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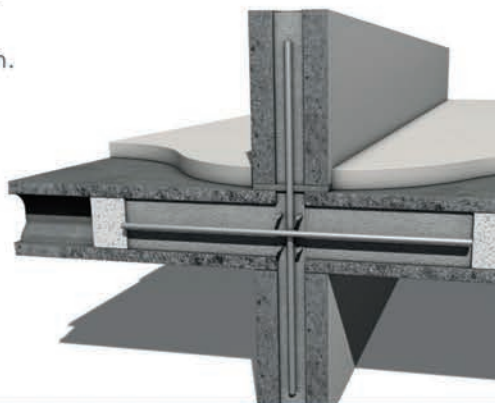
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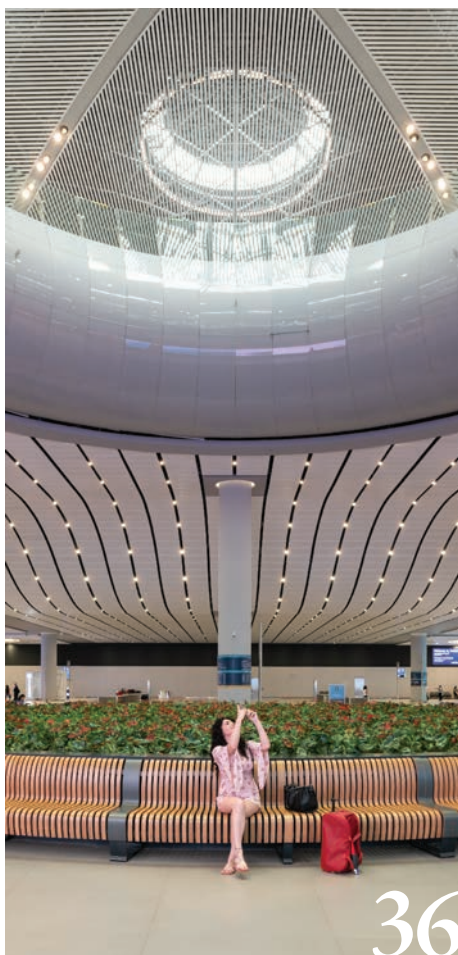
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05



36



46

CONTENTS

10.19

NEWS, VIEWS & INSIGHTS

- 04 Industry news & events
- 20 **View Point:** Architect Katy Barker of Directline Structures
- 23 **Site Lines:** Gavin Maloney of Arup
- 27 **Ask the Architect:** Laura Carrara-Cagni of Edward Williams Architects
- 34 CPD Focus
- 53 UK Construction Week Show Preview
- 56 Appointments and company news

PRODUCTS

- 58 Groundworks & Drainage
- 59 Structural elements
- 62 External envelope
- 77 Insulation
- 78 Heating, ventilation & services
- 80 Interiors
- 88 Safety & security
- 92 Landscaping & external works
- 99 Classified & directory

PROJECT REPORTS

- 36 **Arriving in style**
Istanbul Airport's terminal is the biggest ever built, but its design manages to still place all passengers' experience at the forefront, while honouring Turkish architecture. James Parker reports
- 46 **Vive la Republic**
Export Building is a refurbishment that fuses engineered timber and a revitalised public realm with a progressive tenancy initiative to create a new destination in Docklands. Sébastien Reed speaks to project architect Thidaa Roberts about the scheme

FEATURES

- 73 **EXTERNAL ENVELOPE: ROOFING**
Taking responsibility
Martin Bidewell of Sika discusses why supply chain accountability must be standardised across the industry for safer roof refurbishment
- 83 **INTERIORS: SMART HOMES/SMART TECHNOLOGY**
Smart tips for smart homes
Matt Nimmons of CEDIA EMEA brings together advice from the industry body's membership to explain the elements that should be considered when designing a wider home integration project
- 89 **SAFETY & SECURITY: FIRE PROTECTION & PREVENTION**
Multi-sensor safety
Andy Speake of Aico discusses how multi-sensor alarms are reducing costs & increasing safety from false alarms in social housing
- 95 **LANDSCAPING & EXTERNAL WORKS: STREET FURNITURE & URBAN DESIGN**
Keeping the public safe, not scared
Jaz Vilku of Marshalls Landscape Protection outlines the different options that exist for architects to keep the public safe, without being overly utilitarian

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FROM THE EDITOR



Partly in an attempt to turn away from the depressingly grisly goings-on in Parliament, but also to ensure that we retain a proper focus on the world of architecture, I wanted to highlight some of the great features that we have in *ADF* this month.

However, it's not to say that we only cover the positives, or just the uplifting examples of good design. In our View Point this issue, architect Katy Barker takes a strongly-worded look at the current roles of architects, and suggests they have boxed themselves into a corner as professionals.

She says that the broad skills architects possess would make them ideally fitted to being project managers, for example, but the anti-collaborative 'blame culture' of construction has prevented this. Barker herself has made a success of escaping a narrow 'Design' role and moving into the 'Build' of Design & Build. However unlocking all the gates to free architects already embedded in their silos might be a complex, although worthwhile endeavour.

On a completely different theme, Gavin Maloney of Arup, in our design-in-action article 'Site Lines' looks at how a house made of cork in Berkshire provides an answer to the reusable materials agenda, in a sensibly easy construction solution. Crucially, the building, with its exposed structural cork walls, is carbon-negative. It also provides a pleasing, although unusual, type of tactile materiality, which may be an acquired taste, but offers scope for other applications.

Similarly to Katy's article however, the issue here is that, although it's eminently possible to build a variety of schemes using solid cork, what are the structural issues across the industry that might prevent us from adopting such a sensible approach, and freeing up the possibilities? It might be as much to do with the 'not invented here syndrome' as much as money.

The 'NIHS' effect, somewhat sardonically, holds that organisations will reject ideas particularly based on the fact that they haven't done it before, and that they have come 'from outside.' However, given all of the challenges we face, from Brexit to the climate change agenda, the latter of which will of course require much longer-term solutions, we need to keep our minds as open as possible to the opportunities and alternative approaches.

This does not of course rest solely on architects, who, if anything, tend to apply lateral thinking almost as a way of life! Potentially, however, it needs to start with them.

James Parker
Editor

**ON THE COVER...**

Istanbul Airport's new terminal is not only notable for its size, but for the way it provides striking architectural forms. The vaulted roof is constructed of repeating modular steel forms that echoes Istanbul's traditional architecture.

Cover image © Jim Stephenson

For the full report on this project, go to page 36



WORKPLACE

John Robertson Architects unveil newly refurbished City workplace

John Robertson Architects (JRA) has revitalised an existing office building in the City of London with a prominent new entrance hall and retail podium. Briefed by client Ocubis to create “Clerkenwell meets the City,” Cannon Green provides a contemporary workplace environment complete with hot-desking and co-working spaces, as well as bike storage, showers and a cycle workshop.

The site, comprised of two orthogonal office towers constructed in 1966 and refurbished in 1981, and separated at

ground level. A double-height entrance podium now unifies the two buildings, with the introduction of an interconnected office reception and retail space at ground floor.

Positioned at an angle to the existing building to maximise the use of available space, the scale of the new podium has been carefully designed to respond to the surrounding streets, “ensuring a sensitive and comparable scale to nearby Cannon Place while creating a striking new entrance,” said the architects.

A striking element of the podium design is

the new feature stair, which JRA envisioned as a “sculptural object within the entrance hall that sweeps up alongside the curved glass enclosure toward the office lounge at first floor level,” said the architects.

The practice chose to use concrete for the stairway, “providing mass and depth to complement the exposed steelwork of the podium and existing building,” while also providing a sound barrier to the restaurant space below. Concrete was cast in situ with a fine finish, including a complex variety of curves, landing shapes, and riser depths and widths. At the top of the stairway, an amphitheatre arrangement provides informal meeting spaces, featuring integrated seating.

JRA concluded: “With its new animated entrance, workspace and restaurant area, the repositioned and re-branded Cannon Green provides a revitalised, highly functional environment that encourages greater connectivity and circulation while suiting contemporary office needs.”

EVENTS

AWARDS

Architecture MasterPrize
14 October, Spain
www.architectureprize.com

Structural Awards 2019
15 November, London
www.istructe.org/structuralawards

EXHIBITIONS

Beyond Bauhaus - Modernism in Britain
Ends February 2020
www.architecture.com/whats-on

FESTIVAL

World Architecture Festival
04 - 06 December, Amsterdam
www.worldarchitecturefestival.com

SEMINARS

RIBA London CPD Roadshow
17 October, London
www.architecture.com/whats-on

Inclusive Environments
29 October, London
www.architecture.com/whats-on

TRADE SHOWS

UK Construction Week
08 - 10 October, Birmingham
www.ukconstructionweek.com

London Build
27 - 28 November, London
www.londonbuildexpo.com

REGENERATION

astudio completes £15m Kingston Academy project

Award-winning architectural practice astudio has announced the completion of the £15m Kingston Academy regeneration project, which now also sees the school open to the public as community centre.

Throughout the project, astudio sought to enhance elements of the old building's history, while incorporating modern architectural changes to drive efficiency, flexibility in the space and create the most effective learning and community environment. The regeneration project drew on astudio's expertise in adapting old spaces to fit with new teaching styles and the modern demands of academies, while aiming to truly reflect the school's mission of 'Achieving for Children'.

In line with efforts to modernise and maximise the Academy's ability to create an environment that fit its new role as a community centre, astudio "prioritised access to natural light and the availability of versatile, flexible spaces". At the heart of the Academy, astudio installed a top-lit centre space, also supported by redesigned, naturally lit areas and more open spaces fit for a range of activities.

Advanced technologies played a central role in the new building, "allowing for the greatest flexibility and efficiency," said the



architects. This included the use of virtual reality headsets for prospective parents and the use of Building Information Modelling to coordinate the design.

Following a complex phasing programme, astudio was able to complete the project in stages that enabled the academy to continue operating and functioning fully before the construction was complete.

The architects concluded: "With the right community leaders and innovative designers, schools can support and enhance student productivity". astudio has worked on multiple academic projects, including the St Paul's Trust School in 2010 and Twickenham Academy in 2013.

CULTURAL

Waind Gohil + Potter create new cultural quarter in Ipswich

WG+P Architects (Waind Gohil + Potter) have designed a new theatre square and pavilion as part of a wider mixed-use development to revive the Westgate area of Ipswich. The 35,000 m² site has been incorporated as part of Ipswich Borough Council's development plan.

Phase 1 of the masterplan is to improve the area outside the New Wolsey Theatre, including a new pavilion to be managed by the theatre. The new square will become the North West gateway to Ipswich town centre, while the pavilion will become

home to the theatre's growing community engagement and creative learning programme. The space has been ergonomically designed to encourage collaborative working and provide a Tech Hub for developing digital skills in arts practice for those in Ipswich and Suffolk. The team also worked alongside the theatre in order to ensure that the building design incorporates a Changing Places facility, in addition to accessible toilets, to provide facilities for those with complex needs visiting the town.

WG+P's design for the new pavilion utilises a pre-fabricated timber structure developed with structural engineers Price & Myers and incorporates a striking concertinaed gold coloured metal roof. The landscape design includes new planting, lighting, projections and street furniture.

Phil Waind, director with WG+P said, "This is a wonderful opportunity for us to create something delightful within the space and for all who visit Ipswich. The Willis Building is a short distance away and we wanted a design that aspires and uses construction methods relevant to today. The new public space and building will fundamentally support The New Wolsey Theatre and allow them to maintain and enhance their status as a cultural landmark in the heart of Ipswich."



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AWARDS

World Architecture Festival winners 2019

10 innovative designs addressing some of the world's biggest challenges have won awards from the World Architecture Festival (WAF). The 2019 WAFX Awards celebrate proposals from across the globe – tackling subjects ranging from ageing and health to cultural identity and carbon reduction. This year's category winners include a humane prison design in Belgium, which challenges traditional layouts; a 'horizontal' skyscraper in the heart of Moscow which re-uses existing buildings; repurposed oil tanks creating a new river-front park in Brooklyn; and a pedestrian-focused 'urban living room' for the UAE's longest road.

The winning schemes will be on display at the World Architectural Festival in Amsterdam, which takes place from 4 to 6 December. The overall 2019 WAFX winner, chosen from the category winners, will be presented at the WAF Gala Awards Dinner on Friday 6 December at the Beurs van Berlage.

WAF programme director Paul Finch commented: "This year's winners display high levels of ingenuity and lateral thinking, and demonstrate the power of design and designers to tackle the world's big problems in ways that can turn them into opportunities." The WAFX 2019 Category Prize Winners are:



Water and Food joint winners: Ulsoor Lake by Arup and The Tanks at Bushwick Inlet Park by Studio V Architecture

Ulsoor Lake by Arup

Ulsoor Lake is one of the largest remaining open spaces in Bangalore, however it has not been developed in line with the city's rapidly increasing population and is subject to many pollution threats. Arup's

masterplan is for a holistic strategy, encompassing landscape design, ecology, engineering and socioeconomics, to help the lake and its environs recover from this neglect, while re-engaging the community to support its preservation. The strategy recognises that "pollution must be tackled at source, and that a phased approach to regenerating the lake is critical; continually moving towards the end goal of a catchment-wide suite of interventions to improve sanitation, drainage, stormwater management, and promote walking, cycling and ecological value. In the future, the polished water will form a backdrop to vibrant city life, celebrating the innovative future of Bangalore."

The Tanks at Bushwick Inlet Park by Studio V Architecture

Located at Bushwick Inlet Park, on the Brooklyn waterfront, The Tanks is a "real proposal for New York that radically reimagines what a public park in the 21st century can look like". Nestled against a rare green inlet on the East River, the Bayside Oil complex features 10 empty oil tanks that have been empty for half a century. Each tank is unique and the design vision adaptively reuses the structures as community gardens, performance spaces, galleries, and environments for natural habitats. The overall park will feature public green space, play areas, athletic facilities, plus an ecological inlet with native species and community boating. Joining the design is a non-profit dedicated to re-growing the devastated oyster population in New York Harbour. The project is a collaborative and entirely 'pro bono' effort that involves community groups, city agencies, and the Mayor's office.

Re-use winner: Badaevskij Brewery Redevelopment by Herzog & de Meuron and APEX Project Bureau

The aim of the Badaevskiy Brewery project is to redevelop the six-hectares old factory area, between the Moscow River and the vector to Minsk, and to transform this famous but largely abandoned and rundown site into a vibrant destination point in central Moscow. The factory

grounds and river embankment are to be opened to the city for the first time; the old industrial structures are to be assessed, restored and brought back to life through new internal organisation and uses, and more than 100,000 m² of new residential, office and retail is to be added in order to rejuvenate the site. The new development will comprise three renovated existing historic buildings and a new 'horizontal skyscraper', sitting on a series of stilts, elevated 35 metres above the ground. This new structure brings a series of benefits, such as additional green space, retaining the connection between the existing buildings and the river, and the prime views of Moscow from the flats within the 'hovering' structure.



Smart Cities winner: X-Space Urban Fabric Regeneration by Verform

This concept for an urban regeneration project in Dubai aims to create a new 'urban living room', based along a 1 km section of the Emirate's main highway, Sheikh Zayed Road. "The human-scale space is geared towards pedestrians rather than vehicles, and is designed for all cultures to congregate," said the awards organisers. The urban intervention is a response to how the highway is "breaking up the fabric of the city," and is "designed to give back public realm, along with sustainable green areas, to encourage diversity, integration and tolerance". The project's aim is to reduce the use of cars, with cycle paths, public transport and light-weight vehicles. The design is across a ground level of open spaces and gardens and an upper level with workplaces, restaurants and a gym, both centred around a tree symbolising stability and peace.

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City Rail Link

Cultural Identity winner: City Rail Link by Jasmax + Grimshaw

City Rail Link (CRL) is a major future transport infrastructure project that will extend Auckland's rail passenger network for the city. It is also New Zealand's largest public art project. The project consists of two underground rail tunnels connecting three new stations to a reconfigured downtown area.

The project is designed to be "a powerful expression of indigenous cultural identity," reflecting Auckland's unique identity as the largest Māori and Polynesian city in the world, and to create "an authentic and globally recognisable image of the city for the future". The design is firmly rooted in the Māori Creation Story, and each new station will be identified by a unique artwork, representative of a Māori deity and inspired by the historic landforms and flora characteristic to each station site.

Ethics and Value winner: The School in a Park by Maisam Architects & Engineers

The proposal for the new united school campus for The Ahliyyah School for Girls and The Bishop School for Boys, joins two of the most prominent schools in Amman. Maintaining the strong local identity and values of each school was crucial to the design. The proposal consists of a series of elevated learning pods, rooted by pillars within an interactive park, providing a sense of openness, community, creativity and innovation throughout the campus.

The design approach embodies a fresh take new on the architecture of schools, embracing a flexible use of space to adapt to the changing nature of education. In addition, the campus offers a learning environment that "feels like a second home for students, whilst consolidating the cultural identity of both schools".

Power and Justice winner: Haren Prison by Cafasso NV with B2Ai / EGM Architecten

The new Haren prison situated near Brussels is due to be operational in 2022 and, with 1190 detainees, will be the largest but also the most 'humane' prison in Belgium. The design of the new prison is based on normalisation, rehabilitation, and reintegration. Its free standing and modest building volumes represent as radical departure from the standard panoptic or star-shaped prison floor plan.

The complex consists of eight buildings that house three men's prisons, two women's prisons, a forensic psychiatric centre, an observation unit, workshops, sport infrastructure and a number of communal facilities. The campus has been designed as a small village that functions autonomously but integrates into the surrounding area. The buildings are designed on a human scale: the community building is reminiscent of a town hall or administrative centre, while the prison buildings are designed as multi-family houses.



Pars Medical and Health Centre

Ageing and Health winner: Pars Medical and Health Centre by New Wave Architecture Studio

Pars Medical and Health Centre is set to accommodate the large number of medical tourists currently travelling to Iran for medical services, due to the facilities available and the skilled health workforce. In addition to offering services to the local population, the objective of the project is to provide international services to Iran's neighbouring countries and countries along the Persian Gulf.

The proposal is for a combined 250-bed hospital, hotel, cancer institute, rehabilitation centre, dermatology clinics, spa and commercial healthcare centre. The project is designed to be constructed in different phases, starting with the hospital, as the main income generator for the following phases of the project. Responding to local vernacular, the design features a series of staggered, cantilevered structural rings, with open space at the centre. As well as helping to achieve efficient energy consumption, the design



Skypark Business Centre South

offers wide vistas, natural daylight and direct access to green space for patients.

Building Technology winner: Skypark Business Centre South by Aravia Design & +FUN

This business centre for the development of Luxembourg Airport aims to promote both sustainability and work-life balance for the transient worker. The complex is defined by a semi-transparent louvred skin that acts as both a sun shading device and acoustic barrier, as well as promoting passive ventilation. Aesthetically the facade "adds complexity and depth to the building elevation". Natural light penetration is another key element of the project, which features a controlled building depth, and voids that allow sunlight to reach even the lowest basement level. The project incorporates public spaces and facilities that "add value for the surrounding public realm and contribute to an active work style".

Climate, Energy and Carbon winner: MO(O)D A Prototype for an Office Building by SOS School of Sustainability

In this proposal for a future office in Changzhou, China, meeting rooms and workplaces are supported by a constellation of open, flexible and multi-functional spaces, designed to promote both wellbeing and productivity. The proposal creates a hybrid environment, where meeting rooms and workstations constitute only 30 per cent of the masterplan, while 70 per cent of the space is dedicated to breakaway space.

The project has been driven by an analysis of climate trends, research into innovative and sustainable building materials, the local cultural environment, and the future of the workplace. The final product is "a synthesis of tradition and technology, shaped by both the local environment and needs of the population".

For more details on the WAF Awards and the festival visit www.worldarchitecturefestival.com

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EDUCATION

Heart of LSE campus transformed by Rogers Stirk Harbour + Partners

The London School of Economics and Political Science (LSE) has opened its latest landmark building to students, staff and alumni. The Centre Building, which has a £78m construction cost as part of an overall investment of £125m in developing the centre of LSE's campus, was designed by architects Rogers Stirk Harbour + Partners and delivered by Mace.

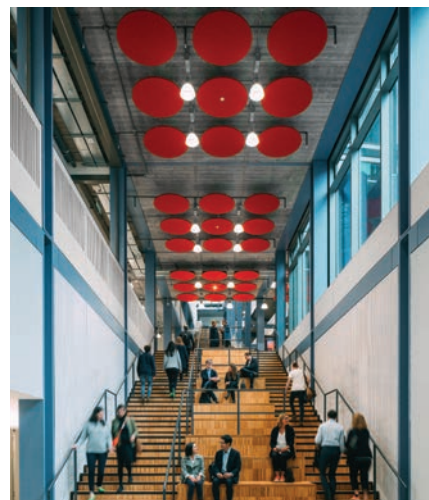
Situated at the heart of LSE's campus, on Houghton Street and Clare Market, the 13-storey building is the largest building commissioned in LSE's history. A "bold and beautiful design," commented the architects, it is also the highest building on campus, offering spectacular views across London's skyline.

