protection in the handle area.

The new Dark Bronze Finish option has also been added to the SALTO MyLock

online configuration tool, allowing users to now visualize this stunning finish for the XS4 One, XS4 One DIN and XS4 One Deadlatch (DL) models on any type of door.

01926 811979

www.saltosystems.com/en



01709 581168
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LIST OF BENEFITS:

- Contemporary finish
 - 8kw Output
- Panoramic view with the curved glass
 - Carbon neutral
 - 5 year guarantee

VORTICE helps improve air quality



Situated opposite the iconic Royal Hospital building on the former bus depot in Cleveland Road, Wolverhampton, 74 apartments and 18 houses in fitted out by GA Nicholas will benefit from excellent indoor air quality thanks to ventilation manufacturer VORTICE. The units create a constant air path by continuously extracting at a trickle rate from the wet rooms and boosting when needed. The range of heat recovery units go a stage further and not only extract, but temper the warmth from the air back into the living rooms and bedrooms.

01283 492949 www.vortice.ltd.uk

Concrete and acoustics come together



By combining cement with wooden board, Hunter Douglas Architectural has created an architectural "best of both worlds". Concrete Veneer is a new and innovative product that brings together a perforated core plate and a finely perforated 1.5 mm cement top layer. It

looks exactly like a conventional concrete product, but the perforated panels provide acoustic absorption to α_w 0.50, NRC 0.65 and SAA 0.64. The nano-perforations are microscopic perforations at \varnothing 0.5 mm, which enable high acoustic performance without compromising the aesthetic quality. It is available in five different colours.

01604 648229 www.hunterdouglas.co.uk



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www.lowheightdrain.co.uk

IVC Commercial overcomes the challenge at London offices

When the poor subfloor condition of a London office building presented a challenge, IVC Commercial provided the solution in LayRed 55 engineered vinyl flooring.

The Upper Street, London offices of real estate investment firm, Cain International have been redesigned by award-winning design and build firm Modus Workspace, using IVC Commercial's LayRed 55 engineered acoustic vinyl flooring. Delivering a workplace that has a home-like feel and captured a 'modern heritage' look, Modus Workspace opted for the durability and maintenance of vinyl flooring for the first, second and third floors of the office.

Ali Mackechnie, project designer, Modus Workspace commented: "We wanted to create a residential feel to the offices and so took inspiration from the classic style of wooden floors. We wanted a vinyl plank that could withstand high traffic in Cain international's busy offices."



On removal of the old floorcovering during the build, the subfloor revealed its poor condition and so contractor, Medifloor, was tasked with finding the solution. It took the usual remedial actions of repair and re-screed, but also recommended the use of IVC Commercial's LayRed 55 engineered vinyl flooring.

Featuring a rigid core and built-in underlay to combat uneven subfloors, LayRed 55

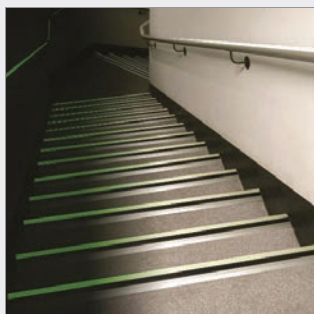
is IVC Commercial's fast and easy to install Luxury Vinyl Tile solution. Durable, easy to maintain, quiet and comfortable underfoot, it is ideal for overcoming installation problems while delivering a high-performance floor.

Jim Gordon, Medifloor, explains: "The subfloor was problematic and very uneven. We repaired and re-screeded as is normal practice, but also recommended LayRed 55 as a way of ensuring that any remaining unevenness didn't impact on the final finish, as vinyl plank floors are particularly sensitive to subfloor condition. The click fit also helped us to minimise installation time."

