



A new era:
The FMB's Brian Berry looks forward to change in the sector under Labour



Savvy with SuDS:
Revealing the amenity that a sustainable drainage scheme can bring to projects



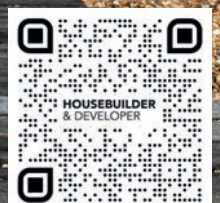
Round Table Review:
Some deep thoughts on the practicalities of deep housing retrofit at scale

HOUSEBUILDER & DEVELOPER

AUGUST/SEPTEMBER 2024



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James Parker

ON THE COVER



HOUSEBUILDER & DEVELOPER

AUGUST/SEPTEMBER 2024



FOLKESTONE'S NEW FACE

The latest part of the seaside town's revival is a luxury apartment block on the beach, with impressive curves and bespoke glazed brick facades.

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FROM THE EDITOR

The new Government has hitched its ambitions to pull the UK's economy out of its slump using a horse called housebuilding, but unfortunately it's not looking keen to leave the stable.

Housing Secretary (and Deputy PM) Angela Rayner has launched a consultation on reforms to the planning system in order to progress the Government's target of 1.5 million homes over five years. It sets in stone a new regime of mandatory housebuilding targets across the country, imposed based on local need.

Rayner believes the outcome will be not 300,000 but 370,000 homes per year across the five year Parliament, a possibly farcical aim given the sector is currently outputting around 200,000 a year. The key is not the paltry 300 new planning officers promised, but the new "grey belt" designation for "low quality" sections of former green belt, which come with a set of "golden rules." Developers will have to provide 50% affordable housing, "increase access to green spaces," and "put the necessary infrastructure in place, such as schools and GP surgeries."

Rayner admitted that the changes "would not be without controversy, but we aren't afraid to take it on." She believed local views should dictate "how to build, not whether to build." Despite the focus on grey belt, brownfield sites "remain the first port of call," she said, with grey belt the next-best option.

More clarity is needed on what grey belt will look like, and how it'll be allocated. Hopefully this will come in the forthcoming Planning & Infrastructure Bill. So far the Department has said it will be "on the edge of existing settlements or roads, as well as old petrol stations and car parks."

It seems the onus will be on planning authorities to ensure they release other sites, or risk grey belt being used: "Where authorities do not have up-to-date local plans in place or enable sufficient housing to come forward to meet local targets, homebuilders can bring forward proposals on grey belt land."

This could lead to a boom in housebuilding, but land that's "safeguarded for environmental reasons will continue to be protected." And, Section 106 arrangements would be strengthened, to ensure the supporting infrastructure is delivered.

Rayner asserted in the Commons: "We will not be deterred by those who stand in our way." I wonder what the housebuilders had to say to her deputy Matthew Pennycook when he spoke to them after Rayner's speech?

The industry is as yet unmoved, some saying that with registrations down and many firms experiencing large downturns, expecting housebuilders to suddenly create thousands of homes is unrealistic. Skills is the big one – it's thought 900,000 new construction workers are already needed by 2028 – so currently it looks as if an extra 300,000 isn't on the cards. We can probably put the 'new towns' plan – that Labour also has on its long list – in the 'cloud cuckoo land' folder for the time being.

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Vistry North East predicts first £150m turnover



Vistry North East said it is “building more homes, more quickly,” and is “eyeing a record breaking year” for 2024 in its recent statement.

Bucking the trend in some regions Vistry North East is currently targeting 800 new properties across 15 sites, from Morpeth in the north to Guisborough in the south. The company said it “is confident of passing £150m turnover for the first time and continuing this growth trajectory.”

Vistry said that key to this success were its “partnerships with housing associations, build to rent operators and Homes England, which enable Vistry to build out sites up to four times faster than traditional private sale only developers.”

Managing director, Sean Egan, explained: “While the speed of housebuilding is normally determined by the state of the private housing market, the pre-sale of homes to our partners across multiple tenures establishes sites much earlier and delivers far faster construction of the entire development, including our own private sale housing. As a result, we are building much more quickly than our competitors, establishing new places and vibrant communities at pace.”

Vistry has consistently topped the monthly National House Builders Council (NHBC) quality ratings in the north east, and the business also has a House Builders Federation (HBF) Five Star customer ratings.