Tracy Meller, partner and architect at Rogers Stirk Harbour + Partners said, "The Centre Building project presented us with a unique opportunity to work with the LSE to design a building which really reflects the values of the school, creating innovative and inspirational spaces for students and staff, in which to learn, socialise, study and collaborate." She added: "Our proposals went beyond the original brief aspirations, placing a new public square at the heart of the campus to improve wayfinding and connectivity, and

to give the LSE a much needed new focal point. Embracing sustainable design principles from the offset the BREEAM Outstanding building provides good daylighting and natural ventilation to over 70 per cent of the accommodation, creating workspaces which enhance the wellbeing of its occupants, in addition it reduces embodied carbon by 30 per cent, harvests rainwater and utilises a biomass boiler and PVs as part of its renewable energy strategy."

The Centre Building hosts a number of academic departments, more than a dozen seminar rooms, hundreds of study spaces and four lecture theatres, including an innovative 'LSE style theatre' designed to allow for both traditional style teaching and collaborative group work. A new LSE Alumni Centre provides a custom-designed space for alumni visiting their campus, while three roof terraces and a cafe provide new areas for students and staff to meet and socialise.

To facilitate interaction, a public square has been placed at the heart of the building, creating a new focal point for students and staff to interact while linking Houghton Street to the Library Plaza and connecting Lincoln's Inn Fields on the western edge of



the campus to the LSE buildings to the east. The building also features a dramatic 'Academic Stair'. Moving diagonally across the facade of the building in a series of double height spaces, the staircase was designed to encourage dialogue between departments, institutes and research centres and to provide additional informal areas for students and staff to interact.

The Centre Building has achieved a BREEAM Outstanding rating.

MIXED USE

HLM's Swanley regeneration scheme given the go-ahead

A major regeneration scheme designed by HLM Architects, aimed at "revitalising" Swanley Square Shopping Centre in Kent, with new retail, community and residential accommodation including Private Rented Sector homes, has been given the green light.

The development, by U+I, which was approved following a public inquiry held locally, comprises 340 residential homes,

46,780 ft² of mixed-use development including retail, restaurants, shops, new community multi-purpose space, and a new multi-storey car park. The scheme will also provide high quality, inclusive public realm and landscaping creating improved access to the recreation ground from the retail centre.

HLM's design, conceived around the "horticultural heritage of Swanley and

Kent" will "bring new life and vibrancy to the town," said HLM, with the introduction of seven new buildings varying in height from three to 11-storeys, replacing a large area of grade parking.

The scheme is one of four mixed-use regeneration projects led by U+I that will deliver over 1,000 new rental homes in the southeast across locations in Ashford, Maidstone, Swanley and Woking; each aimed at providing affordable retail and residential units to enhance local communities and celebrate the character and history of the local areas.

Detailed planning for the phased development of the scheme is now underway with construction expected to commence in 2020.

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AWARD

Kenneth Frampton to receive 2019 Soane Medal

Sir John Soane's Museum have announced that Kenneth Frampton, renowned British architect, critic, historian and Professor of Architecture at Columbia University, New York, will be the recipient of the 2019 Soane Medal. Awarded annually, the Soane Medal recognises architects and critics who have made a major contribution to their field through practice, education, history or theory, and "in doing so have furthered and enriched the public understanding of architecture".

'Kenneth Frampton occupies a unique position in architectural culture'

Sir John Soane's Museum commented: "Kenneth Frampton occupies a "unique position in architectural culture. His work as an architect, writer, critic, educator and academic over the last 50 years has shaped and informed the outlook of countless students and architects. Few architects practising today can claim not to have influenced by his thinking and ideas, notably around issues of context and culture, as articulated in his seminal and still powerfully contemporary text 'Towards a Critical Regionalism' (1983).

"Other works such as 'Studies in Tectonic Culture' (1995) and the many editions of 'Modern Architecture: A Critical History' have driven the ways that we see, think about and understand modern architecture and its role in society."

In recognition of his award, Kenneth Frampton will deliver the Soane Medal Lecture at a special event on 11 November at LSE's new building.



HEALTHCARE

Todd Architects delivers Aseptic Suite at Craigavon Area Hospital

Designed by Todd Architects, the opening of the new £3.37m Aseptic Suite at Craigavon Area Hospital marks the completion of the second phase of a redevelopment programme at the campus.

Located in front of the Macmillan Building, the two-storey "state of the art" unit will be used for preparing and dispensing highly specialised medications such as chemotherapy.

The new suite replaces the previous modular structure attached to the pharmacy department and houses a counselling room where the team can give confidential support and advice to cancer patients about their medication. It will be named the McWilliam Suite in memory of a highly respected pharmacy colleague, Gillian McWilliams, who died from cancer.

Associate architect Andrew Speer of Todd Architects said, "The Aseptic Suite building is designed to provide highly specialist cleanroom pharmaceutical facilities to comply with latest regulatory standards and has a close functional relationship with the adjacent Macmillan Building. The 300 m² ground floor has



large external windows providing optimal natural light to the staff work areas.

The geometric patterned cladding to the first-floor plantroom continues the architectural language established in the earlier phase of the masterplan."

The opening of the "bright and welcoming" Blossom Children & Young People's Centre last year, devised by Todd Architects after extensive engagement with clinicians and end users, marked the beginning of a phased masterplan for the hospital campus.

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RETAIL

Bohlin Cywinski Jackson designs clothing retailer's largest store in Brooklyn

Bohlin Cywinski Jackson have completed their design of Everlane's newest and largest store to date, in the heart of Williamsburg, Brooklyn. Located at 104 North 6th Street, the space is a redesign of an existing 1960s, two-story brick building.

The large storefront invites customers in with a "monumental" 20 ft tall glass wall allowing natural light to fill the space. Inside, the double height space welcomes guests to explore over 2000 ft² on the first floor and an additional 700 ft² on the mezzanine. Guests are guided from the first level to the mezzanine by a grand stair

designed with precast terrazzo treads, a glass guardrail and a maple wood handrail. The ceiling incorporates a deep louvered scrim that "appears as a neutral plane," said the architects, while masking the mechanical and electrical system below the existing building's uneven structure.

One of the primary drivers behind Bohlin Cywinski Jackson design was "guest experience". In developing the "in-person shopping experience," Everlane aimed to reduce wait times for fitting rooms, increase capacity and provide privacy during fittings. In the Williamsburg store, a series



of vertical maple louvers screens the fitting rooms from the main sales area, providing "privacy and warmth," said the firm.

COMMERCIAL

ThirdWay extends former Old Street warehouse

London-based architectural practice ThirdWay Architecture has completed a two-storey office extension to a former Victorian warehouse at 34-38 Provost Street, near Old Street roundabout.

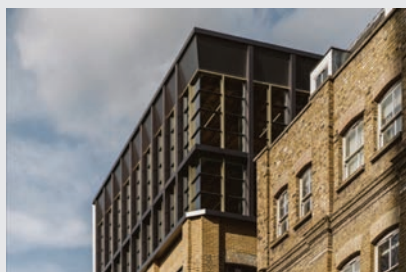
The building was fully pre-let before completion, and covers 15,000 ft² of commercial office space, across ground, lower ground and five upper floors. The brief required a two-storey extension as well as a complete refurbishment, in a design that "celebrated the story of the original Victorian building, accented and enhanced by contemporary additions," said the architects.

Founding director at ThirdWay, Liam Spencer, described the commercial drivers: "Enabling our client to attract the widest range of tenants was at the forefront of our design process, and as such, we were keen to provide a range of unit sizes. It was important that we provided a design that had the flexibility to suit both a single tenant throughout or several different tenants."

Inserting a new extension into an existing building with unique conditions presented a number of challenges. In addition to maintaining the Victorian timber ceiling details, the team had to meet new fire regulations, as well as navigate single stair access across seven floors. The architects said the client "was also keen to experiment with the interplay between rich contemporary additions to the warehouse aesthetics".

Anodised metalwork and heritage style openable windows "offset the weight of the brick host building". At ground floor, the existing brick bays have been opened up to "create an active street presence, a new entrance and draw natural light into the impressive duplex ground and lower ground space". New timber sash windows, replacement loading bay doors and repointed brickwork complete the exterior.

"Internally, the interplay between the original character of the building and contemporary features continues," said ThirdWay Architecture. The original



Victorian timber ceiling details have been retained throughout and highlighted with simple lighting and servicing details. The new floors mirror this approach in engineered timber and "pared back column details" to "make the most of the expansive glazing to the upper levels". Rough sawn timber flooring and a mix of exposed and painted brickwork complete the aesthetic of the floorplates.

The concrete and brick staircase has been accented with warm timber details and contemporary lighting. A new metal staircase connects the added upper floors.



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LONDON BUILD

Event to focus on women in construction

London Build (Olympia, 27-28 November) has been celebrating women within the construction industry since 2015, hosting an annual Women in Construction networking attended by over 1,200 women working across all sectors – making it the UK's largest meeting of Women in Construction.

This free-to-attend session gives professionals the opportunity to learn from a panel of established experts and “rub elbows with some truly inspirational women who have made a significant impact on the industry.”

The event will look at issues of gender imbalance and inequality within the built environment, as well as highlighting the outstanding achievements of those who are driving change across the industry. Kicking off at 10.30 am on day two of London Build (28 Nov), we'll see the Women in

Construction panel take over the main stage – an upgrade from 2018 in order to accommodate the ever-increasing audience. Moderated by Cristina Lanz Azcarate, London and South East Chair - NAWIC, the panel will feature five renowned speakers:

- Ruby El-Kanzi, senior design manager I Construction London – Wates
- Pamela McNroy, equality, diversity & inclusion manager – High Speed Two
- Sharon Duffy, head of transport infrastructure engineering – Transport for London
- Michelle Hands, director – N J Engineering
- Michaela Wain, managing director – We Connect Construction

After the panel, the event will move to the Built Environment Networking Hub – a chance to network with established experts including the event's Women in Construction Ambassadors and discuss the untapped opportunities for both women and men working in construction, diversity and equality.

Becoming a Women in Construction Ambassador

Part of London Build's commitment to amplifying the voices of Women in Construction is its active recruitment of professional and talented individuals driving change within the construction industry. “We

seek out ambassadors to represent the extraordinary skill sets and expertise the industry has to offer. Both women and men are welcome!,” said the organisers.

London Build focuses on showcasing the advantages of being a woman in construction, and strives to have a strong female line-up in its content programme.

This mission to ensure that businesses within the construction industry have every opportunity to thrive, by telling inspiring and motivating stories from exceptional women, is something that we encourage industry professionals to become a part of.

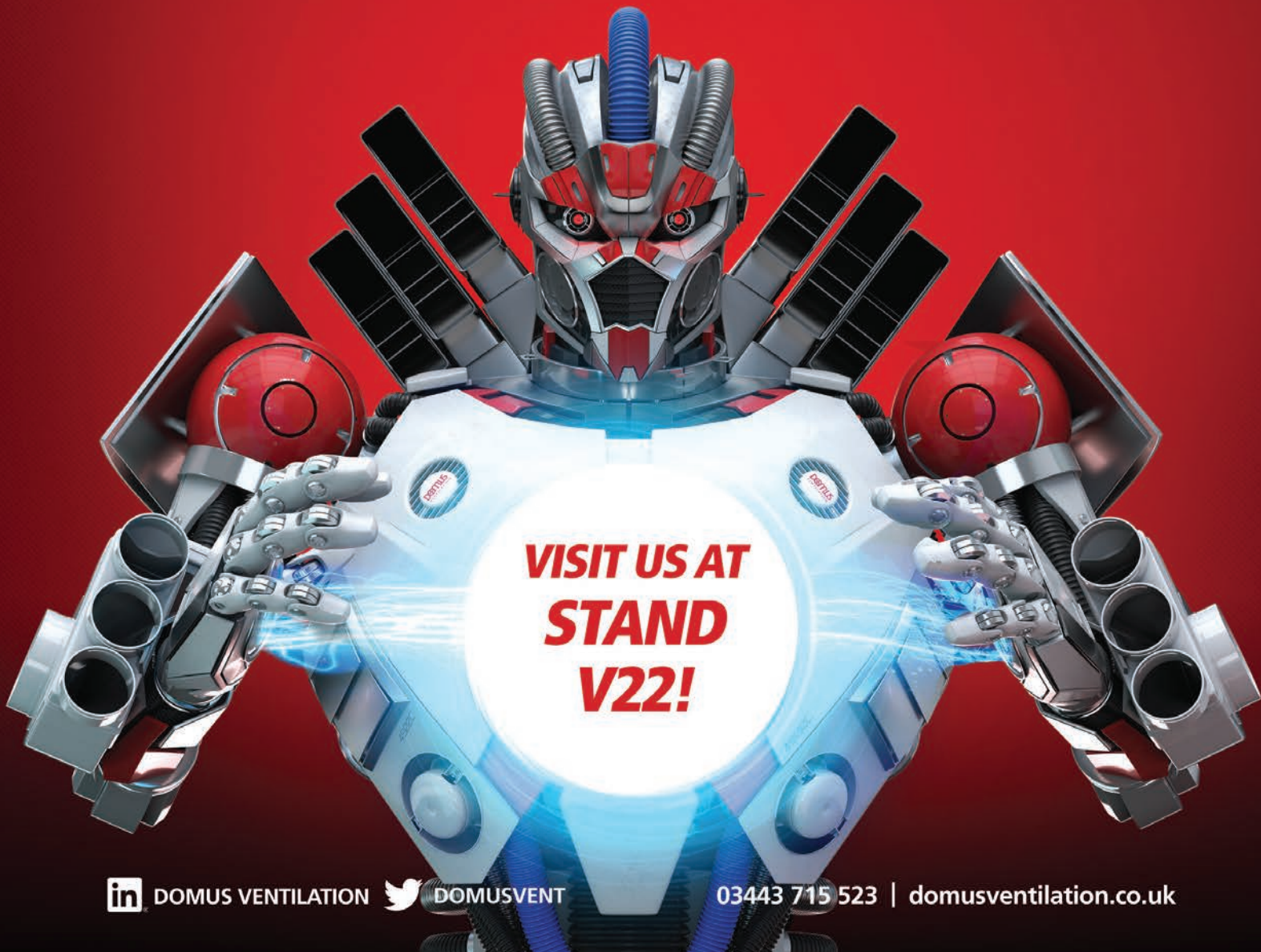
You can get involved by joining industry-leading names such as Christina Riley, Angela Brady, Alison Coutinho and Angela Dapper in becoming a Women in Construction Ambassador. By promoting the Women in Construction Networking Event and London Build to your contacts, you'll have a WIC Ambassadors' badge, priority seating at the conference, first-hand introductions during the networking event to help you gain an active role in promoting the WIC initiative and keep striving to make incredible change in the UK's construction industry.

The organisers concluded: “Anyone of any gender who is passionate about driving change in the UK's built environment, from students to architects to CEO's, is welcome to get involved.”

To find out more or to sign up, visit www.londonbuildexpo.com/wic

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VIEW POINT



Architect Katy Barker of Directline Structures says that despite the barriers to collaborative working, architects could take a leading role in Design & Build

Most people understand the premise of Design & Build procurement – a single organisation undertakes the design, and the build, of a project. It could apply to all manner of construction projects, but how many projects are actually delivered with just the employer and the D&B contractor, with no employer's agent, design team or consultants? Practically zero.

Why? Fundamentally it boils down to two unpopular words in architecture and construction: risk and ego.

Let's go back to the concept of 'design' and 'build' as two separate areas of expertise, as is assumed with traditional procurement. Design is carried out by an architect, traditionally a creative, artistic individual or practice who can make a simple scribble on a piece of tracing paper into a work of art. Seven years of training is required to call yourself an architect and most of this is spent on developing 'concepts' – stories of how a scheme came to be designed drawing on all kinds of inspiration from the site, the history, the function of the building, the proposed users. All this creates the 'why' narrative of architectural design. You can read it in most architectural commentary, but if you are not an architect, you probably won't fully understand.

I come to my first unpopular word: ego – defined as "your opinion of yourself, especially your feeling of your own importance and ability." It is instilled in architecture students, over seven years of education, that they are the most important person in the design of a building.

Jump into the real world, and suddenly you're faced with constraints on every aspect of your design; structural requirements, Building Regulations, planning legislation and most of all, cost.

You are required to be part of an 'integrated team' and at some point, you will have to pass your design over to a contractor who, you are sure, will not understand your vision and butcher it in the process of building it.

The role of the architect is changing. It's not a bad thing.

Architects could be the heart of construction, if they opened themselves up to the whole process

Young people who are attracted to the big-name careers (architect and engineer) have a huge amount to offer that they aren't getting to do as the engineer or architect, so are switching career paths to other kinds of management. So why can't an architect also be a project manager? The role of the architect was historically the role of the master builder – the individual who had the grand plan and oversaw the whole project. Now it seems that architects are only really involved in pre-construction.

When architects are inherently highly skilled, organised, driven individuals with an eye for detail and a creative flair for understanding how the design of a place impacts the user, it is such a waste to limit their scope and not utilise their skills throughout the construction process.

There's been call for reform to architectural education and movement is happening – the results of the RIBA Education Review aren't exactly ground breaking, but architecture apprenticeships now exist and I'm excited to see the kind of architects this creates – however the main

route to qualification still involves five years of university education instilling the same damaging and limiting preconceptions into students. The establishment is reluctant to accept that the role of the architect is changing.

Architects could be great project managers. They are already perfectly placed with input throughout the whole design and construction process, but have limited what that input is by saying 'other people will do that' or 'other people are responsible for that'.

Which brings me to my next unpopular word: risk – "expose (someone or something valued) to danger, harm, or loss."

The construction industry is so bad at working collaboratively because there is a deeply ingrained culture of blame. Every company is focused on reducing their liability and their potential exposure to risk. While this is not a bad business strategy, it is not in the client's – or the project's – interests.

This culture has resulted in compartmentation of design and construction teams, and a linear design process:

- the architect designs a square
- the engineer designs the square's structure
- the M&E consultant fills the square with equipment
- the contractor prices the square structure filled with M&E equipment.

Has anyone questioned whether a square was the right shape? What if a rectangle was actually more cost effective and the contractor could tell you that, but he is too far down the linear process to have any input and it's already cost £40k in consultant's fees, the architect's ego doesn't like to be questioned on design decisions, and it's too risky to change it now.

When people know that no one else is taking any blame, they take ownership of everything

What if the contractor designed it? What if the contractor was an architect? What if the architect was a contractor? But, risk, liability, conflicts of interest! Yes, there can be multiple designers and contractors working on one project, all with their own business interests, but we all have one shared interest – the client and the project.

To work collaboratively we need the whole team on board. A competitive market can help achieve lowest costs, but lowest costs are not always best value – we need to go back to the design stage to address that. It takes a lot of trust to jump straight into a complete D&B project with everyone on board, with one point of liability and risk. How do you manage your liability when you are the only one? You can't limit or exclude from your scope. What you can do is manage. Manage your

supply chain, manage your consultants and sub-consultants, manage the construction process. Above all, manage your people. Foster trust, openness and respect in your team. When people know that no one else is taking any blame, they take ownership of everything. Everyone needs to know clearly what they are doing, and the standards expected of them, and the client needs to know what they are getting.

It is important to remember the difference between employer's requirements (ERs) and specification – an ER might be “a hard wearing, slip resistant vinyl floor” and the specification (or Contractor's Proposal) could be “Gerflor Tarasafe Ultra H20”. ERs should not be specifications; they should be the requirements of the client, and it should be open for the contractor to meet those requirements with the specification he chooses.

The ER might be a little more specific; e.g. “slip resistant vinyl floor – min 2 mm thick, slip resistant rating of R11,” to ensure a minimum standard. This massively increases the range of quotes returned, because the contractors are not only being compared on profit margins, but on their ability to source and specify products and

materials. They might not have big brand names on them, but they will fulfil the employer's requirements.

Surely, the role of the architect pretender has just shrunk dramatically? Yes, because in true Design & Build there isn't a tender and the design and specification is carried out by the contractor. What if the contractor was an architect? What if the architect was a contractor? Design, as thoroughly and intricately understood by architects, is the heart of every construction project and architects could be the heart of the construction process, if they opened themselves up to the whole process.

To use D&B how it was originally intended is a big ask of the construction industry. It requires clients to trust contractors and allow them opportunities to add value. architectural education needs a big shakeup. architects need to rethink their position in the construction industry. Most of all, we need to remember our shared purpose and break out of our silos, learning to trust and value each other to truly work collaboratively.

Katy Barker is an architect and the owner of Directline Structures



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SITE LINES

Low impact, high materiality

Gavin Maloney of Arup looks at how a house made of expanded cork combines impeccable sustainability credentials with a high degree of tactile beauty

Never has public opinion been more interested in how we dispose of the things we produce – from a ban on plastic straws to the feeling of remorse when buying a disposable carrier bag at the local supermarket. The spotlight has been shined on many industries and it will not be long before this mindset positively infiltrates the built environment.

Once an agenda pushed only by the most vehement of eco-warriors, we have now realised that our short-sighted attitude to the built environment is no longer congruent with our civil obligation as designers to reduce our industry's impact on the environment. As the world becomes more urbanised and the pace of development accelerates, questions need to be raised about how we use the finite resources we have available, not just to package our food, but also to build our houses.

The ability to efficiently deconstruct a building back to its component parts is of central importance to material reuse. Whilst the growing market of mass-produced modular construction reduces the bespoke nature of the built environment, it arguably serves only to reduce the cost of construction and does little to truly improve sustainability and promote material reuse. The values that underpin design for reuse are complemented by the application of natural, or more precisely biogenic materials. Both seek to minimise the negative impact our industry has on the environment and, when interwoven, they can often create more exciting and tactile dwellings.