Available in true-to-life wood and stone looks, including the classic grain of Blackjack Oak chosen by Modus Workspace, LayRed 55 is made from 30% recycled content in Belgium using renewable energy.

www.ivc-commercial.com
www.modus.space

New product from Quantum Flooring Solutions: EcoGlo Stair Nosings



EcoGlo is Quantum's innovative solution to stair safety. It is a unique photoluminescent tread material which can be used with most Quantum stair nosings. EcoGlo illuminates step edges in reduced light, aiding safety in cases of emergency. It is also extremely useful for low-light venues, such as cinemas or theatres, and is available in a range of colours and styles. EcoGlo is recharged through exposure to either artificial or natural light, so it is a great option for both internal and external use. It is also UV resistant, so the photoluminescent tread will not fade or dull over time. Just 30 minutes of charge results in over seven hours of visibility, providing excellent step edge contrast. EcoGlo is also highly slip resistant. The photoluminescent strip is combined with a silicon carbide band, ensuring that the stair nosings are safe and durable. These attributes make EcoGlo the perfect installation for emergency situations. Post-Grenfell Tower, there has been a realisation that emergency lighting can and does fail, just when it is needed. EcoGlo can guide people to the exits even when power is down, in as safe a way as possible. It is effective in all light conditions and helps to reduce slips, trips and falls, complying with all health and safety requirements.

0161 627 4222 info@quantumflooring.co.uk

New robe hook collection



Leading hinge manufacturer SIMONSWERK UK are pleased to announce the launch of the new Robe collection. The brand-new range will suite any decor from traditional to modern. Made from solid brass and finished to the highest standards. The stylish designs are available in a wide range of finishes including PVD which has achieved 1,000 hours corrosion resistance tests to BSEN 1670 and can stand up to the most aggressive conditions, has a high temperature resilience, good impact strength and excellent abrasion resistance.

SIMONSWERK are Europe's leading Hinge Manufacturer with a history spanning more than 130 years in the manufacture of brass, aluminium and stainless-steel hinges for doors and windows. The range includes the renowned fully concealed TECTUS hinge range and the popular TRITECH solid brass hinge with concealed bearings.

0121 522 2848 www.simonswerk.co.uk

Bona launches new range of sport floor treatments

Bona®

Great games come from great performance. With a long track record in sports floor treatment, Bona's range of solutions continues to grow. From national top leagues and enduring multisport halls to engineered wood basketball courts and resilient handball surfaces – Bona SuperSport beats industry requirements and exceeds expectations.

Bona are proud to introduce a system of premium sport floor finishes including one that allows players back on floors in just 24 hours! The new Bona SuperSport system comprises a compatible range of top-coats and primers for wood, resilient sport and multi-use floors, plus vibrant line marking paints and surface cleaners. With the Bona SuperSport System, there's no need for compromise in terms of style or visual impact on wood or resilient flooring. Bona offers a wide range of vibrant, mixable colours to help you achieve a wide array of visual expressions.

New SuperSport HD is a premium, two-component waterborne wood floor lacquer, designed to provide a highly durable coating for busy sport or multi-use floors. The



FIBA and GREENGUARD certified formulation is ideal for use as part of a Bona Silver Maintenance Programme, which avoids ever having to sand the surface back to bare wood, and thereby saving expensive downtime. Floors treated with Bona SuperSport HD can be put back into use in just 24 hours!

For newly sanded, sport-specific wood floors, choose new Bona SuperSport One. This tough, one-component formulation also carries the FIBA and GREENGUARD certifications.

For resilient sports surfaces Bona offers SuperSport Pure HD, a new topcoat that restores surface friction and allows players back on the floor in just 24 hours. The new SuperSport range also includes a fast-drying line marking paint, available in 10 vibrant colours; and two highly effective cleaners for use on both wood and resilient surfaces. Choose SuperSport Cleaner for daily cleaning and SuperSport Deep Cleaner for the periodic removal of scuff marks and to de-grease the surface. High-impact force and heavy traffic are all part of the game for sports floors. Durability and special care protective coatings are vital to ensure their competitive edge.

FIBA is the world governing body for basketball whose objective is to achieve a high standard of quality, safety and

technology for the athletes and public involved in the sport. Bona is proud to be a FIBA Equipment & Venue partner and approved supplier of finishes and maintenance products for wooden sports floors. The products' GREENGUARD certification proves they are very low chemical emission products, whose use will contribute towards the interior air quality of the facilities where they are specified.

