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The Housing Issue

ZHA's Patrik Schumacher calls for a market-led revolution in housing

ADF's Future Watch looks at the debate around density

BROCK COMMONS TALLWOOD HOUSE, VANCOUVER

How the design of the world's tallest engineered timber building makes a virtue of its 'ordinariness'

ONE PARK DRIVE, CANARY WHARF

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CONTENTS

03.18

NEWS, VIEWS & INSIGHTS

- 04 Industry news & events
- 13 **Future Watch:** Embracing density
- 17 **Ask the Architect:** Patrik Schumacher, principal at Zaha Hadid Architects
- 20 International Focus
- 23 CPD Focus
- 24 Appointments & news

PRODUCTS

- 45 Groundworks & Drainage
- 48 Structural elements
- 49 External envelope
- 58 Insulation
- 62 Heating, ventilation & services
- 64 Interiors
- 73 Smoke & fire protection
- 74 Safety & security
- 74 Landscaping & external works
- 75 Classified & directory

PROJECT REPORTS

- 26 **A well-rounded view**
The architectural centrepiece of Canary Wharf's new residential development is One Park Drive, Herzog & de Meuron's first UK project yet seen in this sector and a porous, cylindrical landmark. Jack Wooler reports
- 34 **Mass appeal**
James Parker reports on how an "extraordinarily ordinary" student residence in Vancouver became the world's tallest engineered timber building

FEATURES

47 **GROUNDWORKS & DRAINAGE: SEPTIC TANK & PUMPING STATIONS**

Realms of possibility

Ann Boardman of Saniflo UK talks about overcoming drainage challenges and how ambitious projects can go ahead without direct access to mains drainage

51 **EXTERNAL ENVELOPE: GLASS & GLAZING**

Prior engagement

Andrew Cooper of Senior Architectural Systems looks at how getting suppliers on board early can lead to plainer sailing for everyone

60 **INSULATION:**

Time for change

On 1 April, the Minimum Energy Efficiency Standards (MEES) comes into effect in England and Wales. Adrian Pargeter of Kingspan Insulation looks at the effect it will have

65 **INTERIORS**

Hit the deck

Tom Rollo of Polyflor examines the growing number of safety flooring options available to architects

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FROM THE EDITOR



In this issue of *ADF* we focus on the issue of the moment – housing. It is the biggest political football imaginable, with the conflicting demands of 300,000 homes per year to solve the housing crisis, versus developers' and NIMBYs' parallel aims to only build when and where viable. However Theresa May, no doubt frustrated with the lack of progress on her "mission" to build, is now directly attacking developers, accusing them of being "unscrupulous" in their desire to "dodge their obligation to build homes local people can afford."

Expecting housebuilders to do anything other than try and maximise their profits is naïve. The system is weak, and arguably has been made weaker in favour of developers, but a stick rather than carrot approach seems to be emerging at Government level. It hopes its new update to the National Planning Policy Framework (NPPF) will be taken seriously as a sign it is getting tough in an attempt to solve the crisis. Observers have poured cold water on it, saying it contains few new measures since the Autumn Statement.

The tone at the centre has changed however, to something approaching hostility. May made an implied threat to developers that incentive schemes such as Help to Buy, which have led to thousands of new schemes, could be withdrawn if they didn't do their bit. Housebuilders had to "raise their game," she said. And councils are being told that they may not be able to apply so much discretion when it comes to where to build.

However with an absence of measures compelling housebuilders to build out sites they already have permission for (we will have to wait to see what Oliver Letwin's review says), it's hard to see what will prevent developers land-banking. There are some lukewarm moves in the draft NPPF such as allowing councils to impose a start time on developments to try and reduce the problem of developers 'sitting on' sites, as well as to monitor sites which have planning permission, but this puts the onus firmly on local authorities, not developers.

When you ask the developers, however, they see it differently. Andrew Whittaker of the Home Builders Federation nearly accused the Government of lying when it says that they are land-banking, and questions Sajid Javid's approach of "use it or lose it." He categorically denied developers were hoarding land for when the price is right for them to build, saying that developers wanted to build and sell as quickly as possible. Builders say that being impelled to create infrastructure such as roads as well as homes is a key part of the reason they can't always build out sites quickly, not greed.

This is a seemingly intractable problem, when there is still no 'stick' to force developers to build affordable homes, therefore potentially reducing their profits. There's no way they can be expected to operate altruistically, so some form of quota system is surely needed to replace the "viability assessments" currently geared to guaranteeing profits margins in the NPPF. Its almost axiomatic that whatever replaces or updates it needs to be far more robust, if affordable homes are to be delivered in the volume needed.

James Parker
Editor

**ON THE COVER...**

Brock Commons Tallwood house, Vancouver – the world's tallest timber building – designed by architects Acton Ostry.

© Michael Elkan Photography

For the full report on this project, go to page 34



© University College Dublin

COMPETITION

University College Dublin launches international competition to design new precinct and academic building

University College Dublin (UCD) and Malcolm Reading Consultants (MRC) have launched the Future Campus international design competition to design a precinct plus a Centre for Creative Design.

The announcement marks the beginning of a global search for an integrated design team to firstly, create an entrance precinct masterplan. Secondly, they will devise a concept design for an integrated 8,000 m² building that “expresses the University’s creativity” – the Centre for Creative Design, which will be a “making and learning lab”.

The campus has a strong architectural pedigree with a mid-20th-century core designed by Polish architect Andrzej Wejchert, and world-leading facilities.

The urban design element of the competition challenge reflects UCD’s desire to create a “strong and flexible urban design vision” for an area of the campus totalling around 24 ha, informed by place making, accessibility and people flows.

This anticipates the potential for up to 335,000 m² of new development (representing a footprint of circa 67,000 m²).

The Centre for Creative Design is conceived as a charismatic yet well-integrated building that is a “living learning lab” – using innovative materials and new technologies to express its purpose as the university’s home of design studios and laboratories, and maker, project and fabrication spaces. It is intended to foster interdisciplinary learning and encourage academic and business collaborations. Both the Centre for Creative Design and the masterplan vision will exemplify sustainable principles and demonstrate environmentally-aware and “future-facing” design.

Professor Andrew J. Deeks, president of University College Dublin said that the overarching design challenge embodied by the masterplan vision and the Centre for Creative Design is to “give the university greater presence, greater visibility so that it

resonates, becomes better integrated and is a distinctive entity within the city of Dublin.”

“When people come here,” he continued, “we want them to immediately engage with, and strongly relate to, the university. We want our physical environment to inspire and energise students and faculty tutors; local innovators and communities.”

The first-stage global search will culminate in the selection of five teams chosen on the basis of relevant skills and past experience. At the second stage, these teams will be invited to visit the site and receive further briefing, and will be asked to produce a vision for the Entrance Precinct Masterplan and a concept design for the Centre for Creative Design. International teams will be required to team up with a local executive team during the second stage. An honorarium of €40,000 will be paid to each of the shortlisted teams following the conclusion of the competition.

EVENTS

SEMINARS

Designing for flood resilience

08 March, Gateshead

www.architecture.com/whats-on

RIBA Succession planning

14 March, Cambridge

www.architecture.com/whats-on

WORKSHOPS

RIBA Future Leaders: Learning to Lead

22 March, London

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EXHIBITION

The Architecture of Drawing Prize

21 February - 14 April, London

www.soane.org/whats-on/exhibitions

TRADE SHOWS

UK Concrete Show

21-22 March, Birmingham

www.concreteshow.co.uk

Materials for Architecture

25-26 April, London

www.materialsforarchitecture.com

Clerkenwell Design Week

22-24 May, London

www.clerkenwelldesignweek.com

Vision

21-22 June, London

www.visionlondon.com

100% Design

19-22 September, London

www.100percentdesign.co.uk



RESIDENTIAL PROJECT

Plans approved for housing scheme over the Thames

A residential project that will see the first housing built over the River Thames, has been given the go-ahead by planners.

Dartford Council has approved the final phase of the successful Ingress Park development at Greenhithe in Kent, that will see the construction of a 16-storey tower, a smaller apartment block and 20 townhouses on a new pier extending more than 30 metres over the river.

Ingress Park's developer, Crest Nicholson Eastern, has built out the majority of the 1,500 homes already in occupation and appointed Broadway Malyan to design a neighbourhood heart to complete the settlement.

The new pier, which will be 190 metres wide, will replace a previous pier on the site, which was built to service a large paper mill supplying the newspaper industry, demolished in the 1990s to make way for the new development.

The design creates a new riverside walk and a series of terrace viewing points to observe the nearby QE2 Bridge and the shipping along one of the UK's busiest waterways to the east of London.

The 16 storey tower curves along its frontage with the River Thames to maximise views and sunlight for the apartments, with extensive terraces providing views along the river towards London or towards the Ebbsfleet peninsula.

The shape also reflects the new semi-circular public space formed at street level, in combination with earlier phases of development. The tower will also provide space for shops, restaurants and cafes at street and river walk level.

John Dodson, who led the project for Broadway Malyan said: "The design has had to overcome a range of technical and regulatory challenges, so we are delighted to be able to now move ahead with an exciting and unique project that is actively building new residential accommodation over the River Thames, as opposed to along its banks."

"The new landscaped amenity space will serve the Ingress Park community, both for regular shopping and entertainment, such as seasonal events and farmers' markets.

"The links into the wider riverside environment and unique ecology of the semi-saline marshland of the Ebbsfleet Peninsular will bring many visitors, making the circus a key point on their riverside walking route and creating a tranquil place for people to enjoy the unique landscape.

"This final phase of Ingress Park will create a really vibrant residential hub on London's doorstep, with the benefit of being situated within the unique river landscape of Black Duck Marsh and the Ebbsfleet peninsula."

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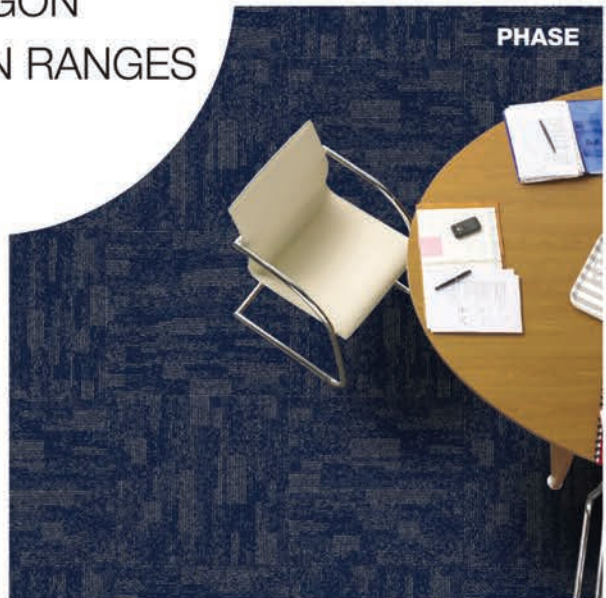


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BOOK

The Handbook of Urban Morphology

The Handbook of Urban Morphology (Wiley 2017) by Karl Kropf, senior lecturer at Oxford Brookes University, brings together theory, practice, and logic from architecture, planning, geography, archaeology and anthropology in an effort to “deepen our understanding of the built environment as a diverse, complex structure that is the product of ongoing social processes.”

Using cases from across the globe, Kropf, also of urban design consultancy Built Form Resource has provided a detailed to employing morphology in urban planning, with step-by-step instructions to solving complex problems. The book demonstrates a cross-pollination of fields, “combining academic research in urban morphology and practice in urban design with the aim of using insights from one to improve the other”.

The Handbook is divided into three parts – Principles, Methods (including case studies), and Applications, which reviews different applications of urban morphology.

Kropf concludes by stating that the built environment can be considered as a “quasi-natural phenomenon”, sitting between empirical and cultural understanding. He recommends continuing to extend understanding from both viewpoints.

EVENT

Metals in focus at Materials for Architecture



A wide spectrum of metals will be put under the microscope at Materials for Architecture, the highly focused 2018 conference and exhibition, taking place from 25-26 April at the ILEC Conference Centre, London.

As part of a packed speaker lineup looking at key construction materials in practice, thought leaders will analyse metals' use in structures, envelope, facades and finishes. This will help to bolster best practice, demystify problems, and advance the cutting-edge of specification and technology.

Conference highlights include: ‘The compelling sustainability case for aluminium in architecture’ will see Professor Michael Stacey of Michael Stacey Architects outline the benefits for architects, on sustainability and durability grounds.

Copper innovation expert Graeme Bell of Aurubis will cover ‘Advanced architectural approaches’ in both copper and copper alloys for facades in his talk at Materials for Architecture. Also Jan Lukaszewski of ALFED (The Aluminium Federation) will offer a technical perspective on how aluminium can enhance durability. Lastly, Jonathan Lowy, of VM Zinc, will look at zinc’s timeless aesthetics.

Register to attend at www.materialsforarchitecture.com

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AWARDS

The 2018 Manser Medal for the best one-off house



The Manser Medal is widely regarded as the UK's most coveted architectural award for one-off house design. It was first presented in 2001 to inspire innovation in house design and create exemplars to be taken up by the wider housebuilding industry. Named in honour of Michael Manser CBE, RA, PPRIBA, the 2018 Medal is to be presented in association with the Sunday Times British Homes Awards, with the winner receiving a £5,000 prize fund.

Michael's son Jonathan Manser, managing director of The Manser Practice commented: "My father is honoured that a Medal was introduced in his name to recognise design excellence in one-off home design. Since Cezary Bednarski's inaugural win in 2001, subsequent winning architects have earned industry acclaim and public recognition and helped their business.

"I am delighted with the plans to further build on this successful legacy with the Medal now enjoying an even bigger profile as an integral part of the highly respected British Homes Awards with the Sunday Times, and with the added attraction of a prize fund for the winning architect."

Accompanying Jonathan Manser on visits to the six schemes short-listed for the 2017 Medal were fellow judges:

- Chris Loyn, architect and founder, Loyn + Co Architects, twice Manser Medal winner with Stormy Castle in 2014 and Outhouse in 2016
 - Sandra Coppin, director, Coppin Dockray Architecture & Design
- The winner for 2017, after much debate, was Greenways, designed by Eldridge London. The judges declared: "In the middle of bosky suburbia this house appears to hover above the ground when seen from the road and the illusions continue at every level thereafter.

Beautifully designed and built, with immaculate detailing, there is hardly a straight line in the building and the resultant plan, linkage of spaces, and relationship of the house to its carefully sculpted garden is nothing if not innovative. The building stays in the mind, causing discussion and further thought."



The winner of the 2017 Manser Medal: Greenways, Coombe Park designed by Eldridge London

In awarding the Medal to Mike Gibson of Eldridge London at the presentation of the 2017 Sunday Times British Homes Awards, Jonathan Manser enthused: "This is a house that can't be ignored, has many stunning and surprising elements and, while unlikely to be copied, will give Architects and housebuilders much to think about. A fantastically brave and well executed 'grand project' of domestic architecture!"

Recognising the Medal's respected legacy Nick Eldridge commented: "We are honoured to be the recipient of the 2017 Manser Medal as it is the one award which has consistently championed quality and innovation in house design. The recognition from our peers, who know the challenges of making architecture, cannot be underestimated."

Announcing the 2018 Medal

To ensure the spirit and legacy of the Medal endures, certain amendments to the entry qualification criteria have been made for 2018:



- For new build houses to bespoke commission only
 - House transformations/renovations/refurbishments /conversions excluded
 - Contract value below £1.5m
 - For practices formed since 2000
 - For projects within the U.K. or Europe
 - For houses by any designer/architect; not exclusive to RIBA members
- Submissions for the 2018 Medal can be made online at www.mansermedal.co.uk before midnight on Thursday June 7 2018.

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FUTURE WATCH

Embracing density

James Parker looks at how the new London Plan could transform the capital, as it puts high-density housing high on the agenda

London Mayor Sadiq Khan's London Plan, governing all London's planning decisions, is still in draft form. When finally published next year it could have big repercussions for the shape of London's housing. However, many believe that this is not coming soon enough, to tackle the triple threat of London's crisis of affordability, the stigma attached to high-density housing, and the stranglehold of planning which has historically prevented more effective alternatives flourishing.

London now contains 8.7 million people, and forecasts of 11 million by 2050 are not fanciful. The Mayor has responded by increasing housebuilding targets to 65,000 homes per year, but estate agents have predicted that only half that will be built in reality.

The yawning gap between supply and demand, particularly in affordable homes, is well known. What is less widely discussed is how building at greater density could both help to close the gap in numbers terms, but also amplify the benefits of city living for residents, bringing infrastructure closer to homes and reducing car use. Upping density has traditionally been associated with tower blocks, but Victorian terraces and mid-rise mansion blocks can in some cases offer greater density, and much better amenity.

According to Tim Burgess, director of CoveBurgess architects, increasing density is "undoubtedly the most effective solution to the housing crisis." He adds: "The idea that we continue to build houses away from where people work couldn't be more misguided for a sustainable future."

He explains further: "Density determines footfall on the streets and footfall is the key that unlocks city life. If you are fortunate enough to live on Manhattan Island, you need not leave your city block to get all that you need, from cafes to culture."

Removing density limits

Khan's team at the GLA, led by dynamic deputy mayor Jules Pipe, have made a major intervention in order to try and push the density of future development, as part of the revision of the London Plan last December. The launch of the draft plan came with the headline that Khan has "ripped up planning rules," – partly based around his team having removed the upper limit for density.