The Cork House, secluded by the Thames in Berkshire, was an idea born out of a desire to simplify modern construction methods – to remove the barriers to deconstruction and to push the boundaries of what can be achieved with plant-based materials. The research began in 2014 by architects Matthew Barnett Howland, Dido Milne and Oliver Wilton and after an initial exploratory phase, they found potential in expanded cork. Primarily marketed as a natural alternative to petroleum-based insulation materials, expanded cork showed promise in performing the role of structure, insulation, weather barrier and finishes. Further detailed research part funded by Innovate UK and EPSRC grants was undertaken by MPH Architects, The Bartlett, University of Bath, Amorim UK and Ty-Mawr, with subcontractors BRE and our team at Arup.

Expanded cork is made from a by-product of the wine stopper industry and cork oak forestry, normally sent to waste, formed by



© Magnus Dennis



© Ricky Jones

heating and compressing cork granules within an autoclave to create a block that is amalgamated and bound by its own natural resins. The blocks can then be CNC machined offsite to produce a kit of building blocks that form a dry-jointed interlocking construction system. Weighing less than 13 kg each and installed with little more than a rubber mallet to an 'interference fit', the assembly process has



© Alex de Rijke



Images © Matthew Barnett Howland

The purpose of Cork House was more than achieving metrics and credentials – it is a perfect example of how structural testing and experimentation with new materials can help inform the environmental debate

more similarities to Lego than modern house construction. Cork House contains 1268 cork blocks assembled upon a cross-laminated timber (CLT) floorplate and founded on removable screw piles. The roof is formed from five corbelling truncated pyramids supported on timber edge members and valley lintels to span window and door openings and allow an open plan interior. Meticulous detailing of block interfaces by Matthew, Dido and Oliver, developed through experimentation on smaller test buildings and rigorously tested by BRE culminated in the weather-tight yet completely dry form of construction used on Cork House.

While traditional methods of dry jointed roof construction have existed for millennia, often designed through trial and error and utilising the high self-weight compression for stability, the low density of the material led to interesting challenges for Arup such as relying on the ballast of the rooflights to prevent uplift under high winds.

Utilising the same material for both structure and insulation was also not without its challenges. Rather predictably, the denser the

blocks, the stiffer they became – however, equally predictably, the thermal insulation performance suffered. It was therefore always going to be a careful balance between the different performance requirements demanded of the material. We also had to think about the creep behaviour under sustained loading, a long-term affect that cannot be easily replicated in short-term lab experiments. We applied our knowledge gained from other plant-based materials such as timber and bamboo to best predict the future compression of this inherently soft material.

There are many ways to present the sustainability credentials of a building. The Cork House was carbon-negative at completion – not a bad starting point. In numerical terms, the building is predicted to emit only 619 kg of carbon dioxide equivalent per square meter over its lifetime. An impressive figure, which will be evaluated though, a post-occupancy study. However, taking a step back, it is clear that a dwelling formed almost exclusively from a waste biogenic material that can be effortlessly deconstructed to its constituent parts and repurposed, must have a minimal footprint on the environment.

The purpose of Cork House was more than achieving metrics and credentials. It's a perfect example of how structural testing and experimentation with new materials can help inform the environmental debate. It is not trying to provide the definitive solution for every project. Rather, it serves to inspire the innovators of our industry, and allay the naysayers, at a time when society is demanding that we all play our part in finding answers to climate change.

Gavin Maloney is a structural engineer at Arup

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ASK THE ARCHITECT

Laura Carrara-Cagni of Edward Williams Architects answers *ADF*'s questions about the things that drive her, personally and professionally



Laura Carrara-Cagni

WHY DID YOU BECOME AN ARCHITECT?

I love travelling and I wanted to become an interpreter, so I actually studied languages first. I was spending more time helping a friend with her architectural drawings. I realised that architecture was a real world-shaping profession; much more exciting! But with this creativity came responsibility: I needed the tools to actually become an architect. So almost a year later, I switched faculty to the Architecture School in Genova and caught up with my peers. Passion gave me the energy to work very hard at it.

I still wanted to travel, so as soon as I finished my studies I got a COMETT European Community Scholarship and moved to Nancy in France for two years. I then moved to Austin, Texas, until I finally settled in London in 1998.

WHAT DO YOU LIKE ABOUT IT MOST?

I love engaging with the end-users of a project. I love putting myself in their shoes, experiencing how they use a given space and improving it, then being rewarded with their project buy-in. Design is an iterative process; I use my creative and technical tools to improve people's living and working spaces.

I also love being on building sites. The ideas on paper suddenly and unalterably

become real. This gives me energy. When a project is complete, I can see that the spaces really work and everyone's experience is bettered. That's when all the effort to get there is rewarded.

WHAT IS THE HARDEST PART OF YOUR JOB?

The daily fighting. To be recognised beyond being a woman and a foreigner is particularly difficult in the UK. Then there is convincing client and consultants to do better and push boundaries, often through extra work, more resources, and more research. This doesn't necessarily mean extra cost; on the contrary, often you can compensate for a small budget with extra research and really optimise the client's budget.

In our studio, we are always experimenting with some new material, use of design, and new technology. We like to push ourselves. Pushing others is the struggle, but it is always worth it and it pays off in the end.

DO YOU HAVE A KEY SUCCESS FACTOR WHEN MANAGING MULTIDISCIPLINARY TEAMS?

We deliver programmes on time and to budget because we succeed in getting the design team and client all working towards the same goal. It is always possible to achieve this. I have delivered very large, complex projects with initial "impossible conditions" because I was able to align all team members to the common goal, whatever it took. This is a profession founded on teamwork; no large project can be delivered by one individual alone. The difference between working well together or otherwise is what determines the success of the project.

WHAT IS YOUR PROUDEST ACHIEVEMENT AND WHY?

Following many years' experience at Hopkins, eight years ago, Edward Williams and I started our own practice. That was an exciting venture. Since then, we have doubled our team size every year and completed some extraordinary projects. We always have multiple projects onsite and have an established team which we mentor. We are growing together and we are winning awards.

WHAT'S YOUR BIGGEST CURRENT DESIGN CHALLENGE?

Since 2015, we have been lead designer for The Midland Metropolitan Hospital, just



outside Birmingham. Within a complex PFI2 team structure, employed by the main contractor, we managed to win the competition with an alternative scheme that pushed the building to one side of the site – leaving half of the 16 acres available as open space for green, publicly-accessible outdoor space for sport, creative and community activities.

MMH will be the largest A&E in Western Europe, so we decided it would only be fitting to give it the largest hospital winter garden in UK! Our design is all about promoting a sense of wellbeing instead of institutional confinement: the Winter Garden at Level 5 functions as a public space, undercover. Seating and planting, cafes and shops, and a Gallery are designed into the break-out space for patients, staff, visitors, and members of the public. We even made space for a natural habitat for redstarts on the pedestrian-accessible deck outside the winter garden.

The project is two thirds complete and stopped when the main contractor, Carillion, went into liquidation last year. We are working very closely with the trust to get it going again, and this is now in sight.

WHAT SINGLE CHANGE OR INNOVATION WOULD MAKE AN ARCHITECT'S JOB EASIER?

All projects in our studio are carried out in BIM (Building Information Modelling). This means that all projects are designed on a 3D complex model. It is a great tool but still presents important limits, so we often spend a lot of time in order to achieve what we want. Revit, which is the BIM version we use, still struggles to model basic elements like landscaping and curved handrails!



WHAT'S YOUR CURRENT FAVOURITE MATERIAL FOR USE IN DESIGNS?

We carefully select the right materials for each project and detail them meticulously to produce something unique, long-lasting and sustainable. I love materials and spend a lot of time exploring and trying to get the best out of each in a traditional or a new way. Timber has always been one of our favourite materials to work with and we are now pushing it further in order to get fast, dry and quiet construction using it as a structural material too. Our next project onsite is a CLT construction. The last project we completed was a modern timber refurbishment in an old brick mews which we transformed into a beautiful office.

For many years, I have researched colour. I am convinced that colour choices for the built environment cannot be arbitrary or a matter of taste. For the end result to be a balanced and meaningful composition that enhances its context, colours have to be decided by the same rigorous process as other design and material choices. The embedded colour of natural materials needs to be controlled together with the applied colours. So I became kind of an expert in creating balanced colour interior and external spaces.

DO YOU STRUGGLE TO TAKE TIME OFF – HOW DO YOU RELAX?

When you have your own studio, it is always difficult to cut off completely. We tend to take short frequent breaks but we stay connected while we are relaxing! We have recently completed a refurbishment in our



All images © Edward Williams Architects

family home in Genova, my home town in Italy. It was a challenging project in a historic building [see image on previous page] and it has now become our perfect place to retreat and entertain friends and family.

DO YOU SEE GENDER BALANCE IN UK ARCHITECTURE AS AN IMPROVING SITUATION?

I hope so. I am not sure how much the construction industry as a whole is actually changing its attitude but we are certainly doing as much as we can to mentor women in the office so they can grow in the profession and have the skills to get respected by peers in order to enable them to make the most of their capacity. Too often women have to spend too much time and effort to get recognised, and this is a terrible waste of resources. So far, our experience and strength are the only things that can overcome this problem.

HOW BIG AN EMPHASIS DO YOU PUT ON USING TECHNOLOGY WHEN DESIGNING BUILDINGS?

We have been investing in sophisticated software since we started the studio. Our projects being developed in Revit allows us to quickly produce sketch models and images for interactive review with stakeholders – and it supports the design development process. The effect of all of this re-engineering is that we are now two to three times as efficient as a traditional architecture office.

Our most recent innovation is our in-house 3D printing and modelling, which

allows us to produce accurate models in a fraction of the time it used to. We've recently used it to build a large model of part of the Midland Metropolitan Hospital in intricate detail [pictured left], which was recently on show in the RA Summer Exhibition's Architecture room, together with a smaller model of a circular library in Lithuania. Nothing, though, can replace the traditional lead pencil and paper for the thinking process!

ARE YOU WORRIED ABOUT BREXIT IN TERMS OF ITS EFFECT ON YOU AND YOUR PRACTICE?

Of course! Where do I start?! Whichever side you stand, everyone is worried. The uncertainty makes the client more conservative, either just sitting and waiting or in the best case, taking much less risk. This has a devastating knock-on effect in the construction world. The economic impact when Brexit is actually implemented will be very detrimental across the board.

We will not have access to the European procurement system which will restrict our choice of projects. Hiring people will be much more difficult as there simply are not enough UK students/architects. Needing visas for European staff, too, will increase our costs considerably. Even as architects, we are considering stockpiling! A disaster all-round, and hard times to come.

WHAT ARE YOUR PERSONAL GOALS FOR NEXT YEAR?

I am involved in the ULI (Urban Land Institute) Healthcare and Life Sciences Council in the US, so I travel twice a year for the meetings. The UK ULI is trying to develop a similar council and I hope I can contribute significantly to this goal, bridging US and UK experiences.

I also want to get more involved in higher education, both working with universities and going back to guest lecturing and teaching. Whenever I do so I get a buzz from the students' enthusiasm and curiosity and it stimulates me to do more research. I have one particular research exercise in my back pocket which I hope will result in a very interesting breakthrough in the use of materials.

Personally, I would love also to spend more time following contemporary art, a passion I have had for years. I have been focusing recently on Italian galleries to discover new Italian talents.

Laura Carrara-Cagni is a director of Edward Williams Architects

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Head of customer insight and futures, BT



Lord Richard Best OBE
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Senior partner, PRP



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Acquisition and development manager, Unite Students



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NEW ARRIVALS

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



TWO NEW APPOINTMENTS TURLEY

Planning and development consultancy Turley has strengthened its planning service, appointing Lisa Russell as associate director and Hannah Munro as planner at its Edinburgh office, both of whom arrive from WYG. Russell brings over 15 years' experience in securing energy, retail, residential and commercial planning permissions, she has also helped to facilitate the delivery of key strategic infrastructure developments across Scotland and the UK. Munro brings with her "significant experience in retail, residential and commercial development projects".

The appointments bolster Turley's planning team and will support growing demand for project work throughout Scotland. Commenting on them, head of planning Scotland, Colin Smith said, "Our team in Scotland has grown consistently throughout 2019, and we are pleased to now boast a 10-strong team across planning and heritage working on a range of high-profile projects. The expansion of the team demonstrates our ongoing commitment to investment in Scotland and the diversification of our work across sectors, including energy and strategic infrastructure." Lisa Russell added: "I am thrilled to be joining Turley at a time of growth in Scotland, particularly in energy, EIA development and the hospitality and leisure sectors. Turley's expanding client base presents fantastic opportunities, and I am looking forward to working with the team and helping to shape Scotland's future built environment."



LUKE ABBOTT STEPHEN GEORGE + PARTNERS

Stephen George + Partners (SGP), has appointed Luke Abbott as studio director, based at the firm's Leicester office. Luke will be working with partner Marcus Madden-Smith in SGP's industrial and logistics sector group. In addition to managing a team, Luke will be involved in client liaison, feasibility studies, concept design, and plans of works. Luke explains, "I was attracted to SGP as I knew them as an established practice, but with an ambition to expand and the resources and talent to make that expansion work. I've designed buildings across many sectors but am now looking forward to focusing my skills in the industrial and logistics market." Luke joins SGP from Roger Coy Partnership where he was director of architecture, combining team leadership with multi sector experience including education, healthcare and residential, as well as commercial.



FRANCESCA GERNONE HLW

Global architecture and design firm HLW has announced the latest addition to its growing London team, Francesca Gernone as principal. Gernone comes to HLW with a "strong background in base building repositioning and impactful interiors work". Leveraging over two decades of industry experience across both architecture and design, Gernone's award-winning academic and professional achievements "uniquely qualify her to lead HLW's dynamic London studio as the firm continues to evolve". Gernone commented, "I have long admired HLW expansive project portfolio, and I am thrilled to join a collaborative and creative team that speaks a similar design language to my own. I look forward to bringing innovative interior design and architectural solutions to the firm's various range of high-impact projects — pushing the boundaries of what's possible in the built environment." Bronte Turner, managing director at HLW's London Office said, "Francesca joins HLW London at an exciting time, as we continue to take on larger, more innovative projects in the European market. Francesca's impressive experience and dedication to furthering design innovation makes her a powerful addition to our growing team. We look forward to strengthening our firm's architectural practice under her leadership." HLW's roster of projects includes Capital One's London and Nottingham offices, Willis Towers Watson, and One Docklands.

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APPLE AVENTURA, MIAMI FOSTER + PARTNERS

Apple Aventura by Foster + Partners, “embodies Miami’s spirit of openness and generosity,” said the architects, bringing people together under an undulating vaulted roof that is reminiscent of the city’s nautical and architectural roots. The materiality and flowing spaces are inspired by the region’s Art Deco buildings, with the new two-level store creating a “dynamic destination that nurtures creativity and innovation”. The glazed facade “blurs the boundary between the interior and exterior,” with the grove of trees and display tables flowing seamlessly into the vast double-height hall, sheltered by the vaulted roof. Made solely from precast elements, its 80 ft long concrete beams span 60 ft between slender steel columns, that are clad with a concrete casing. Between the beams, 20 ft concrete arches span to form a barrel-vaulted ceiling, which is covered by a white fabric on the underside for acoustic attenuation. Inside, a sweeping flight of steps form a generous amphitheater, looking onto the Forum screen. Linking the internal entrance to the plaza below, the steps form the social heart of the store.



TIGNÉ POINT DEVELOPMENT, MALTA LOM ARCHITECTURE & DESIGN

LOM architecture & design has unveiled its design for a new mixed-use development at Tigné Point in Malta. The scheme consists of a 16-storey residential tower and new retail, food and beverage units. The 13,200 m² residential tower is designed to maximise views out towards the island’s capital Valletta, and the Mediterranean Sea. It has a stepped profile to accommodate large penthouse terraces. The south facade has a staggered plan, with large articulated balconies that provide shading. Glass reinforced concrete cladding will be used on the facades to reflect the local limestone and is contrasted with a secondary palette of bronze-coloured zinc balcony edges.



CHU HAI COLLEGE CAMPUS, CHINA ROCCO DESIGN ARCHITECTS

Designed by Rocco Design Architects, Chu Hai College is a university campus for 4,000 students shaped by the compact urban condition of Hong Kong. The spatial organisation of the campus maximises density in various ways. Stacked slab blocks accommodating different programs rise vertically, sitting over a podium of communal activities – including lecture halls and a gymnasium/multi-purpose sports centre. A folded vertical Student Boulevard rises to form an elevated street network that weaves together the different blocks and levels into a connected whole. From the Boulevard, students gain free access to a series of sky gardens and roof decks of various scales.



GREEN VILLA, THE NETHERLANDS

MVRDV

MVRDV and Van Boven Architecten have designed a small office and residential building on a corner lot next to the Dommel river in the Dutch village of Sint-Michielsgestel. Located on the town's southern edge, the four-storey Green Villa adopts the urban form of the neighbouring buildings. The design developed by MVRDV and co-architects Van Boven Architecten continues the formation of the street frontage on Adrianusplein, adopting the mansard roof shape of the previously constructed buildings. Within this shape, however, the Green Villa diverges drastically from the other buildings on the street in its materiality; a "rack" of shelves, of varying depths, hosts an abundance of potted plants, bushes, and trees such as forsythias, jasmine, pine, and birch.



BABYN YAR HOLOCAUST MEMORIAL CENTRE, UKRAINE

QUERKRAFT ARCHITEKTEN

An expert jury have unanimously selected the winning architectural design project for the future Babyn Yar Holocaust Memorial Centre, to be built on the site of the 1941-1943 atrocity in Kyiv, Ukraine. The winning design was submitted by the Austrian architecture bureau – Querkraft Architekten – with the landscape architect Kieran Fraser Landscape Design (Austria). The ground-breaking centre will be the first Holocaust Memorial in Eastern Europe. The concept of the winning project is built around the future centre visitor's individual perception of the Holocaust. The design solution, said the centre, "enables the visitor to physically feel the danger and hopelessness that surrounded the victims gunned down at Babyn Yar". A long ramp resembling a ditch or fissure leads to the core exhibition located 20 metres below the ground level. The walls of the ramp rise up around the visitor, ultimately encasing them underground. The journey made by visitors mirrors the path taken by victims towards the place of their death in the Babyn Yar ravine, whilst also "reflecting society's incessant plunge towards the darkness of violence".



NIEDERHAFFEN RIVER PROMENADE, HAMBURG

ZAHA HADID ARCHITECTS

Designed by Zaha Hadid Architects, the upgraded 625 metre Niederhafen river promenade located on the Elbe River between St. Pauli Landungsbrücken and Baumwall in Hamburg was integral to the city's flood protection system. The promenade offers generous public spaces for pedestrians, joggers, street performers, food stalls and cafes. Wide staircases resembling small amphitheatres are carved within the flood protection barrier at points where streets from the adjacent neighbourhoods meet the structure; giving passers-by at street level views of the people strolling along the promenade at the top of the barrier as well as views of the masts and superstructures of ships in the Elbe. Pedestrian areas of the promenade are clad in a dark, anthracite-coloured granite that contrasts with the light grey granite of the staircases.

CPD FOCUS

The latest CPD courses, seminars and documents for architects

HAND HYGIENE COMPLIANCE – CAN ENGINEERING HELP?



Opportunistic antibiotic-resistant pathogens are becoming commonplace in our healthcare environment, and beyond. Consequently, effective hand decontamination – to break any chain of infection – is also increasingly important. **Horne Engineering's** new CPD seminar raises the question what are the barriers to achieving effective hand hygiene compliance? And how can engineering help? This seminar provides relevant information and understanding for specifying Architects and Building Services Engineers involved in the design of new build and refurbishment healthcare projects. www.horne.co.uk

TWO NEW RIBA ASSESSED CPD SEMINARS FROM COMAR



In two RIBA assessed seminars, **Comar** outlines: *'Stand & Deliver: a Study of Curtain Walling'* – the design of curtain walling, it's properties and how it is used by specifiers. This seminar aims to offer an understanding of the points of H11 in the NBS specification system, and how best to make use of it. *'Designing Functions & Reliability into Entrances'* – the issues that influence the function of main entrance design and technology. This seminar aims to offer an understanding of how user expectation influences door design and links this with hardware selection, entrance configuration and floor finishes. 020 685 9685 www.comar-alu.co.uk

BAL LAUNCHES NEW ARCHITECTURAL TILING SURGERIES



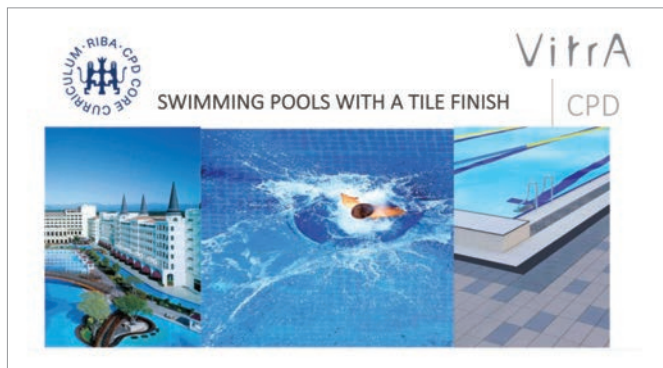
Due to the success of its CPD programme, **BAL** is launching nationwide tiling surgeries at architectural practices across the country. These sessions offer architects, specifiers and design teams in-house technical support with tile and stone advice or a simple Q&A session on any aspect of tiled installations. With more than 50 years' heritage of providing specifications and technical support to architects, specifiers and contractors, BAL is well placed to ensure that tiling projects run smoothly from design stage to completion. 01782 591120 www.bal-adhesives.com/specifiers/book-a-tiling-surgery

FREE FIRE AND SMOKE CURTAIN CPD SEMINARS FROM COOPERS FIRE



Coopers Fire offers a range of free CPD seminars. Approved by RIBA, the seminars aim to educate the fire protection industry and wider building industry about application of fire and smoke curtains in buildings. Aimed at construction industry professionals such as Architects, Building Control Officers, Building Engineers, Specifiers and the Fire and Rescue Service, the seminars provide an excellent overview of the benefits of specifying such products. Coopers Fire cover the following subjects as part of the RIBA Core Curriculum; Design, construction and technology, Health, safety and wellbeing, Legal, regulatory and statutory compliance. 02392 454 405 www.coopersfire.com

VITRA TILES INTRODUCES NEW AND REVAMPED CPD PRESENTATIONS



Vitra Tiles is launching a new RIBA-approved CPD presentation on *'Swimming Pools with a Tile Finish'*. At the same time the company is introducing revamped versions of its existing CPDs on *'Specifying Tiles in the Hospitality Sector'* and *'Understanding Designing and Specifying with Tiles'*.