Sustainability is “at the forefront of Vistry’s thinking,” said the firm. “A significant proportion of the homes in the north east are now being delivered

through the company’s three timber frame factories. The plan is to be a net zero organisation by 2040.”

The firm added: “A lot of work is underway to further improve operational processes, including reducing waste and the environmental impact of the materials used, and to minimise greenhouse gas emissions and running costs for customers.”

Vistry North East is developing several major sites including developments providing 670 homes near Stockton; 660 homes at Kirkleatham, near Redcar; 441 homes at Morpeth; 401 homes at Bishop Auckland; 445 in Gateshead; 275 in Middlesbrough; 275 in Sunderland and 270 at Birtley. In addition, extra care developments providing over 300 specialist homes for older people are underway at Guisborough and Peshaw, with another due to start shortly in Morpeth.

Vistry North East added: “Bovis and Countryside private sale home brands will be added to the existing Linden Homes being built in the region.”



Story Homes Penrith scheme gets green light



Story Homes has secured planning permission to deliver 194 new homes and associated infrastructure on land off Inglewood Road, Penrith.

Westmorland & Furness Council resolved to grant planning consent for the scheme at its Planning Committee meeting in July. The scheme will form a second phase of Story Homes’ development ‘The Fairways’ which was completed in 2020.

Of the total number of properties, 20% will be classed as affordable homes for suitable applicants with a connection to the local area, and the scheme also includes a £30,000 contribution towards improvements at Fairhill playing fields.

Story Homes’ proposals for the new development offers a variety of two to five bedroom homes with flexible, open plan living spaces. “The scheme has been carefully designed to provide for an appropriate extension to the urban environment with attractive new street scenes, new walking routes and connected open spaces,” said the developer.

Adam McNally, senior land and planning manager for Story Homes Cumbria & Scotland, said: “Our team has worked closely with Westmorland & Furness Council, taking into consideration their feedback. Phase two of The Fairways will enable us to continue to bring more high-quality homes to the local area to help meet local demand for housing and economic growth ambitions.”

This new residential development will also create benefits for the local economy during the construction phase as a result of direct and indirect employment opportunities through the sub-contractor and supply chains, as well as an increased demand for local services when the new homes are occupied.



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Hill gives Peters lead role in Special Projects

Housebuilder The Hill Group has announced the promotion of Cain Peters to managing director in charge of special projects, specialising in large high density construction projects. Cain, who began his journey with Hill as a site manager 17 years ago, will “leverage his extensive experience,” which includes key joint venture partnerships and has become a major pillar of Hill’s recent success.

Since 2015, in his role as regional director, Cain has worked closely with the Special Projects division. He will now manage a team of over 100 employees and a division with a projected turnover of £300m for the current financial year.

Andy Hill OBE, group chief executive of The Hill Group, comments: “Cain has demonstrated exceptional loyalty and a commitment to continuous improvement during his time at Hill. This latest promotion is both a well-deserved progression, reaffirming the confidence I have in him to lead and develop further our Special Projects team for large joint venture projects with key partners across London and the South East.”

Peters commented: “I am passionate about Hill and proud to have been a part of the company’s success over the past 17 years. I look forward to leading the Special Projects division and contributing to the company’s future achievements and planned period of growth.”

Hill has gone from strength to strength in recent years and was recently named Housebuilder of the Year at the 2023 WhatHouse? Awards. The company is currently planning for the next phase of its business strategy, in which the Special Projects region will play a key role.

Screwfix LIVE returns in September

Screwfix LIVE, the “omnichannel” retailer’s flagship, is coming back to Farnborough in September.

The free-to-enter show is returning to Farnborough International Exhibition & Conference Centre from 27-29 September with even more exclusive show deals and leading suppliers.

With more than 180 leading trade brands under one roof, visitors will enjoy three days of live product demonstrations, entertainment, special guests in attendance and much more.

Last year, Screwfix Live celebrated its 10th anniversary with a breaking record event. Over 19,500 visitors attended the event across the weekend and had the chance to meet and greet celebrity guests including football legend John Barnes, TV presenter and Olympic champion Samantha Quek, and comedian Iain Stirling.