The key aspects underpinning the new London Plan when it comes to density are as follows:

- A new concept of 'making the best use of land', as an overarching holistic objective feeding many of the policy areas, superseding previous requirements to "maximise" or "optimise" the use of land
- Linking greater density with higher design quality
- Abolish the 'Density Matrix' previously used by GLA to set a limit for each Borough (based on number of habitable rooms,



and dwellings per hectare)

- Borough councils to work with developers to establish the correct density on site by site basis, (key factors being transport connectivity and infrastructure)
- Presumption in favour of 'small sites' of 25 homes or fewer, supported by targets for each Borough.

Car trouble

Previously the GLA permitted higher density in areas with a high Public Transport Access Level (PTAL) score, in the belief that a greater number of homes could be supported because of good access to public transport. Avoiding the need to prioritise car use in developments, this remains a key driver for the GLA as the Mayor looks to reduce emissions across the capital.

This is one reason why, as a recent blog by consultant Deloitte pointed out, what "constitutes the 'best use of land' is likely to cause plenty of debate." In ending the previous cap, the new Plan theoretically makes it possible to build high-density housing where deemed appropriate, and this will be controversial in many cases.

At the 22 January meeting of the London Assembly Planning Committee, GLA Conservative member Tony Arbour complained that because it was proposed that new residential development over 800 m² would not need off street parking, the new London Plan would create "inconvenience in suburbs," and that there "wasn't a proper realisation that there are very many Londons, and in outer

London the requirement for a car is very different to inner London.”

Jules Pipe responded by admitting there was a direct policy intention to de-incentivise car use, saying “there has to be behaviour change around cars, we can’t design for potential car use.”

Design issues

A range of views were expressed at the London Assembly meeting regarding the merits of a more coordinated approach to increasing density, although there were concerns over whether a removal of the upper limit was the best way to do this.

Architect Sunand Prasad of Penoyre and Prasad commended what he saw as a “move from developer-led to plan-led” approach at the GLA, as “fantastic in theory.” However he added a major caveat that to do so was “very complicated” and the current Plan seemed “half-baked” in simply removing a limit on density in one fell swoop. Prasad added: “There’s no transition, you are potentially removing all prescription.”

Jules Pipe responded to dissenters on whether the matrix could have been retained with a lower and upper limit, saying that local Boroughs could set size mixes, including the proportion of affordable rented housing. He admitted however that “there is a capacity issue at local authorities”.

He insisted that the GLA “haven’t abandoned the principles of the density matrix” and confirmed that PTAL would remain the key means for working out the correct density. This is despite the fact the measure has been criticised because they present an “effectively binary choice” between PTAL categories 1-3 and 4-6 “which can virtually double the acceptable density,” according to a blog by legal firm Lichfields.

Local planning authorities are “all too often placed under pressure by objectors if considering schemes at above the maximum density,” said Lichfields. However it added that this could again be avoided if they “accepted a little more subtlety in interpretation [of PTAL]”.

Developers will be encouraged to build affordable housing by the fact that schemes with 35 per cent or more affordable housing can benefit from fast track planning. Also, the GLA has promised new housing design guidance to support the new London Plan. This may give some hints as to what it means by developers offering “range” and “variety” to homeowners or renters, in the form of a greater mix of typologies on these denser future developments.

Devolution revolution

GLA members present at the meeting confirmed that the density level could be different on every site, and that they were “trying to get back to Boroughs looking at the capacity of each site”. With decision-making devolved, comes the question of whether it will be more accountable to local residents. One contributor at the GLA meeting warned, however, that as a result of removing the limit on density, “there are going to be a lot of developments that communities are going to feel uncomfortable with, because they weren’t involved, and because of what it is”.

One organisation is trying to counter the assumption that residents automatically recoil at the idea of more homes being added to their site footprint, making the case for both how density can enhance streets and add value, and for much greater community involvement in decision-making.

London YIMBY emulates the US-based Yes in My Back Yard movement which campaigns for development in areas where rental costs have escalated far beyond affordable levels for most residents.

The YIMBY organisation is trying to counter the assumption that residents automatically recoil at the idea of more homes being added to their site footprint

Its director John Myers told *ADF* that increasing density is the way forward: “Done well it can be a great way to get better places and do more with the land we have”.

He is aiming to harness political support, encouraged by the California YIMBY movement having achieved three state laws to get more homes built, and a proposal to allow buildings of up to 80 feet in height anywhere within walking distance of public transport.

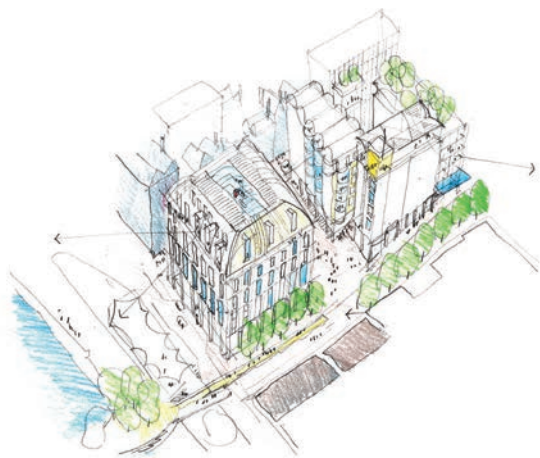
Myers believes firmly that better spaces are possible via denser housing: “We have plenty of room to build attractive, dense housing that will make better, more walkable and liveable places.” He thinks that the London Plan “is looking in the right direction, although the way they’ve drafted the small sites policy is very controversial in some areas.

The London YIMBY project (www.londonyimby.org) also looks to devolve decision-making down to community level. In its 2017 report ‘Yes in My Back Yard – How to end the housing crisis, boost the economy and win more votes,’ one of the “most popular options” described, says Myers, is the idea of letting residents allocate themselves planning permission on a street-by-street basis. They can then extend upwards or replace, thus increase density in a way that suits them, using a design code they have drawn up. According to the report, surveys carried out in 2016 and 2017 showed “up to 53 per cent” of residents in favour of the idea.

Tim Burgess of CoveBurgess praises the YIMBY report’s ideas as “effective because they attack the root of the problem, that is ‘top-down’ planning policy. National policy is a blunt instrument that is interpreted differently by different councils, and leads to endless bureaucracy, rather than imaginative solutions.” He adds: “The report creates a new structure of ‘grass roots up’, that allow cities to be intensified in a much more granular and particular way, without losing the grain, or pattern, of a place.”

Myers cites a successful project that increased density in Primrose Hill, north London by HTA Design, where two rows of Victorian houses added mansard roof extensions to increase living space for growing families, or facilitate division into flats. The Fitzroo project, despite “unanimous support from residents” took two years to get planning. Says Myers, “Many planners want more well-planned density, but they are sensitive to reactions from local voters and councillors. The system was never really designed to allow a lot of densification.” He adds: “The GLA’s new draft London Plan is pushing for more density, and we are starting to see a backlash from some Boroughs.”

Patrik Schumacher, principal at ZHA Architects, is a proponent of the benefits of urban density, but also has controversial views on the merits of letting the market dictate planning rather than politics. He says he supports the idea of residents being able to grant themselves rights to develop, seeing this as an example of where the market can dictate the best density for its own needs. “It will tease out where these densifications would be most value enhancing. This would not only increase the beauty and liveability of these areas as many new urban amenities would come in the wake of this densification, but contribute to overall prosperity as this would convert millions of commuting hours to potentially



Many planners want more well-planned density, but they are sensitive to reactions from local voters & councillors

John Myers, director London YIMBY

productive working and networking hours.”

Schumacher believes that decision-making on housing should be liberated from planning departments: “Arbitrary, politically imposed density and land use restrictions – and especially

arbitrary space standards – have to be abolished. Entrepreneurial creativity must be allowed to tailor solutions to various lifestyles and income groups.”

He cites the example of The Collective, a ‘co-living’ rental-based scheme in Old Oak, Hammersmith which features substantial shared space such as gyms, pools, gaming rooms, co-working space and a restaurant, but compact 10 m² apartments. “It is a great, truly affordable offer, delivered by an entrepreneur unleashed from the standards that now freeze all spatial innovation.”

Future questions

The big problem might turn out to be that as the new London Plan takes effect in coming years, and density increases in inner London sites (to the benefit of many communities ready to take on such vibrancy which others might read as crowdedness), that the suburbs remain largely untouched when it comes to higher density development. What of the vast swathes of land outside the North Circular, where more savvy design-led planning could mean more efficient and sustainable, denser communities with good public transport rather than the traditional miles of semi-detacheds? The Mayor expects the suburbs to produce 250,000 homes over the next decade so brave new thinking, with place-making at the core, is needed.

Interestingly, London’s population density is relatively high but in terms of land use its density is thirteenth out of 15 ‘world cities’, well below Tokyo and New York. This means that there is great untapped potential to increase density across the capital, and that architectural judgement will need to be brought to bear in order to get it right. ■

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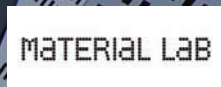
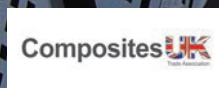
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ASK THE ARCHITECT

Patrik Schumacher, principal at Zaha Hadid Architects, answers *ADF*'s questions on how housing could be improved



Patrik Schumacher of ZHA

YOU HAVE SAID SOME FAIRLY STARTLING THINGS ON THE SUBJECT OF SOCIAL HOUSING RECENTLY, ARE SUCH COMMENTS PARTLY DESIGNED TO PROVOKE PEOPLE OUT OF THEIR COMFORT ZONE?

I am using the debate to explore ideas and am willing to receive serious push back. My comments about privatisation and social housing have been met with disbelief by many, although I also received a lot of encouragement.

To give truth a chance at all we need to avoid ad hominem attacks and see each other as honest, unselfish truth seekers, even in the face of unusual contributions. Defamation must never substitute for argument.

YOU SAY THE MARKET SHOULD DECIDE ON THE BEST DENSITY – IS THIS IN THE MAIN A REACTION TO THE WORST ILLS OF GOVERNMENT PLANNING?

The housing market is unfortunately one of the most politicised markets, suffocating under political interventionism. The loss of societal prosperity here is enormous, not only due to the poor housing provision, but further due to its stifling impact on all economic activities. Productivity growth is the key to all our aspirations.

Our communication-intensive new economy depends on continuous professional networking and thrives best in large, dense urban clusters.

YOU ADVOCATE ABOLISHING ALL GOVERNMENT-LED SOCIAL AND AFFORDABLE HOUSING, HOW COULD YOU BE SURE THE PRIVATE SECTOR WOULD BUILD THE RIGHT AMOUNTS AND RIGHT QUALITY IN ITS PLACE?

How can we be sure that the private sector will deliver fresh croissants, coffee and orange juice according to individual preferences for millions of breakfast tables every morning? All this happens without any quotas! The 19th century, the era of laissez-faire capitalism, delivered all those beautiful urban buildings we still thrive in better than in what 20th century government planning delivered.

WHY WOULD THE PRIVATE SECTOR BUILD IN AREAS WHICH WERE NOT FINANCIALLY ATTRACTIVE FOR IT TO DO SO – AND IS THIS A PROBLEM?

In a free market society, a real need expresses itself in market demand, which in turn inspires supply. The greatest fortunes are earned through the supply of mass markets, without any subsidies. Competition in supply keeps prices competitive. Our affordability crisis must be attributed to supply restrictions – nobody is disputing this. Where I diverge from the mainstream is that I do not believe that subsidies are the answer while restrictions are kept in place.

How then, without subsidies, will those with lower incomes be housed? By urban entrepreneurs who will tailor economic products for this market segment, if the Government gets out of the way. Housebuilders should be able to deliver decent, truly affordable housing, but only if Government withdraws and let's the market get to work.

Arbitrary, politically imposed density, land use and space standards have to be abolished, and entrepreneurial creativity must be allowed to tailor solutions to various lifestyles and income groups.

LONDON HAS FAILED TO BUILD THE AFFORDABLE HOUSING IT NEEDS – HALF OF THE 30,000 BUILT IN 2016 WAS BUILT IN 2007, WHO DO YOU BLAME FOR THIS?

I blame the planning system and 'nimby'ism, as well as space standards, but also the affordability impositions themselves which discourage development.

Rationing forgoes the market rationality that always allocates resources to those who best utilise them. For the sake of society's total productivity, central locations should be allocated to those whose optimum productivity is most dependent upon operating at the centre of our network society.

The whole system of so-called 'affordable housing' constitutes a massive interference with market processes that costs our society dearly, and is one of the contributing causes of the whole affordability crisis it is intended to alleviate. If you think through the chain of economic effects from the fact that some people receive houses at artificially suppressed prices, it makes housing, on average, less affordable.

Sadiq Khan seems intent on ramping up 'affordable housing,' i.e. housing rationed according to political prerogatives, to 50 per cent of all new housing provision, thereby making the remainder – which has to cover the subsidies – all the more unaffordable. No wonder that the income eligibility threshold is ramped up continuously also. A vicious cycle.

By subsidising the residences of privately employed 'key workers' we only allow their salaries to be lowered, thus benefitting those who use their services. This might often be people who could, would and should pay more for these services. By subsidising such workers we are further privileging a group that seems already comparatively privileged. Like most subsidies they do not at all deliver what they claim, namely to help those most in real need.

DO YOU HAVE A MODEL OF MARKET-LED SOCIAL HOUSING YOU ARE READY TO APPLY IN PRACTICE?

We are working on radical densification concepts with creative entrepreneurs like Reza Merchant from The Collective and Crispin Kelly from Baylight. The Collective uses a regulatory loophole to offer a very innovative, affordable and attractive rental 'co-living' product in London, far away from the imposed space standards. The individual apartment units are just 10 m², i.e. one fourth of the required minimum.

DO YOU THINK THE AD HOC COLLECTION OF TALL BUILDINGS IN THE CITY OF LONDON IS AN ILLUSTRATION OF WHAT CAN HAPPEN IF THE MARKET'S ALLOWED TO ADJUDICATE ON PLANNING?

I agree that there is an aesthetic problem with the high rise cluster in the City.

We find this urbanism of seemingly random agglomerations all over the world. I have termed this “garbage spill urbanisation”. It paradoxically produces a disorienting sameness out of too much heterogeneity. My solution to this is not more planning, but the convergence and upgrading of the discipline of architecture towards a hegemonic parametricism that would be able to visually articulate the programmatic order, currently obscured under the stylistic cacophony.

In terms of density, productive programmatic order and vitality, the City of London is an exemplary success. That the creation of this most dynamic, high productivity urban cluster was at all possible is an accident of history: the preservation of the ancient political constitution of the Corporation of London that allowed the finance sector to shape its own space without being hampered by political ‘nimby’ism of residents. The Corporation wisely avoided letting residences and with them potential political forces enter its territory, thus preventing politics trumping economics. However, this also imposed its own cost:

the avoidance of residences is not ideal, but indirectly also politically imposed.

The entrepreneurial freedom of mixing land-uses is crucial for the vitality of the city. Only a creative trial and error process, guided by price signals as well as profit vs loss signals, can discover and optimise, at each individual site, the most value-enhancing use-mixes that best synergise with the particular urban adjacencies of that site. The planning bureaucracy lacks the requisite knowledge, as well as agility, and the incentive, to optimise.

IS THERE A RISK THAT MARKET-LED SOCIAL HOUSING WOULD WORK WELL FOR MORE AFFLUENT PEOPLE IN NICE AREAS, BUT POORER HOMEOWNERS COULD BE EXCLUDED?

Markets cater very well to all priorities of any and all income groups. In my view it makes no sense anymore to try to fix “needs” bureaucratically via standards. The empty, free-floating, boundless concept of need should be replaced by the concept of effective demand backed up by income and willingness to pay. Markets should be set free to cater for all the

individual demands that our society generates. That’s what they do.

HOW CAN ARCHITECTURE ITSELF BE PART OF THE SOLUTION?

Architecture can certainly be an important part of the solution once the space for entrepreneurial freedom has been opened up. Innovative developers will rely on creative architects to cast inventive lifestyle offerings into innovative spatial forms. That freedom is a precondition of innovative problem solving should be self-evident.