The introduction of a new CPD and the enhancement and updating of the two existing documents is an important part of Vitra Tiles' strategic goal to strengthen its profile in the architects' and specifiers' sector. Being RIBA-approved, the Vitra Tiles CPDs count towards architects' professional accreditation.

The presentations cover the full range of tiling issues in the areas in question, bringing to each subject Vitra Tiles' enormous capabilities and experience as a global market leader in tiling. The company's tiles feature in projects all over the world, ranging from domestic to the most prestigious commercial projects. The technical expertise on offer and experience of tiling applications in a wide range of different types of installation is therefore unparalleled.

The swimming pool and leisure sector is an important and growing one for Vitra Tiles, where a number of tiling issues are key, including safety, non-slip and aesthetics. The CPD presentation *'Swimming Pools with a Tile Finish'* provides

information for specifiers on all these and other areas.

The CPD presentation *'Specifying Tiles in the Hospitality Sector'* broadens the focus to include other aspects in addition to swimming pools, such as kitchen areas, as well as consumer expectations of luxury tiled installations throughout hospitality facilities.

Finally the CPD *'Understanding Designing and Specifying with Tiles'* covers all the issues architects need to be aware of when specifying and designing tiles, including different tile types and the importance of correct specification.

"Our suite of RIBA-approved CPD presentations provides important tools for architects and specifiers working with our products," says Ken Aston, UK & Ireland Sales Manager at Vitra Tiles. "Taken together with our products which are of interest to architects, such as ProColor – a new range of RAL colours launched this year – this shows that we are serious in providing the specification sector with the products that they need for their projects and also the key technical information to be able to specify and design successfully with tiles."

All Vitra Tiles CPD seminars can be booked from the website of the RIBA CPD Providers' Network or by contacting Vitra Tiles direct.

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Arriving in style

Istanbul Airport's terminal is the biggest ever built, but its design manages to still place all passengers' experience at the forefront, while honouring Turkish architecture. James Parker reports

Opened this April, the new terminal building at Istanbul Airport is the largest yet constructed in the world, and is the result of a multi-faceted collaboration. This included concept architects Grimshaw, Haptic and Nordic Office of Architecture, with interior design concept and design development by Scott Brownrigg.

The new airport moves all traffic from Ataturk airport to the Black Sea coast to provide a major international hub, providing for stopovers on long-haul flights as well as 'point to point' flights. Initially having two runways, the airport is due to expand to six in subsequent phases, and currently serves 90 million passengers per year, which will rise to 150 million.

The terminal building is notable not only for its size, but for the way it provides striking architectural forms informed by its cultural context, which also help passengers by breaking up the monumental scale, and its speed of construction. Due to the modular approach used, the project took only 42 months to build, despite having a gross floor area of 1.44 million m², and having 371 aircraft parking spots, 143 boarding bridges and a total cost of €10.2bn.

Forming the team

The consortium consisting of local companies Cengiz, Kolin, Limak, MNG and Kalyon required a swift timeframe for the Arup-masterplanned project, owner of Haptic, Tomas Stokke told *ADF*.

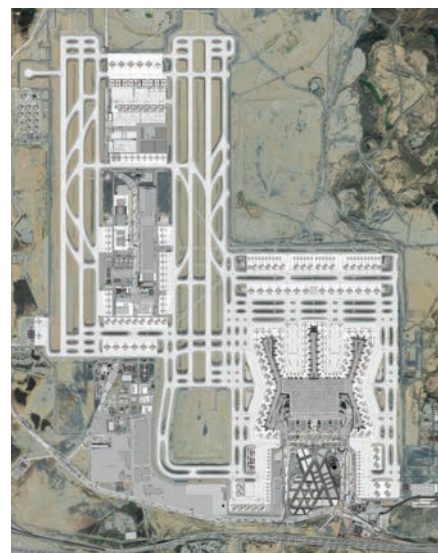
The investment consortium won the bid to develop the project in May 2013. Andrew Thomas of Grimshaw explains

how Nordic's previous experience with the client stood them in good stead for being appointed to design this scheme: "It so happened that the project's technical director and CEO of the client group had had a very positive previous experience with Nordic." Tomas adds: "They did a peer review on an airport, including some very frank commentary."

At the same time, Haptic and Grimshaw were seeking a "relevant" project they could collaborate on, "where we would literally reinforce each other," says Tomas. He adds that the two firms thought that "it might be an airport project of a certain size where a three-way collaboration might be good," so when Nordic was initially approached by the client, they joined forces with Haptic (who share a familial link as Stokke's father Gudmund is principal partner at Nordic), and Grimshaw.

Andrew says that the principles of how the three-way relationship would function were "agreed very quickly," and it would be a "blended team, with complete parity of creative responsibility." Everyone involved would have an equal share in the design, and there wouldn't be any lines drawn between the teams.

With Nordic and Haptic both having London bases near Grimshaw's Clerkenwell office, as well as in Oslo, facilitating design collaboration in each firm's base wasn't a problem. Andrew says: "We just worked in a very joined up way," adding that during the intense, roughly four-month design period, some of the bases "became centres of gravity for particular parts of the project, and that made sense in terms of using our resources effectively."



RECORD BREAKER

The new terminal building (bottom right) serves five piers and has a gross floor area of 1.44 million m²
© Scott Brownrigg



At Istanbul, arriving passengers have an invigorating, much more visually-connected welcome than is common

Cultural inspiration

This was a project with national importance, and as such the design would reference Turkish cultural traditions, and more specifically the famous architecture of Istanbul itself, however not in a slavish way. Members of the design teams spent a good amount of time in the city, “studying everything from the contemporary aspects to the amazing Mosques,” says Tomas Stokke.

As a result, while the team was concerned to avoid pastiche at all costs, they wanted to bring some of the sense of the city to its new airport terminal. This naturally meant emulating some of the forms of Istanbul’s historic religious buildings, but also the experience of their interiors, as well as other

typologies such as hammams. Andrew Thomas: “From our walks around the city and the imagery we used for inspiration in researching the project, the mosques had an incredible drama of light, within what are generally quite solid, heavy buildings – seeing that light how it plays across the floor was a strong reference point.”

“We didn’t want a literal interpretation of a Mosque, but to use their qualities – such as how light filters through clerestory windows,” says Tomas. However, he adds that the design inspiration “was as much about the markets of Istanbul – the patterns and colour, and the feeling you get as you walk through the streets and vistas appear.”

Haptic, Nordic and Grimshaw, have all designed projects across the globe with sensitivity to the cultural context at their core. As Andrew says, “wherever any of us have worked you can see there’s a deep intention to try and read, understand and represent the place.”

Streams of light & natural wayfinding

The building’s colossal vaulted roof is the main design feature – constructed of repeating modular steel forms – and the one which most conspicuously echoes the traditional architecture of Istanbul. The soffit is formed of steel ribs which allows what Stokke describes as “streams of light” to permeate down to the airport’s floor – from regularly placed circular rings of rooflights above, as well as points where the ribs cross. He says this was a “key concept from early on in the design,” and says proudly that it has “translated incredibly well into the final result.”

The key benefit for passengers of the rooflights is that the very deep-planned 750 m wide x 380 m deep structure building is broken up and enlivened. This is also achieved by the columns and the double barrel-vault form of the ceiling, which form bays with regularly spaced rooflights. These also have the important benefit of helping guide passengers through the building.

“The barrel vault running in both directions really helps with orientation,” says Stokke. Major functions such as the check-in ‘island’ have been placed so they are framed by the vault above, to exploit the natural wayfinding fostered by the structure, as Stokke explains: “The main lines of movement sit within the vaults, including the retail elements. It reinforces the natural movement through the airport.” He cites one example of the success of this,



from the airport's opening earlier this year, where the client placed staff throughout the airport to help guide passengers, but "people very intuitively understood how to navigate this very large airport."

Behind the vaulted soffit, the roof is a simple flat form with a regular 36 metre column grid. However, the vault itself forms part of the supporting structure, and is not merely decorative – "the vaulted form expresses the geometry of the roof structure above, rather than being merely decorative" says Andrew.

He says that the roof's design was also driven by pragmatism, due to the tight schedule: "It was about a roof that's simple, modular and easy to build, can be built quickly, and design quality can be secured in the simplest way possible even without our ongoing involvement."

Scott Brownrigg led on the interior design concept and the design development, working with local Turkish architects Fonksiyon Mimarlik, Turgut Alton Mimarlik and Kiklop Design & Engineering. Andrew comments: "both client and architects were very faithful to the design concept, and did a very good job of realising it." Tomas adds that the simple modularity of the design "helped safeguard the design intention."

The roof design was one area where the three practices "worked really effectively in parallel," says Andrew, the individual firms

all undertaking studies which "brought a real richness to it," he says. This parallel design process was overseen by a director in each case, who then came together to combine their work.

Due to the building's huge scale, its 23.5 metre height relative to its width, is in proportion. Tomas: "The number sounds crazy but in the context of scale of the terminal it feels just right." He adds that – echoing the city itself – passengers being able to "see 'large lit spaces at the end of the vistas' helps to 'humanise the scale'."

Alternative movement

The interior of the T-shaped terminal (or 'processor' building, using airport design terminology) have a logical arrangement for departing passengers on the second floor, with check in desks near to the entrance. Behind these sit passport control and security screening, located between two large internal structures, one housing offices, and the other a hotel. Beyond these are the retail areas, before passengers head directly out to one of the double-height, fully glazed piers to wait at their allocated gate on the second level – this airport is equipped with MARS gates which can accommodate two small or one large aircraft.

Within the five long piers, the designers took the decision to turn conventional airport design on its head when it came to

CULTURE

The vaulted roof is constructed of repeating modular steel forms – and is a conspicuous reference to the traditional architecture and culture of Istanbul



PASSIVE COOLING

The architects extended the vault to provide a canopy over the glazed south-facing facade

the level changes required for passengers on this scheme. Traditionally, departing passengers have the upper hand when it comes to spatial quality, as they tend to spend a lot more time and therefore money in the airport. Here, arriving passengers are treated to much more than the standard windowless tunnel to baggage reclaim. Andrew explains: “There was a lot of discussion early on about whether they should be on upper or lower level – quite often arriving passengers come into a poorly lit basement and a lot of corridors.”

Instead, at Istanbul, passengers have an invigorating, much more visually-connected welcome. After ascending via escalators from the piers, they walk across a series of daylit bridges with open views over the cavernous terminal below. Descending to passport control and baggage reclaim on the ground floor, they move down finally to taxi ranks on the sub-ground level.

The much improved experience also helps to offset the fact that they by default have a much longer, unbroken journey through the airport than departing counterparts. Andrew says: “It’s something we have tried to address in our projects, and on Istanbul

we all came with the same view on how we should treat it.”

Maurice Rosario from Scott Brownrigg comments on the interiors: “We’ve created a series of ‘big moments’ along the route. For example, rather than traversing endless similar corridors, there’s an area at the end of the piers that’s a significant space in its own right”.

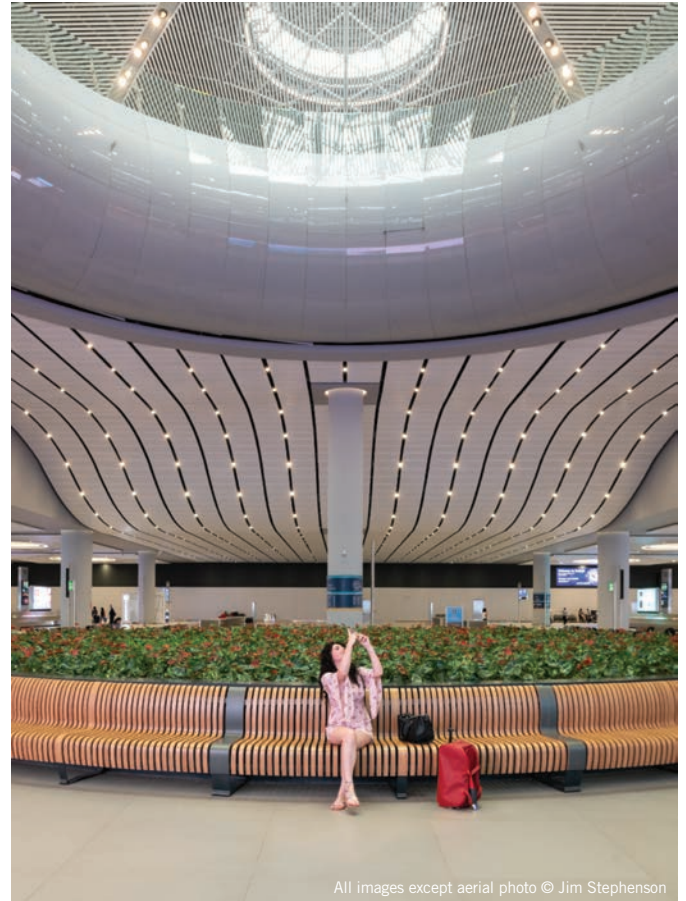
In a similar way, the various standard ‘moments’ which departing passengers have to navigate – from check in to retail area – helps to break up walking distances. “Comparable airports have much longer distances,” asserts Maurice.

Exteriors

The building’s major external design feature also provide passive cooling for the building in a hot climate. The architects extended the vault to provide an enormous canopy overhanging the fully glazed south-facing front facade by approximately 54 metres. There is a full structural bay external to the glazing providing a covered courtyard running the length of the building– further limiting solar gain and creating an distinctive profile.

PROJECT FACTFILE

Gross floor area: 1,440,000 m²
Project cost: €10.2bn
No. of aircraft parking places: 371
No. of boarding bridges: 143



All images except aerial photo © Jim Stephenson

This is one key sustainability benefit, together with the building being “relatively compact,” says Stokke, adding “this is very significant in environmental terms”. A further ‘eco’ aspect is the relative lack of artificial lighting, due to the large numbers of rooflights.

Between the airport’s front facade and the car park is a planted area which once its trees have matured will be a very attractive green space. The next stage of the project will see another terminal building of 340,000 m² constructed, handling up to 30 million passengers, as well as another runway.

The new terminal was designed to be flexible, and as is common with major airport projects, its size was increased dramatically during the initial design stages. Maurice comments: “Due to its construction being based on a repeatable modularity, as well as ‘soft’ spaces left to accommodate potential future changes in airport technology or processes, it could be easily expanded to meet these needs.”

He continues, “This terminal is the dawn of a new era in terms of passenger

experience, setting the blueprint for future mega hub airports, whilst maintaining its sense of place but above all maintaining a human scale.”

Conclusion

While this building is a major achievement on several levels, one of the lesser known accomplishments but still worthy of recognition is the success of moving all passenger traffic (60 million passengers annually) over from Ataturk in one weekend, a virtually unprecedented logistical feat.

But when it comes to the building, aside from being the biggest airport building yet constructed, the real trick the architects have pulled off is to prioritise the experience of its users. This will be particularly welcomed by tired passengers arriving from a long flight, who will no doubt be surprised to encounter a truly pleasant, and manageable place. And its standardised construction, while being simultaneously fast, efficient and sensible, is key to this, breaking down this behemoth into something like a human scale. ■

Aside from being the biggest airport building yet constructed, the real trick the architects have pulled off is to prioritise the experience of its users

“This is your captain speaking” – can you hear me?

Located at the end of the Stansted Airport runway is a new College which opened in September 2018. A link was developed with Manchester Airport Group over a period of 5 years to secure the acre of land and get their buy-in for the proposed college. Money was raised through a joint venture to build the college; two £3.5million grants from the South East Local Enterprise Partnership (SELEP) Local Growth Fund and Essex County Council, as well as a £300,000 grant by Uttlesford District Council and £50,000 support from the Savoy Trust.

Stansted Airport College is the first on-site education facility of its kind at any major UK airport, designed by Pascall+Watson and constructed by Willmott Dixon. Courses are available for students, who are pursuing a career in the aviation and related industries. Acoustic consultant Cole Jarman Associates was employed to make recommendations, to create a quiet and amenable learning environment.



Selectagaze was approached to provide a resolution with secondary glazing. It is the most effective method of acoustic insulation for windows in extremely noisy areas. Acoustic tests have shown that Selectagaze secondary glazing can provide a 45dB reduction if set 200mm from a single glazed primary window with 6mm glass. Based on this, if used in combination with high-performance primary windows, then

the dB rating requirements would be met.

Selectagaze installed 32 units with their Series 10 - two and three pane horizontal sliders and a Series 41 casement door. All were installed with a cavity of 200mm and tightly sealed.

Not only have the staff and students already seen the massive acoustic benefit of the secondary glazing, but they should also gain from thermal insulation it provides and the added security. The roar of the overhead planes has been silenced, creating a quiet and conducive space for concentration required for teaching and studying.

Established in 1966 and Royal Warrant Holder since 2004, Selectagaze has a wealth of experience working on many building types, from new build to Grade I Listed buildings. A free technical advisory service is offered and RIBA approved CPDs are available to architects and designers.

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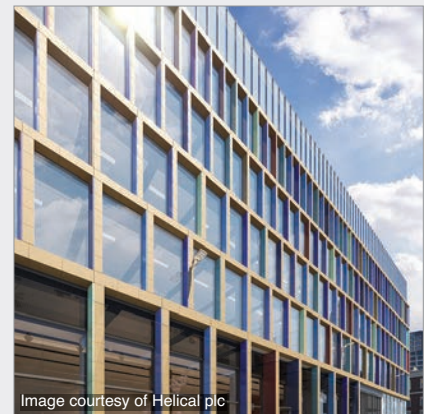
Offices at Farringdon station to feature TROX fancoils

TROX UK has been selected by MACE MEP Services to provide PWX fancoils and grilles for the new office development at Farringdon East Crossrail Station over-site development in central London. The prestigious development by Helical plc, known as Kaleidoscope, will be a six storey office building of 88,600 sq ft with a restaurant unit on the ground floor. The floorplates range from 14,000 sq ft to 19,500 sq ft and the building benefits from a communal rooftop terrace of 5,000 sq ft together with 94 cycle spaces, showers and its own loading bay. It is situated immediately east of Smithfield Market with views over Charterhouse Square and towards St Paul's Cathedral. As well as anticipating a BREEAM “Excellent” rating after a pre-assessment exercise, the prestigious building (designed by PLP Architecture) displays outstanding aesthetic endeavour and has achieved a WiredScore Platinum rating, meaning it is at the forefront of digital connectivity.

Development of the scheme started in August 2018 and completion is due in December 2019.

TROX PWX fancoils were the natural choice for the Kaleidoscope development, to assist the achievement of ambitious sustainability goals, and to provide optimum flexibility for layout of the office spaces. Launched in 2017, the PWX fancoil was the result of an extensive research and development programme and was put through thorough testing, using TROX's in-house test chamber (constructed to comply with ASHRAE 79, BS1397 and EUROVENT 6/3), in addition to extensive corroboration of results at an independent test facility.

TROX PWX units feature new inlet attenuators, inlet plenums and discharge attenuators capable of achieving outstanding performance across a wide range of applications. SFPs across the range comply with and exceed Part L requirements, with typical values between 0.15 to 0.25 W/(l/s) at



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The TROX PWX range is able to speed up the specification of projects significantly, streamline installation and commissioning, and provide valuable environmental and cost benefits whilst reducing levels of risk. This has resulted in the PWX being selected not only for the Kaleidoscope development at the Farringdon East Crossrail Station, but also for many other notable projects around the UK.

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Platform drainage at Historic York Railway Station

The original York Railway Station was built within the City Walls, adjacent to where the current station now stands. Opened in 1839 by the North Midland Railway, the structure only served trains to and from the south and the northern coalfields. However by 1873, as more passenger and goods lines were built into York, a larger station, from which trains could gain access from all directions, was needed.



Opening in 1877, the new York Station took three years to rebuild. Designed by the North Eastern Railway's architect Thomas Prosser, the curved 800ft-long train-shed roof, supported by iron columns, arched 42ft above the platforms. The station was immediately hailed as one of the great buildings in Victorian era. At the time, it was the largest railway station in the world with four massive arches and thirteen platforms.

Today, the structure still impresses. Serving the busy East Coast mainline route, primarily between Glasgow Aberdeen, Edinburgh and London it is also a vital cross-route link between Glasgow, Manchester and Liverpool. The station currently copes with around 800 trains and thousands of passengers each week. With so many passengers using the station, the extended platforms, which project out from the original arched structure, are as busy as ever. The platform surfaces have been designed to gently slope inward away from the track so any surface water naturally



drains towards their centre. Effective drainage of these roofed and un-roofed "outer" areas was a major safety consideration.