Screwfix LIVE will also host the final of Screwfix Top Tradesperson on Friday 27 September. The competition is now in its 15th year and champions tradespeople across the UK and Republic of Ireland. 10 skilled finalists will face a panel of industry experts, including 2023 champion Astrid Arnold, to determine who will be crowned Screwfix Top

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Registrations are now open to attend Screwfix LIVE 2024 and you can register at screwfixlive.com

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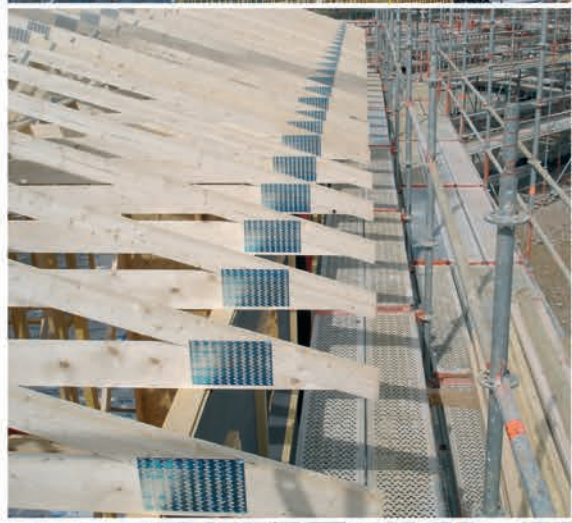
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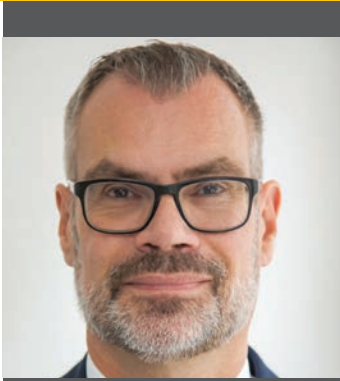


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Brian Berry

THE INDUSTRY ADVOCATE

A NEW ERA

Labour's election victory has ended 14 years of Conservative dominance. Brian Berry, CEO of the Federation of Master Builders (FMB), discusses the potential impact on the housing industry and whether Labour can deliver on their promises.

Labour's general election win has changed the landscape of British politics, following 14 years of the Conservative Party being dominant in Westminster. With the majority Labour holds it should mean their agenda is implemented with little challenge. They have plenty of ambitious plans to keep the housing industry busy, but with such lofty ambitions, will they be able to deliver?

LABOUR'S BIG PLANS

Labour's plan to deliver 1.5 million new homes over five years will be a tough goal, considering the country has failed to meet housing targets for many years, and sections of the market like SMEs are in steep decline. But, plans to reform the planning system should help to make it easier to build homes. Labour's announcement to provide increased direct government funding for planning officers is good to see, however, the figures announced are a drop in the ocean compared to what is needed to rebalance planning teams that have been losing staff to the private sector.

The Labour Party has made brownfield sites a key tenant of their plans. This could be a bonus for SME house builders who tend to prefer to use smaller, brownfield sites. There is also the much talked about 'grey belt' which is what Labour is describing as the poor quality green belt land. There has been a scramble to understand what this term really means and for the moment it remains a Labour term, rather than having any legal meaning. Hopefully, Labour doesn't get too distracted by this, as the so-called grey belt offers very few opportunities – less than 1% of the Green Belt - and that only makes up 13% of England's land.

Labour also has plans to deliver new towns. These could unlock opportunities and a consistent line of work for my members, smaller, local house builders. The FMB has made clear to the new Housing Minister, Matthew Pennycook MP that any plans on new towns should consider SMEs. Much like large strategic sites, they should be broken down into smaller plots so that developments can have a diverse range of housing.

WHERE ARE THE BUILDERS?

But what about skills? This topic could



easily be an entire article, so I'll be brief. The industry is in desperate need of new builders to deliver all these ambitious plans. But with apprenticeship numbers falling far short of the numbers required and high dropout rates, will the industry be ready to ramp up? At the current rate, the answer is no. Labour have announced the setting up of Skills England, so let's see over the coming months what can be done to boost numbers.