And yet, we all too often want to play it all too safe and call for the state to curb freedom and prohibit change. I would like to encourage us to risk more freedom. Theoretical insight into the self-regulation mechanisms of markets should lead us to trust that the market process will discipline and channel the entrepreneurial energies towards outcomes that maximise total societal value. ■

This version has been edited to fit space – Patrik Schumacher’s full answers are available at www.architectsdatafile.co.uk



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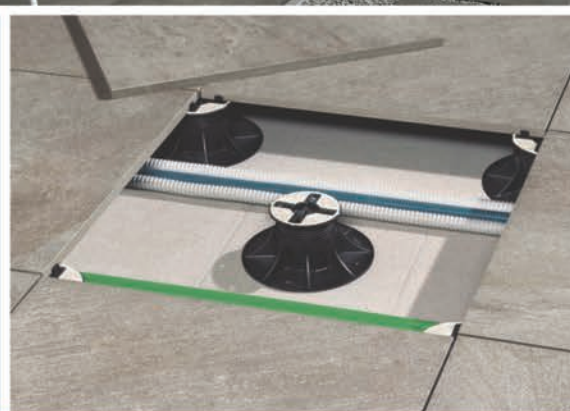
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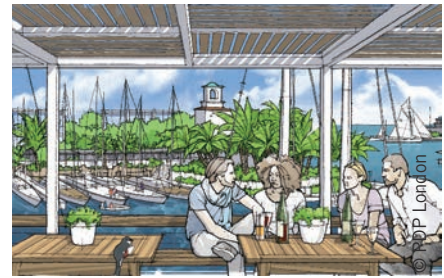
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GOTHENBURG CABLE CAR, SWEDEN UNSTUDIO

UNStudio's design has been selected as the winning entry in the competition to design Gothenburg's cable car. The new cable car system will comprise one cable car line with four stations, and six towers and is one of a number of projects undertaken by the City of Gothenburg to mark its 400th anniversary in 2021. The 3 km long Gothenburg cable car line starts at Järntorget, where it links to a bus and tram transfer node. It then crosses the river and continues to three further stations in the north of the city. Inspired by and referencing the steady motion of Gothenburg's famous shipyard cranes, the six towers will continue across the landscape as sculptures, defining a new city skyline and symbolically connecting the history of the RiverCity with its future. At night, the illumination of the towers is achieved by spotlights that line the inside of the tower beam surface. The stations are not only designed around principles of natural wayfinding and social safety, but also with a strong identity in mind that will make them clearly recognisable as destination points within the city.

Ref: 5090



PUNTA COLORADA MASTERPLAN, CUBA PDP LONDON

PDP London has been appointed masterplan architect for new 700 ha resort in western Cuba, winning an international competition. A collaboration between PDP London Architects and Urban Designers with DSC Group and an expert team of international consultants, the proposed development at Punta Colorada presents a unique opportunity to create one of the world's finest golf destinations. At the heart of the development, four 9-hole golf courses will allow visitors to create their own 18-hole course from any combination they choose. The central golf club will provide the spatial link between the four distinct golf experiences on offer. Sustainability has been a crucial factor throughout the design process, to protect, enhance and curate the existing landscapes in synergy with the proposed new interventions.

Ref: 2802



PERSPECTIVE OFFICE, TURKEY SLASH ARCHITECTS

Slash Architects' first building in Mersin, one of the major towns in Turkey, is a four storey mixed use project. The design has been shaped around segregating the different characteristics of shopping and offices on the facade according to their needs. As the front facade serves customers, the office building has a segregated entrance on the back facade. This facade has an envelope of wooden sun-blinds which are held by a horizontal grid system. This design allows the building to create inner gardens where a lot of greenery is integrated.

Ref: 7373



ZHEJIANG WORLD TRADE CENTER, CHINA LEIGH & ORANGE

Leigh & Orange (L&O) has been appointed to deliver the new Zhejiang World Trade Center (WTC) in Hangzhou. The original building was first established in 1987, designed as a key venue to facilitate foreign trade, during the early years of the Chinese economic reforms. Using the concept of a transit oriented development, or TOD, the new design will help re-zone the existing hotel-office-convention clusters, and inject a “new commercial catalyst for the business community”. Located in the heart of the Huanglong financial district, the project is primarily an underground redevelopment with a total construction area of 79,250 m², including 24,700 m² of new commercial spaces. The basement retail will be connected to the metro forming a public gathering space, a focal point for the surrounding community. Central to the design is the concept of a “retail park”, where retail space will be intertwined with an indoor sport-themed arcade and an outdoor park trail.

Ref: 3816



MUSEUM OF ANTIQUITIES, NARBONNE FOSTER + PARTNERS

The building envelope of the new museum of antiquities in Narbonne, designed by Foster + Partners, is complete and press and elected officials were invited to visit the site of what will be one of the most significant cultural projects in the region. Foster + Partners' design, devised in collaboration with museum specialist Studio Adrien Gardère, is based around the prime exhibit of the museum – a collection of more than 1,000 Roman funerary stones, recovered from the city's medieval walls in the 19th century. The museum's single storey structure with administrative offices at mezzanine level has a precast concrete roof canopy, which, inspired by Roman building techniques, provides thermal mass and contributes to a comprehensive environmental strategy. This canopy is supported by load-bearing SIREWALLs (Structural Insulated Rammed Earth) – striped in varying shades of terracotta that reflect the natural earth hues of the region. These walls also provide an engaging backdrop to the Roman exhibits on display.

Ref: 7287



LUCIEN CORNIL STUDENT RESIDENCE, FRANCE A+ARCHITECTURE

A+Architecture has designed one of the highest wooden buildings in France for the CROUS: the Lucien Cornil hall of residence in Marseilles. Consisting of three wings, the design benefits of this 200-room structure benefits from very high ground floor and attics on the top two levels as well as quality shared spaces. The use of solid wood CLT (Cross Laminated Timber) limits energy consumption and provides a low carbon footprint. “The entire building has been designed to be very heat and acoustically efficient, while maintaining consistent lines and at a very competitive price,” say the architects. A perforated curved panel is mixed with large aluminium shingles to mix up the lines, reduce the scale and break-down the volumes. The perforated skin passes in front of a section of wide glazed strips, transforming the building in the evening.

Ref: 2600



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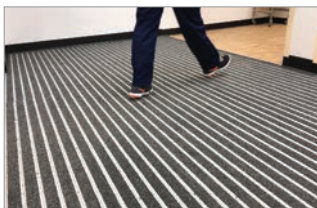
RENOLIT has launched a new CPD seminar on the flexibility and uses of thermoformable PVC as a decorative surface which illustrates the benefits of PVC films over other decorative surface materials. The seminar provides architects with an understanding about PVC and its common uses within interior construction projects. It informs how to recognize different types of surfaces films, their applications and raises awareness of some specialist applications. 01670 718222 www.renolit.com/design

FILA FOCUSES ON TILE SAFETY IN NEW RIBA-APPROVED CPD



FILA has introduced a new RIBA-approved CPD presentation, entitled *Ceramic and porcelain – how a correct cleaning regime can safeguard slip resistance*. The new seminar examines surface maintenance and its importance in terms of health and safety, giving advice on correct specification, with examples of high profile UK case studies. With slips and trips a major cause of injury, FILA's new seminar discusses the link with poor maintenance regimes and, in particular, an inadequate 'initial clean'. 01584 877286 www.filasolutions.com

'STEP ON IT!' SPECIFICATION OF ENTRANCE MATTING



Quantum Flooring Solutions – RIBA approved CPD seminar *STEP ON IT!* is a presentation and discussion dealing with the subject of specifying safe and effective entrance matting. The CPD presentation includes: What entrance matting is designed to achieve and how to select the right one; How recent BRE guidelines affect the choices for specifiers; Environmental and health and safety considerations applicable to the manufacture, installation and maintenance of entrance matting. 0161 627 4222 www.quantumprofilesystems.com

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, its properties and how it is used by specifiers. This seminar aims to offer an understanding of the points of Hill 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

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This session, from Swegon Air Management, available as an in-person seminar or webinar, outlines the need to understand and comply with tested methods when selecting, installing and using fire and fire/smoke dampers. Attendees are educated in damper design, selection, installation, testing, analysis and performance. It aims to highlight and clarify the differences between fire and fire/smoke dampers. The seminar stresses the critical responsibility of all parties involved in the overall sequence from system specification through to compliant installation. Emphasis is placed on the need for all parties to work as a team in order to achieve this goal. 01746 761921 www.swegonair.co.uk

AN ARCHITECTS GUIDE TO WAYFINDING AND SIGNAGE



Navigate your way around wayfinding and signage for building projects with *The Comprehensive Guide to Wayfinding and Signage* CPD from Modulex. Demystify the essentials of wayfinding and signage with tools and guides which enable architects and designers to efficiently guide visitors around their projects, whether for healthcare, education, workplace or leisure. Explore the key materials and typographic considerations for effective signage including when creating an inclusive wayfinding strategy. 01604 684020 www.modulex.com

NEW MODERN PRESS CONNECTION CPD FROM VIEGA



A new CPD aimed at M&E professionals, facilities managers and architects, has been launched by Viega. The CPD explores modern press connection technology in relation to effectively delivering potable water to new and existing buildings. The CPD looks at various elements, which can be a contributor to contamination such as storage and assembly in addition to pipe material and connection systems. The presentation then looks at press connection technology and its advantages for use with potable water supply pipework. 0800 612 2206 www.viega.co.uk

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Donkey Ride was the colour of choice for downstairs walls and kitchen units, while chair backs feature a soft green Sunday Stroll. Photo courtesy Lime Stuff

Internal refurb for listed cottage

Refurbishing a 16th Century listed cottage in Hursley involved integrating original beams into the interior design and renewing lime plaster. Earthborn paints and finishes were chosen because their breathability suits lime plaster and timber. Claypaint was used on all walls and ceilings; some being first treated with Earthborn Isolating Primer. High performance Claypaint gives a distinctive, ultra matt finish. Painted timberwork was given a silk sheen with Earthborn's flexible, hardwearing Eggshell. The kitchen's wooden furniture features Eco Chic Claypaint with a clear protective coating of breathable Earthborn Furniture Wax. Ecolabel approved, Earthborn Claypaint and Eggshell contain no oils or acrylics, making them virtually VOC free.

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British Ceramic Tile sponsor tiling show



The TTA is delighted to announce that British Ceramic Tile is to be the event sponsor of The Tile Association Tiling Show. The support of BCT, who have also signed up as a Gold sponsor of the Awards for this year, is a further demonstration of

the enthusiasm with which the industry has received the launch of The Tiling Show. This is now definitely an event which should not be missed by anyone involved in the tiling sector. The Tile Association Tiling Show will take place on Friday 18 May at The St Johns Hotel, Solihull, the same venue which will host the TTA Awards that evening.

0300 365 8453 www.tiles.org.uk

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The Architects Datafile (ADF) website is an online provider of past and present products and news items for the architect or specifier. architectsdatafile.co.uk is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they may require. From the website, you can find links to digital

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Plaswood wins industry award



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Signbox provides signage solutions



Charter Building, Uxbridge: Signbox provides internal wayfinding and external illuminated signage solutions to five-storey office building. Signbox created and installed simple, icon-led wayfinding graphics, symbols and floor-level information using the latest high-tack, self-adhesive Mactac films.

Graphics were applied to a vast number of surfaces throughout the building: from painted plasterboard to doors, brick and concrete walls and even to the floors of the building's four basement-level car parks.

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Richard Reeve to take Axim to new height

TPG, The Parkside Group Limited is pleased to announce that Richard Reeve, Sales Director will be exclusively looking after one of its major divisions, Axim Architectural Hardware.

Richard has been with TPG for 15 years and is excited to take the leading hardware brand to even greater heights. Richard said, "Axim is one of the most trusted brands in the industry for reliability and quality. Axim celebrated 30 years of business last year and having worked throughout the industry I know that the Axim TC-8800 series of Concealed Transom Closers is well known for its superb long-term performance and as part of TPG, Axim, is backed up by market leading delivery to its European wide distributor and partner network."

Over the last 30 years Axim has extensively developed its product range to include all the hardware that top quality commercial doors require. Richard commented that "Everyone knows the top performer the Axim TC Series

of Concealed Closers, however, I am not sure that everyone is aware of how extensive the Axim product range is. The Axim PR Series Panic Exit range is comprehensive, and the Axim Panic Exit Locking Handle is one of the most high-quality products I have seen which fits across the entire range."

The Axim branded product range includes Emergency and Panic Exit Devices that are certified to BS EN 179 and BS EN 1125, a range of handles including D-handles, Lever Handles, Pad Handles, Pull Handles and Tube Handles, Floor Springs which can take a door weight of up to 150Kg, Locks including Mortice, Dead Latch, Extension Flush Bolts for security slave doors.

The Axim TC-8800 Series of Concealed Transom Closer will fit most major manufacture's doors and has three different strengths. The TC 9900 is a universal closer which is ideal for repair and maintenance and where closers have failed, the TC9900 offers a fast solution without the need for costly repairs.



Offering innovative solutions has been at the fore of Axim and launching new products such as the Axim ES-2100 Electric Strike a remote access product that offers installers a reduction in installation and maintenance time. The Axim LK-2100 Reversible Deadlatch offers a non-handed solution which means that installers and distributors can reduce their stock-holding by only stocking one Deadlatch instead of two.

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Altro retains its place in the Top 100



Altro has been ranked 83 in the coveted Sunday Times 100 Best Companies to Work For 2018 list. This is the 11th time the family-founded, Letchworth-based company has featured in this prestigious list. The Sunday Times Best Companies to Work For list is the annual ranking of

'the cream of Britain's happy and motivated workforces'. With more than 1,000 companies registered to take part, it is considered the most extensive research into employee engagement carried out in the UK.

01462 489 516 www.altro.co.uk

Paul Wright, appointed as Vice Chairman



Formed in 1985, ADSA ensures that its member companies offer premium levels of safety for pedestrian automatic doors. Paul Wright, Service Director for leading access and security solutions provider **dormakaba**, has served as an Executive Council member for four years and will be appointed as Vice Chairman of ADSA on May 1st.

Paul has over 18 years of industry experience. His current remit at dormakaba as Service Director, is to oversee the day-to-day management of the UK and Ireland businesses. To find out more about ADSA and its current work within the industry, please visit adsa.org.uk.

01462 477600 www.dormakaba.com/gb-en

Assuring quality standards



Darren Salmon is now area service manager, southern region, while Angus Grey is undertaking the same role for the northern region. They will assist and co-ordinate many of GEZE UK's largest commercial service tenders, manage its key accounts,

oversee the training and development of team members and undertake liaison with health and safety to ensure compliance with legal requirements and company policies. For more information about GEZE UK's comprehensive range of automatic operators, manual door closers and window technology products call GEZE.

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Use Wood Wisely



Norbord's Use Wood Wisely is an educational resource for the responsible and sustainable use of wood. Rather than burning virgin timber as fuel for energy generation – and thereby releasing tonnes of CO₂ into the atmosphere – Norbord argues for the 'cascade of use' philosophy. It is much more efficient to process virgin timber into added-value products, such as wood

panels, that are used in the housing and construction industry. Burning wood to create electricity can result in significant impacts on wildlife and habitats. In the wood panels industry, among others, timber is made into panels that lock up carbon for many decades.

www.usewoodwisely.co.uk



**BUILDING
PROJECTS**

**ONE PARK DRIVE
CANARY WHARF, LONDON**

A well-rounded view

The architectural centrepiece of Canary Wharf's new residential development is One Park Drive, Herzog & de Meuron's first UK project for the sector and an innovative, cylindrical landmark in tall building design. Jack Wooler reports



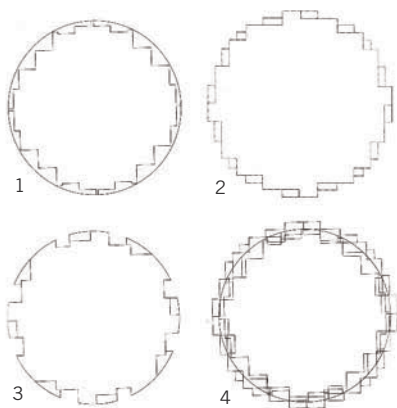
One Park Drive is a residential tower currently being built on a prominent site at the corner of the eastern section of Canary Wharf, formerly known as Wood Wharf. The project is part of seven new neighbourhoods of medium rise and tall buildings that have been masterplanned by architects Allies and Morrison, and which are being developed in a series of phases by the Canary Wharf Group.

Canary Wharf is, in its own right, regarded as one of the UK's two main financial centres, with the other being the City of London. It is home to some of the country's tallest buildings, which One Park Drive, at

58 storeys and 215 metres, will rival. Its near neighbour One Canada Square, is the second tallest building in the UK at 236 metres.

The Group is a real-estate giant, owning around half of the property in Canary Wharf. Over the last 10 years, it is believed that the company has constructed more office space in London than any other developer. The group's remit extends from creating the initial vision, through construction, to the day-to-day management, providing the company with a uniquely long-term perspective.

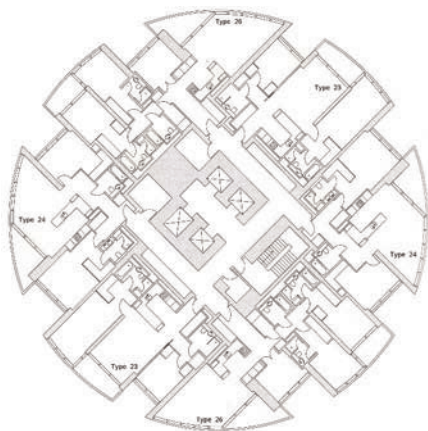
One Park Drive is the first and defining building of the new residential neighbourhood. The project is a

**ABOVE**

1: Loft 2: Cluster 3: Bay 4: Overlay of all levels

BELOW

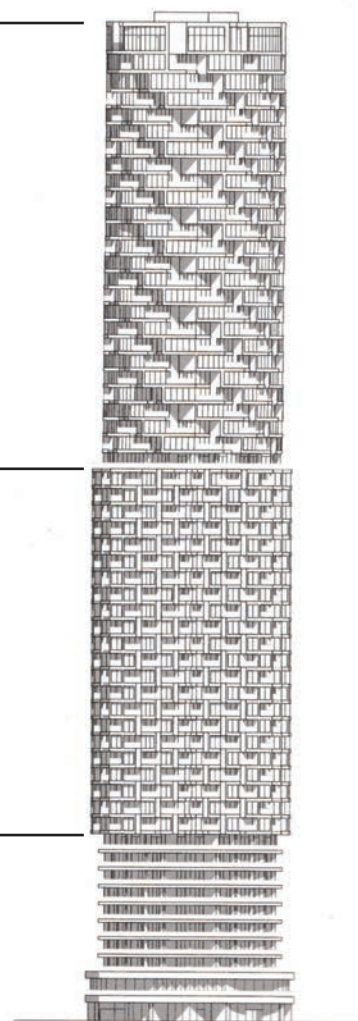
Floor layout of one of the Bay typology's floors



Bay
Levels 33-57

Cluster
Levels 10-32

Loft
Levels 02-09



The tower combines distinct typologies, each of which are easily distinguishable on the skyscraper's exterior – it's envisaged that each will 're-examine city living'

483-apartment skyscraper pitched at the luxury sector, and is Herzog & de Meuron's first residential project in the UK. While the building has been designed to fit harmoniously into its surroundings, and certainly befits the prestige of its waterfront location, the cylindrical design provides a strong contrast to the almost exclusively orthogonal, glass-clad buildings across the estate.