Technical Manager at Bona, Alec Stacey, said: "With our new Bona SuperSport system, we are offering flooring contractors, facility managers and owners of wood and resilient sports and multi-use floors a total system of finishes, paints and cleaners. All are safe and easy to use and designed to reduce downtime and get users back on the floor fast. The Bona SuperSport System is developed with the contractor in mind. From primers and finishes to paints and cleaners, everything is developed with full compatibility in mind, to ensure the best results in minimal time. A sports floor places very specific demands on paints and finishes. Unlike ordinary wooden floors, sports floors are subject to intense impact, movement and flexing due to the tempo of modern sports. The Bona SuperSport System offers practical solutions for high demanding sports surfaces"

info.uk@bona.com www.bona.com



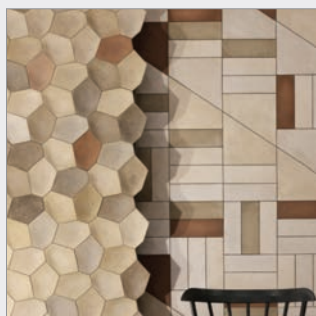
UNILIN Panels brings a natural way of working



Giving a broad playing field to fuel creativity, MOODS is a series of collaborative projects between UNILIN Panels and design studios. In the third of the series, Ghent-based Studio Woot Woot, delivers NATURAL WAY OF WORKING, a palette that lets everyone feel good, in even the largest of companies. Bringing this calm and natural zen into an office space comes in a refined and well-balanced palette with a few main colours in different shades. For example, UNILIN Panels has a wide range of wood designs – perfect for desks and wall coverings or finishing off the office kitchenette – and combining these with different tones of green is an ideal starting point. UNILIN Evola provides these natural finishes and colours in a range of HPL and melamine-faced panels with matching edging strips. Durable and easy to maintain, UNILIN Evola can be used to bring a natural way of working to walls, doors, desktops, countertops, cupboards, panels and much more. You can see the full NATURAL WAY OF WORKING palette for real at the UNILIN Panels London showroom, The Gallery Clerkenwell. Same day samples are also available within central London.

info.panels@unilin.com www.unilinpanels.com

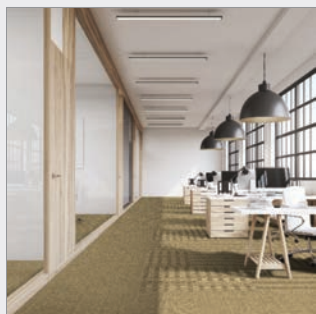
Parkside introduces 100% natural, zero waste wall tile



Made from 100% natural materials using a patented, low-energy production process, Criaterra tiles are the latest decorative wall tiles to join the Parkside portfolio. Made from stone powders, clays and plant fibres cast in three-dimensional patterns that fuse geometric and organic forms, and available in colours derived from natural pigments, Criaterra is a unique decorative wall tile that challenges the conventions of production and design. 100% biodegradable, as strong as concrete and with six times the thermal resistance, Criaterra takes a bold step towards product circularity. Offering a 90% energy saving in production against ceramics and using up to 70% upcycled quarry waste material, the tiles use Advanced Earth Technology, the result of an intensive five-year scientific R&D project. This innovative technology re-engineers the way tiles are manufactured and introduces a fully regenerative product, as well as replacing conventional high temperature firing with a low temperature process that reduces greenhouse gas emissions. Suitable for internal decorative wall use only and designed to work best without grout, Criaterra is a natural alternative to mass produced ceramic tiles.

0116 276 2532 www.parkside.co.uk

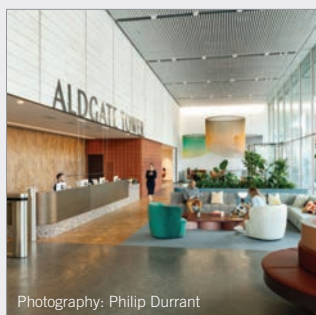
Carpet Tiles shaped by the landscapes of Flanders



Shaped by the diverse landscapes of Flanders, Heritage is the latest carpet tile from modulyss, a collection deeply rooted in the company's Belgian roots. From the ever-changing coastline of the west to the iconic cobblestones that have marked cycling's great champions and the fertile polders found inland, Heritage celebrates the landscape of Flanders in five coordinating carpet tile designs now available from modulyss. Cobbles, Haze, Dune, Meadow and Polder have been designed by Ruben De Reu, design and product development manager at modulyss. "I was intrigued by the concept of heritage and how it shapes a country's identity through the passage of generations", he explains. "For me, it is about a need to go back to our roots and reminisce in familiar and comforting memories. I drew upon the thriving history of the Flemish textile industry, Belgian artists I admire and the landscapes of my youth. Heritage weaves together past and present, reflecting the shapes, textures and colours of Flemish landscapes." Made in the country that has inspired it, Heritage is a striking carpet tile collection now available from modulyss.