Hauraton RECYFIX® STANDARD 100 channels were chosen for the slightly curving platforms – see photographs. The 271 metres of channelling installed were made from the company's tough recycled Polyethylene-Polypropylene (PE-PP), all fitted with Class C 250 ductile iron "heel-safe" gratings finished in a Black anti-oxidisation coating. As each one metre unit only weighs just over 6kg, including the grating, contractor C. Spencer Limited was impressed with the ease and speed of installing the channels as all the units used easily complied with manual lifting regulations.

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Vive la Republic

Export Building, the latest phase of Republic, a wide-ranging offices development in east London, is a refurbishment that fuses engineered timber and a revitalised public realm with a progressive tenancy initiative to create a new destination in Docklands. Sébastien Reed speaks to project architect Thidaa Roberts about the scheme

“It’s right next to East India DLR station. There’s no way you’d accidentally find yourself there; you have to have the intention.” So says RHE Studio’s Thidaa Roberts, painting a picture of the users’ journey to the Docklands site where her firm’s new office building now sits as part of the Republic masterplan. “You get off the DLR, then you go over a pedestrian walkway crossing a motorway below.” She continues: “After that, you have to go down two and a half flights of steps and you’re there. It’s the first building you see.”

Studio RHE was called to work on Republic after completing ‘London’s first cycle-in office’, the Alphabeta Building, at 18 Finsbury Square near Old Street for developer Resolution. Garnering numerous awards for the practice, generating significant profit upon resale, and, in Roberts’ words, putting RHE “on the map for refurbished workspaces,” Alphabeta functioned as a sturdy precursor and hallmark of trust for a solid working relationship between the architects and Trilogy Real Estate, an offshoot of Alphabeta’s developer Resolution.

When quizzed on the brief, it’s revealed that RHE’s previous successes provided fertile grounds upon which they could explore new avenues and creative ideas: “The client trusts us, so they don’t really give us a brief aside from cues like ‘more net internal area,’ and ‘we want more people to use to this space,’” explains Roberts. “We had lots of freedom, we’d simply suggest something and discuss it.”

This freedom granted to the architects was a welcome offering, particularly





Tired finishes, absence of facilities, and an uninspiring public realm together inspired a clear path to improvement

given the existing site's lacking visual appeal which, upon arrival, consisted of a set of commercial buildings dating from the late 1980s and 1990s, plus associated landscaping. Tired finishes, absence of facilities, and an uninspiring public realm together inspired a clear path to improvement.

Republic's masterplan was to be built in interspersed phases with the first renovated block, Import Building, completed in 2016 by Studio RHE. Export Building, situated adjacently south to its older sister, was the next focal point for the architects.

From old to new

Its name derived from the historic importance of waterborne trade in the area, Export Building is the new title for the former Capstan House, originally one of four commercial buildings erected on the

0.84 hectare site, with Import Building – formerly, Anchorage House – situated just to the north. Two further buildings which are yet to be redeveloped, Mulberry House and Lighterman House, are located to the south-west of Export Building. A small network of canals outlining the south and west elevations of Import Building separate it from its counterparts.

In plan, Export Building forms a rectangle composed of an east and west block, connected in the middle. In section, the building reflects this simplicity. The existing 10-floor block tapers down to eight floors at the south-west side, allowing floors eight and nine to benefit from access to a set of roof terraces with views from the Dome to Stratford and the Olympic Park.

The eight-storey block to the south-west and the 10 storey block to the north-east were each originally clad in stone with inset glazing and helmed by two separate mansard roofs. These two elements are connected by a third element clad in curtain walling and connecting to the glazed pitched roof over a full-height atrium at the heart of the building.

The ground floor facade follows this three-part composition by accentuating the entrance at the base of the connecting

CONNECTED

The part-refurb comprises three existing blocks, with an added two-storey extension which accentuates the building's entrance



SIBERIAN LARCH

Renewably sourced Siberian larch was specified for the tapered facade bays, due to its durability as well as its aesthetic as the material ages

part of the overall mass.

Changes to the massing of the building have been made at ground- and first-floor levels, where an extension fills out the pre-existing granite-arched arcade which previously skirted the building and extends out to the north-east, increasing the volume of area dedicated to retail space at ground level, of which there was none prior to renovation, and office space on the first floor.

Across the building, stone cladding has been traded in for timber, black and grey-white gradient coatings and black cladding, while the north-east end features a mural painted with geometric designs in blue, grey, white and yellow.

Retained in the new design are elements of the original facade, explains Roberts: “The building itself is very rhythmic in its existing language, so we used that to develop our spacing.” Full-height glazing and a series of white powder-coated aluminium louvres and concave bays featuring doorways accentuated with timber cladding are interspersed along the ground- and first-floor facade, to coincide with the original building’s rhythm. The design limits solar gain while the timber cladding adds a dimension of warmth. A

“The idea is that you can share everything”

Thidaa Roberts, associate director, RHE Studio

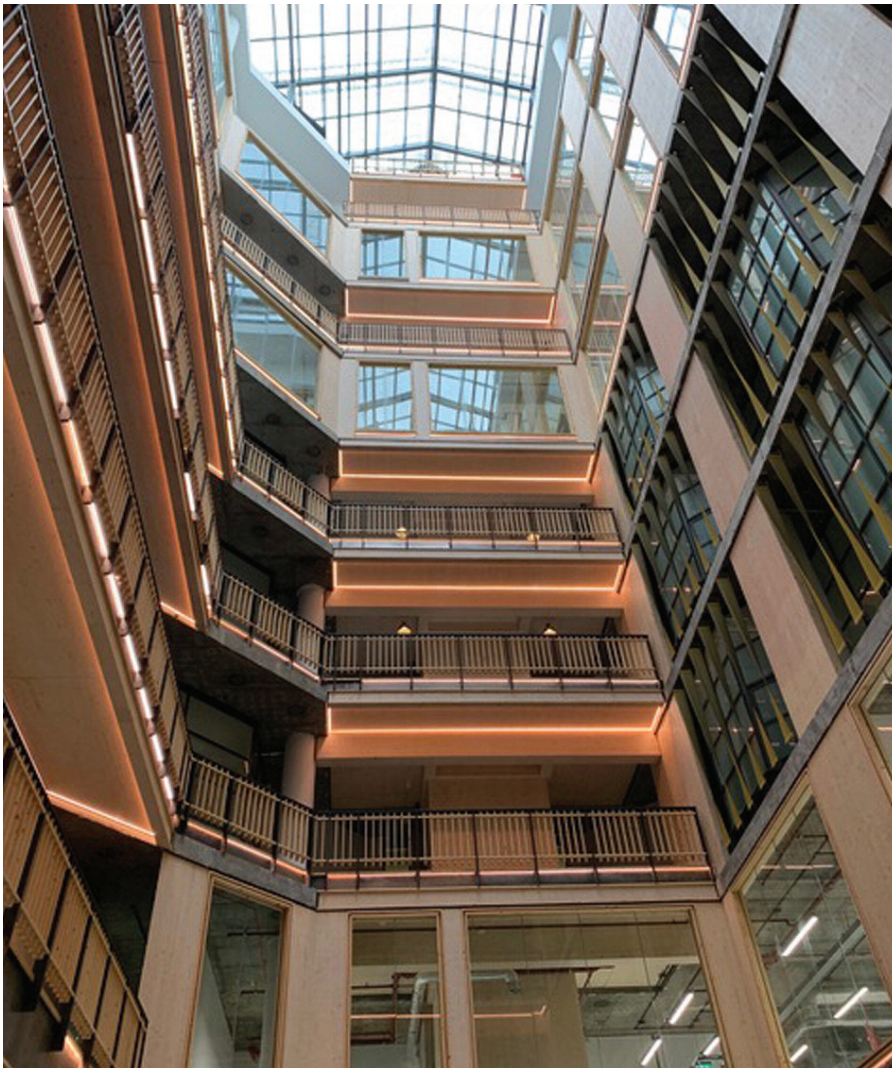
large timber bay signals the entrance to the building on its northern elevation.

Interiors

Export Building’s internal programme is primarily devoted to commercial office space, which occupies floors two to nine almost exclusively. Four floor plates make up each floor slab, which have been cut back slightly from the original design to open up the atrium and allow more natural light to cascade down into the building.

The office spaces are ‘Cat A’ with the suspended ceilings having been ripped out for extra height, exposing the services and giving tenants more freedom to arrange their workspaces as desired. Grey carpets have been replaced with exposed raised access flooring, and walls painted white, reflecting the scheme’s corporate ethos.

The ground floor hosts semi-private meeting rooms, and an array of retail and restaurant units which are “open to the



The office spaces feature full-height glazing establishing strong visual connections throughout the interior space



atrium space, making the space seem a lot larger,” says Roberts. “We have quite a large atrium space with variant furniture pieces, one long table, lots of small nooks, and a big bar table if you want to do more standing up,” she continues, “the idea is that you can share everything at Republic.”

Export Building’s basement is equipped with car parking, 300 cycle stores, two changing rooms, showers, lockers and toilets, the facilities for music events, plus a members’ mini lounge. The 10th floor houses the building’s plant services.

Wellness with wood

“In particular, we wanted to use timber,” Roberts says, “so we chose CLT and glulam.” Structurally, Export Building’s new elements are constructed using these materials. A glulam structure supports the ground level extension, while a CLT and glulam platform

provides even more supplementary net internal area around the atrium. Both Import Building and Export Building have internal atria with generous roof lights.

“It’s obviously very warm, and a nice material to work around,” remarks Roberts. “What’s really nice is the contrast between the rough structural concrete on the inside and the CLT.” The main distinction between Export Building and its older sister is the expression of the relationship between CLT and concrete in the former, with the latter being almost completely mono-textural in its use of CLT.

Roberts admits that CLT is “a bit design heavy in the beginning – you have to design everything in detail before they cut it. But,” she continues, “what makes it much better for everyone, is that it comes onsite and it just takes a few days to put up – it’s like Lego.”

ABOVE RIGHT

Overlooking the atrium, the office spaces feature full-height glazing, establishing strong visual connections throughout the interior



“What was extra challenging was that between floors two, three and four we had tenants in the building, so we couldn’t touch those floors,” says Roberts. “There’s a language happening and then there’s a kind of gap that we filled with twisted yellow fabric.” The previous tenants had a long

lease on the floors for disaster recovery measures – protecting their offices.”

Renewably sourced Siberian larch is specified for the tapered facade bays due to its durability and aesthetic as it ages, while an extensive planting strategy transforms the flat roof of the new extension into a green roof littered with solar panels providing clean energy to the building.

A new destination

Roberts notes that compared to similar projects, “there wasn’t a huge budget for it, so we focused on the groundscape and human level. We wanted to activate the whole public realm.” Previously, the vast outdoor space at Republic was under-used, attracting little foot traffic. The architects attributed this to its dated, industrial appearance and lack of amenities. Canals have been widened, and railings around them removed, additionally shared furniture has been added, as well as waterfalls to mask motorway noise.

“One thing that was really nice is the public space around it.” At the time of commencing work on the scheme, the



architects didn't realise that the surrounding area was largely residential. After redesigning and redeveloping the public realm with features such as ambient lighting, moveable street furniture, timber decking, new stone tiling and landscaping delivering a huge man-made lake next to the motorway, "all the local residents use the space."

Commenting on further spatial peculiarities of the scheme, Roberts says: "It's mostly the public realm space that leaks into the building." The public realm surrounding the building was envisioned as the same space as the public areas at the ground floors of Import Buildings and Export Buildings. Overlooking the atrium, the office spaces feature full-height glazing establishing strong visual connections throughout the interior space and giving a sense of openness.

Additionally, to render the public realm between Import Building and Export Building even more pedestrian-friendly, transport routes hosting buses and other traffic running through the site have been pruned and a turning cycle at the eastern

end of the site placed.

With its low budget, modest location, and progressive tenancy initiative which curates a healthy blend of occupants based on their specific budgets, Republic is able to offer some of the most competitively priced office space in London. More than a place of business, however, Export Building and its siblings stand a promising chance at supporting a fresh east London destination to both locals and beyond. ■

PROJECT FACTFILE

Client: Trilogy Property

Architect: Studio RHE

Public realm consultants: Made Public

Landscape architects: Studio RHE with Remapp

Structural engineers: Heyne Tillett Steel

Transport consultant: Steer Davies Gleave



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New tech hits the headlines at UK Construction Week

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UKCW 2019 will be bringing cutting edge technology to the NEC in October, helping make it a must-attend event for any architect who wants a peek into the future

Construction was told three years ago it had to 'Modernise or die.' That statement has clearly resonated with parts of the sector with new technology and techniques entering the industry, but what about the rest of the sector?

This drive for innovation encouraged UK Construction Week (UKCW) to "throw down the gauntlet and ask the new disruptors to step forward and show others the way towards the next industrial revolution," said the organisers.

Real innovation

The new Innovation Zone, partnered with the Construction Innovation Hub (the Hub), is only hosting exhibitors with genuinely innovative products, and it has really pushed the innovation boat out.

Products range from quiet heat pumps to BIM-related innovations, from bricklaying robots to passive fire protection.

Nathan Garnett, UKCW event director says, "We really want to encourage true innovation at this year's show. With assistance from our advisory board and input from the Hub we have some fascinating new products to showcase in the Innovation Zone. The journey towards a more modern industry has begun, although there is still a way to go. Our hope is that UKCW will demonstrate a new possible future, which will challenge and inspire others to change."

From robots to heat pumps

Examples on display include robotics, with the Semblr Catus robots out in force at the show. Working in small swarms, they build brickwork at faster speeds and lower



costs than larger robots. Speeding up this heavily manual process will make a huge difference to the delivery of buildings and other brick structures.

Sharing tasks and information can be time consuming, especially if big files are included. PlanRadar has developed an all new task management system which works in 3D. This is essentially a 3D BIM version for designers, architects and builders and makes sharing plans much easier.

Air source heat pumps have caught the attention of the Government as a low carbon heating option. Mitsubishi's Ecodan ultra quiet air source heat pump, for example, is breaking new ground because it is so quiet it can be located closer to homes. It is also more efficient and helps reduce the reliance on fossil fuels.

Fire has been on everyone's agenda since Grenfell, with many companies adding fire



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proofing to their ranges. Tenmat has introduced a new product range of passive fire protection to provide fire breaks around ceiling fittings. The products include downlight covers, fire rated air valves and ceiling fan fire stops. A ceiling is only as fireproof as its weakest element, so this new product range is essential to improve fire safety.

Self-build, sustainability and repurposing

are all boxes which are ticked by another innovation – the Studio Bark wooden building system called U-Build. It is made up of wooden frames and panels which can be assembled and dismantled with just a drill and a hammer. It can be used to build a small or large structure depending on your needs, and once the build is no longer required it can be dismantled.

There are many more products on display in the Innovation Zone and one of them will be the winner of the new Innovation Award, which will be announced on Wednesday 9 October.

UKCW is one event with many sections, including Build sponsored by Easy-Trim, Building Tech, Civils, Energy and HVAC, Surface and Materials, and Timber. It also features Concrete Expo (8-9 October only) and Grand Designs Live (9-10 October only). Single registration gives free access to all areas of the show. Pre-booking is also strongly recommended for the extensive seminars and CPD programme.

Find out more about what's on at UKCW at www.ukconstructionweek.com

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UK CONSTRUCTION WEEK STAND NO B561

Can you REALLY spot the difference?

A challenge is being set for builders attending UK Construction Week – spot which facade is not made with traditional bricks.

The competition aims to promote a new, fast-fix brick system that is significantly faster to install than brick slips. It's the newest innovation in a range of MMC products launched for the UK housebuilding market.

weberwall brick from Saint-Gobain Weber is a lightweight brick effect product supplied on mesh sheets, in a range of realistic brick finishes.

Weber is so confident that even the most seasoned bricklayer will not be able to spot the difference, it is offering a prize draw* of an iPad Mini or £500 of Virgin Experience Day Vouchers at UK Construction Week to those who can guess which is which.

As a UK factory-manufactured product that falls into category 6 of the Government's recent MMC definition, weberwall brick is ideal for applications where a housebuilder wants to achieve a quality facade finish without having to use specialist labour.

Kelvin Green, product manager, Saint-



Gobain Weber said:

"About half of all new builds in the UK have brick facades, a clear indication that people find brick aesthetically appealing. With the cost of bricks increasing and expensive alternatives such as brick slips and acrylic bricks, meeting this demand is costing housebuilders dearly.

"Bricklayers are highly skilled and are often in short supply. We developed the weberwall brick as an alternative to traditional bricks and brick slips, enabling housebuilders to save skilled bricklayers for more complex jobs."

Available from autumn 2019, weberwall

brick comes in a selection of colours and three designs to accommodate common design requirements: wall, corner and soldier wrap. It is applied to the substrate with a specially formulated render before being pointed in the same way as a standard brick. It is also suitable for use in interior design.

To find out more and see live installation demonstrations, visit Saint-Gobain Weber's stand at UK Construction Week (B292 in the Build area, Hall 10).

*Terms and conditions apply, please see the Saint-Gobain Weber website.

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UK CONSTRUCTION WEEK STAND NO B292

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UK CONSTRUCTION WEEK STAND NO B532

High demand training courses offered by Mapei

Mapei's purpose-built training facility, located opposite the UK Headquarters in Halesowen, West Midlands, cements the company's commitment to providing ongoing support to its customers and construction professionals through courses across various product lines and specialisms.

Situated at Mapei's Midland House, the training centre comprises a 31-seater 'stadium' auditorium that plays host to presentations and demonstrations for all aspects of the building industry. A number of

dedicated bays are provided for hands-on experience of Mapei wall and floor installation systems, welcoming participation by attendees. Applications cover ceramic and stone finishes, resilient and wood flooring, industrial flooring – resin and cementitious, industrial waterproofing, and building products including concrete repair. Practical demonstrations for EWI and coatings take place in the centre's mock house structure.

Training dates for tiling, flooring and EWI courses are hosted by experience training managers Chris Myatt, Adrian Jennings, Neal Perryman and Adrian Jones. Bookings from distributors, contractors, designers and engineers are welcomed, and can be tailored to specific needs and requirements. All training delegates receive presentation notes, refreshments, a buffet lunch, a factory tour, and Mapei goodies.

The remaining 2019 training dates are:
Resilient: 24th September and 19th November
Ceramic: 15th October and 5th November



Resin flooring: 24th October

Throughout 2019 the Academy has also hosted bespoke training sessions for key customers that have been able to make effective use of the meeting facilities for their own internal training at our central location.

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Window of Opportunity for Tom



GEZE UK new sales manager, Tom Hammerton, joins the company with a background in field sales, telesales and customer service. He will be responsible for the distribution and installation sales of natural smoke and environmental ventilation systems, managing existing customer relationships and establishing new ones. Tom will help manage and deliver sales targets, will be involved with surveying sites and liaise with other teams to progress project management and workflow. He said: "I am delighted to be given the opportunity to build my reputation within a company as renowned as GEZE and tackle the evolving needs of the sector."

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Unveiling London stock exchange floatation



Brickability Group plc announced the admission of its entire issued ordinary share capital, which comprises 230,458,821 ordinary shares ("Ordinary Shares") to trading on the AIM market of the London Stock Exchange ("Admission") on 29 August 2019. Dealings in the Ordinary Shares commenced at 8:00 a.m. under the ticker "BRCK" and ISIN GB00BK63S759. Crest Building Products joined the Brickability Group in March 2018. The new and enlarged Brickability Group has been formed by the coming together of companies who all have their specialist products and services, but who all serve the same market.

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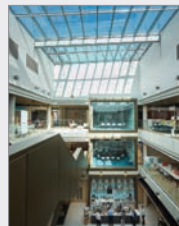
Domus Ventilation makes debut at shows



Domus Ventilation, part of the Polypipe group, will be exhibiting at UK Construction Week and London Build this year for the first time. Domus will be on stand E10 at UK Construction Week (8-10th October at the NEC, Birmingham) and stand V22 at London Build (27-28th November at Olympia London). The focus of the company's stand will be on the new CMX-MULTI Mechanical Extract Ventilation (MEV) units, plus its industry leading ducting systems. Domus Ventilation's CMX-MULTI MEV unit is an extremely compact and highly energy-efficient centralised MEV, designed for use in apartments and small to medium sized houses.

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UK CONSTRUCTION WEEK STAND NO E10

Retro video games meet modern 'Smart' heat network solutions at UK Construction Week



Evinox Energy are gearing up to take part in UK Construction Week, which is running from 8th to 10th October at Birmingham's NEC and is the largest and most significant construction event of the year. UK Construction Week features an excellent programme with over 650 exhibitors covering every facet of the industry, CPD accredited seminars, networking events, an innovation zone and much more.

Visit Evinox at stand E317 where retro video games meet modern 'Smart' heat

network solutions, with the launch of ModuSat® FUSION prefabricated HIU utility cupboard. The product will be on display and offers the 'perfect fit' for communal and district heat network developments.

Visitors can watch the ModuSat® FUSION video (Styled on classic 80's video games) and experience first-hand the unique combination of ultra-compact design with 'smart' high-efficiency heat interface unit performance.

Win a retro Nintendo NES games console

Be sure to stop by at Evinox's stand and enter the Free ModuSat® FUSION competition, where you can win a retro Nintendo Classic Mini NES games console! A miniaturised version of the ground-breaking NES originally released in Europe in 1986.