THE SOCIAL HOUSING DILEMMA

Social housing could be an important route forward for small, local house builders as it has the potential to provide a consistent pipeline of work from local authorities or social housing providers, with the use of smaller developers may be particularly needed in rural areas. Labour haven't fixed a percentage to the number of social homes they would like, but pre-election announcements put it at 40%. The reality of the housing market has likely meant this number was omitted from the manifesto and no official percentage now exists.

However, the broken system surrounding Registered Providers (RPs) of social housing must be fixed. Too many smaller house builders struggle to find RPs to partner with, owing to the smaller sizes of their social housing numbers, which are economically unattractive to social housing providers. This means homes go unbuilt and people stay on housing waiting lists, especially in rural areas.

There is much to play for over the coming months and years – which is why it's going to be an exciting but challenging time not just for our industry but for the new Government wanting to implement its new agenda.

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Samantha Hursey, operations director, Meadfleet

SAVVY WITH SUDS

Samantha Hursey of Meadfleet Open Space Management discusses the practicalities of maintaining SuDS and how they can bring amenity to new housing developments.



Sustainable Drainage Systems or SuDS, not only play a key role on residential developments in mitigating the risks of flooding, but they also offer ecological and amenity value. Ideally, they will be maintained to maximise all three benefits, making them a key feature in new residential schemes.

WHAT ARE SUDS?

SuDS mitigate the impact of new developments on local drainage to reduce the risk of flooding. They also help improve water quality and support biodiversity. SuDS simulate natural drainage to manage the risks of flooding and pollution caused by urban surface runoff. Wherever possible they should also provide environmental enhancements and contribute to the amenity value of an area.

Examples of common SuDS features include attenuation ponds, also known as balancing ponds, which are designed to hold water and slow down the flow of stormwater runoff particularly during periods of heavy rain. Swales are another frequently used mechanism on a housing development to help control urban runoff. They are shallow channels with gentle slopes that collect and move water. Swales also assist in the improvement of water quality by removing pollutants

through infiltration.

Another example is permeable paving which can be used on roadways, drives and patios and can often drain double their surface area, allowing for more water to be stored and infiltrated, preventing it from directly reaching a watercourse. Permeable paving is beneficial in that it does not require any additional space and serves a dual function while being easy to maintain.

WHY ARE SUDS IMPORTANT?

With increasing extreme weather events and the likelihood of warmer and wetter weather in the coming years, it is vital that housing developments do not place added pressure on existing drainage systems. SuDS provide a solution to mitigate flooding and reduce water pollution, and it is likely that they will become a compulsory feature on all new developments.

Not only do sustainable drainage systems provide practical solutions to mitigate flooding, they also offer other benefits as previously mentioned including biodiversity enhancement, another key focus of the housebuilding industry with the introduction of Biodiversity Net Gain legislation earlier this year.



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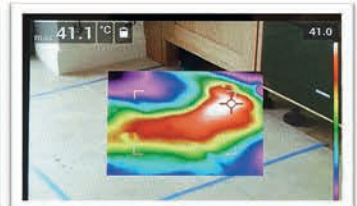
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WHAT ARE THE CHALLENGES OF MAINTAINING SUDS?

When designed and built following best practice guidelines, SuDS do not require a complex day-to-day maintenance programme. An ongoing schedule of works must be followed to ensure features such as inlets and outlets are always kept clear to ensure water can flow without obstruction.

Regular maintenance and inspections must be combined with less frequent tasks such as silt removal and vegetation management. Vegetation must be managed carefully in and around SuDS with invasive species identified and removed. Maintenance regimes must consider the potential presence of wildlife and be conducted at the most appropriate time of year to reduce disruption to any species that may be present.

While day-to-day management and maintenance of SuDS can be straightforward, there are likely to be ad hoc tasks that require specialist technical and ecological expertise.

WHAT ARE THE BIODIVERSITY BENEFITS OF SUDS?

SuDS have multiple benefits for wildlife. Traditional drainage can reduce the amount of water for plants and animals while also allowing pollutants to enter waterways. SuDS can help increase the amount of water and suitable habitats available for wildlife. Successful sustainable drainage systems will provide food, shelter and breeding opportunities for birds, mammals, amphibians, and invertebrates.