Sir George Iacobescu CBE, chairman and CEO of the Canary Wharf Group, outlined the project and its architects' contribution: "One Park Drive represents the best of Canary Wharf, as our private estate develops into a new destination for London.

"We have collaborated with architects who share our vision for what 21st century urban living can be.

"They have designed a building which is not just a unique piece of architecture but

something which will set the standard for everything that follows."

Design

Swiss firm Herzog & de Meuron's reputation needs little introduction, the practice having been awarded the Pritzker Prize in 2001. Their portfolio includes landmark projects from Beijing National Stadium to the Walker Art Centre, Minnesota. Founded by senior partners Jacques Herzog and Pierre de Meuron, the firm is probably best known in the UK for the transformation of the Bankside Power Station into the new home of the Tate Modern.

The 21st century has often been called the 'Age of Spectacle', and many modern statement buildings are characterised by architects aspiring first and foremost to



Meticulous thought has been put into the design of the building

SITE

The building is under construction the south west corner of the former Wood Wharf (left of image)

dazzle observers, with the overarching goal being to create something ‘unique’. This inevitably leads to projects being accused of ‘form over function,’ and questions over whether the design energy has been spent chasing style, rather than considering the end user.

With One Park Drive, which admittedly presents a fascinating composition, Herzog & de Meuron have taken a different approach. The firm’s meticulous attention to detail has led to a building whose external form describes the living spaces within.

Facades sometimes cloak what may be a less than elegantly organised internal structure. The seemingly eccentric hybrid layout of One Park Drive however – tapered apartments with square rooms within a circular envelope – is displayed proudly on the building’s exterior.

Circular towers pose a multitude of challenges to designers, and are therefore rare. The internal grid system achieved here, and the way it responds and interacts with the building’s overall form, is being seen as a possible benchmark for the future of cylindrical buildings.

Meticulous thought has been put into the design of the building, such as the plan grid being rotated 45 degrees from true north to optimise sunlight exposure to each unit. An orthogonal stepped plan protects apartments from cross views, while offering multiple vistas.

In an interview with writer and director of the Design Museum, Deyan Sudjic, project architect Jacques Herzog commented: “What makes it interesting sculpturally is that it has

a mix of different apartment sizes.

“We used that mix as an opportunity to express it in the facade. Small apartments produce a different imprint on the facade than larger or medium sizes. It gives the building the light, the scale and the grain and the profile.”

Herzog wanted the building to be “looking all round,” which resulted in a design that avoids the circular perimeter dictating the outlook for residents. “It does not really participate in any given vista,” he explains, “it potentially has interesting views all around.”

The unified exterior of One Park Drive is to be clad in glazed, fluted terracotta. This will make for a far warmer and more tactile facade than is common on buildings of this type. It’s a far cry from the glass sheen characterising many of the surrounding buildings, and helps to signify this is a place for people to live, not work.

Tactility is clearly important to the architect, as Herzog says: “It will feel good to touch. We will use a lot of wood.”

Three typologies

The tower combines three distinct designs, which have been labelled ‘typologies’, stacked on top of each other, and each easily distinguishable on the skyscraper’s exterior. It is envisaged that each typology will “re-examine city living,” providing its own lifestyle characteristics, while together they form a harmonious whole.

Herzog describes how the firm set the development apart from its peers by providing this explicit variety: “Residential

The building could spark the dawn of a new era in high-rise accommodation

ORTHOGONAL

The other buildings on the estate are almost exclusively orthogonal in form



high-rises are conventionally characterised by the negative qualities of sameness and too much repetition.

“One Park Drive has three distinct zones offering different types of accommodation that are clearly expressed, offering a sense of individuality in a larger development.”

Levels 2-9 of the building feature the Loft apartments, the first typology. These floors contain some of the largest apartments, with high ceilings and continuous bands of external terraces. Larger units in the Loft section offer extended outdoor space, taking advantage of their proximity to the water and the relative wind shelter afforded by their lower height. Spaces within are “free-flowing,” divided using sliding walls and pivoted screens, and they will have seamless resin floors, “sculptural” bathrooms and curved ceilings.

Next, floors 10-32 form the Cluster apartments at the centre, containing the greatest diversity of apartment types. In this section, floorplates of each storey are mirrored but rotated. Each floor is at a different angle to the floors above and below it, creating a complex but ordered exterior, while still maintaining the clarity of the internal spaces. As the tower’s midriff, the Cluster section is made up of smaller apartments, openly expressing their rectangular forms through the building’s exterior, offset and contrasted against the cylindrical forms above and below. In a similar way, materials used internally will reflect those of the exterior.

The third and final typology is the Bay, covering floors 33-57. The orthogonal floorplates with rectangular rooms again contrast

with the external curvature of the building, providing further differentiation from a typical high rise. Each floor rotates on plan in a similar way to the Cluster apartment floors, providing double-height terraces and a dynamic and kinetic spiralling effect.

The design of the Bay apartments is heavily focused on both daylighting and offering sweeping views across the capital. The Bay apartments include many of the larger two and three bedroom units, each apartment enjoying set back terraces. The large bay windows offer extensive views, and the interiors will be luxurious, featuring exposed concrete walls, timber and stone.

In every typology, the geometry of the building has been “expressed without restraint through the facade”. Complexity is created, especially in the Cluster and Bay levels, through the rotation and mirroring of their floorplates. “While providing texture and change in the building’s exterior, each section maintains the cylindrical whole, unifying the tower,” say the architects.

“It’s clearly made for people to stay in and use,” says Herzog. “It has a lot of terraces, the facade is very porous.” It’s not simply “glass in the foreground,” he further explains. “It’s like an inhabited rock.”

Terraces

The building is distinguished by its terraces forming an inherent part of the curve of the structure, with every apartment having a covered terrace. Rather than an after-thought protruding from the exterior, the outdoor areas provided in each apartment



form a part of the whole, created between the apartments' enclosing walls and the outer edge of each floor plate.

There are a wealth of variations when it comes to the terraces, with many of the Cluster apartments offering two terraces, the Lofts providing expansive wrap-around versions that connect with different interior spaces, and the Bay apartments' terraces boasting double-height ceilings.

The three exterior typologies are continued on the inside of the apartments, providing each with a distinct style. What all the homes have in common however, is that every facet of the design has been moulded by the architects with the user experience put first and foremost. Usable space is maximised, while each apartment remains "a clear part of the building's architectural expression".

Lifestyle

Both in the building and externally, a sense of a One Park Drive 'lifestyle' has been the guiding principle for the developers, and Canary Wharf Group has integrated a range of amenities to help create this. On the ground floor are a lounge and library, with floor to ceiling glazing, plus a cinema, and on the first floor there is a 20 metre pool, plus gym and spa.

The riverside, surrounding parks, and landscaped gardens, will be maintained by the Canary Wharf Group, creating two distinct levels of public space below the actual ground floor of the building. Canary Wharf is also home to the capital's largest collection of outdoor public art.

One Park Drive is the first of a brand new neighbourhood the Group is constructing which it hopes will combine urban convenience with exclusivity. Integrated into the development plan are high streets, boutique arcade style 'Lanes' and plenty of open, green spaces. There will also be a dedicated doctor's surgery and a new local primary school.

Modern city living

One Park Drive will serve as a visual gateway to the district, and will be a striking focal point for this corner of the estate. It appears that no expense has been spared by the Canary Wharf Group in making the building the centrepiece of a new neighbourhood for discerning and no doubt affluent buyers. The architects' expertise has been fully showcased in creating a new type of skyscraper to be the flagship for this new area of Canary Wharf, which will now be called home by thousands of residents as well as a place of work.

The building could also however spark the dawn of a new era in high-rise accommodation, with its variety coupled with tactility of facade. Could it mark the beginning of the end for monolithic glass walls? Whatever, One Park Drive is a landmark in more porous tall buildings, openly playing with as well as celebrating their function.

The architects conclude: "The new tower will be both a symbol and the heart of the new urban quarter, an extension of a dynamic global community and the start of a new, vibrant neighbourhood." ■

2019

The building is expected to complete in 2019

Selectaglaze helps College improve sustainability

Jesus College, part of the University of Cambridge, is known for its Listed buildings, sustainable design projects, and modern architecture. In 2014 it began work on the West Court development by purchasing the Grade II Listed buildings belonging to its neighbour, Wesley House. The College wished to sensitively refurbish the Grade II Listed building to make it heat efficient and sustainable, while also keeping its original features.

The main contractor, Cocksedge, approached Selectaglaze, one of the UK's leading providers of secondary glazing, for advice and assistance. The primary windows were draughty, allowing heat to escape and suffered from noise ingress and egress. The secondary glazing had to be considerate with regard to the architectural heritage of Jesus College.

Selectaglaze had previously worked on the College's Chapel Court student accommodation refurbishment, where it treated over 300

openings. Selectaglaze subsequently installed over 100 secondary glazing units in West Court. It was important that the secondary glazing did not detract from the original primary windows - iron casements set into stone mullions. A combination of casements and horizontal sliders matched the original design to avoid the introduction of new sight-lines. Finished in anodised bronze, they complement the overall feel of the building.

The College hopes to reduce its annual energy costs as a result of Selectaglaze's work. Those staying there have found the accommodation to be far more peaceful, with little or no distraction coming from the outside.

Secondary glazing traps an insulating layer of air, which can reduce heat loss by 50%. With the introduction of low emissivity glass, U-values of around 1.8 can be achieved. High performance twin seals help to virtually eradicate draughts. Furthermore, noise ingress is significantly reduced. A gap between the primary and secondary glazing



of at least 100mm achieves a reduction of 45dB - rising to more than 50dB if specialist acoustic glass is specified.

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Acoustic solutions bring harmony



Islwyn High in Caerphilly is an ambitious project to amalgamate two former schools in a new purpose-built development. A variety of Rockfon acoustic ceiling tiles are installed throughout the school to control noise and harmonise with the contemporary interior. Acoustics were high on the agenda when it came to the ceiling specification.

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www.architectsdatafile.co.uk

Sapa shows design flare



An acclaimed new research building in Nottingham has seen the official switch on of a unique artwork whose aluminium tubes are embedded with fibre optic lights that respond to NASA measurements of solar flares; with the backdrop to the sculpture being a high-performance glazing

system from the range of Sapa Building System, part of Hydro Building Systems UK. The main area of glazed facade is 45 metres long and 15 metres tall, being made up of Sapa NRGY62 fixed lights measuring up to 4000mm wide by 1500mm high.

01684 853500 www.sapabuildingsystems.co.uk

Senior strengthens supply chain links with new college contracts

Collaboration and repeat business with key supply chain partners has seen aluminium glazing solutions from Senior Architectural Systems specified for use on two new college contracts.

Senior has supplied the glazing packages for both the new Lancashire Energy HQ at Blackpool & Flyde College and the Advanced Skills and Innovation Centre (ASIC) at Wakefield College in West Yorkshire, working with fabricator and installer Aire Valley Architectural Aluminium Ltd and main contractor Bardsley Construction to deliver the design vision of architects IBI Group.

Combining attractive slim sightlines and high thermal performance, the building envelope of both college buildings has benefitted from products from Senior's extensive range of aluminium doors, windows and curtain walling systems.

Reflecting the college's focus on training for the renewable energy sector, the new Lancashire Energy HQ at Blackpool & Flyde



College boasts a sustainable design scheme which includes a living green wall and an energy-efficient glazing package. The improved thermal performance and slim sightlines offered by Senior's SF52 aluminium curtain walling made it the ideal choice to create the college's attractive double-height atrium and striking faceted entrance, which also features Senior's robust SPW500 aluminium doors. Further contributing to the building's BREEAM rating of 'excellent' are Senior's thermally-broken SPW600e aluminium windows.



Also designed by IBI Group, the new ASIC building at Wakefield College features the same specification of aluminium fenestration solutions from Senior which have once again been installed by Aire Valley Architectural Ltd for main contractor Bardsley Construction Ltd. Here, Senior's SF52 curtain walling has been used to add further interest to the building's attractive façade design which features a mix of masonry brickwork and coloured cladding panels. The modern design of the new-build three storey building maximises the use of light and space, with the slim profile of Senior's SF52 curtain walling system and SPW600e aluminium windows helping to create a welcoming and comfortable learning environment.

01709 772600

www.seniorarchitectural.co.uk

Jeckells sets pupils in the shade



Jeckells' the Sailmakers has installed three tensioned canopies over outside learning areas at Icknield School in Letchworth. Working closely with architects, Wilby & Burnett, Jeckells fabricated the canopies, sourced the stainless steel posts with red post bumpers and

organised full installation to fit in with the school's demanding schedule. Ferrari Soltis 86 premium mesh material was used due to its strength and durability. In recent years Jeckells has built up a reputation for the design and manufacture of quality shade sails with an almost unlimited degree of versatility in design, colour and materials.

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Cambridge delves deeper



Kingspan Kooltherm's FM Pipe Insulation has been installed on the University of Cambridge's centrepiece for industrial partnership with the physical sciences and engineering. The £26 million Maxwell Centre, opened in 2016, achieved credits towards a BREEAM 'Excellent' rating

thanks in part to the Kingspan Kooltherm FM Pipe Insulation that was specified for the project. The product offers superior thermal performance, and comprises a fibre-free phenolic insulation core, externally faced with an aluminium vapour barrier foil.

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BUILDING
PROJECTSBROCK COMMONS TALLWOOD HOUSE
VANCOUVER, CANADA

Mass appeal

James Parker reports on how an “extraordinarily ordinary” student residence in Vancouver became the world’s tallest engineered timber building almost by accident

At 18 storeys, Brock Commons Tallwood House, a student residence in Vancouver, is currently the world’s tallest engineered timber building (at least until the 24 storey Ho Ho Tower in Vienna is completed later this year). There is a race on to build tall in timber, driven by the huge sustainability benefits allied to construction efficiencies of engineered timber. However, while timber is the load-bearing structure for 17 storeys of architect Acton Ostry’s building, the really interesting thing about Tallwood House is paradoxically, its relative ordinariness.

As is common in a country with abundant timber resources, building in wood was always the goal for this project, but as architect Russell Acton tells *ADF*, the aim was also definitively “not to create an international showpiece for the tall wood movement.” It is the first project built under the 2013 Tall Wood Demonstration Projects Initiative by the Canadian Government, offering funding for projects over 10 storeys. The project was launched to help grow the engineered timber industry, and says Acton, “help make the case for mainstreaming tall timber buildings.”

The client for Tallwood House, the student housing department of the University of British Columbia, wanted the project to be “first and foremost be a modest, home away from home for students, similar in form, massing, function and finish to existing student residence buildings on the campus,” says Acton. The scale of the building was more a function of the need to accommodate growing student numbers than part of a grand project to build a tall building from CLT and glulam for its own sake.

It was almost coincidental that the

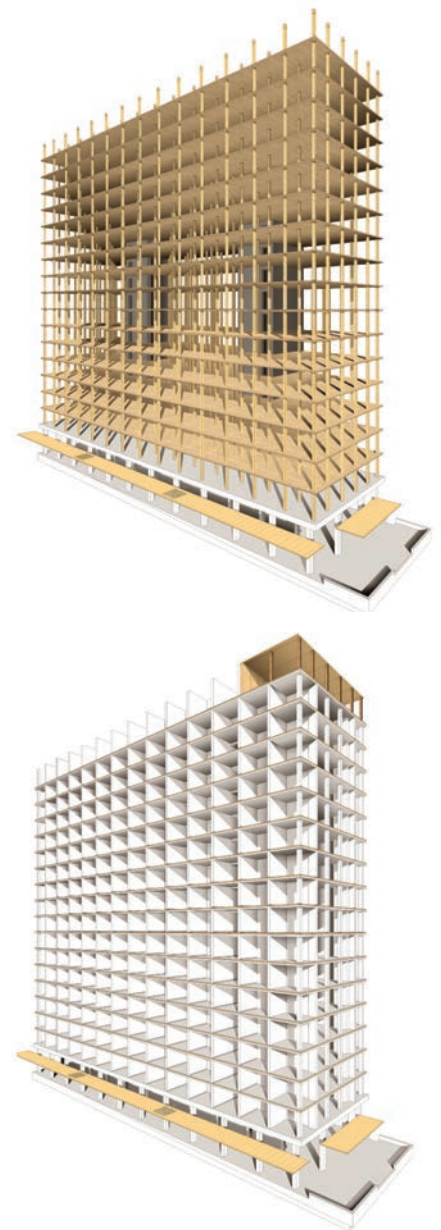
building’s size plus the material of choice being wood conspired to produce a ‘world-record’ project. “Creating the world’s tallest mass wood tower was never a goal,” says Acton, “It was simply an outcome of the fact that student residences constructed on the campus are typically 53 metres tall due to height limitations, and that was taller than any other mass wood building in the world already constructed.”