0800 096 2702 www.modulyss.com

Office Luxury with Havwoods: Introducing Aldgate House



Photography: Philip Durrant

Aldgate House, a high-profile office building in the capital, required an aesthetic wood floor and cladding solution to enhance its ground floor lobby. Part of a wider renovation, the design brief for this luxurious project was to revitalise the entrance space and to create an inclusive yet inviting environment for office workers and guests to match its vibrant city surroundings. Havwoods End Grain from the Henley collection was specified for this project, an extremely durable choice, the engineered planks benefit from inherent natural texture and distinctive ring details which only add to the board's unique charm. An ideal choice for a bustling lobby, the luxurious pre-finished planks can easily withstand heavy footfall, whilst creating a seamless flow across interiors. Paired alongside terracotta tiles, pops of green and terrazzo effect surfaces, the combination of multiple earthy shades results in an interior scheme that exudes warmth, with the stunning visual appeal of the End Grain boards taking centre stage. In addition to the floor, these stunning boards have also been used on the wall behind the reception desks, this creates an impactful feature and helps to zone the space.

01524 737000 hvws.co/showrooms

Panic Bar suits Scottish regulations



Carl F Groupco, leading manufacturer of door and window hardware, including panic and emergency exit components, expands their range to include the CISA FAST Touch Panic Exit Push Bar. Compatible with FUHR panic exit door locks, the panic bar features fast touch operation and a special mortice panic function that works alongside the eurogroove fit FUHR multipoint panic lock range. The stainless-steel satin PVD finish provides a clean and crisp appearance. Certified in accordance with EN 1125 and CE marked the CISA panic bar has been tested beyond the expected parameters requested by regulators.

01733 393 330 www.carlfgroupco.co.uk

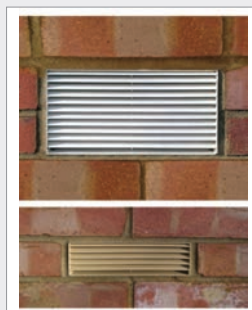
Increase in orders for Glide Bollard system



Leading security products firm Securiscape says the end of lockdown has seen an increase in orders for its IWA 14-rated Glide Bollard system, a cost-effective access control solution inspired by plastic sliders on a curtain rail. Available in two variants, including a Nano version which requires an excavation depth of just 130mm, the Glide Bollard system uses steel bollards which can be slid in and out of position along a rail embedded into the road surface. Mark Stone, Securiscape's managing director said: "It's a simple idea but it's a real game-changer".

01335 370979 www.securiscape.co.uk

Fire Safe Air Brick® installed at Blackhorse View residential development



Titon Ventilation Systems new Fire Safe Air Brick® has recently been installed in the new Blackhorse View residential development. Blackhorse View situated in Walthamstow is a brand new development from Barratt London of 350 new homes in East London. The development offers one, two and three bedroom apartments which includes a private outdoor area where residents will be able to enjoy the communal gardens. Miers Construction Products who have an expansive range of building products in their portfolio, supplied the Titon FireSafe® Air Brick to the Blackhorse View project. The Titon FireSafe® Air Brick is a specialist product developed and manufactured by offering low resistance to airflow, but high resistance to fire as set out in Approved Document B (fire safety) volume 1: Dwellings, 2019 edition. The Titon FireSafe® Air Brick is designed and tested to BS EN13141-2:2010 specifically for mechanical ventilation systems. Made from 1mm electrogalvanized sheet steel, fire class A1 'no contribution to fire' and polyester powder coating meeting EN13501-1 classification A2-s1,d0. The Titon FireSafe® Air Brick is ideal for fire safety applications.

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Beautifully safe

David Pringle of Bailey Street Furniture Group says that as we venture out to town centres as lockdown eases, sadly the continued terrorism threat means a focus on aesthetic features with hidden security capability

Many cities across the globe are redefining their urban policies as they face the increasing fear of terrorist attacks. Just as we all tentatively venture out post-lockdown and find a new outdoor life, the concept of shopping, open spaces, festivals, and outdoor events are less appealing, in light of the above threat. Our urban spaces need security requirements and procedures to reassure and protect users.