Structure is a key factor for optimal biodiversity value. Providing a variety

of grass lengths for example and leaving some areas uncut or cut on rotation enhances structural diversity which will benefit varied species who will use the grasses in different ways. Longer grasses offer a suitable location for the eggs and larvae of some insects to remain over the winter months. Reptiles and amphibians will use longer grass as cover and search it for insects.

Marginal wetland vegetation is ideal to be kept long as it helps increase humidity creating preferable conditions for wildlife.

HOW DO SUDS IMPROVE AMENITY VALUE?

SuDS can provide benefits to new housing developments that contribute to the amenity value of an area. Many SuDS features are dual purpose, for example play areas may double as detention basins and roadways may incorporate permeable paving, thus maximising the available space on the development while not impacting the aesthetics.

Carefully managed SuDS such as basins and swales can be visually pleasing, adding variety to a landscape while attracting a range of wildlife, from insects such as bees, moths and butterflies to birds, newts, and water voles. Access to well-maintained green spaces and nature are proven to support both physical and mental wellbeing, and open spaces that include a variety of features are thought to have the greatest impact in this respect.

Through careful management, green SuDS with beneficial planting can contribute to also help cool urban areas and remove pollutants from the air.

SuDS can become a key feature of a development with community

involvement. Adding bird feeders, insect hotels and wildlife shelters on or adjacent to them helps maximise their appeal to residents and signage can be used to educate on the benefits of these features. Activities such as wildlife walks and bug hunts can further engage residents.

WHAT ARE THE KEY THINGS TO CONSIDER WHEN DESIGNING & IMPLEMENTING SUDS?

Collaboration by all parties is useful to ensure the successful design and implementation of SuDS features. Designers and housebuilders must consider future practicalities of ongoing maintenance requirements. Ensuring the SuDS are designed to allow the elements to be suitably accessed and easily maintained on a regular basis are key to the successful management of drainage features.

Housebuilders must consider the appropriate solutions for the ongoing specialist management of sustainable drainage features. Options include management companies who will take long term responsibility and provide a robust inspection and maintenance process to meet planning approval and the ongoing needs of SuDS features. Organisations that take an objective approach, taking into account best practice and managing SuDS for optimum effectiveness as well as biodiversity and amenity value should be sought for the long-term success of SuDS features and the legacy of the development.

Samantha Hursey is operations director at Meadfleet Open Space Management



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Patrick Mooney

THE SOCIAL NETWORK

REALITY CHECK

Patrick Mooney, housing consultant and news editor of Housing Management & Maintenance magazine, interrogates Labour's plan for growing the supply of new housing, and asks 'how realistic is it?'



Since winning the general election Labour has embarked on an ambitious series of policy announcements designed to show how different they are from their predecessors. This eventually manifested itself in the King's Speech which outlined the new Government's legislation programme, packed full of Bills to deliver economic growth.

But on delivering new housing they appear to have a near identical target – so what are their chances of success?

Remember the Conservatives had a target of delivering 300,000 new homes a year by the middle of this decade. Labour has set itself a target of achieving 1.5 million homes over the course of five years, which even I can work out amounts to much the same overall figure.

As a country we haven't gotten close to achieving anything like 300,000 new homes a year recently (the last time we did was in 1977) and the list of reasons for that is quite lengthy.

The main problems were a disjointed planning framework, a fractured economy which drove mortgage rates out of the reach for many prospective buyers and drove a number of our biggest modular housebuilders out of business. In fact it is a wonder that we still managed to build 234,000 homes last year, albeit that figure includes conversions.

NOT ENOUGH HOUSING

Homelessness, evictions, disrepair and overcrowding have all risen sharply in recent years, the private rental market is showing signs of stress while affordability for all tenure types has gotten steadily worse. Perhaps most worrying of all though has been the sharp decline in the building of new homes for social rent, with rents set at roughly 50 to 60% of market rent.

In each of the last 10 years fewer than 10,000 social rent homes have been constructed. Of the 522,335 affordable homes built in the past decade, some 260,000 (49%) were for affordable rent and 127,214 were for shared ownership, while only 76,925 (14%) were for social rent.

The situation which Labour has inherited could hardly be any worse. But Labour has spent a long time in opposition in which to develop its plans and there is a huge appetite for change across the housing sector and it seems the whole country.