If successful you can plug the Nintendo Classic Mini into your TV, pick up that grey controller, and rediscover the joy of NES games – in high definition at 60 Hz!

There will be three Nintendo Classic Mini NES's up for grabs, one on each day of the exhibition and entry is completely FREE of charge. Winner's will be announced at the end of each day. Visit Evinox's stand for full details.

'Smart' heat Interface units on display

Evinox will also display the latest range of ModuSat® XR 'Smart' Heating and Cooling Interface Units at the event. These units provide M&E Contractors and Consulting Engineers with a "whole lot more" for a "whole lot less" due to the myriad of hidden extras. Models on display will include the popular ModuSat® XR-ECO Twin Plate unit for heating and instantaneous hot water and the ModuSat® XR-ECO Combined Heating and Cooling interface unit, with new ultra compact dimensions.

01372 722277

www.evinoxenergy.co.uk

UK CONSTRUCTION WEEK STAND NO E317



Tobermore Launch New Specification Guide

Tobermore continue to set standards with the launch of their official new Specification Guide. Designed with architects, landscape designers, developers, building contractors and housebuilders in mind, the all-encompassing new guide is complete with all the latest additions to Tobermore's extensive paving and walling ranges, and photography of stunning commercial schemes. The almost 300 page guide is a carefully detailed resource with extensive visual and technical references to help designers and architects choose the ideal solution for their project. The clearly indexed format enables the user to choose from the hundreds of colour, size and finish options suitable for the full range of traffic applications and project sector. Importantly, all the product options are located in one document so essential elements including steps and kerbs can be referenced and specified at the same time. The guide is just one of the tools available to specifiers who can also use Tobermore's interactive online tools to compare alternative products and request product samples to aid their selection process.

0844 800 5736 www.tobermore.co.uk



New Luceco LED Lighting Specification Website

Luceco has recently launched a brand-new website demonstrating the range and diversity of their LED luminaires. They have also showcased many new fittings, serving applications across varied industry sectors including healthcare, education, retail, hospitality, industrial and commercial lighting. The website has been carefully designed to provide lighting professionals with detailed information segregated into easy to use categories and create specification submittals by simply selecting the products that they require to form their specification documentation. Many other useful downloads including the new Specification Guide, photometric data, Industry Specific Lighting Brochures, datasheets and a suite of BIM Files created in Revit covering the Luceco range, are all available.

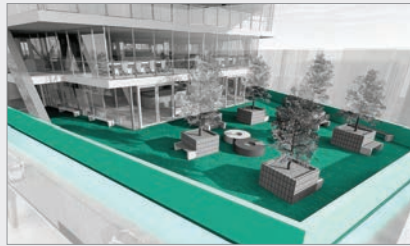
01952 238 100 www.luceco.com

Release of new Podium Deck Brochure

Delta Membrane Systems Limited, one of the UK's leading Type C cavity drainage membrane manufacturer and supplier of specialist structural waterproofing products is pleased to announce the release of its new Podium Deck Brochure. This 44-page, full colour brochure presents design and build philosophy, project detailing and specification/selection of the correct waterproofing and drainage protection systems for podium decks, buried roofs, blue roofs, green roofs, warm roofs, cold roofs, hybrid roofs, car parks and terraces & balconies.

Delta's Podium Deck Brochure is divided into key sections and features an array of easy-to-read text, technical drawings, detailing and 2D graphics. Successful podium deck and buried roof waterproofing design lies with choosing the most appropriate combinations of structure and waterproofing system to achieve pre-determined performance levels and criteria.

In order to design out risk of failure due to less than adequate workmanship, damage or defects on site it is also important to consider



practicality and ease of installation, the phasing of the construction process and the scope for testing and certifying during construction. To reduce risk, Delta's Podium Deck brochure focuses on:

- Design & Build Philosophy
- Definitions of Structure
- Choice of Structure
- Selection of Waterproofing
- Selection of Drainage Protection
- Detailed Drawings

"Recent years have seen an increase in the use of podium decks, and it has been recognised that there has been a significant increase in failures.

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"Being a sustainable business within the construction industry is about striking the balance between customer expectations, the requirements of building regulations and reduction of project failure/risks. We truly believe that acting as a responsible business in society, will contribute to lasting life cycles of structures and ultimately economic success".

"I would like to add my thanks to the Delta Technical Team for contributing so expertly to this brochure – we've produced a "first" within the structural waterproofing industry and this would not have been possible without all of your hard work – so many thanks to you all for your continued hard work and input".

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The professional decorating industry will again convene at Coventry's Ricoh Arena on November 26 and 27 for the 2019 National Painting and Decorating Show. Now in its 25th year, this is the annual trade event targeted specifically at professional

decorators, interior designers, stockists and facility managers. The National Painting and Decorating Show provides visitors with a valuable networking opportunity to meet exhibitors face-to-face, find out who's doing what in the decorating industry, and exchange ideas and solutions with like-minded decorating professionals.

www.paintshow.co.uk www.paintinganddecoratingnews.co.uk

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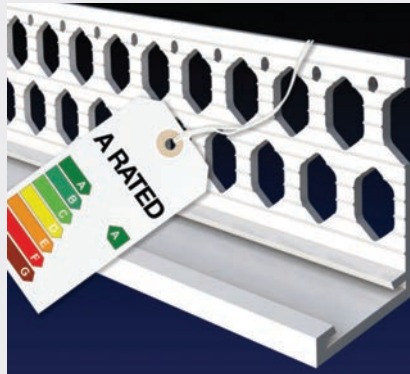
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Renderplas PVC beading solutions for a sustainable future

Managing Director of Renderplas, Daniel Leedham-Green, is committed to ensuring that the production of millions of linear meters of Renderplas PVC beads every year used for rendering, plastering, dry lining and external wall insulation, actually contribute to a sustainable environment rather than harming it.

From conception 30 years ago, Renderplas have worked hard to innovate and lead the PVC bead industry in the field of sustainability. All of our white PVC beads are made predominantly from waste material from the vast manufacturing process of building components, making them sustainable and a great development in the way that building components can perform.

We are proud to manufacture our PVC beads in the UK and to provide a low carbon alternative to cheap imports. Quality is assured, Renderplas beads will not perish and



they will not need replacing. Our PVC products require far less maintenance than traditional building materials, they are also easier to cut and handle than metal and so produce far less waste during installation.

Renderplas PVC beads are designed to last as long as the render, typically 25 years or

more, and they last longer than metal. Even if the render needs replacing or when the building reaches end of life, our PVC beads can be removed and easily recycled.

The first PVC bead manufacturer to complete a full life cycle assessment (LCA) providing Ecopoint calculations for our products, Renderplas PVC beads achieved the top eco-rating available of "excellent" in an independent environmental profile report. Renderplas beads are ecologically benign and comply with REACH legislation as all harmful additives have been removed.

Renderplas 

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The Revolutionary Thermal Flooring Solution From Milbank Concrete Products



Following on from market research and the identification of the need for an affordable, cost effective and efficient thermal beam and block style floor arrangement, Milbank Concrete Products are proud to introduce their new and improved insulated concrete flooring solution, WarmFloor Pro.

WarmFloor Pro offers construction professionals a cost-effective alternative to quickly assembling a thermally insulated concrete ground floor over the industry leading competitor. Utilising lightweight EPS infill panels as opposed to concrete blocks, the reduced initial construction costs and an increase in energy savings make WarmFloor Pro a compelling alternative to a standard beam and block floor.

In combination with its certification and A+ Green Guide rating, WarmFloor Pro is proving to be a must have addition to any new, eco-friendly development where keeping running costs low is paramount. A wide range of EPS panel depths and grades are available to satisfy your U-value or budget requirements along with a varied range of prestressed concrete beams.

01787 223 931 www.milbank.co.uk

Roofshield® fit for King's



The roofs of the magnificent historic buildings of King's College Cambridge are being renovated and protected with the combination of beautiful Collyweston Slate and Roofshield® membrane, from A Proctor Group. Roofshield has long been recognised as one of the highest performing roofing membrane solutions, providing a pitched

roof underlay, which is both air and vapour permeable. The high performance of Roofshield, backed by two BBA Certificates, has been successfully used in preserving and protecting the fabric of a wide range of historic and listed buildings for more than 21 years.

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Hemsec – Insulated panel manufacturers



When you can improve your reputation by using the right insulated panels, it makes sense to work with Hemsec. Hemsec are proud to be one of the UK's largest and longest-standing insulated panel manufacturers. Hemsec work in partnership across the supply chain, and are trusted by companies who need absolute confidence in the timely delivery of high quality, durable building

materials. For more information, please contact the company.

0151 426 7171 www.hemsec.com

Comfort and safety from SE Controls at sixth form centre

A new sixth form study and careers centre at Hampton School in South West London is using a combined ventilation and smoke clearance system from SE Controls to help provide a comfortable learning environment with enhanced fire safety for students and staff.

Designed by IID Architects, the new building is constructed as a three-story pod located in the centre of the school's Hammond Quad, while a further single storey was added to the existing building at the southern end of the quad and the previously open space covered with a glazed roof.

In addition to meeting the building's fire protection specification, which demands that fire fighters must be able to actuate the system and disperse smoke on arrival, via a manual call point at the main entrance, SE Controls also had to integrate the ventilation solution into the BMS to provide comfort ventilation and temperature control during

day-to-day operation. To achieve this, 20 SHEVTEC louvred smoke ventilators were installed at high-level in a rooftop plenum and operate as a four-zone system via a dedicated controller, linked to the BMS. This design enables proportional actuation of the vents so that they can be opened in stages depending on the temperature within the atrium. The control panel also incorporates a 72-hour battery backup for failsafe operation in the event of power interruption or failure.

As the ventilation system must also operate in the event of a fire, all the ventilators and control systems supplied by SE Controls are manufactured and tested in accordance with BS EN 12101 part 2 and part 10, as well as being compliant with other relevant product legislation, regulations and standards.

Although the louvres are all 1,280mm in height, five different widths were used on the project, ranging from 1,430mm to 1,854mm, enabling them to fit within the structural glazing system's dimensions and



Image courtesy of IID Architects

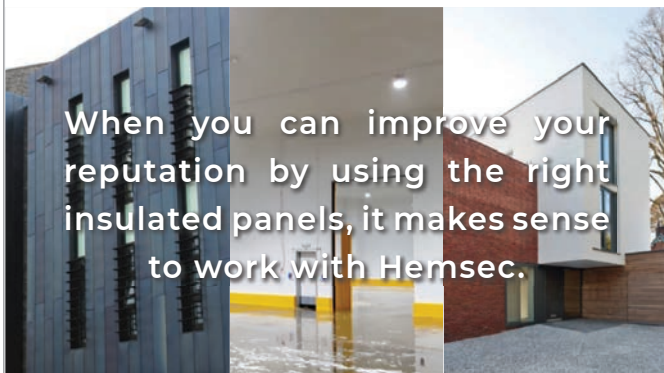
ensure the ventilation airflow requirements are met.

In normal comfort mode, IP65 rated electric motors open and close the louvres depending on the level of cooling and ventilation needed within the atrium, which is managed by the school's BMS. If the building's fire alarm system is actuated, it over-rides the BMS and all the vents are closed until the fire services arrived and actuate the system to manage how the smoke is cleared to assist fire-fighting procedures.

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Fire Safe Liverpool Living

The 11-storey new building currently under construction on Liverpool's Parliament Street is the second phase of an exciting redevelopment project for the city and includes a flame retardant vapour control layer in the wall system.

With Phase 1 of the Liverpool Parliament Street redevelopment nearing completion, Phase 2/3 is well underway. The building will have 145 apartments and ground floor commercial units, with a gym and rooftop gardens for residents' use. Manchester-based Goodwin Construction Group are the main contractors for all three phases.

As appropriate for a prestige, high-rise residential building, superior materials have been specified throughout. An advanced, flame retardant vapour control layer is being installed as a key component of the wall system. FlameOut Block is independently tested to EN ISO 13501-1, rated B1-s1,d0, the highest flame retardant standard. It is part of the FlameOut® range of flame retardant building materials produced by Industrial Textiles & Plastics (ITP).



FlameOut Block is available in two weights (140gsm and 210gsm) and has a reinforcement scrim for superior tensile strength for both wall and roof installations. VCLs, installed on the warm side of the insulation, ensure the building envelope is properly sealed to control ventilation, prevent heat loss and protect insulation from interstitial condensation.

The FlameOut range also includes the UK's first non-combustible breather membrane, Safe One®, which is independently tested and



rated to A2-s1,d0, and FlameOut Breathe, an FR breather membrane suitable for both roof and wall installations, rated B-s1,d0.

ITP has more than 25 years specialist experience in flame retardant technology, and is currently developing new products, including a Class A2 VCL, to meet the demand for non-combustible and FR materials required by ever more stringent fire safety regulations in construction.

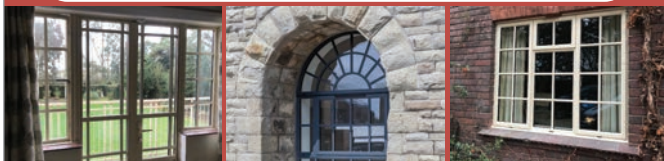
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Val-U-Therm PLUS® wall panels achieve $0.08 \text{ W/m}^2\text{K}$ – probably the best U-value wall in the world. Couple this with Scotframe's expertise & track record and the sky really is the limit when it comes to design of buildings that tick all the boxes on your clients' wish lists.

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

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

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

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Couple this with its exceptional thermal



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

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

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

The Maryville PassivHaus delivered a total primary energy demand of $69 \text{ kWh/m}^2\text{a}$ (exceeding the PassivHaus requirement of $120 \text{ kWh/m}^2\text{a}$). This 'Fabric First' approach

is also suitable for commercial buildings – the Rocking Horse Nursery at the University of Aberdeen, which caters for 78 pre-school children, achieved an air tightness of 0.475 ACH.

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

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

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

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

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01467 624 440 www.scotframe.co.uk



Senior's healthy mix of solutions

Ideally suited to the healthcare sector, aluminium fenestration systems can offer huge benefits in terms of aesthetics, durability and efficiency and thanks to Senior Architectural Systems, specifiers can access a full range of solutions from one sole supplier. With a proven track record of delivering contracts that meet the specific performance and budgetary requirements of this challenging sector, Senior's work in the healthcare market includes the recently completed Sir Robert Ogden MacMillan Centre in Northallerton. The new state of the art cancer care facility is circular in form with the extensive use of Senior's SF52 aluminium curtain walling providing maximum views of the surrounding landscaped gardens. As well as helping to achieve the require levels of daylighting, Senior's thermally-enhanced aluminium curtain walling has been integrated with Senior's patented low U-value PRe® aluminium windows to provide ventilation and further contribute to the overall efficiency of the building envelope.

www.seniorarchitectural.co.uk

Profile 22 used in housing development



Profile 22 Chamfered Windows were specified and commissioned for 39 new build houses in Telford. When it came to the windows and doors on the project, the contract was awarded to Profile 22 Approved Window Contractor Select Windows. Profile 22's Optima Chamfered Windows is increasingly becoming the commercial system of choice because of its ability to meet demanding requirements at a competitive price. Optima delivers a 1.2 W/m²K U-value as standard, with U-values as low as 0.8 W/m²K possible. Optima windows achieve PAS24 2016 Enhanced Security and have Secured by Design options when these are required.

www.profile22.co.uk

Crittall booked for library transformation



One of Northern Ireland's most popular 20th century libraries has been refurbished and extended with Crittall Windows helping to retain its unique character. Crittall W20 windows were specified for the contract, with polyester powder coated white frames they contribute to the overall light and airy feel of the redesigned library interior. The double-glazed, weatherstripped windows suit perfectly a heritage building with a modern purpose. Designed and constructed to achieve a BREEAM Very Good certification Coleraine Library now provides users with vastly improved facilities.

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Steel windows and doors have quickly become part of home interior styles as internal partitions, shower screens, replacements for exterior walls among others. Although mostly recognised for their solid black frames, steel windows, doors and their fixtures are available in a whole host of colours to complement any residential scheme. Homeowners can incorporate brass, bronze or copper steel windows or doors to tie an industrial look together enabling new frames to match industrial accessories such as copper light fittings or brass framed glass tables. Steel Window Association members offer a multitude of colour options available to suit every home and interior scheme.

www.steel-window-association.co.uk

New non-combustible range panels



Metalline have introduced a new non-combustible A1 rated spandrel panel that has been designed to fit into most curtain walling, structural glazing and unitised systems. Constructed from an A1 non-combustible material Metalline's new Spandrel panels have been independently tested at

Effectis achieving a 60/60 rating to ensure they meet the very latest fire and safety regulations. These highly versatile panels can be adapted for a wide range of buildings, they are produced from environmentally friendly and sustainable materials and can help a building conform to the highest level of BREEAM certification.

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Ideal for residential projects and small commercial applications, CRL Spig-Lite Pro is a fully adjustable glass balustrade system with a unique clamping design that removes the need to hold the glass with locking pins. The elongated holes allow for easy adjustment of the glass panels, ensuring the

top edge of the glass is equal when a handrail is not required. The system achieves 0.74Kn loading and features individual spigots that raise the glass to 32mm above floor level creating a natural drainage solution that ensures no water can get trapped inside the balcony area.

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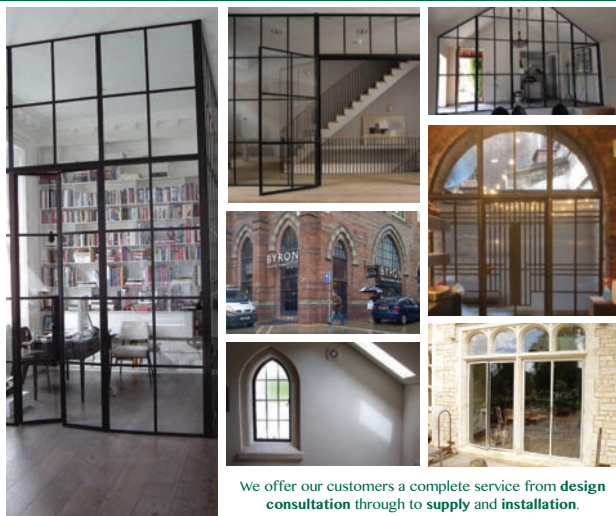


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Kingspan TEK sports centre is fit for King's



Students at the renowned King's College School in Cambridge are enjoying getting active in their new Sports & Cultural Centre, constructed with the use of the offsite Kingspan TEK Cladding Panels. Kingspan TEK Cladding Panels are high performance

structural insulated panels (SIPs) which comprise a rigid insulation core between two layers of OSB/3. The panels also feature a unique jointing system which helps to reduce air loss through the walls of the structure. McVeigh Offsite fabricated the panels to the project's specifications at their production site.

01544 387 384 www.kingspantek.co.uk

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George Barnsdale to supply windows for workhouse



George Barnsdale is delighted to announce it has been chosen to manufacture and install the timber windows for a renowned Grade II listed former workhouse building in Fitzrovia, London. The project is being undertaken by University College London Hospitals Charity to provide mixed residential and commercial accommodation. The Strand Union Workhouse is said to have been used by Charles Dickens as inspiration for his 1837 novel *Oliver Twist* and was listed Grade II in 2011. A total of 119 timber box sliding sash single and double glazed windows will be designed and manufactured by George Barnsdale in the company's Lincolnshire factory alongside some timber flush casement windows and doorsets. The company's installation team will fit them this autumn/winter. Commenting on the project, Steve Dixon, Sales Director said "We are delighted to have the opportunity to work on this exciting development. We have delivered timber windows and doors on numerous projects throughout London but this has very special provenance with its links to Dickens and Florence Nightingale. We really do pride ourselves on the part we play in bringing these historical buildings back to life with our bespoke products."

01775 823000 www.georgebarnsdale.co.uk

High specification AluK windows and doors in new cardiff bay development



AluK facade solutions are at the heart of a recently completed residential development on Cardiff's Bute East Dock which combines both new build apartments and affordable homes. Schooner Wharf is the first open market scheme to be developed by Cardiff Community Housing Association (CCHA), who were working in partnership with main contractors Morganstone. It features 32 two, three and four bedroom affordable homes, alongside a seven storey waterside apartment building with 85 one and two bedroom apartments for sale on the open market. AluK products have been installed extensively throughout the scheme in contemporary Anthracite grey, including fully suited 58BW windows and 58BD doors, GT55TB commercial entrance doors and SL52 curtain walling. The products were chosen as they all met the high performance specifications laid down by the architects Austin Smith Lord and had the benefit of providing a coherent, fully suited look to support the overall design vision. All AluK products on Schooner Wharf were fabricated and installed by commercial specialists Denval based in Cardiff, who are part of AluK's network of fabrication partners.

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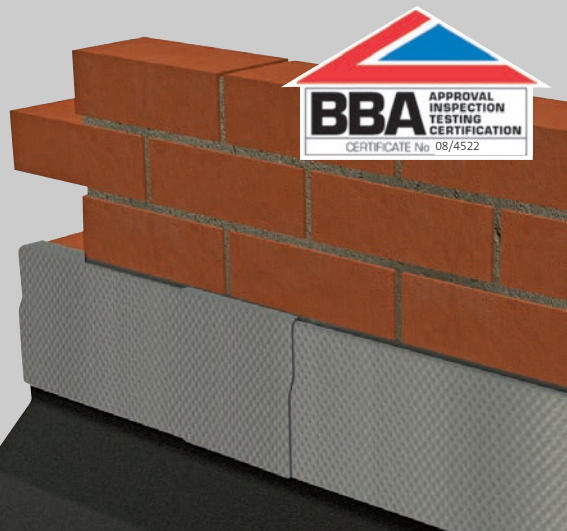
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Taking responsibility

Martin Bidewell of Sika discusses why supply chain accountability must be standardised across the industry for safer roof refurbishment

Two years after the Grenfell disaster and 18 months on from the Hackitt Report's call for greater clarity of guidance and regulations for construction, safety has become a primary factor in specification decisions across all elements of a building.