During the last five years 4,000 terrorist attacks took place and caused nearly 32,000 fatalities globally. Terrorist attacks typically take place in cities and other built up areas where they can successfully cause maximum impact and loss of life. They aim to destroy the very fabric of culture, constrain our freedom, and make our city life one of fear.

The Government has been employing architects to redesign the public realm in British cities and buildings to create bollards and barriers that can block terrorists who intend to use vehicles and bombs. It is crucial that city life can continue unabated.

Over recent years the Government has developed various 'impact standards' and 'defensive' approaches; hiding measures have become the norm. Using design features to engineer security is becoming standard in ordinary buildings as well as high profile locations. Many architects integrate hidden barriers into their new buildings and offer retrofit for existing properties.

Disguised bollards and barriers are an important part of making buildings secure, and impact tested steel reinforcements can now be found inside a wide range of different street furniture including planters, bus stops and street lighting. So while these features may appear as though they have been designed with aesthetics in mind, they are actually serving an important purpose. Once you start looking for



them, these protective features can be found everywhere!

An alternative approach

Following attacks in Barcelona and many other European cities, Italian architect Stefano Boeri – best known for his green plant covered buildings – suggested that our cities take an alternative approach to vehicle mitigation. Cities, he believes, should be redesigned to include trees and bulky planters overflowing with greenery rather than stark concrete barriers.

Boeri: "A big pot full of soil has the same resistance to a Jersey [modular concrete barrier], but it can host a tree – a living being that offers shadow, absorbs the dust, subtle pollutants and CO₂, as well as producing oxygen, and accommodates birds."

Using design features to engineer security is becoming standard in ordinary buildings as well as high profile locations



It is thought that planting would integrate better with our monuments and historic architecture as seen temporarily on London Bridge following the vehicle attack in June 2017. The 'mitigation planters' separated the footpath from the six lanes of traffic that crosses the bridge, protecting city users.

Green spaces are vital for everyone, and we all feel the benefit. A beautifully designed green landscape combined with clever street furniture design offers not only a great use of space but creates the opportunity to add security measures with an additional aesthetic quality often missing in hard concrete design. Successful green areas and abundant planting can improve morale and productivity of city workers through psychological benefits, and far beyond.

For urban planning to be successful it is important that design, technology and security work hand in hand. Public safety is continual, the impact of terrorist threats constant. So the need to design public spaces in order to reduce this risk and to minimise the impact of vehicular attacks is at the forefront. Street furniture has to be designed to serve all purposes. Both

protection and aesthetics are key.

Responding to this demand, we designed a flexible, modular retaining wall system for creating raised planting schemes in our urban and city environment. Designed for easy installation, the modules are intended for all areas of our cityscape, from courtyards to roads and shopping areas to recreational spaces.

A reinforced structure designed for 'Hostile Vehicle Mitigation' can offer both security and protection to pedestrians and infrastructure without compromising the aesthetic value of a residential or commercial area. It is possible to secure our cityscapes without sacrificing both the beauty and identity of our urban environment.

The standard system has recently been utilised in expanding outdoor spaces for hospitality establishments along Elizabeth Street in Victoria, Central London. The planters were specified to provide a contained sense of calm amidst the bustling surroundings, maintaining the street's 'village' ambience.

David Pringle is managing director of the Bailey Street Furniture Group

For urban planning to be successful it is important that design, technology and security work hand in hand



A modular planting system designed to offer greater safety & protection to pedestrians and infrastructure without compromising on the aesthetic values in urban environments.

bsfg.co.uk

01625 322888

enquiries@bsfg.co.uk



Pocket Guide makes light work of meeting BS 5266-1



Fire and life safety systems manufacturer, Advanced, has published its BS 5266-1 Pocket Guide to Emergency Lighting.

Developed for individuals and organisations responsible for the design, installation, commissioning and maintenance of emergency lighting systems, the pocket guide serves as a tool to make compliance with BS 5266-1 quicker and easier.