Demand for on-campus student housing has rocketed recently – the campus sits at the end of a peninsula where Vancouver’s most expensive real estate is located. Acton explains: “If you’re not living on campus, you have to live quite far away.”

The client also wanted Tallwood House to be comparable in cost to a similarly-sized concrete student residence. Beyond that, Government funding would bridge the “innovation gap” of extra money needed due to this being a first-of-its-kind building, as Acton explains. “There’s a bit more design time that needs to be paid for, there are some aspects of construction that need to be examined – we built a very expensive two-storey mock-up.”

The thin, narrow site, on a fairly exposed escarpment, led to a 15 metre x 54 metre footprint. The building is strictly speaking ‘hybrid’ as it includes two equally sized concrete circulation cores, their symmetry being favoured by structural engineer Fast & Epp, but also the contractor, who was able to pour more efficiently.

The cores jut slightly out of the building, to provide a more efficient layout for the CLT timber used for the frame, as well as some visual interest to the facade. Acton explains that discussions with two 20-strong stakeholder panels covering timber’s fire and structural issues (required to meet





CONSTRUCTION

The 17 storeys of engineered timber were constructed using a simple glulam post and CLT panel system

Once everyone understood and accepted it wasn't going to be a tourist attraction for architects and engineers, it made a lot of the decision-making very straightforward

regulations), meant that a clear view resulted that the exit routes needed to be in concrete.

Four members of the fire panel were fire chiefs from Vancouver and surrounding cities. "They recognised a CLT core would be structurally sensible and could be used by emergency responders with confidence." However Acton adds, "they appreciated that for a first of its kind building we were proposing a concrete core, because they knew a CLT alternative would be a hard sell to the firefighters."

Design process

According to the project's architect, "once everyone understood and accepted it wasn't going to be a tourist attraction for architects and engineers, it made a lot of the decision-making very straightforward. It wasn't about me, it was about 'them.'" Acton says this anti-ego ethos ties in with the practice's belief that "not all buildings should be showpiece buildings...the responsibility in designing 'background' buildings is to make them handsome, and fit in, as well as having a bit of exuberance. But they shouldn't be trying too hard." He summarises the firm's approach to this project as "very matter of fact and common sense, we understood what [the client] was looking for."

Acton Ostry, like most Canadian practices,

is well versed in building in timber – "the first half of our career was spent designing wood buildings, albeit not particularly tall and not in CLT. They have a strong relationship with the university, having previously designed several successful projects collaboratively.

The budget was a "modest" \$39m (Canadian dollars), so a primary challenge "was to ensure that the design team always keep the project objectives in mind". One of the major selling points of CLT construction is of course speed and efficiency, and the 17 floors of CLT panels and glulam posts took only 46 days to erect, with the whole construction completing in 66 days. The project cost \$240/ft² including the 8-9 per cent "innovation gap" funding, however without that it was \$221/ft², and a 2017 comparator for a similar concrete construction was \$220/ft². This was clear validation of the "keep it simple" design and construction approach.

Structural details

The layout of the building maximises repetition in the interests of efficiency, avoiding obstacles to easy distribution of electrical, mechanical and sprinkler systems. On the ground level (there's no basement) a concrete podium houses student social and

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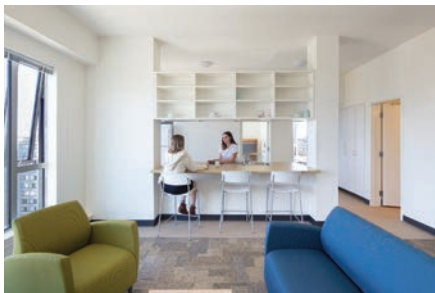
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The university is using this pioneering but simple building as a 'Living Laboratory'



study amenity spaces and building services. Above that are 17 levels constructed from five-ply CLT floors, 169 mm thick, sitting on 265 mm x 215 mm glulam columns (these are 265 mm square at ground floor level). There are four bedroom units at each end with studio units between; all having kitchens and bathrooms.

This construction achieves the key challenge of a thin enough floor assembly to accommodate 18 storeys within the 53 metre height limitation across the campus. Acton commends how the structural engineers at Fast & Epp “rose to the challenge” of creating a relatively thin, strong and simple CLT structure, a two-way spanning CLT slab – which, he notes, “required machine stress rated timber at the outermost laminations.” This application of two-way spanning CLT is thought to be the most extensive ever used and, says Acton, “was a brilliant solution as the floor depth is quite similar to that of a comparable two-way concrete slab.”

Acton says that the collaborative process need to consult all stakeholders and develop the fit-for-purpose solution for the budget was “a huge co-ordination exercise,” adding “that’s where you had to check your ego at the door.” The design achievement has been acknowledged with a clutch of awards, including the Award for Excellence at the

2017 National Council of Structural Engineers Association Awards.

The University of British Columbia performed tests on the structural characteristics of the CLT panels and glulam column system, and it proved to be considerably stronger than anticipated. Acton says that counter to expectations, rolling shear rather than punching shear was where there was a “point of failure” in tests, however even this had 25 per cent greater capacity than had originally been expected.

The panels are simply bolted onto the steel connectors on top of each column, before the next column is dropped into the steel connector and held in place with a steel pin. Infill wall panels are steel stud framed, and the floor panels are screwed to the concrete lift cores, with additional steel drag straps attached to them to transfer seismic forces to the ground.

The wood structure has for the most part been encapsulated with gypsum board, as the budget did not permit the volume of timber that would have been needed for exposed timber to offer the necessary ‘char’ potential to conform with fire regulations. Building Code in British Columbia permits the top floor of a tall building to be faced internally with exposed timber however, so here a student lounge has exposed glulam



columns. The only other exposed timber, hinting at the building's true nature, is a 58 metre CLT canopy.

Acton comments: "As soon as you expose mass wood, the costs go way up. The additional volume of wood to use char for fire protection is extraordinarily expensive, even more so when you factor in the cost of co-ordinating services."

He says candidly that establishing the cost from other projects was tricky: "I found it very difficult to find other architects and developers around the world sharing their information. Almost no-one wants to say what it costs, because it's very expensive. I believe exposed mass wood is at a minimum twice as expensive as encapsulated."

Interestingly, due to the nature of Canadian CLT, it was 29 mm thicker than it needed to be from a structural point of view, however there still wouldn't have been enough spare to provide exposed timber – "for each hour of char you need about 40 mm of wood," says Acton. He adds that if timber had been exposed throughout, two inches would have needed to be added to every floor, "we wouldn't have been able to get the 17th floor of timber in." The building would also have needed to be a module wider.

Wind loading "was a consideration, but

mainly due to the seaside location and concerns for potential sway at uppermost storeys," he says. However standard modelling did not throw up "anything remarkable enough to warrant extensive investigation and design allowances."

Exterior and interior

With the offsite panel construction providing tight tolerances, high levels of air-tightness were achieved. Panels are steel stud framed and measure 8 metres wide x 2.65 metres high, forming the entire wall of two studios. Performing similarly to curtain wall, they arrived on site with two windows pre-installed. Additional insulation was inserted after installation, as well as a vapour barrier and drywall finish.

The building is clad with Trespa panels – "an interesting material as it's made from 70 per cent wood fibre and resins, so it's a durable but environmental solution that's suitable for a high-rise application," comments Acton. The panels have an appearance similar to timber, and with none arriving broken on site, the substantial surplus was used to clad all lift lobbies. Corner windows "help to dematerialise the mass of the building," and a metal cornice on the roof echoes 1960s modernist buildings on the campus.

All images © Acton Ostry Architects Inc. & University of British Columbia.
Photographer: Michael Elkan Photography

PROJECT FACTFILE: BROCK COMMONS TALLWOOD HOUSE

Timber source: British Columbia
Glulam and CLT supplied by: Structurlam

Volume of wood used: 2233 m³
Carbon stored: 1753 tonnes of CO₂
Greenhouse emissions avoided: 679 tonnes of CO₂

Total potential carbon benefit: 2432 tonnes of CO₂ (equivalent to 511 cars off the road for a year)

Sustainability rating: LEED Gold
Number of student beds: 404

The layout of the building maximises repetition for optimum efficiency, avoiding obstacles to distribution of electrical, mechanical and sprinkler systems



The fast construction process, guided by BIM, delighted the subcontractors, because the facade was enclosed as each storey's timber frame was erected, so they were working in dry, warm conditions. The construction manager told Acton: "we hate the idea of going back to concrete."

Internally, the residences resemble their counterparts on the campus, with similar amenity spaces including social and study space on the ground floor. However, Acton explains that to the discerning eye, the accuracy of CLT construction adds a different dimension: "Everything is just so square and crisp and accurate that there's a sharpness to the units that you don't sense in a concrete building."

The interiors are finished to a high standard, with solid wood doors and furniture, following the building's overall theme, to provide a "very warm, inviting and cosy" feel. The university has made a conscious effort to tell students they are in a timber building, says Acton, and they respond positively. "I have met many students on site and they love the idea of living in a mass wood building."

Living laboratory

The university is using this pioneering but simple building as a 'Living Laboratory', using sensors to measure shrinkage, moisture in CLT, and wind and seismic effects. This is being done in the hope the data produced will support future changes to the Building Code for mass wood structures.

The building, with its standard glazed and panelled exterior, plain facades, repeated layout and lack of exposed timber, might be seen as prosaic, but it is exactly what was required by the client to perform the function required. Acton says the ordinariness of the building is its real virtue, as it could help promulgate widespread adoption of tall timber in the mainstream to achieve the greatest carbon gains.

He admits the timber building purists may not approve, but says that it's important to see the bigger picture: "There's really been a bit of a disservice by some architects promoting the expression of exposed wood as almost like a mandatory, that you're doing it wrong if you cover up the wood, it's a sin, you're a bad architect." Acton concludes: "We are going to build tens of thousands of these extraordinarily ordinary encapsulated timber buildings, and this is where we are going to see the benefits of using a renewable resource." ■









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Multi-mode hybrid ventilation with enhanced thermal efficiency

Ventilation specialist Passivent has introduced the Hybrid Plus2 Aircool® multi-mode ventilation system. Designed to meet the requirements of the forthcoming Building Bulletin 101, “Guidelines on ventilation, thermal comfort and indoor air quality in schools” and the Facilities Output Specification for Priority Schools Programme Phase 2, the Hybrid Plus2 Aircool is suited to where a single-sided ventilation strategy is required in a building.

With a contemporary, streamlined design, the product consists of three main components: the external weather louvre, the through-wall sleeve and the inner mixing unit, making it easy to specify and order, whilst ensuring a complete integrated system is supplied. The Hybrid Plus2 Aircool incorporates three modes of operation to suit varying internal CO₂ and room temperature levels. Mode 1 – mixing mode – is designed for cooler spring, autumn and winter periods when the incoming air is tempered by mixing with warmer internal air before it enters the room thus minimising the risk of cold draughts. Mode 2 – cooling mode – is used in the warmer summer months when the unit responds to the higher temperatures within the room environment, extracts the warm stale air and replaces it with cooler fresh air. This mode ensures that CO₂ and temperature are kept at acceptable levels. Mode 3 – passive mode – can be used when two units



Passivent's Hybrid Plus2 Aircool offers ventilation with improved thermal efficiency.

are incorporated in the same room. This mode does not use any powered fans and allows single-sided ventilation to the room passively when mixing or cooling are not required.

The system utilises the controllable insulated dampers from Passivent's Aircool range which have been designed for use in external facades, including all forms of wall construction, curtain walling and window profiles. The system is controlled by the Passivent iC8000 controller allowing for up to four individual zones to be managed or it

can be integrated within the building's management system. Incorporating a variable speed fan, the unit is energy efficient and quiet but is able to deliver up to 145l/s of ventilation. Weather resistance and security are provided by the external weather louvre, even when the internal insulated louvre is open. One Hybrid Plus2 Aircool can effectively ventilate a room containing up to 16 occupants; adding a second unit will accommodate up to 32 people per room. Made from robust lightweight ABS, the unique three part construction can be mounted below the ceiling and its modular design makes it simple and fast to install. The Hybrid Plus2 Aircool can also be mounted within the ceiling void with the inclusion of additional grilles and ducting.

The ventilator can be used across a range of markets including education and commercial offices with higher internal heat gains. In addition to daytime cooling, it can also be used for night cooling to reduce the risk of overheating.

Passivent offers a comprehensive technical design service including assistance with product selection and system design. For more information, please call or email quoting 'Hybrid' or alternatively please visit the website.

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Highs and lows of student life

GEZE products are giving students access to the highs and lows of student life in a development which incorporates a 21-storey tower block and three low-rise residences.

Chamberlain Hall – part of University of Birmingham's Vale Village scheme – saw the replacement of the 50-year-old Eden Town, known as High Hall and its associated wings – with new purpose-built accommodation.

It provides a home-from-home for 725 students in either en-suite study bedrooms in clusters of five or six, which share a kitchen/lounge - or self-contained studios.

GEZE products were used throughout the development. Every bedroom and circulation door, more than 800 in total, is fitted with a TS 3000 EC. This surface mounted door closer has a low opening force, requiring less energy to open it, making it a great choice for an educational building.

It adheres to strictest safety standards, and not only features an adjustable hydraulic latching action, closing force and closing speed, but also incorporates a sleek guide rail rather than an obtrusive arm



to make it safer choice for residents.

Kitchen Doors were fitted with the TS 4000 EFS - a pinion toothed door closer with free swing arm function which enables people to go through the door while applying little physical force once the door has been initially opened. It has an electro hold-open function which ensures safe closing of the door in an event of a fire.

TS 5000 E closers were fitted to lobby doors. They are fitted with electro-mechanical hold-open devices which are released in

the event of a fire closing the door safely. The TS 5000 E is suitable for doors up to 1400mm in width and has adjustable closing force, size EN 2-6, adjustable closing speed, hydraulic latching action and hydraulic back check.

Fifteen GEZE Slimdrive EMD-F electro-mechanical swing door operators were fitted to entrance doors and rooms for disabled students.

They are almost silent in operation, with the capacity to move large and heavy, single leaf doors with ease. The Slimdrive EMD-F operators are extremely durable which mean that they are the ideal low-maintenance solution for areas of heavy footfall such as student accommodation.

Students living in the tower benefit from lake-side views across the Vale, a Grade 2 historic park and garden, and those on the upper floors enjoy vistas right across the city. The three low rise blocks have been designed to sit at an angle maximising views across the Vale.

01543 443000 www.geze.co.uk

KI's Perry chair selected for university



Set for completion in 2030, the University of Edinburgh's upgrade is hoping to give students a vibrant, flexible learning environment. Working with Azzurro, the university selected KI's Perry chairs in polypropylene and upholstery. From blues and reds, to beige and white, the colours

specified add distinct character to each room. The chair's unique backrest optimises comfort for prolonged seating by moving with the user's own weight, making this high-density stacking chair the ideal choice for educational environments.

020 7405 7082 www.kieurope.com

Mighton used in university restoration

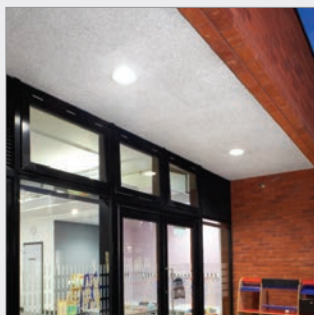


Restoration Paint (11-0050) from **Mighton** Ankerstuy, a range specifically designed for maintaining and restoring the exterior of timber doors and windows, was the correct choice for a 217-year-old Cambridge University college that needed maintenance to more than 1,000 sliding sash windows. The paint is water-borne and quick drying, so it can be applied in multiple coats in a single working day. It will not 'block'

when the college's classical sash windows are opened and closed, and it exhibits good gap and crack filling characteristics where the timber substrate may show signs of ageing.

01223 497097 www.mightonproducts.com

Heradesign proves it's tough enough inside and out



The Albion Street neighbourhood in Southwark, London is undergoing an extensive regeneration programme. A new school building for Albion Primary fulfils a central function in helping achieve the council's ambitious plan. Heradesign ceilings from **Knauf AMF** are installed throughout the new building to meet the aesthetic and acoustic demands of this innovative project. Heradesign is safe to use in semi-exposed external areas which is one of the reasons Haverstock Associate Partner Tim Bystedt specified it, "Heradesign has an interesting texture and is available in the neutral colour we wanted for the underside of the entrance canopy and outside stairwell. It was easy to install and did not require any painting or plastering which helped keep costs down and the project on schedule." Heradesign is a range of ceiling tiles and wall absorbers manufactured from sustainably sourced wood-wool with a unique, organic aesthetic that can be made to match any colour as ceilings, fins, rafts and wall absorbers to product visually stimulating interiors. Heradesign is a cost-effective solution for heavy duty areas and offers the highest Class 1A impact resistance.