The tragedy and the subsequent report have been a catalyst for new safety legislation. Just as significantly, they have also nurtured a culture of safety that is prompting specifiers to consider products' fire safety credentials throughout their lifecycle, including both the build and operational phases.

Where legislation is not immediately forthcoming, it falls to industry bodies and product manufacturers to self-regulate and drive best practice to maximise safety for both contractors and the public during construction, and for end users following completion.

One of the tangible ways that this is happening in the roofing sector is through the NFRC's (National Federation of Roofing Contractors) Safe2Torch Guidelines, which are designed to manage the fire safety hazards associated with the specification and installation of bituminous roofing systems.

What are the guidelines?

Although they are not mandatory, the Safe2Torch guidelines have become the recognised industry standard for safer installation of bituminous roofing systems since they were introduced in 2017. They have also supported innovation in the sector and have also been instrumental in the product development process for some product manufacturers.

The guidelines bring clarity to where it is safe to use flame-based hot works and where torch installation must be avoided, and using a self-adhesive bituminous membrane is a convenient and robust option. For specifiers, this means looking for a complete roofing system that includes both a torch-on membrane and a



self-adhesive membrane or flame-free alternative. All elements of the system should offer the same level of guaranteed performance, in terms of both installation integrity and service-life.

The specification should clearly set out the Safe2Torch zones and the torch-free areas where a self-adhesive membrane must be used, with the aid of hot air welding equipment where required to activate the adhesive.

What are torch-free zones?

It's important to work with a roofing supply chain partner that offers a site survey to map the Safe2Torch and torch-free areas of roof for each project. This is because identifying all the Safe2Torch zones can often be complex and require an understanding of the existing roof build up, the layout of the roof, and the proximity and fire risk of surrounding structures. The supplier should then also ensure this information is written into the technical specification and procurement documentation, and that the installation is regularly inspected to ensure Safe2Torch

Although they are not mandatory, the Safe2Torch guidelines have become the recognised industry standard for safer installation of bituminous roofing systems since they were introduced in 2017



compliance throughout the programme.

The Safe2Torch guidelines provide a clear and detailed outline of areas that should be specified as torch-free zones. These include: timber roof decks and roof areas with timber upstands or fillets, hanging tiles, thatched roofs, rooflight kerbs and upstands, lantern rooflights, windowsills, and cladded areas.

The guidelines also stipulate that torch-on systems should be avoided in any confined areas and for any areas that may contain concealed flammable materials, a full list of recommendations is available on the NFRC website.

To maintain the safety of the installation team and any occupants in the building, and protect the fabric of the building from fire risk, the guidelines require a self-adhesive bitumen system to be used within 900 mm of any of these torch-free areas.

Other design & specification considerations

Bitumen roofing technology has advanced significantly over the past decade, not only in response to Safe2Torch Guidelines but also to provide increased durability, performance and service life. A membrane that combines the flexibility and tensile strength of SBS bitumen with the

hardwearing performance and U/V resistance of APAO provides the ideal solution for the UK climate.

The roofing membrane should be specified in combination with a suitable insulation to meet the required thermal performance, and the structural loading of the new roof build-up should be taken into account in the specification, particularly if the roof is being designed as an overlay. Similarly, if there will be rooftop plant or equipment, the compressive strength of the roof build up should also be factored into the specification. Wind uplift, fire safety, drainage and the safety of maintenance teams should also form part of the specification process for the Safe2Torch compliant roof.

Best practice

The construction sector may still have some way to go to embed greater clarity in its specification processes but, for the roofing sector at least, the Safe2Torch guidelines provide an excellent best practice framework. It's now up to manufacturers, specifiers and contractors to implement them.

Martin Bidewell is head of technical and product management – roofing at Sika

Create cost effective falls on a flat roof

Tapered insulation can be retrofitted as part of the waterproofing system during the refurbishment of a flat roof where drainage falls are insufficient. A tapered scheme is quick to install as the insulation upgrade and falls are applied in a single operation.

Bauder has a patent-pending tapered insulation system, with innovative ridge and valley infill formations that enable both simplistic designs and the creation of complex fall configurations without the need to modify the building structure, creating cost savings for your client.

Key benefits

- Incorporated within the warm roof construction of a refurbishment flat roof system
- Suitable for use with bituminous membrane, single ply or cold applied waterproofing systems to suit the project requirements.
- Flexibility to create complex configurations with multi-directional falls.
- Creates 1:60 falls to comply with BS



- 6229:2018 Flat Roofs with Continuously Supported Flexible Roof Coverings.
- Granted BROOF (t4) to TS1187 and BS EN 13501-5 when used in a Bauder warm roof system.
- Good compressive strength to resist physical damage.
- Foil-faced for improved thermal efficiency

COMPLYING TO NEW BRITISH STANDARDS

Falls

The BS 6229:2018 update, effective from November 2018, considers it good practice for flat roofs to be designed to clear surface water as quickly as possible. It is also required in Building Regulations Part H that 'adequate provision is made for rainwater to be carried from the roof of the building'. According to BS 6229 & BS 8217, flat roofs should be designed with minimum falls of 1:40 to ensure a finished fall of 1:80 can be achieved. This applies to all roof areas including internal gutters and sumps.

Thermal performance

The minimum U-value levels permitted at any point of a heated building is 0.35W/m²K, including the thinnest areas of a tapered roof and gutters. Insulated outlets are required to maintain thermal continuity at drainage points. All Bauder designed schemes take these factors into account to adhere to the BS 6229:2018 update.

Bauder Tapered Insulation Design

Every roof will require a bespoke layout according to location of outlets or the drainage system which will dictate the direction of falls, maximum heights, acceptable weight loading, U-value to be achieved and budget costs.

BauderPIR FA Tapered Insulation is faced on both sides with black aluminium foil which increases thermal efficiency. The boards are available in a variety of thickness from a 1-board up to an 8-board to achieve the desired pitch and thermal requirements for each project. Using only one layer of tapered board atop 160mm FATE base layer of insulation makes for an easier, quicker and more cost-effective method of applying a tapered scheme.

How to specify a tapered scheme

Bauder offers a tapered insulation design service with every scheme designed to match the needs of the project and meet building regulations - BS 6229:2018 for minimal thermal performance of the roof and thermal bridging resolution, BS 5250:2011+A1:2016 Code of Practice for Control of Condensation in Buildings and U-value calculations in accordance with BS 6946 Annex E (Calculation method) to confirm the thickness required and/or U value achieved.

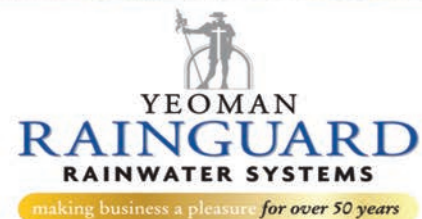
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Thermoblock combats cold bridging for new leisure facilities at Fife Holiday Park



The construction of a new swimming pool and play park at a caravan and holiday lodge complex, set in a stunning location on the coast of Fife, is making full use of the unique insulating and load-carrying attributes offered by **Marmox Thermoblocks**. With its fully enclosed and well insulated steel framed structure, the new swimming pool and play park will offer year round enjoyment for not only those staying in the caravans and lodge homes, but also the wider public. A key element to this energy saving design is preventing cold-bridging occurring around the perimeter to the building's in-situ reinforced concrete floor where it meets the external walls, with its 140mm thick block inner leaf, infilling the cold-rolled steel columns. The site agent for Pert Bruce Construction, Mark Macpherson, commented: "This is the first time I have seen the product, but the bricklayers found it quite straightforward to install and our company has also been using Thermoblock on a housing site in Brechin for Angus Council." Pert Bruce Construction is also making use of the Marmox MSP 360 sealant as an adhesive to complete the stepped overlay joints between the individual Thermoblock units.

www.marmox.co.uk

Kingspan brings eastern promise



The **Kingspan OPTIM-R Balcony and Terrace System** has been installed as part of the award-winning Here East development. The design called for three large recessed balconies running up to 13 metres in length.

Chris Oatridge, managing director at Kaicer, discussed the specification: "The recessed balconies are an important element in the exterior design, not only adding outdoor spaces but also helping to soften the overall appearance. By using the Kingspan OPTIM-R Balcony and Terrace system, we were able to insulate the balcony floor to an exceptional level with an insulation depth of just 85 mm."

01544 387 384 www.kingspaninsulation.co.uk/optim-r

STO acoustic solution hits the right note



Sto has helped to create a balanced acoustic environment at the world-famous Royal Opera House in Convent Garden. The StoSilent Distance monolithic, seamless acoustic solution has been installed within the new entrance foyer and front-of-house spaces as part of the recent 'Open Up' refurbishment to make the Royal Opera House a more welcoming building. "We had used it previously and been very pleased with its ability to provide a correctly balanced acoustic environment, and also create a clean, minimalist appearance, both of which this historic arts building deserved," comments Tom Shell from project architects Stanton Williams.

0141 892 8000 www.sto.co.uk

Estate customised with Kingspan Kooltherm



A new build estate of bespoke modular houses is benefitting from the outstanding thermal performance of **Kingspan Kooltherm K110 Plus Soffit Board**. Swan Housing Association is aiming to reduce the operational CO₂ emissions of each of its properties to 2.6 tonnes per year by 2021. With this commitment in mind, the Kingspan Kooltherm

K110 Plus Soffit Board was specified for use in the houses with recessed entrances, in order to effectively insulate the spaces above. This outstanding thermal performance allowed the target U-value to be met with a slim thickness of insulation.

01544 387 384 www.kingspaninsulation.co.uk

Sto therm system keeps things warm



A Northern Ireland apartment block has been given a new lease of life with the installation of a combination of products supplied by Sto. The 15-storey Carnet House building on Belfast's Ardarn Estate now boasts a U-value of

between 0.15 and 0.23W/m²K thanks to the installation of a Sto high-performance and cost-effective insulation system, finished with a special self-cleaning external render. This BBA certified insulation system has European Technical Approval ETA-03/0027, and it has an efficient single-leaf construction that provides excellent thermal performance while also protecting the external wall surface from weathering.

0141 892 8000 www.sto.co.uk

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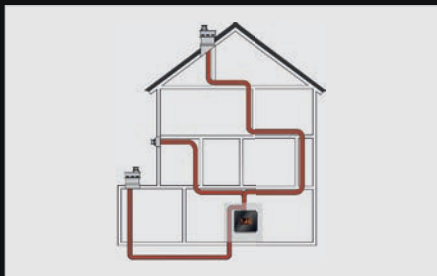
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AET at 20 Soho Square



20 Soho Square is a Neo-classical building with a stunning Portland stone facade and colonnade. The underfloor system, from AET Flexible Space, features on seven floors of the eight-storey building. The system is a CAM-C Direct Expansion system with supply and return air distributed via the floor plenum. The Fantiles are standard TU4 fan terminals with EC motors for enhanced energy efficiency. Instead of a rooftop chiller providing chilled water, the building uses Daikin Heat Pump units to maximise use of space and energy efficiency.

01342 310400 www.flexiblespace.com

New studor range



Marley Plumbing & Drainage has expanded its product offering by introducing the Studor active drainage ventilation system, designed to offer customers even greater choice when it comes to system ventilation design on high rise projects. The Studor P.A.P.A (Positive Air Pressure Attenuator) and Studor Air Admittance Valves (AAV), which are available now, are particularly suited to high-rise applications and eliminate the need for roof penetrations and secondary venting. P.A.P.A has been developed to eliminate the harmful effects of positive pressure generated in gravity fed systems in multi-storey buildings.

01622 852585 www.marleypd.co.uk

Waterloo delivers fresh air to sports hub



A £50m project bringing world-class sporting and leisure facilities to Warwickshire has received a new cooling and ventilation system from Waterloo Air Products plc. Waterloo worked with designers to deliver a high-specification, energy-efficient scheme to cope with fluctuating levels of occupancy. Waterloo produced a series of intricate and bespoke products to create the right aesthetics in the state-of-the-art fitness centre. Luke Fearn, Mechanical Project Director at Derry Building Services in Birmingham says "From the beginning, Waterloo never failed to support us, and the company provided us with the exact products we needed to complete the build."

01622 711500 www.waterloo.co.uk

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In the market for super new flooring? Flowcrete have you covered



The retail sector is a complex world, with each outlet often having different flooring requirements. While shopping centres may lean more towards aesthetics, supermarkets need to blend the decorative with the durable. One criterion that remains consistent across the sector is the need for the flooring to meet the challenge of the high footfall expected in these areas. For supermarket environments, it is not just footfall that the flooring would need to withstand, but wheeled trolley traffic too, as well as exposure to spillages and organic acids that threaten the sanitation of a space. While protecting against possible abrasions and the chemicals from dropped foodstuffs, supermarkets also need to provide a safe and slip resistant profile with an easy to clean and maintain finish. One of the many **Flowcrete UK** systems that is ideally suited to the main concourse of supermarkets is the decorative Flowfast Terrosso. This seamless, hardwearing acrylic resin floor finish was developed for high traffic retail environments. Available in a range of classic colours, this system can tolerate full traffic after a curing time of two to three hours.

uk@flowcrete.com www.flowcrete.co.uk

Expona Design- Mix, Match, Play



Polyflor, one of the UK's commercial vinyl flooring specialists, is delighted to announce the relaunch of Expona Design, their premium heavy commercial Luxury Vinyl Tile collection. The new collection now features 30 stand out shades, including 24 brand new designs that incorporate the latest trends in industrial materials, salvaged timbers and rustic metals. Blurring the boundaries between wood and stone with harmonious colour tones across designs, shades can be mixed and matched to zone, transition and make statement in a variety of heavy commercial interiors, across multiple sectors, including retail, leisure and office spaces. The introduction of four outstanding reclaimed timber designs balance the range by beautifully capturing the natural extremes in colour variation of authentic salvaged wood. It is clear to see this playful, stand out collection delivers individuality alongside practicality and longevity. All Expona products are enhanced with Polyflor PUR, Polyflor's exclusive and robust polyurethane reinforcement which is cross linked, and UV cured to provide superior cleaning benefits and a cost-effective maintenance regime.

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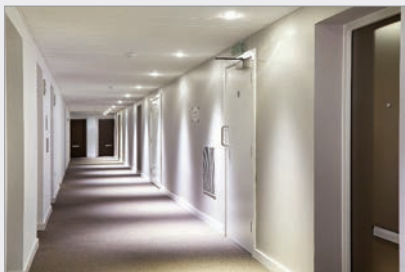
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Luxury London living at new Stratford Plaza

Minutes from the centre of London sits Stratford Plaza, a new, luxurious £80m Telford Homes Plc development, built to a very high specification, complete with Knauf AMF acoustic ceilings. Stratford Plaza is situated within the New Commercial Quarter, overlooking Olympic Park.

This exciting project on a site opposite Stratford Station has resulted in a structurally impressive 26 storey elliptical building featuring 220 apartments and 2,000m² of commercial space. An impressive design feature is the architecturally innovative use of floor-to-ceiling glazing which allows maximum light to flood into its interiors.

Barry Jarvis of Telford Homes, "Telford Homes prides itself on its reputation for building excellence. Given the large amount of glass utilised in the design of Stratford Plaza, internal sound insulation was of paramount importance to us. Knauf AMF Thermatex not only provided us with the required acoustic rating and desired aesthetics but importantly they impressed us with their onsite support and efficient supply chain



which always met the agreed schedule."

One design imperative for project, with the scale of glass present, was to ensure optimal sound control. In addition to aesthetics, ease of access for maintenance was also a critical factor, which is why Knauf AMF Thermatex® Acoustic Planks were specified for use in shared spaces throughout the building.

THERMATEX® Alpha HD offers extremely high acoustic absorbency. The tiles, which guarantee easy handling and uncomplicated construction, are available in lengths of up to 1800mm – wide enough to span the corridors of the Stratford Plaza in a single plank, complementing the clean lines of



the contemporary design with their highly light reflective, elegant, smooth surface.

0191 5188600 www.knaufamf.com

Ceiling enhances natural surroundings

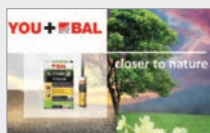


A solid wood Hunter Douglas Architectural ceiling and external canopy was the natural choice for a modern, purpose-built crematorium, which nestles in a tranquil waterside setting. Hunter Douglas Architectural, a leader in solid wood

interior and external ceilings, was specified to supply 85m² solid wood linear open system in European oak for the chapel as well as 530m² of solid wood European pine for the exterior soffits. They were supplied 92mm wide by 15mm deep, and installed with a 19mm gap, which was visually closed by a black non-woven acoustic tissue.

01604 648229 www.hunterdouglas.co.uk

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Colours have been used throughout history as an unspoken language understood by all humankind and are popularly connected to seasonality and to mood. Detail makes all the difference on tiling projects, which is why BAL – market-leaders in full tiling

solutions – have introduced a range of new shades to the Micromax2 grout range that take influence from the natural environment and the changing seasons. The 11 new shades take inspiration from the world around us and nature through changing seasons. Please visit mailchi.mp/building-adhesives.com/closer-to-nature for more.

01782 591100 www.bal-adhesives.com

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compac.es

Record £32m orders for bathroom pods



Offsite Solutions has announced £32m of orders for more than 9,500 units in the last six months – a record performance and a significant increase on the same period last year. James Stephens, managing director of Offsite Solutions, said “We have continued

to grow market share and diversify into new areas such as retirement living and timber-framed housing. This is testament to our team's consistently outstanding performance in delivering every bathroom project to the highest standards, and is reflected in the high number of repeat customers we now have.”

www.offsitesolutions.com



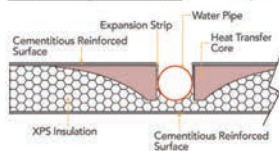
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Smart tips for smart homes

Matt Nimmons of CEDIA EMEA brings together advice from the industry body's membership to explain the elements that should be considered when designing a wider home integration project



The integration of smart technology is fast becoming the norm for households up and down the country. It is now more important than ever for design and build professionals to understand smart home technology, and the latest audio-visual developments to provide the service that is now fully expected by the client.

Lighting

The main reasons you would want clever lighting are aesthetics and convenience. Today's houses have many more lighting circuits than we used to have – LED strip accents, wall lights, feature pendants, and chandeliers. Without dimming, the whole thing would look bright, and could look harsh, and with one button per light circuit,

you would end up with a mass of switches and no-one knowing what they do.

Lighting control is about using the space between lights on and lights off. When you start to play around with the infinite variations in lighting levels of any circuit and combine those circuits to work together, you can create ambience to complement a mood or functionality to perform a task. A good lighting designer will be able to highlight existing features and create stunning effects through their choice of lamps and fittings. The lighting control system gives you simple access to these 'scenes' so that they can be recalled at the touch of a button or vocal command.

An emerging area is in 'bio-adaptive' lighting, where colour temperature varies with time of day. Cooler white light in the



daytime and a warmer yellow glow in the evenings, which studies have shown help people sleep more easily.

Heating

Being able to 'zone' heating so that you can independently set the temperature in each room is one of the main benefits of a modern heating system. Many heating control systems have smart phone apps to allow them to be controlled when out of the house. But, more often than not, we don't tend to adjust our heating very much. So, having a thermostat on the wall in every room of your house is a bit over the top, which is why we prefer to use invisible temperature sensors and hidden thermostats – it looks better and it's far more intuitive to operate.

Security

Door entry systems can eliminate the need for a key and can now be entered via a code or with fingerprint entry. This can offer lock status updates as well as notifications on specific users. For example, these may be children, service teams, and dog walkers who have entered the property with their own unique code.

An intruder and fire alarm can be installed and further integrated into a whole home control solution so that arming and disarming can be performed from the touchscreen. This means that the original alarm module can be hidden away to keep the wall clutter to a minimum.

Control

We are seeing an increasing desire for more complex smart home technologies in mid-market homes. In these properties, people

We need to ask ourselves how useful the technology we're installing actually is, and help clients avoid technology for technology's sake – focusing on what will genuinely make their lives better

just expect things to be easy to use and the interfaces to be intuitive to operate. We have definitely seen a shift in client attitudes towards a preference for using their existing mobile phones and tablets as the primary interface to the control system.

Currently, most control systems have an interface with a single configuration for the home, but we have started to see control systems introduce personalisation so that all the users of the system within the home can have their own unique interface. With the proliferation of virtual voice assistants, homeowners are increasingly looking to utilise this as a method to interface with their smart home systems.

Working with an integrator

Lighting and shading, heating control, security, and audio-visual systems can all be integrated seamlessly in terms of operation and aesthetics with the right planning. By involving a CEDIA member in a project at the architectural planning stage, you'll end up with a more elegant living space.

In order to understand what's possible, try and visit one of the many amazing home technology showrooms and 'experience centres' around the UK. We've now passed the point of being impressed about being able to turn on your bathroom lights from the beach, we need to ask ourselves how useful the technology we're installing actually is and help clients avoid technology for technology's sake, focusing on what will genuinely make their lives better.