The BS 5266-1 Pocket Guide to Emergency Lighting helps system designers and installers to understand the importance of emergency lighting, the legislation surrounding it, and some of the solutions available to address the challenges they face. The guide also offers the most up-to-date, reliable information you need on lighting placement and lighting levels as well as addressing the criteria that need to be met around system design and light testing.

Matt Jones, emergency lighting business manager at Advanced, said: "The guide serves as a useful resource to refer to for those with



a responsibility for the emergency lighting system, and complements Advanced's growing suite of emergency lighting training and support materials. These include our on-demand webinar, 'Bridging the Gap Between Fire and Emergency Lighting

Systems', and CPD presentation, 'The Best Route to Compliance for your Emergency Lighting Systems'."

The BS 5266-1 Pocket Guide to Emergency Lighting is available as a hard-copy, or can be downloaded from www.luxintelligent.com via PC, tablet or smartphone, ideal for those managing and maintaining lighting systems on the go. The guide is intended to aid designers and installers of emergency lighting systems and is not to be used as a substitute for BS 5266-1 which should be read in full.

Advanced is owned by FTSE 100 company Halma plc, a global group of life-saving technology companies. Advanced products protect a wide range of prestigious and high-profile sites across the globe, from London's Shard and Lloyds building to Abu Dhabi International Airport and the Hagia Sophia historic site in Turkey.

0345 894 7000
www.luxintelligent.com

Painting with Pride



In celebration of Pride month in June, 108 bollards in Covent Garden's Floral Street were painted in a vibrant multicoloured scheme. The task was undertaken in just a week, by decorators Cronin & Millward, based in Gillingham, Kent. The specification called for a quick-drying, water-based paint. With this in mind, One Can Matt by Bradite was selected. It is quick-drying and touch dry in 30 minutes making it re-coatable in just one hour. One Can is available in both eggshell and matt finishes and can be tinted in a full range of BS, RAL and NCS colours. Company Director of Cronin & Millward, Paul Cronin explained that the location created extra logistical planning, as Floral Street is rather narrow and is home to the stage door of the Royal Opera House, amongst several popular shops and residences. He commented: "This was challenging with working around the public safely and with a deadline of June the 1st. It was a tall order but thanks to the help of our team we got there in the end". Paul said that Bradite's One Can "went on very nicely" and has now put in a bid to re-paint the bollards when the time comes, about six months from now.

01248 600315 www.bradite.com

Knightsbridge piles up lighting ideas



The new BL5 brick light from Knightsbridge offers a multitude of lighting solutions for outdoor walls. The IP65-rated, surface mount brick light, which is available in black or grey, offers a choice of warm white or cool white via its energy efficient LED light source.

Made from weather-resistant polycarbonate, it measures a compact 100 mm (H) by 235 mm (W), with the slimmest of projections: a mere 32 mm. However, should a flush fitting installation be required there is an optional kit available for converting the unit to recess mounting, making it the perfect addition to dwarf walls or low brickwork.

01582 88 77 60 www.mlaccessories.co.uk

ISO 14001:2015 standard achieved



Pyroguard, part of the Technical Fire Safety Group and a leading independent provider of fire safety glass solutions, is pleased to announce that it has achieved the ISO 14001:2015 Environmental Management standard across its UK sites. The internationally accepted ISO 14001 standard outlines the most effective ways

to put a successful environmental management system in place, designed to help organisations identify, manage, monitor and improve their environmental performance, such as through a more efficient use of resources and/or a reduction in waste.

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As 60,000 made their way to and from Wembley Stadium, Resiblock were able to sit back and watch as the Resiblock '22' and Resiblock '22' A.F products navigated their way through another strenuous test of large volumes of footfall traffic. The return of Wimbledon at The All-England Lawn Tennis & Croquet Club also saw the return of fans, and the chance for Resiblock Resiecco to once more seal its position as a leading sealer for Sports Venue's, especially at the recently sealed Gate 20 development. Resiblock's range of commercial sealers has performed once more.

www.resiblock.com

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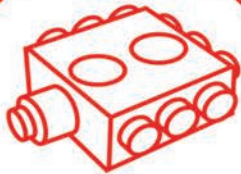


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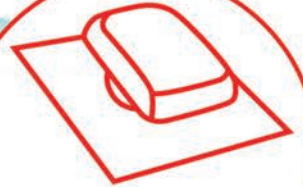
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