The speed of delivering these new homes will be hugely important, as we don't want the programme back loaded to the end of a five year period. Reintroducing mandatory local targets and recruiting hundreds more planning officers (but from where?) will undoubtedly help, but much

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more than this will be required if a quick step-change is to be delivered to the supply side.

Remember it was only a few months ago that the National Housing Federation and Shelter teamed up to submit a growth plan which it was claimed could deliver about 90,000 social (or affordable) homes a year and which more than pays for itself in just three years by providing a massive boost to the rest of the economy and in particular the construction sector.

The NHF/Shelter plan showed that within just three years, the 90,000 new social rent homes will have paid for themselves and returned £37.8bn back into the economy, largely by boosting construction. It would directly support nearly 140,000 jobs in the first year alone. In addition, the plan showed that new social homes have the potential to generate huge savings for the taxpayer across multiple government departments, as follows:

- £4.5bn savings on housing benefit;
- £2.5bn income from construction taxes;
- £3.8bn income from employment taxes;
- £5.2bn savings to the NHS;
- £4.5bn savings from reduction in homelessness; and
- £3.3bn savings to Universal Credit.

SCALING UP

The total economic and social benefits of building 90,000 social rent homes could generate £51.2bn net over 30 years (that's £86.5bn gross), including a £12bn profit to the taxpayer. But can this be scaled up to deliver maybe 120,000 or 150,000 social rent homes a year – and do the scale of benefits still apply? What about the possibility of including or adding affordable rent and shared ownership homes to the model?

Speaking at the report's launch earlier this year Polly Neate, chief executive of Shelter, commented: "Homelessness is a political choice...investment is the best way to improve productivity. If we invest in building 90,000 social homes a year, we could end homelessness, save the taxpayer money, boost jobs, reduce the burden of poor housing on our NHS and improve children's life chances."

Neate added: "If this Government or the next is serious about wanting the economy to grow and people to thrive, investing in genuinely affordable housing is a no brainer. Building 90,000 social homes would pay for themselves and return an impressive £37.8bn back to the economy in just three years."



WHEN IT'S PUT LIKE THAT, WHAT'S NOT TO LIKE?

Assuming this plan or a version of it is adopted by Labour, there is still the matter of how the other 200,000 new homes a year are to be delivered.

The Government has already signalled its willingness to build on the 'grey belt' – those parts of the green belt which are not really beautiful and have previously been used for car parks, petrol stations, retail or industrial parks and disused farm buildings. And then there is the huge untapped potential of Britain's Brownfield sites which collectively could provide space for over one million new homes.

COLLECTIVE SUPPORT

The private housebuilders have warmly welcomed Labour's plans and intentions, with their bosses lining up to voice their support after meeting the new Housing Secretary and Deputy Prime Minister Angela Rayner.

Neil Jefferson, chief executive of the Home Builders Federation, said: "Planning has been the biggest constraint on housebuilding in recent years and the measures proposed will address the main areas of concern by bringing more land forward for development more quickly."

But the builders still need to deliver the new homes and Ministers will be keen to ensure there are no fresh instances of land banking for the future, in order to maximise profits and shareholder dividends.

A cautionary note has been struck by Construction Products Association director, Noble Francis, who warned "there just won't be the people" to meet the housebuilding pledge.

Francis said a lack of skilled construction labour and product manufacturing capacity may defeat the homebuilding plan. "As housebuilding recovers over the next few years, these may emerge as the key constraints given that a significant rise in UK skilled labour and product manufacturing requires upfront investment (time and money) for a long-term return."

Francis said the UK's housebuilding workforce and product manufacturing capacity have fallen in recent years, so "new investment in skills and capacity will initially be needed just to get them back to where they were two to three years ago." Francis pointed to figures showing there were 2.08 million people employed in construction in the first quarter of 2024, down 1.9% year-on-year.

This could of course be tackled by targeted recruitment from mainland Europe, where there is a huge pool of skilled construction workers. Remember the time a few years back when we relied very heavily on workers from Poland and other parts of Eastern Europe to provide a wide number of building services.

The other potential blockage (which might be more difficult to solve!) is that the main providers of new social housing (local authorities and housing associations) are already facing enormous pressures currently – primarily to upgrade their existing housing stock – so it is energy efficient, free from water leaks and mould – while also dealing with new consumer standards.