Matt Nimmons is managing director at CEDIA EMEA

CEDIA would also like to thank the following members for their help in this feature ConnectedWorks, Seven Integration, Homeplay, IndigoZest and Automated Spaces

Discover our 2019 collections



Novellini UK offers a full range of bathroom products; including bespoke shower enclosures, wet-rooms, steam rooms, spa baths, furniture and much more.

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

Hospital installs Yeoman Shield to help maintain fire doors

Stockport NHS Trust runs both community NHS services and Stepping Hill Hospital, which serves people across the areas of Stockport and the High Peak. With the responsibility of the safety and comfort of so many patients and staff, it is important that the trust maintain a high-quality standard within the built environment.

When fire doors in the ground floor corridor of the hospital were identified as having minor damage to edges and panels, the trust engaged with Yeoman Shield to provide a solution to stop the damage from becoming a major concern. Left unchecked this type of impairment can lead to the non-conformity and malfunction of a fire door.

Yeoman Shield supplied and installed fire rated FD30 Door Edge Protectors to the leading and hinged edges of double swing door sets along the corridor.

Door faces were fitted with Yeoman Shield 2mm thick FalmouthEx protection panels,



to guard against impact damage mainly caused by the movement of wheeled and motorised trolleys.

Now that the hospital's fire doors have Yeoman Shield protection fitted, the life cycle of the doors will be extended, avoiding the

costly task of replacing them.

Yeoman Shield door protection products have been fully fire tested to the current standards required.

0113 279 5854 www.yeomanshield.com

Watersaving contributes to accreditation



Future-thinking architects are utilising the sustainable and aesthetic appeal of sensor taps, while building managers are taking advantage of a more reliable and cost-saving solution to water usage. People are switching on to the fact that a water saving of up to 70 per cent can be expected through the installation of

CONTI+ sensor products. How can CONTI+ technologies support your sustainable building objectives? Discover more or request a CPD. Contact Paul Musgrove, UK Development Manager.

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Novellini returns to Sleep & Eat

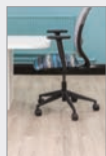


Novellini will be exhibiting at the annual Sleep & Eat event at Olympia London from 19th – 20th November. Having recently launched a wealth of new products in the UK, the Italian bathroom specialist is welcoming visitors to its stand at the event, where on display will

be the new Frame collection of bathroom accessories. Working alongside architects and designers, Novellini creates beautiful and functional bathrooms that complement the home, helping to design tranquil spaces that promote well-being within the home.

01727 229922 www.novellini.co.uk

Altro gives University a touch of class



The Altro Ensemble™ modular flooring system is providing Cardiff University with an attractive, modern and flexible way to create stunning interiors with limitless design options. Cardiff University has fitted wood-effect Altro Ensemble LVTs in the reception area and ground floor corridors of its Business School, as part of a refurbishment that was designed and managed

by WSP. Altro Ensemble modular flooring system is the next generation of luxury vinyl tiles. From colour blocking to geometric patterns, with a range of plank and tile sizes and textures, Altro Ensemble gives design freedom to create luxurious floors for commercial interior spaces.

01462 489 516 www.altro.co.uk

Energy savings for Transgourmet



TransGourmet is a European food wholesaler supplying fresh produce to leading food outlets. The wholesaler required a state-of-the-art lighting solution for its new 25,000m² warehouse facility in St Loubes, western France, to save energy and provide a high-quality working environment. Lighting

solutions provider, Sylvania, specified its SylSmart intelligent lighting system for the facility. With a goal to provide a modern and efficient working space, the Sylvania system has the capacity to save up to 90 per cent energy savings on previous systems.

www.sylvania-lighting.co.uk



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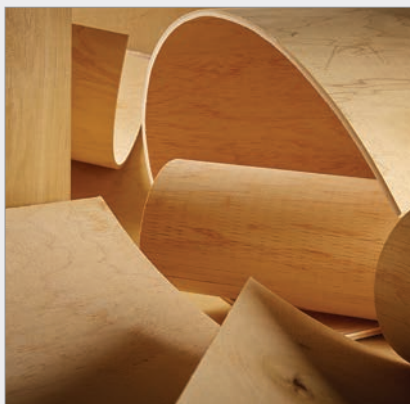
Shape your projects with FR Flexi-Ply

Providing yet another innovative breakthrough, industry leader James Latham now offers a fully certified fire-retardant, flexible plywood, giving interior design professionals a quick and easy solution for creating high-impact curves, waves and cylindrical shapes in their fit-out projects.

Ideal for reception desks, columns, panelling, arches and counters, it is already proving extremely popular in the exhibition, shopfitting, hospitality and commercial sectors where a Euro Class B fire-retardant material is part of the specification.

Stuart Devoil, James Latham's Group Head of Marketing explained, "Our new FR Flexi-Ply has already been a big hit with customers. In fact, the first load sold out before we could even advertise it! As well as being fully tested and third party certified with a Class B EN13501 fire rating, it offers designers exceptional flexibility and performance as it can easily be bent to all kinds of intricate shapes and radii, delivering a highly cost-effective and time saving solution.

"As well as the obvious risk to safety of



occupants, fire damage in buildings can be devastating and as a result, fire-retardant products are increasingly being specified to help reduce this impact. In particular, when it comes to high-footfall public areas such as retail premises, exhibition centres, concert venues, stadia, cinemas, theatres, hotels etc as well as schools, offices and hospitals, fire retardant materials are essential."

Available in thicknesses from 3 – 16mm,

and sheet sizes up to 1220 x 2500mm, FR Flexi-ply can provide an excellent solution to complex design challenges, combining design flexibility, great aesthetics and performance you can trust.

James Latham offers one of the widest ranges of certified and independently tested timber and panel materials on the market. As well as the new FR Flexi-ply, its high-performance, fire-retardant product portfolio includes; CE marked Birch Plywood, Timber Cladding, Chipboard, MDF, MF/MDF, OSB, plus decorative products for interiors such as Valchromat HDF, MFC, HI-MACS solid surface, Laminate and Fire-rated door blanks.

All products are certified and independently tested to the relevant Euro Classes, providing data on the rate of fire propagation, lateral fire spread, total heat release and smoke production among others. Copies of reports, and the Field of Application relating to all these products are available to download on the James Latham website.

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Concealment enhances tenant safety

British designed and manufactured, Powermatic controlled, concealed door closers from Samuel Heath are gaining increasing popularity for use on fire doors in high-rise flats, apartments and HMOs. The door closers carry the CE mark and have been independently tested and proved to meet the requirements for FD60 and FD30 fire doors under BS EN 1634-1. Totally concealed when the door is closed, Powermatic door closers are less susceptible to damage from vandalism or tampering. This gives them a significant advantage over surface mounted door closers when it comes to reliability of the fire door and maintenance costs, making them the right choice for both tenants and social landlords. Unlike other jamb-mounted devices, Powermatic door closers facilitate a door's compliance with the accessibility requirements of Approved Document M, are the only Certifire jamb-mounted door closer and do not have to be removed from the door to be adjusted.

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Schueco Jansen announce new doors



A comprehensive range of unlatched, non-rebated, single-acting fire doors are now available from European steel specialist Schueco Jansen. The systems offer a solution for every application, including screens and partition walls. All the systems have a sleek modern look with slender profiles and slim sightlines that are fully tested and approved. Designed to integrate perfectly with Schueco Jansen glazed screens, these Schueco Jansen doors have hinges that have been tested through a million cycles, making them ideal for high-traffic areas in schools, hospitals, offices and public buildings.

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Multi-sensor safety

Andy Speake of Aico discusses how multi-sensor alarm technology is reducing costs as well as increasing safety from false alarms in social housing

Aico introduced the first mains powered domestic multi-sensor to the smoke alarm market in 2014 as a means of reducing false alarms and providing the best response to all fire types, making alarm specification and installation simpler in the process. Since then, ranges of multi-sensors have entered the domestic market and have been growing rapidly in popularity, notably in the social housing sector.

The typical multi-sensor uses both optical and heat sensors within the same alarm unit, although other variations exist.

Multi-sensors vary dramatically in design, from basic models where there is limited cross evaluation of the sensor values, through to highly sophisticated devices that can assess the variation in values from each sensor in order to determine the nature of the potential fire. Consequently, their ability to detect fires while discerning false alarm sources is a very mixed bag indeed.

However, the more sophisticated devices are extremely effective at providing a quick response to both slow smouldering and fast flaming fires, while remaining more impervious to kitchen fumes and contamination, which are so often the cause of false alarms.

The Building Research Establishment (BRE) 2018 Briefing Paper – ‘The performance of multi-sensors in fire and false alarm tests’ – reports on the findings of its testing of 35 different optical heat multi-sensors. It estimates that potentially 38.1 per cent of observed false alarms could have been reduced if multi-sensors had been present.

Cost implications

Multi-sensors are more sophisticated than single sensor alarms and are priced accordingly; however you are getting two alarm types in one and, with the more sophisticated models such as our own, there are complex algorithms





Social housing providers have been quick to realise the benefits in terms of improved tenant safety and a reduction in false alarms and overall costs

category LD2, which is increasingly being adopted following recent changes to BS 5839-6:2019 (the code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises) and changes to Scottish legislation.

We estimate that switching to quality multi-sensors can reduce call out rates by an incredible 90 per cent, resulting in a maintenance cost saving which offsets the initial higher purchase cost and still provides an overall saving.

Social housing providers are very much in tune with this. South Cambridgeshire District Council are using mains powered multi-sensors, along with heat and carbon monoxide alarms, in its 1400 sheltered housing properties. The smoke alarm systems are being installed to Category LD2, with a heat alarm in the kitchen, a multi-sensor in all circulation spaces and entrance halls and carbon monoxide alarms in properties that are not fully electric.

"It is imperative to specify the right product for the right situation" states Eddie Spicer, M&E surveyor for South Cambridgeshire District Council.

"Obviously, cost is a major factor and with the introduction of the latest technologies in the multi-sensor, the lack of false alarms has paid dividends with lower call out rates and nuisance alarm activations."

The multi-sensor may only have been in the domestic market for a mere five years, but what an impact it has made during that short time! Social housing providers have been quick to realise the benefits in terms of improved tenant safety and a reduction in false alarms and overall costs. With increasing evidence of the benefits of multi-sensors and the move to LD2 smoke alarm systems which require a higher level of protection, involving more alarms per property, the rise of the multi-sensor looks set to continue.

Andy Speake is national technical manager of Aico


interpreting the signals to get a better understanding of what is really happening in the immediate environment.

Depending on the model, you will probably be paying around 15 per cent more per unit for a multi-sensor. So why are so many people, especially those in the social housing sector, specifying multi-sensors?

With multi-sensors, you are getting the best of both worlds: improved protection and reduced costs when you take into account the financial implications of reduced false alarms that multi-sensors bring.

Using our market knowledge, along with insights from a range of Registered Social Landlords across the UK, we have run some figures, and they make for interesting reading. Based on 10,000 properties where smoke alarms are fitted to the minimum category of protection, LD3, we estimate a potential saving of £101.5k on call out costs when compared to fitting an optical alarm.

That saving more than doubles when alarms are fitted to the medium protection



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Resiblock wows at Wood Wharf



Resiblock, and their patented proprietary self-binding jointing sand Resiblock Resifix, have wowed following installation in Canary Wharf's newest district Wood Wharf. With high levels of both footfall and vehicular traffic expected, the challenge of

keeping the paving stabilised arose. Resiblock were able to rely on the success of Main Street, Gibraltar to demonstrate the effectiveness and long-term success of Resiblock Resifix in a mixed-use environment. This, and subsequent testing, secured Resiblock Resifix as the choice of sand stabiliser for the first phase of the Wood Wharf site.

mail@resiblock.com

The place to be



Woodscape had the pleasure of working with Macgregor Smith Landscape Architects, who headed up a public realm enhancement project in Bath. The spaces required planter seats that were movable to allow reworking of the area for

events. The key circular seat design with offset tree void used a combination of timber slats and intricate bronze fretwork from Inspired Metal, with Woodscape bringing the necessary technical experience required to manufacture the seats so that they could be relocated. Large circular tree seats were produced, utilising a bronze finish skirt and durable hardwood slats with L-shaped backrest.

01254 685 185 sales@woodscape.co.uk

Installation of coloured shade sails & posts



In May 2019 Jeckells the Sailmakers completed an installation at Attleborough Primary School to create three brightly coloured mesh shade sails on green posts to match their drainpipes with yellow post bumpers to match their logo. The installation provides sun shade for the youngsters at the school and Jeckells' project managed the whole installation, including specification and installation of the posts. Jeckells' do a lot of work for schools, understanding their health & safety requirements and working around the curriculum to make life easier for busy school administrators.

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Clark-Drain introduces Technodrain into UK construction

Clark-Drain Ltd unveils Technodrain®, a new addition to its popular linear drainage range that broadens the choice for UK construction.

Designed for surface water management, the versatility of Technodrain® enables it to be used across all construction environments as a light, robust, technical solution for run-off surface design.

Made from High Density Polyethylene, Technodrain® encompasses all load classes (A15-F900) in accordance with European standard EN 1433, comprising an array of grating design options in ductile iron, galvanised steel and stainless steel.

The Technodrain® system will be available in 100mm, 150mm, 200mm and 300mm internal widths.

With the advantage of light-weight, polyethylene - e.g. the EXEL 200HV has a 42.61 l/s hydraulic capacity ideal for use in road drainage and car parks and weighs 26.1kg, complete with D400 ductile iron



grating - its size to weight ratio maximises savings in transport and installation cost.

Technologically advanced, Technodrain® is resistant to temperature change with a thermal range between -60OC and +100OC. It is also resistant to a wide range of acids, salts and hydrocarbons so that it can be used in challenging environments such as chemical plants, petrol stations and surfaces where anti-freeze salts are used.

Technodrain® incorporates many other benefits. Its robust design adds to its sustainable life, whilst installation is eased

with tongue and groove joints enabling the connection of multiple channels with a ready-mounted grate. Its preformed lateral and vertical channel outlets also provide quick and easy connection to discharge pipes.

Furthermore, project design is supported by integrated Tee and Cross-section joints that can adapt the drainage line, enabling control over the accuracy and cost effectiveness of the whole system.

An important additional accessory is the Technodrain® sump unit. It can be installed as a terminal unit off the line or as a central element of two converging lines. The sump is equipped with an optional anti-odour siphon that can be removed easily for cleaning purposes and a grating to filter leaves and debris. Use of the sump allows you to increase the out-flow diameter of all channels up to Ø200.

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 **Woodscape.**

Keeping the public safe, not scared

Securing public spaces – rather than simply focusing on their aesthetics – has fast risen up the agenda for architects, but there is a risk of choosing overly utilitarian options, says Jaz Vilku of Marshalls Landscape Protection

The need to protect the public from vehicle-borne attacks and accidents has always been an important element for architects to consider on projects ranging from town and city centre schemes through to sports stadiums. In recent years, however, as criminal ram raids have increased in frequency and terrorist attacks claimed more lives, the task has become increasingly important.

The issue of protecting public spaces poses two challenges. The first comes from the fact that vehicle terror attacks require little to no planning and can be carried out in an instant. The natural conclusion from this is that it is extremely difficult to predict where and when an incident might happen, creating problems with specifying products to mitigate against this unpredictable threat.

The second is that all too often the products that are chosen are flawed, both aesthetically and for the protection they offer. Take metal barriers and concrete blocks, for example, which have long been the de facto choice. First, their appearance serves to create a hostile look and feel to an area, which leads to fortification. Second, while they are heavy and offer a physical barrier, quite often they're not installed or specified with any security standards. In essence, what is being installed is effectively a dead weight that may stop a vehicle but doesn't offer any actual security guarantees.

But that doesn't need to be the case, and a range of options exist for architects to consider early on in any project that both protect and fit in with its wider aesthetics. These can come in the form of planters, cycle stands, litter bins and benches that can deliver to differing security specifications. Specifying to Publicly Available Specification (PAS) 68, for





example, can see a product able to stop a 7.2 tonne lorry travelling at 40 mph when installed correctly.

For areas where the risk of a hostile vehicle attack is lower, or where protection might predominantly be needed against criminal ram raids – which have more than doubled in the last five years – or accidental collisions, other options

While it's vital to secure urban areas from attacks and crime, so too is the need to combat the psychology that some of the more utilitarian products can create

exist. PAS 170, on the other hand, delivers a testing standard for vehicles of up to 2.5 tonnes travelling up to either 10 mph or 20 mph and is a more cost-effective solution in lower risk areas.

In addition, options are also available in busy towns and city centres where, owing to the ubiquity of underground services ranging from data and electrical cabling to water, gas and waste pipes, installation can be a challenge.

We are leading the way in innovating within this category, with the launch of a super-shallow foundation system, which has a depth requirement of just 100 mm, much lower than the traditional requirements of between 600 mm and 1,000 mm. For those installing the products, this range avoids the requirement for major excavation works, which can lead to road closures, and also minimises the levels of waste.

These options all serve to keep the public safe and not scared. A main objective of terrorists is to destroy the very fabric of our everyday life. While it's vital to secure urban areas from attacks and crime, so too is the need to combat the psychology some of the more utilitarian products can create. By fortifying an area, we run the risk of reducing footfall, impacting businesses and having a detrimental effect on a location's cultural heritage.

Specifying aesthetically pleasing landscape furniture products that make sure the risk isn't visible to someone using a space now needs to be high on the list of priorities for architects. By being aware of the threats posed and the options available, public spaces can be made both safe, and welcoming.

Jaz Vilkhū is managing director at Marshalls Landscape Protection

Stay Safe with Energetics Technology

Established in 2010 by Dr Peter Jemmett, Derbyshire based Energetics Technology Ltd (ETL) is very active in creating new products for the security and counter terror industries. ETL centres on the research and development of energetic materials, and pyrotechnic products for the successful integration of its products into ordnance systems. The company offers the design and manufacturing of specialist energetic products and research and development into pyrotechnic compositions and explosives, explosives and weapon system evaluations, CIED training and the supply of EOD equipment.

Flexible UK manufacturing facilities render ETL capable of providing fast responses and able to cater for any level of specificity the customer may require. With the specialist defence product market increasing notably, ETL have grown to offer a variety of solutions.

ETL's experience and knowledge in energetic compositions also enables the company to create products that protect against such compositions. This knowledge is



used in the development and manufacture of its blast protection products.

ETL has recently launched its HALO 80 Plus, an all-new blast resistant litter bin, an improvement on the HALO 80, an already popular product for dealing with public area threats. The HALO 80 Plus offers an improved protective performance against explosions and overpressures. It also has increased protection from high velocity primary fragments and is reshaping the blast protection capabilities of a small sized bin. The bin does not need to be permanently fixed to the ground, thus saving on expensive installation costs and rendering the bin easily transportable should the location of the threat change. The HALO 80 Plus

provides seven star rated blast mitigation and it is functional and easily emptied. It incorporates SABREMAT technology which, enables all-round horizontal protection. Additionally, the Halo 80 Plus has very low maintenance costs, all equating in the bin being vastly superior to other similar products.

As well as being excellent in its function, the HALO 80 Plus can be fitted with accessories and optional extras. It can be fitted with a powder coated sleeve that can meet any standard RAL colour, or a perforated stainless steel sleeve. Buyers can also choose from recycling lids, section dividers and rain cover lids, vinyl labels for recycling information, logos or branding and cigarette stubber plates.

ETL can also offer standard isolation units and threat mitigation units for use in airport baggage areas, police stations, commercial offices, academic institutions and embassies. ETL also offers bespoke solutions to customers needing security or counter terrorism products tailored to specific needs.

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Green-tech supply Green-tree soils for £30m refurbishment programme

One of the UK's busiest retail sites, Teesside Park in Stockton-on-Tees, is undergoing its biggest overhaul for 30 years. Owner, leading UK property company British Land has undertaken a £30m programme of enhancements, of which £1.6m has been allocated to new landscaping, over a period of 18 months and 12 phases.

The majority of the landscaping centres around the new car parking layout, which has been totally re-designed to improve accessibility, traffic flow and reduce 'conflict'. It is being carried out by Gavin Jones Limited who provide professional landscape management services across the UK.

Two key pedestrian routes have been added as well as an open-air courtyard, featuring seating and Corten-style planters.

As part of the first three phases, Green-tech has supplied in excess of 1,500 tonnes of Green-tree soil, including Amenity Tree Soil, sand and pea gravel for the tree pits; along with Green-tree subsoil and topsoil for the



ornamental herbaceous planters.

The landscape architects, MacGregor Smith, requested a specific planting specification, and Green-tree was able to produce a bespoke topsoil mix to satisfy these demands.

The soil was supplied from one of Green-tree's soil manufacturing sites in Yorkshire, just three miles away from the final site. All deliveries were timed to hit pre-9am timed deliveries; the smaller batches ensuring that all soil was fresh and easy to handle.

In addition, Green-tech's Mona Relief irrigation systems and tree anchors were

supplied to ensure all the trees and shrubs have the best possible chance of establishment and success in their new environment.

Richard Wexham from Green-tech said, "To supply the soil for such a major project, with such a tight specification and deadlines, is something that we thrive on. We have worked with both the landscape contractor, Gavin Jones Ltd, and landscape Architect MacGregor Smith on several projects now, and it is always a pleasure to be able to deliver a fantastic product at a competitive price."

Ricky Whiteman, Head of Estimating North from Gavin Jones Ltd adds, "On a project of this scale, logistics and delivery deadlines are critical. Working with Green-tech on previous projects, we were confident that everything would run to plan, and they didn't let us down. Everything was supplied when and where it was needed, with the minimum of fuss."

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