0191 518 8600 www.knaufamf.com

Hauraton surface drainage systems installed at Maltby Academy School, Rotherham

The Maltby Academy School to the East of Rotherham was established in the 1930s with additional building added in the 1960s. The school has expanded and now offers up to 1200 student places.

Early in 2012 it was decided refurbish the older building and build a new open plan business/enterprise centre and sport science block. In addition, the old gymnasium was to be converted into a performing and creative arts facility.

The £10.9 million contract for the re-development of Maltby Academy was awarded to BAM Construction of Leeds, in June 2012. The site was fully operational by September 2013 with full completion shortly afterwards.

With the site being quite flat, and the old and new buildings' surrounded by paved and asphalted surfaces, it was essential rainwater is drained effectively. Two Hauraton systems were chosen to drain surface water: RECYFIX® PRO and RECYFIX® SLOTTED channels.



A Hauraton RECYFIX® PRO 100 channel system, fitted with FIBRETEC® C250, HEELSAFE 9mm slot gratings, was used to drain the asphalted yards and car park.

Since its launched in February 2010, the RECYFIX PRO surface water drainage channel, featuring the innovative FIBRETEC® grating, has been specified and successfully installed in numerous United Kingdom drainage projects, including rail station platforms, public squares, shopping malls, sports-fields, tartan running tracks and many

other commercial and private applications.

The material PA-GF, used to make the FIBRETEC® grating, was especially developed by Hauraton; the tough, UV resistant, fibre reinforced moulding offers high stability and huge strength for its weight. Complying with loading category Class C250 the grating can easily take the weight of commercial delivery vehicles. The design is a real innovation as its non-corrosive material provides a visually appealing surface finish that retains its black colour.

The FIBRETEC® C250 HEELSAFE grating was specifically designed by Hauraton R & D engineers to enhance the flow of water into the channel. The slots are super smooth, elliptical openings with the moulded bars having slightly raised triangular bosses along their outside edges. As well as providing an elegant appearance, the feature ensures surface water is directed into the slots.

07768333852 www.drainage-projects.co.uk

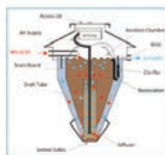


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Realms of possibility

Ann Boardman of Saniflo UK talks about overcoming drainage challenges and gives some examples of how ambitious projects can go ahead without relying on direct access to mains drainage

Architects and specifiers are confronted by domestic and commercial projects that come with all manner of drainage obstacles to overcome. Some may allow the restrictions and limitations of mains drainage to lead, or at least, heavily influence their design choices, but there is really no need. By using a combination of macerators and pumps it is possible to find a suitable non-mains drainage solution for any wet areas and WCs in any building, whether a temporary or permanent structure. More professionals are turning to macerators and pumps for their drainage solutions, in a wide variety of situations, and with success.

Obviously, the key to any successful project using macerators and pumps is specifying the right product for the job. And with so many different plumbing scenarios possible, it is important to work with reputable manufacturers whose specialists can properly inform you, guide you through the options and keep you updated with the latest product information. Macerators and pumps are in use up and down the country in everything from universities to 'glamping pods', and in some cases entire projects rely on macerators and pumps. You can even connect them to Building Management Systems for the ultimate control.

It is likely that you have used services that rely on macerators without even knowing it. At ExCeL in London for example, the WC facilities use macerators. London ExCeL first opened in November 2000 and is still growing today with additional facilities being added. The 100-acre site at Royal Victoria Dock is home to many large events including exhibitions and conferences and millions of people visit ExCeL every year. This venue relies on a number of macerators for its smooth operations.

You might be surprised to learn that elsewhere in our capital city, some of the nation's most prestigious landmarks could not operate without macerators and pumps. Take The Shard, for example. The building

was created using pioneering engineering methods not previously used in the UK involving top-down methods where foundations are dug while the core is built up.

Officially completed and opened in 2012, The Shard is an architecturally striking 'vertical city', housing multiple and different occupiers including hotel, education, medical, tourist, residential, retail, restaurant and office facilities. Here, a total of 45 macerators also help to keep the prestigious medical facilities of London Bridge Hospital fully functioning.

The macerators were fitted retrospectively, but there might be times when you have a brand-new domestic or commercial build that requires a clever drainage solution and perhaps you want to avoid messy, time-consuming and costly excavation works. Even in these cases you can turn to macerators and pumps. Here all you need is one product that sits underground and removes waste water from the building. Look for a pump that can be sited outside a building and below ground where the drainage is too low for a sewer or too low for a surface mounted pumping station. You need to go for a high capacity tank with multiple connections to take waste from bathrooms, kitchens and utility rooms in industrial or large domestic buildings.

Lastly, 20 Fenchurch Street – otherwise known as The Walkie Talkie – was completed in 2014 and is the sixth tallest building in The City of London. The 34-storey building cost more than £200m and features a distinctive top-heavy form, and top-floor Sky Garden. This building uses macerators and pumps on every floor to ensure it can remain open for business. Here, the plumbing goes up into the ceiling to the main stack pipe and this connects to mains drains.

These examples are testament to the flexibility that macerators are able to offer.

Ann Boardman is head of marketing and product development at Saniflo UK



It is likely that you have used services that rely on macerators without even knowing it

Pump firm Uniflo Products Ltd expands



A family-run business specialising in the design and supply of its own brand of waste disposal Macerator pumps has moved to larger premises in Wakefield West Yorkshire to accommodate its ongoing growth. Macerator pump specialist **Uniflo Products Ltd** has relocated its operations to a citycentre unit on Smyth Street. The new premises have provided space for offices and warehousing for the ongoing mail order business and have allowed the company to open up its own first trade counter.

info@unifloproducts.co.uk

Architects Datafile website



The Architects Datafile (ADF) website is an online provider of past and present products and news items for the architect or specifier. architectsdatafile.co.uk is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they may require. From the website, you can find links to digital

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Industrial MDF on an upward growth



It's hard to imagine where the interior fit-out market would be today without Medium Density Fibreboard. This versatile material – first manufactured in the UK by **Norbord** in 1979 – is used for a wide range of on-site applications, both in sheet form and as pre-formed profiles for architraves and skirtings. Manufacturers of products such as door and drawer fronts, fitted wardrobes and kitchen worktops are now major consumers of high quality MDF, such as Norbord's CaberWood Industrial which is formulated to give a superior routed finish, especially with the more angular deep profiles in use today.

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www.allertonuk.com

Damp and waterproofing technology



Safeguard has updated its essential product guide with a new, fourth edition that provides crucial information on specifying its market-leading ranges of damp- and waterproofing technologies.

A result of Safeguard's 30 years of product innovation and expertise in the sector, the 54-page guide covers the Dryzone, Stormdry, Vandex, Oldroyd and Brickfix brands, to name a few. Product areas include: rising damp, replastering, damp-proof coatings, condensation and mould, rain penetration, masonry repair, basement drainage, and tanking and waterproofing in general.

01403 210 204 www.safeguardeurope.com

Luxury lodges create seaside showpiece



Owners of prestigious new holiday lodges on Dorset's Jurassic Coast can expect them to keep their pristine looks in the face of the area's legendary weather and salt spray, thanks to a factory coating of Woodstain TP from the **Mighton Ankerstuy** Specialist range.

The lodges are the first in Siberian larch cladding to be installed at the park but, as Mighton Technical Coatings Director Graham Avery said, they now form a superb shop window for other prospective owners to see them at their best.

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BBA Certified Damp Proofing from Newton



Thanks to its new BBA certified damp proofing range, **Newton Waterproofing Systems**, one of the oldest independent UK damp proofing suppliers, can now provide a comprehensive solution for rising damp.

To prevent rising damp from occurring in new builds, a physical damp proof course (DPC), such as the BBA certified Newton 809-DPC, is installed. However, in remedial rising damp situations the best method is to use Newton 804-DPC, a high strength and BBA certified damp proofing cream, to convert an existing mortar course into a new DPC. Newton 808-RA is then used as a render additive to prevent the passage of residual moisture and hygroscopic salts from the masonry to the new internal surface.

Collectively, the Newtonite Damp Proofing System can be combined to provide a BBA certified solution to all forms of damp, from rising damp to penetrating damp, residual hygroscopic damp and condensation.

01732 806 963 www.newtonwaterproofing.co.uk

Bridgestop fundamental for protection



Leading housebuilder, Bellway Homes has come to rely on the performance of Monarfloor Bridgestop for protecting party walls. Monks Meadow is one of Bellway's current developments where two, three and four bedroom houses are being built to a high specification.

Bridgestop offers an innovative and dependable solution, as part of a fully approved Robust Detail in minimising both impact and flanking sound travelling through cavity separating walls. As well as this, the Icopal system offers four points under the Code for Sustainable Homes which is still widely favoured by social housing providers.

0161 865 4444 www.icopal.co.uk

Aluglaze panels are an ideal choice



To alleviate the level of homelessness in Ealing, homes are being built from former shipping containers that feature attractive facades manufactured from Aluglaze panels. Panel Systems supplied 144 Aluglaze panels with externally

projecting trays. The manufacturer fabricated the panels with a high performance insulation core to achieve a 0.35 W/m²K U Value. The Aluglaze panels were supplied in five main colours, each of which was specified in various shades including three tones of green, blue and red and two tones of orange and yellow.

sales@panelsystems.co.uk

Flying light



Kalwall® translucent cladding has transformed the newly completed 4,200 square metre extension at Indiana's South Bend Regional Airport. Designed by architects Ken Herceg and Associates, the new terminal comprises five gates, restaurants, gift shops and break-out areas all housed under an architecturally exposed, steel-framed barrel vault structure that simulates the structure of an aircraft wing. This is covered with a curved Kalwall Skyroof® 10 metres wide and 180 metres long. As passengers exit the dark and windowless TSA screening area, they are bathed in welcoming and natural daylight with unimpeded views across the runways. Kalwall eliminates shadows and glare and the stark contrasts of light and shade. The system also enhances simplicity by doing away with the need for blinds, curtains or solar control. Even on cloudy days, the interior is flooded with natural daylight, which means less artificial lighting and, because Kalwall is highly insulating, energy costs are reduced. The standard Kalwall 70mm thick panel offers insulation up to 0.28W/m²K – equivalent to a cavity filled brick wall, while still allowing for up to 15 per cent visible light transmittance.

www.structura-uk.com/kalwall

Cladding makes a difference in Caerphilly



Freefoam Fortex Double Shiplap PVC-U Cladding has been utilised to great effect on homes on the Lansbury Park estate in Caerphilly. Installed as part of a £2 million investment package to improve energy efficiency and transform the appearance of the estate the extensive refurbishment programme was commissioned by Caerphilly County Borough Council and fitted by contractor Eon Energy. The development previously featured white PVC cladding but the refurbishment gave the opportunity to bring colour to the properties. Eon Energy chose a variety of subtle shades from the Fortex range including Cappuccino, Colonial Blue, Misty Grey and Argyl Brown to complement the new exterior finish. Value for money is a key driver for Local Authorities. PVC cladding is a cost effective option saving expensive and time consuming ongoing maintenance. With Freefoam's ten year guarantee on the majority of the colour range Caerphilly Borough Council will still be seeing the benefits of this refurbishment in many years to come. For further information, please visit the Freefoam website or contact Freefoam by calling.

01604 591110 www.freefoam.com

Bespoke rooflights enhanced London home



Located in a West London conservation area, the existing property required updating by remodelling the kitchen and dining room that suffered poor connection to the rear garden. North facing, these rooms received little daylight from the modest sized windows. It was a dark and dingy space. Architect Simon Feneley's response at Feneley Studio, was to reconfigure the ground floor providing a utility and cloakroom off the entrance hall with a formal sitting room at the front of the property. A full height sliding pocket door reveals a newly extended family room with a panoramic view of the garden. The roof of the extension is asymmetrical about the axis from the front door, providing increased floor to ceiling height and avoiding a long continuous corridor. Custom made East and West facing rooflights by Lonsdale provide generous amounts of natural light and are a focal point of the extension with dramatic results as the sun moves from early morning until dusk. Ever changing forms of sunlight fall upon the polished concrete flooring which runs throughout the ground floor, with daylight washing down the full height herringbone wall tiling in the contemporary kitchen.

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Prior engagement

With most construction projects following the traditional sequence of design, specification and procurement, Andrew Cooper of Senior Architectural Systems looks at how getting suppliers on board early can lead to plainer sailing for everyone

As highlighted in the influential Farmer Review of the UK Construction Labour Model, collaboration is a term often discussed in the industry but not a practice that is routinely adopted. One barrier to achieving greater levels of supply chain collaboration is undoubtedly the industry's long-standing reliance on competitive tendering, when budget constraints often see contracts awarded to those that offer the lowest bid rather than the greatest value.

The advantage of early supplier involvement in a project can't be underestimated, as it provides the perfect forum for manufacturers to contribute specialist knowledge and facilitates an environment in which innovation and problem-solving can thrive. If a project has already been designed before all the options have been considered, it follows that many vital opportunities for reducing risk, time and costs could be missed. Much more than just a buzz word, supply chain collaboration offers real, tangible benefits – but what exactly can product manufacturers bring to the table?

Reducing risk

One of the greatest plus points for supply chain collaboration is that it can bridge the gap between design and delivery so that the completed scheme performs and looks as originally intended. Early engagement with manufacturers, who are of course well placed to advise how products can be used most effectively, can help to highlight any potential risks prior to work commencing on site and reduce the likelihood of expensive and time consuming redesigns when these problems resurface later on.

In terms of designing and delivering the building envelope, tapping into the manufacturers' extensive product knowledge can be vital in ensuring that all the different interfaces, such as curtain walling and cladding, work together effectively to create a water tight building. It makes sense to take time to iron out any





It remains to be seen how far the industry can comfortably embrace true supply chain collaboration

potential issues at the design stage rather than incur delays and expense to fix them on site but unfortunately, this isn't always the case. As a result, projects being delivered late and over-budget is a common occurrence.

Product performance

As well as reducing risk, effective collaboration and communication within the supply chain can also highlight opportunities for innovation and value engineering. Indeed, talking to suppliers and specialists at the earliest opportunity can often give greater design flexibility to projects that are subject to strict performance criteria.

This is particularly true with regards to the specification of fenestration systems where there are often a number of different requirements to meet, from aesthetic appeal and durability to acoustics and thermal efficiency. The benefits of early discussions with those members of the supply chain that will be directly involved in the delivery of the building envelope means that if appropriate, the original specification can be changed to a product that can better meet some or all of the performance criteria.

For example, by switching specification

from a standard aluminium window system to one that offers improved thermal efficiency with only a nominal price increase can not only lead to greater reduction in a project's carbon calculations, but can also give additional cost-savings by eliminating the need for other potentially more expensive energy-saving elements such as photovoltaic roof panels or under floor insulation.

Supplying support

The technical knowledge that a product manufacturer possesses can also add significant weight to a contractor's tender document, as can the reliability of having recommendations to get an experienced and trusted installation team on board. Once a project is secured, the benefits of such early engagement can continue to be felt throughout the build programme, with suppliers attending design meetings and site visits to help ensure best practice and that all specification and technical matters are being correctly adhered to.

With the rise of BIM and its reliance on shared information, it remains to be seen how far the industry can comfortably embrace true supply chain collaboration and if the nature of the more traditional supplier agreements will change. There is strength in numbers though, and by working together to realise a shared goal, every member of the project team can reap the rewards of successfully delivering a contract from conception to completion.

Andrew Cooper is national specification manager at Senior Architectural Systems

COLLABORATION

Effective collaboration and communication can highlight opportunities for innovation as well as for value engineering



St Mary's Crescent | Architect: Grand Design London | Photographer: Veronica Rodriguez

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- Fixing Method

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Fire stops / cavity barriers

- Position (window / floor level, panel joints)
- material (steel / mineral / intumescent)

Substructure

- Material (timber / aluminium)
- Shape

Cladding type

- Calorific Potential
- Panel Size / Shape
- Width and Location of Joint
- Fixing Method (mechanical, adhesive)

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Karma House student accommodation
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BSkyB Believe in Better Centre
© Simon Kennedy

Paul Herbert, Specification Manager:
07584 680263

Richard Geater, Sales Manager:
07584 680262

Richard Clough, Business
Development Manager:
07760 884369

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PROJECT DETAILS

Project: BSKyB Believe in Better Centre
Location: West London
Facade material: ALUCOBOND® PLUS sunrise silver metallic, Anodized Look C0/EV1
Construction system: Cassette on bolts
Building Owner: BSKyB
Planning (Architect): ARUP Associates
Fabricator / Installer: Sotech / Glass Solutions
Year of construction: 2014

PROJECT DETAILS

Project: Karma House student accommodation
Location: Wembley, London
Facade material: ALUCOBOND® PLUS Anodized Look C32 + spectra Sahara Crystal
Construction system: Cassettes – Special construction
Planning (Architect): HTA design
Fabricator / Installer: EH Smith / Century Facades
Year of construction: 2015

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Ocula specified for commercial designers own workspace



Ocula Systems partitioning system has been specified for the workspace of commercial interior designers, Harmsen Tilney Shane's London offices. The project is a living breathing example of the work the firm designs. Ocula systems supplied 20 linear metres of single glazed banded partitioning with drywall integration and flush glazed doors to the project. These were installed across meeting rooms and offices along with framed glass doors. Whilst the aesthetics of the banded glass and partitioning system were important, so was the level of acoustics. And an acceptable level was achieved with 12.8mm acoustic laminate glass that provided 38dB for this single glazed broken plan area. Harmsen, Tilney Shane employ a holistic approach to design that examines how a space is used for meetings, day to day tasks, strategic planning and recreation. All this is combined with the overall business objectives to create a space that will assist in the delivery of these goals. Their London office, is a live example of the work they do and they are said to be pleased with the result. So much so they are looking to replace the sliding, folding glass wall of the main meeting room at another site.