However, Kate Henderson, chief executive at the National Housing Federation, did not think this was an insurmountable problem for her members. Overall she said the King's Speech outlined some "important and welcome first steps towards tackling the housing crisis and increasing the delivery of desperately needed affordable and social homes."

Henderson added that the NHF looks forward "to working closely with the Government to ensure that a revitalised planning system delivers the number and types of affordable homes the country needs. However, "this will not be possible through planning reform alone and will need to be met with the right funding."

"Housing associations stand ready to support the Government on this to deliver the biggest increase in social and affordable housebuilding in a generation." With this amount of collective agreement and support the prospects for delivering serious growth in housebuilding have never looked better since the late 1970s – all of which is making so many housing professionals optimistic that this time the Government's plans could work.

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Building a Greener Future



Cassandre Le Galliard of Aggregate Industries discusses the driving factors housebuilders are facing concerning embodied carbon in cement

Housebuilders are at the forefront of the move towards creating an eco-friendlier environment, incorporating high-quality materials, low carbon technologies and green energy solutions into sustainable homes that enrich our living standards.

While the new Government's commitment to build 1.5 million homes over the next five years is welcomed, vast amounts of materials will be needed, and sustainability must be central to this. Aggregate Industries is already collaborating with developers and contractors to drive sustainable building through the increased use of reduced carbon and recycled materials.

But how much greener would the world be if cement could be low carbon as well?

That's why the London-based Global Cement and Concrete Association has pledged not just to reduce the carbon footprint of concrete – of which cement is a key ingredient – but to achieve neutrality across the industry by 2050 (the year that the Government has itself committed to reaching net zero).

It is an enviable target, and since launching our own ECOPact concrete product range, we are witnessing a dramatic increase in demand for low carbon sustainable products.

LOW CARBON SOLUTIONS

A now much-in-demand low-carbon solution, ECOPact has been taken up in 30 worldwide markets, including housebuilding, to reduce the footprint of buildings and infrastructure to decarbonise construction at scale.

Delivering 100% performance, ECOPact can reduce the embodied carbon of buildings and homes by at least 30% without offsets. It is the industry's broadest offering of low-carbon concrete for sustainable construction and is sold at

a range of levels, starting at 30% lower embedded carbon compared to standard (CEM1) concrete.

By utilising a mix of supplementary cementitious materials and admixture technology, it is supporting a circular economy, it can also include recycled construction demolition materials, enhancing its environmental benefits by saving natural resources.

Building on the success of ECOPact, ECOPlanet has been added to our range of sustainable building solutions, which are aligned with the world's highest standards of sustainable building certifications – from BREEAM to LEED. Its sustainability profile is driven by innovative low-emission raw materials and, using calcined clay and recycled construction demolition materials, our ECOPlanet formulations reduce buildings' CO₂ footprint by up to 30%.

ACCELERATION TOWARDS NET ZERO

Concrete is the most used man-made material in the world, with about 14 billion cubic metres being used every day, 40% of which goes into building homes. Buildings account for around 40% of energy related global carbon emissions on an annual basis, with at least one-quarter of the emissions resulting from embodied carbon or carbon emissions associated with building materials and construction.

In the UK, according to the Climate Change Committee, 14% of greenhouse gas emissions come from our 28 million homes. Strenuous efforts are therefore being made to tackle that and housebuilders are increasingly aware of the pressing need to accelerate the industry towards net zero.

The majority, however, are already 'squaring up' to the challenges thrown at them by the Future Homes and Building Standard (FHBS) which aims to revolutionise new homes in the UK by slashing carbon emissions by 75-80% compared to current standards.

Significantly, 96% of senior leaders of housebuilders across the UK, contributing to an in-depth report – "Building Blocks to Future Homes" – conducted by Aggregate Industries, are fully aware of the FHBS and the required changes needed across their business for compliance.

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MORE NEEDS TO BE DONE

Moreover, robust preparatory actions are palpably underway – but despite awareness of the FHBS, more needs to be done, 52% of respondents have not aligned themselves with specialist environmental or sustainability consultancies; less than half (47%) are forging new supplier partnerships and just 46% are delving into low carbon building materials.

In a proactive move, 45% are amplifying their use of Modern Methods of Construction (MMC), while 42% are reassessing their house type range.