0118 935 8152 www.ocularsystems.co.uk

Crittall enhances West End hotel luxury



The Radisson Blu Edwardian Hampshire Hotel offers guests a sleek, contemporary interior enhanced by the installation of Crittall screens and doors. The screens and doors are constructed from W20 double-glazed, polyester powder coated components. The inherent strength of the steel

makes possible the slimmest of frames and glazing beads to ensure the maximum amount of light enters the interior spaces. The dark powder-coated hue of the screens was selected to blend harmoniously with the various tones of the newly-refurbished hotel's interior spaces.

01376 530800 www.crittall-windows.co.uk

Dynamic glass installation in Dubai



SageGlass®, one of the world's smartest electrochromic glass, will be installed in the Mohammed bin Rashid Library, currently under construction in Dubai. A project of the Dubai Municipality, it is the largest library and cultural project in the Arab world. SageGlass will make up 72

per cent of the project's total glass elevation and can be programmed to tint automatically to the appropriate level of transparency in response to the sun, controlled manually via smartphone application.

Adrian.Gallagher@saint-gobain.com www.sageglass.com/en

Award-winning design highlight



For those projects looking for something special and exclusive, the LAMILUX F100 circular skylight not only sets special visual accents, but also provides unrivalled comfort, heat insulation and energy efficiency, with its high levels of airtightness and water tightness.

Honoured with the German Design Award 2018, in the category "Building and Elements" the skylight features a newly designed, curved border frame, an innovative hinge system and an optional ventilation function, making it an attractive option for architects looking for a functional yet eye-catching design.

www.lamilux.co.uk

Glassolutions balances form & function



A stunning floor-to-ceiling glazing installation designed, specified and delivered by GLASSOLUTIONS has helped create the ideal balance between form and function at a new multi-use development in West Yorkshire. To give Number One Kirkstall Forge the ideal

balance between aesthetics and functionality, the GLASSOLUTIONS Contracting division specified a combination of WICONA aluminium systems integrating with high performance insulating glass units, spandrels and sandwich panels.

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SFS reports strong sales growth



Photo courtesy of Artez / James Andrews

Global group sales growth of 13.7 per cent in 2017 for fastening systems manufacturer SFS, reflects the growing customer demand here in the UK for high performance fixing solutions for the building envelope, which the company is set to support further with its unveiling of the industry's first complete package for rainscreen systems. In addition to an expanded range of SFS-branded products and services being readied for launch in 2018, the company now offers Nvelope rainscreen support systems after the manufacturer joined the SFS family in 2016.

0113 2085 500 www.sfsintec.co.uk

Mooragh the merrier for Eurologik



Developers constructing a block of luxury apartments in an exposed and beautiful location on the Isle of Man chose Eurologik doors and windows from Eurocell to provide the premium appearance and robust performance required. The Eurologik range includes casement, reversible, tilt-and-turn and French windows, as well as residential entrance doors and bi-fold doors. These can be customised with a whole comprehensive range of colours, woodgrain finishes and decorative options, including Scotia and ovolo beads, mock horn sashes, arched tops and Georgian bars.

0800 988 3049 www.eurocell.co.uk

New door handles from SWA Member



Two new door handle designs are now available from Steel Window Association member, Steel Window Fittings, designed to answer the demand for stylish external and internal steel ironmongery. The slim backplate (30mm), and separate matching Escutcheon, are perfect for a wide range of locks and latches. The standard backplate on both door handles allows the fixing screws to be visible for a traditional appearance; or an optional cover is supplied to conceal these screws for a more contemporary look.

www.steel-window-association.co.uk

New range of sliding doors from Schueco



New from sustainable building envelope specialist, Schueco UK, is a range of superior sliding door systems that provide a complete and elegant solution for high-specification domestic and commercial properties. Covering both sliding and lift-and-slide doors, the new Schueco ASE 60 & 80 platform comprises fifteen opening types including six single-track options. The result is greater choice, maximum design flexibility and the ability to accommodate widely differing project requirements. The inclusion of SmartStop and SmartClose technology ensures safe, trouble-free operation.

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Kingspan acquires the assets of GRM



Kingspan Industrial Insulation Ltd have agreed with SIG Distribution an Asset Purchase Acquisition of GRM Insulation Solutions based in Eastlands, Manchester. This APA will combine the assets of the two pipe insulation manufacturers,

providing the market with improved customer service both for the UK, Ireland and Central Europe. Kingspan Industrial Insulation products are used across building services, process and petrochemical applications and refrigeration services. The twin manufacturing line is expected to go live this summer.

01544 388 601 www.kingspaninsulation.co.uk

Roof refurbishment made easier



A roofing company switched to using BreatherQuilt from the range of YBS, finding it more cost-effective to install while offering superior performance compared to rival products on the market. The first project where R. G. Leverett trialled YBS BreatherQuilt was a 1950s

bungalow in Norwich whose original roof covering of concrete tiles was at the end of its life. YBS BreatherQuilt is a BDA, LABC and NHBC certified for pitched roof insulation material for use in new-build and refurbishment applications.

01909 721662 www.ybsinsulation.com



The sounds of science

Experimentarium in Tuborg near Copenhagen is one of the most exciting buildings to open in recent months. Designed by CEBRA architects, this world class science centre provides families, school children and science lovers high-quality science exhibitions where they can touch and play and experience science in an innovative new way. This fascinating project is full of contrasts meaning that the structure itself is as much an exhibition as the attractions and sights within. Inevitably the use of hard surfaces throughout, coupled with the noise and chatter from thousands of daily visitors, meant the architects had to pay special attention to the acoustics. Their solution was to install Troldekt ceiling panels which provide a very high-performance sound absorbing surface which contrasts dramatically with the copper, aluminium and glass elements and complements the interior atmosphere. In addition, because the ceiling is suspended it can be removed or adapted to accommodate exhibition changes.

www.troldekt.co.uk

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Time for change

Minimum Energy Efficiency Standards (MEES) comes into effect in England and Wales on 1 April. Adrian Pargeter of Kingspan Insulation looks at the effect this will have



Compliance with MEES will become compulsory for all privately rented properties from 2023

The new legislation aims to address the worst performing private rental properties by preventing landlords from granting tenancy in buildings with an Energy Performance Certificate (EPC) lower than an E (subject to certain exemptions). MEES will become compulsory for all privately rented properties from 2023.

Estimates suggest that the average annual energy cost for an EPC band G property is £1,150 more than that of an EPC band E property. This additional cost can make it unaffordable for tenants to properly heat their homes, potentially leading to significant health issues. With around 320,000 private rental dwellings in England falling within EPC bands F and G, it is easily understandable why the Government has identified this as a priority area.

When undertaking work on these projects, specifiers should carefully consider options which can raise buildings beyond the minimum standards. In its Clean Growth Strategy, the Government committed to upgrading as many private and social housing properties as possible to EPC band C by 2030. Properties refurbished to an EPC of E may therefore

require further disruptive work within a few years. One of the most cost-effective ways to deliver significant long-term improvements is by raising the thermal performance of the building fabric.

Fabric first

Unlike potentially short lived renewable technologies, a well detailed and carefully installed insulation retrofit should continue to perform over the long term with little or no maintenance. While insulation retrofits have typically focused on attics or cavity walls, 45 per cent of all fuel-poor households live in solid walled or hard-to-treat dwellings. It is therefore vital that the external walls on these properties are tackled.

The thickness of the insulation layer in solid wall insulation applications is a key design consideration. Any insulation installed internally will cut into the available living space, while thick external insulation layers can present structural challenges (particularly on taller buildings).

Solid wall insulation applications also require the depth of window sills to be increased. As a result, installing significant thicknesses of insulation can reduce internal light levels, creating dark, unwelcoming environments which are potentially unhealthy for tenants.

In order to keep the insulation depth to a minimum, without compromising thermal performance, it is necessary to install insulation materials with a low thermal conductivity. The latest generation of phenolic insulation boards can now achieve a thermal conductivity of just 0.018 W/m.K, much lower than other commonly used insulation materials. The rigid insulation boards can be quickly and easily installed and are available for both internal and external solid wall applications.

Fire safety

Any improvements to the energy efficiency of existing buildings must not be made at

the expense of fire safety, particularly in high-rise constructions. Premium performance rigid phenolic insulation can achieve the required fire performance and negligible smoke obscuration for use as External or Internal Wall Insulation (EWI and IWI), which are two of the most commonly used refurbishment applications.

In addition to providing a solution for low and medium height buildings, specific systems incorporating phenolic insulation are also available for applications above 18 metres. Several systems have been fully tested to BS 8414, and are BR 135 compliant. The BRE holds a register of cladding configurations which have been successfully tested to BS 8414 at www.bre.co.uk/regulatory-testing. It is important to remember that these results only apply to the specific designs tested. Also, recent tests will not yet be listed. You can refer to the manufacturers and/or designer of your current system to get the latest information.

Refurbishment options

A wide variety of buildings currently fall within EPC bands F and G and the most appropriate solution for each will, of



course, depend on its unique characteristics and requirements. Premium performance phenolic insulation boards offer a proven option in specifications where fabric performance is identified as a priority, allowing the desired level of thermal performance to be met with a slim, lightweight construction.

Adrian Pargeter is head of technical and product development at Kingspan Insulation

PERFORMANCE

High performance rigid phenolic insulation can achieve the required fire performance and negligible smoke obscuration for use as External Wall Insulation



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Sto takes insulation to new heights



Residents of a prestigious new home created in a former WWII RAF control tower will enjoy a warm and comfortable environment, thanks to the use of external wall insulation from Sto. Restoration of the historic building in Scotland has included the installation of StoTherm Classic insulation and a StoSilco external render, and this has transformed the control tower into the impressive centrepiece of a contemporary new residential development.

0141 892 8000 www.sto.co.uk

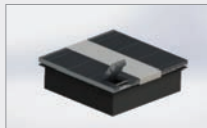
Fernox recognised by H&V News Awards



Fernox and Expert Trades have been shortlisted in the Collaboration of the Year category for the H&V News Awards 2018. The market leading chemical water treatment and filter manufacturer, Fernox, announced the partnership last year, and now works alongside the online trade platform to bridge the gap between manufacturer and tradesman – as well as developing further relationships within the HVAC industry. Francine Wickham, global marketing director at Fernox said: “The H&V News Awards is a key industry event and being named as a finalist celebrates our continued commitment to market excellence.”

0330 100 7750 www.fernox.com

Super Slim-line Fantile launched



AET Flexible Space, a leading provider of underfloor air conditioning systems has just released the latest version of their market leading recessed fan air terminal, or Fantile. The new super slim-line TU350 Fantile is similar to the existing TUS Fantile, with an equivalent unit height of just 150mm, but the new model has superior performance, achieving higher airflow capacity with reduced noise levels. The slim-line Fantile was specially designed for developers seeking to maximise revenue. By removing services from the ceiling void and utilising the space beneath the raised floor

01342 310400 www.flexiblespace.com

Vortice launches new website



Vortice has launched its new website for the UK market. The site is mobile-friendly and in keeping with the group's corporate websites around the world. Customers can order online, view technical details for each product and compare different products by specification. Finance and Marketing Manager Hayley Powell said: “We hope our customers find our new UK website easy to access, navigate and to purchase from. It contains a mine of information about all of our products as well as details about our CPD programme and BPEC installers training course.”

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Johnson launches new VRF

Johnson Controls-Hitachi Air Conditioning Europe is launching an innovative new range of modular VRF units for 2018 under the Hitachi brand. Called Set Free Sigma, the outdoor units for 2-pipe Heat Pump and 3-pipe Heat Recovery will replace the existing Set Free VRF units. Available from 5 to 24HP in a single unit module and up to 96HP with combinations, the outdoor unit casing has been completely redesigned and offers a total of seven new capacity models – 18, 20, 22 and 24HP (Standard) and 14, 16 and 18HP (High Efficiency). This extended lineup achieves higher power combinations from fewer units, requiring fewer connections and delivering improved installation flexibility – meeting the needs of specifiers, installers and end users. All units are compatible with Hitachi's System Free indoor range, with comfort protection available as standard across the range.

020 3901 0913 www.hitachi-hvac.com



Successful test for Norcros

Sugar Quay is a new residential site, currently under development. It is situated in one of the most prestigious riverside locations still to be developed in London on the north bank of the River Thames near to the Tower of London. The core of the project is the replacement of a 1970s office block with a contemporary mixed-use Foster & Partners scheme. This will comprise apartments built at basement level, at ground floor level and also in blocks of nine to eleven storeys. Norcros Adhesives carried out a programme of on-site tests, using the new Norcros Pro Gyp-Base Fast Track Sealer, which greatly reduces the minimum drying times normally applicable for anhydrite screeds. Developed and tested in association with Gypsol, Norcros Pro Gyp Base offers a fast track solution for tiling on to both heated and unheated anhydrite screeds. At the conclusion of the tests there was no evidence of debonding of tiles or cracking of the grout joints in any of the bays and no evidence that the Pro Gyp Base had not worked effectively.

01782 524140 www.norcros-adhesives.com

Hit the deck

Tom Rollo of Polyflor examines the growing number of safety flooring options available to architects

Many years ago, an architect interested in safety flooring was faced with a simple choice, it was available in any colour as long as it was grey! With function not form being all important, safety flooring tended to be laid in traditional commercial areas where spillages would occur.

Fast forward 20 years or so and the vinyl safety flooring world we now see today is much more sophisticated and a significantly different animal. Safety flooring is now a combination of both style and substance, with warmer, brighter and more contemporary designs available which are far removed from the institutional, clinical look of old.

Having evolved substantially to meet market demands and trends in our health and safety conscious culture, the use of safety vinyl has extended from back of house to showcase areas where it is more visible to the public and central to interior design concepts. Traditional safety floors often include dark aggregate to provide friction which is very visible, whereas the carborundum-free particles used in modern ranges are similar to the tone of the floor's base colour and therefore give the look of smooth vinyl but with the performance of a safety floor.

Thanks to the technological advances from flooring manufacturers, safety flooring with virtually invisible particles and sustainable wet slip resistance has become a major consideration for architects wanting to create a wow factor. Built-in safety has become a client expectation rather than just a wish on their checklist.

Architects have a duty of care to ensure that a suitable safety flooring is selected for areas where there are risks of spillages and surface water. Therefore it is always important to check that the product manufacturer can support slip resistance test method claims in accordance with HSE & UK Slip Resistance Group Guidelines.

In terms of safety floor credentials, all products specified to provide slip resistance





in wet conditions should meet EN 13845, which is the European Safety Flooring standard for particle based flooring. To meet the criteria for this standard, safety flooring must pass the '50,000 cycles' abrasion test to ensure long term, sustainable slip resistant performance of the aggregates used within the product.

Products specified as safety floors should also be Health & Safety Executive (HSE) compliant and offer a low potential for slip. The production processes used to develop HSE compliant safety flooring are highly sophisticated with slip resistance generated through use of aggregates such as quartz, aluminium oxide, silicon carbide and recycled natural aggregates incorporated in the full performance layer. This ensures that slip resistance is provided throughout the guaranteed life of the product.

To meet HSE requirements, a safety floor must achieve a result of 36+ in the Pendulum Wet Test with a surface roughness of 20 + microns. These tests are portable and can be used to take live readings on site to demonstrate slip resistance over the life of the floor. Specification of safety flooring must not be made solely against Ramp Test (DIN 51130) R value ratings such as R10 as this is an ex-factory method of assessing slip resistance that takes no account of wear and maintenance carried out to the floor over time. Hence, a product with a rough emboss but no embedded particles may be sold as a pseudo safety flooring with an ex-factory R10 rating but in time the emboss will wear, leaving a smooth floor that is not slip resistant in wet conditions.

It is also important that slip resistance does not impinge on the flooring's overall look and subsequent ease of cleaning. Dispelling the myth that safety flooring is difficult to clean, the development of protective maintenance enhancements mean improved maintenance benefits, optimum appearance retention and life cycle maintenance cost savings.

The key to specifying the right safety floor for your next project is to seek advice from a trusted flooring manufacturer who can advise on suitable products that will perform safely for years to come and can demonstrate conformance to the industry standards.

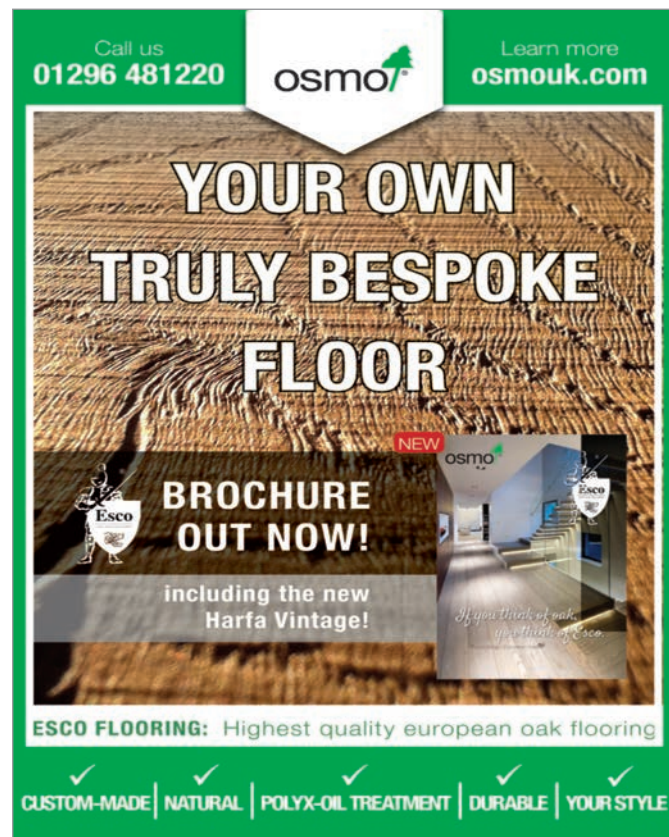
Tom Rollo is marketing manager at Polyflor



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NEW

Shopping centre refurbishment enhanced



Hunter Douglas's first major ceiling project using an engineered solid wood (ESW) baffle system at a UK shopping centre has been hailed a huge success. Award-winning architects Benoy, designed the £8 million refurbishment at Queensgate Shopping

Centre, Peterborough, specified Hunter Douglas to manufacture the ceiling. The company manufactured and supplied 1100m² ESW grill ceiling, with slat dimensions of 150mm x 25mm and a 75mm gap. A total of 1000m² was finished in pure white RAL9010, while the remaining 100m² was finished in walnut veneer.

01604 648229 www.hunterdouglas.co.uk

Hunter Douglas expands HeartFelt®



Hunter Douglas has introduced a new colour range for its award-winning HeartFelt® ceiling system. The world's first modular and linear felt ceiling system, which scooped a prestigious Red Dot award for product design earlier this year, now includes cream, light brown,

medium brown, dark brown and umber, which blend in seamlessly with materials such as wood. These five new earth tones complement the original five grey shades, and black and white, which have also been added to the palette. The HeartFelt® ceiling system, described as "one of the best products of 2017" by the Red Dot award judges.

01604 648229 www.hunterdouglas.co.uk

Announcing the latest addition to the Ultralite® family: Ultralite® D2



Announcing the latest addition to the Ultralite® family: Ultralite® D2 from Mapei is a ready-mixed, lightweight and brilliant white adhesive for ceramic wall tiles, ideal for areas such as residential and commercial showers and wetrooms. Bright white Ultralite® D2 can be used with large format tiles up to 350mm x 350mm, producing up to 45 per cent extra yield compared to standard weight adhesive. An area of up to 8m² can be tiled from one bucket when using standard size wall tiles. Ultralite® D2 is a ready to use paste and has excellent initial grab. The viscosity of the paste enables easy trowelling on to vertical surfaces, providing excellent coverage when fixing larger tiles. Ultralite® D2 can be used for installing porous bodied ceramic tiles and mosaics onto internal walls and highly deformable substrates in both commercial and domestic areas, fixing tiles to plasterboard, plaster walls and tile backer boards, as well as painted surfaces or existing tile surfaces. Contact Mapei's Technical Services Department for more information about using Ultralite® adhesives in your project.

0121 508 6970 www.mapei.co.uk

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Flooring: NEOLITH PHEDRA Satin Museum of Latin American Art Buenos Aires (MALBA)
Designed by Estudio Herreros; Photography: Javier Agustín Rojas

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magrini baby changing units

Magrini **baby changing units** provide a hygienic and safe place for changing your smallest customers.

The contemporary style incorporates extra-deep sides providing an intrinsic safety barrier and the units have a unique hinge system preventing small fingers from being trapped.

Magrini baby changing units are available in a choice of colours to suit modern commercial washrooms.



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Interior Film creates the right image



The Pixel Business Centre in Essex was refurbished using 90 per cent recycled materials. Specialist contractor T6 used Interior Film, a self-adhesive architectural film from David Clouting, to restore 50 old wooden doors with metal and glass portholes back to life. T6 also used Interior Film to give a smooth seamless finish to the reclaimed plywood for the buildings' cafe walls and bar area and the washroom/toilet block walls. Interior Film, manufactured by LG Hausys, is quick and easy to install and can be applied to almost any interior surface.

www.davidclouting.co.uk

'Best value' pays all round...



Delivery of 'best value' is being given a new approach – at least as far as sanitary requirements are concerned. Under current Building Regulations, if space is a limiting factor in toilet provision, the acceptable 'catch-all' is to install a unisex, wheelchair-accessible toilet, to be available for use by anyone visiting the premises. Closomat is urging providers to go a stage further, and include therein a little more space, a hoist and adult-sized changing bench. It delivers, the company maintains, best value in terms of space management, cost, and customer service.

0161 969 1199 www.clos-o-mat.com

Raw beauty from Osmo...



Osmo UK, the eco-friendly wood and finishes experts, offers Polyx-Oil Tints Raw, a lightly tinted protective finish that provides an original, untreated appearance for wooden floors. Desired by many homeowners, this finish not only creates a sought-after look, but also protects the wood's surface. It retains the natural beauty and character of the wood in a perfect way. Easy to use and apply, Polyx-Oil Tints Raw is the ideal product for customers who wish to retain the wood's original look. By accentuating the natural colour and grain of the wood, the surface appears as near to natural as possible.

www.osmouk.com

Tranquilt utilised for 'Gateway to Wales'



A three-storey apartment building being constructed at Sealand in Flint, has featured the use of Monarfloor Tranquilt acoustic membrane. As part of the extensive Icopal range, the product played an important role in the multiple occupancy structure achieving compliance with Part E of the Building Regulations. In total 1200 square metres of Tranquilt has been installed. Monarfloor Tranquilt creates an acoustic isolation layer between a concrete subfloor and a floating screed to help specifications exceed the requirements of Approved Document E to the Building Regulations.

0161 865 4444 www.icopal.co.uk

Signbox brings life and character



Signbox has printed and installed 39 graphic artworks at new Cardinia Real Estate UK properties in London. Cardinia Real Estate UK worked in collaboration with a number of artists to transform the buildings with colourful and distinctive artwork displays throughout. Signbox digitally printed permanent wall art onto Digimura 2:1, a Class-O fire rated wall covering. Interactive wall art was printed using Teslaflex, a ferrous film with a high-grade flexible magnetic base and self-adhesive back that is durable, re-usable, cost-effective and can be installed on any flat surface.

01784 438688 www.signbox.co.uk

Washroom gets excellent reception



Washroom Washroom, has designed and installed a striking bespoke reception desk along with new washrooms for an award-winning office development with ISG. The reception area at The Bower had to set the tone for the rest of the building and to make a lasting impression on visitors. With this in mind, Washroom designed and manufactured a bespoke Corian reception desk to mirror the angular lines of the unique feature staircases in the building's central atrium. In addition, Washroom installed new male and female washrooms to three levels across four cores of the building.

sales@washroom.co.uk

A world of colour



David Brailsford, Altro's New Product Introduction Manager, looks at surfaces for healthcare around the world and explores the influence that climate and light. The healthcare sector has traditionally posed challenges for designers when it comes to specifying materials that can be used on floors and walls. Products and finishes have to meet stringent criteria, including enhanced safety requirements, hygiene of the highest standards and legislative obligations. Thankfully, Altro now have a huge range of options that satisfy these requirements, whilst offering far more flexibility when it comes to aesthetics.

01462 489 516 www.altro.co.uk

Original and contemporary designs



Design and Build firm, Oktra, recently specified a mix of Forbo Flooring Systems' Tessera carpet tiles and Allura Flex Luxury Vinyl Tiles (LVT) for the refurbishment of Zebra Technologies' new office space. From retro tetris style patterns to classic, yet contemporary chevron designs, the creativity of the floor scheme led the project to being commended in the Fly Forbo 2016/17 competition. Forbo's Tessera carpet tiles are renowned for their aesthetic styling and outstanding performance, even in the most demanding heavy traffic environments.

01773 744 121 www.forbo-flooring.co.uk/offices



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Artisan Panel doors for luxury apartments

Specialist door manufacturer, Ahmarra have supplied bespoke panel doors for a number of striking high-end residential properties.

'The Pentagon' is a boutique collection of five superior three-bedroom apartments built by renowned developers, Yogo Group. Located in Hadley Wood, Hertfordshire, these beautiful homes are the very definition of luxury living, as well as Ahmarra's internal doors, each apartment has been uniquely interior designed throughout, from wall



and ceiling finishes, mood lighting and bespoke designed kitchens and bathrooms. Ahmarra worked closely with Yogo Group to select Blenheim panel and flush doors in an Ebony Ash stain.

Ahmarra have also supplied bespoke panel doors for 'Arts House', an exciting new development in Kensington for CC Construction. Windsor 3B panels doors were selected in 'blue grass' and 'bone white' factory painted finishes.

All doors were selected from Ahmarra's Artisan Panel Door Collection. This bespoke range of panel doors includes stunning designs from Ahmarra's latest projects which have featured in some of the most prestigious residential developments in the UK.

The Artisan range has been designed specifically for architects, developers and interior designers working in the luxury residential sector and offers a wide choice of door and panel designs and additional joinery components.

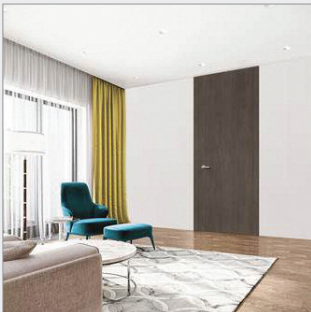


Proud to fly the flag for British craftsmanship, the Artisan Panel Door Collection offers the very best quality in terms of design and materials.

View the brochure or browse the online 'Panel Door Product Selector' on the Ahmarra website or contact the Ahmarra sales team by calling.

02392 389076 www.ahmarra.co.uk

Vicaima reaches new heights



Getting to the top is not easy. But with the rising demand for grey and on-trend tonal colours epitomised by the new Visual Sensations' Mountain from Vicaima, specifiers can take their vision to new heights with doors that reflect the latest fashions within interior design. Vicaima has launched four new and stunning Visual Sensation finishes into its ever popular Dekordor SD range. Mountain, being one its latest grey creations, has given designers some new creative inspiration. Stimulated by dramatic landscapes, Mountain allows specifiers to incorporate the peaceful essence of nature within their chosen interior space. Since its introduction, the Visual Sensations (VS) collection has heralded a new era for foil faced doors, with bespoke models being created and manufactured by Vicaima that offer unique design solutions which are in-step with the latest design trends. Visual Sensations Mountain is just one in a selection of eight new finish options in the 2018 VS collection, which also includes Tundra, Alpine and Desert, all of which available in both vertical grain and cross directional woodgrain designs.

01793 532333 www.vicaima.com

Luceco lights print specialists



Luceco and Advanced Interior Solutions (AIS) have recently completed an LED lighting installation at Vinyl Graphics Ltd with LuxBay, a cost-effective LED luminaire ideal for high ceiling mounting positions in industrial and warehouse environments.

VGL's production facilities were poorly lit following the initial base build installation inherited when they took the building. With the combined expertise of Luceco and Advanced Interior Solutions, a full lighting design was produced, and luminaires installed to ensure the correct lux levels for the environment.

01952 238100 www.luceco.com

Twin165 pairs looks with capacity



A leading business services provider required a high quality cable management solution for a new multi-million pound facility and, with its sleek design and large data capacity, Marshall-Tufflex's Twin165 system fitted the build perfectly.

Innovative PVC-U Twin165 delivered the perfect solution, with a large bend radius control of 50mm suitable for installations up to Cat 7a. The trunking is split to provide 60 per cent of space for power delivery and a generous 40 per cent for data cables, making it perfect for commercial requirements.

01424 856655 www.marshall-tufflex.com

New generation of LED pendant fittings

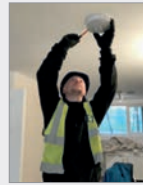


Megaman, has launched its innovative range of aluminium linear LED pendants, Gabio. The patent pending louvre features a unique design, incorporating light cells within its junctions to allow a sophisticated and continuous optical distribution.

Suitable for education, retail and commercial applications, the versatile Gabio provides customers with a unique lighting solution that can suit a variety of installation needs. Gabio LED louvres are available in 20W and 30W versions, producing up to 117 lumens per watt with a lamp life of up to 50000 hours at L70.

01707 386000 www.megamanuk.com

Firm insists on Aico Smoke Alarms



E7 Building Services fits Aico Smoke Alarms solely throughout all residential properties as it considers them to be “the best and most reliable equipment on the market”. Aico’s Ei160e Series delivers the highest level of protection for BS 5839-6 Grade D applications, Ei160e Optical and Heat Alarms are resistant to false alarms, easy to install, attractive with their clean, modern design and are fully compatible with existing Aico alarms and accessories. The Ei160e Series alarms are also compatible with RadioLINK+ technology for whole system data extraction and wireless alarm interconnection.

enquiries@aico.co.uk

Mapei launch LVT adhesive: Ultrabond Eco MS 4 LVT



Mapei UK has launched a new high performance, one-component silylated polymer based adhesive for installing LVT floor coverings: Mapei Ultrabond Eco MS 4 LVT. This product is designed for use on interior floors for LVT floor coverings and as a universal adhesive for all types of textile and resilient flooring coverings, including vinyl. Mapei Ultrabond Eco MS 4 LVT is suitable for use with under-floor heating systems and in extreme environments. Ultrabond Eco MS 4 LVT is suitable for use in domestic, commercial and industrial locations, for example hospitals, shopping centers and airports. Tough and highly resistant to shear loads, Ultrabond Eco MS 4 LVT is particularly suitable for floors exposed to direct sunlight, intense mechanical stress and areas which are constantly exposed to water such as communal kitchens, showers and wetrooms. Solvent free EMICODE rated EC1 R Plus, Ultrabond Eco MS 4 LVT is rated very low emissions and is suitable for installers who are sensitive to epoxy and epoxy/PU products, proving harmless to the health of the installer and end user.

0121 508 6970 www.mapei.co.uk



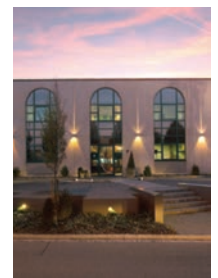
Exclusive veneer deal with decospan

James Latham has agreed a deal to become the exclusive UK distributor for Decospan’s added value products. The agreement includes Decospan’s Shinnoki, Querkus, Nørdus, and Look’ likes collections. Decospan is a European leader in premium veneer processing and its unique production methods capture and enhance the beauty, colour, markings and structure of solid wood, combining these with the many advantages of a veneered panel. Chris Sutton, Managing Director of James Latham said, “These exclusive collections offer unprecedented choice to architects, interior designers and furniture makers and we are already seeing specifications coming through, particularly for high-end residential, retail, commercial and hospitality projects.” For more information please visit the website.

www.lathamtimber.co.uk

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0208 123 7914 modernlightingsolutions.co.uk

A range of rising bollard systems



Security bollards are commonly used when there is a need to protect property and people in a designated area, and can be either fixed, manual, or fully automated rising bollards. The use of security bollards as a visual deterrent can help prevent attempted theft of vehicles and property, along with offering a physical barrier between the road and the protected area. At Macs, they offer a wide range of rising bollard systems to suit many applications. For more information, please visit the website.

www.macs-bollards.com

'Rock' solid with Resiblock Resifix

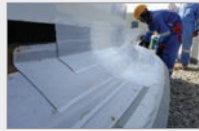


Resiblock Resifix Commercial was selected as one of the best products to prevent accidents on Gibraltar's busiest street, mainly due to its ability to solidify the large joint widths associated with Cobble Paving Blocks. As a self-binding jointing

sand, Resiblock Resifix Commercial expands to the size of the joint once activated by water, to create a flexible polymeric adhesive. Resiblock has continued their partnership with Gibraltar by supplying Resiblock Resifix for Main Street Repairs.

mail@resiblock.com

UAE Oil & Gas Storage chooses Denso

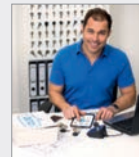


BPGIC is a prominent tank storage operator whose activities in Fujairah, United Arab Emirates, include the storing all types of oil products and gas. Denso Steelcoat Tank Base Protection System was recently applied on all BPGIC's tanks in their new Fujairah

storage facilities terminal. The approval was based on the successful record of this Denso system used by other tank farm operators in the UAE. After hand power tool cleaning and the application of Denso Hi-Tack Primer, Densyl Mastic was used to fill all voids before the areas were wrapped with a layer of Denso Hi-Tack Tape.

020 8670 7511 www.denso.net

Abloy UK launches CLIQ Go App



Security expert Abloy UK has launched the new CLIQ® Go App, designed to allow small to medium sized organisations to remotely manage their security from wherever they are, keeping their business secure 'on the go'. The CLIQ Go App moves security to a new dimension, enabling business owners to control security in their building

and premises from their mobile device. Features include the ability to schedule access to rooms or give contractors time-limited access. If a key is lost, access can also be revoked using the CLIQ Go App, all managed from a cloud-based system.

marketing@abloy.co.uk



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