Notably, 88% have outlined targets for carbon reduction and, among these, almost two thirds (62%) have backed their targets with a sustainability strategy and a detailed roadmap to net zero. While just under half (47%) already have a dedicated sustainability director to navigate this green transition, another 38% are in the process of appointing one, signifying a collective, strategic march towards a sustainable future.

Critiques, however, hinge on aspects such as the insufficiency of available support, short lead times to implement changes, educational deficits, and lack of government stimuli – factors which potentially hinder housebuilders in their race against stringent targets amidst an environment rife with policy delays and economic strife.

BUILDING BLOCKS TO FUTURE HOMES

Though the FHBS may be progressive and far-reaching, there are clearly some hurdles which must be overcome to feasibly bring it into force. Fundamental to this is tackling the lack of available academia, research and industry collateral on green building matters, making it even more difficult for housebuilders to upskill on their own merit.

As part of a strategic analysis presented in the “Building Blocks to Future Homes” report, the team at Aggregate Industries have proposed three key enablers to equip housebuilders with the right tools and support to ensure FHBS compliance. It is calling for:

- A government-backed collaborative platform to facilitate cross-industry co-operation
- Dedicated stimuli for FHBS properties (e.g. stamp duty tax reductions for eco-friendly homes)
- The sustainable contractor skills gap to be addressed

With global warming continuing and the built environment accounting for approximately 40% of global GHG emissions, accomplishing net zero is unattainable without a fundamental decarbonisation of the sector. Our findings from this report stress the need for an evolution of regulatory frameworks which leverage the ambition within the sector to spur change.

The sustainability challenge is, after all, a shared one; and it is only together that we can create a future where we no longer need to have conversations about building greener because low carbon homes perform as designed, as standard, every time.

Concrete and cement production is an energy-intensive process which releases carbon dioxide, so early production of a more sustainable and cost-effective low-carbon cement, on a global scale, is vital if we are to meet the infrastructural needs of economically developing towns, cities and nations.

STRATEGIC INVESTMENT

Alterations in the manufacturing process of concrete and steel – both major embodied carbon contributors – will have a huge impact; hence low carbon cement facilities are currently being developed around the world and in the UK. As construction firms ramp up their delivery of sustainability commitments, there is recognition that the green innovation stakes must also be raised higher within the supply chain.

Meanwhile, for us at Aggregate Industries, significant strategic investment is being made in R&D and innovation as we move towards our goal as a supplier of sustainable construction materials.

At the Port of Tilbury, for example, our new manufacturing facility will fulfil the increasing demand for sustainable building materials within an evolving market. It will support the global drive for low carbon and circular construction materials and accelerate decarbonisation in the UK market.

As a manufacturer and supplier for the UK's building industry, we are fervently committed to pioneering the sustainable future. This includes further and on-going of innovative sustainable alternatives across our concrete, cement, asphalt, aggregates and landscaping ranges.

Cassandre Le Galliard is sustainable product manager at Aggregate Industries

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ROUND TABLE REVIEW

Building Insights LIVE: Exploring solutions for residential deep retrofit



All images © Mikey Pooley

Attendees:

Samantha Organ, associate professor in Building Sustainability, University of West of England

Russell Smith, director, RetrofitWorks

Nik Nelberg, co-founder, Earl & Calam Design and Build

Jack Ostrofsky, programme director, Retrofit London

David Pierpoint, CEO, The Retrofit Academy CIC

David Adams, strategic advisor & director, AdamsD Consulting

Becky Lane, CEO, Furbnow

Kate Simpson, associate professor, Nottingham Trent University

Ashley Cooper, managing director, WMS Underfloor Heating (event sponsor)

Alex Baines, head of Building Better at British Gypsum & Isover (event sponsor; Saint Gobain Construction Products UK)

INTRODUCTION

The construction industry is confronting the ‘green elephant in the room,’ namely the challenge of reducing the carbon emissions of our existing housing stock at a much larger scale. The stats are daunting – to reduce CO₂ emissions by the required 80% by 2050 to hit net zero, our 27 million homes need to be upgraded at a rate of one and half every minute.

The topic was of a suitable weight to bring together housebuilders, retrofit experts and different ends of the supply chain, in a Building Insights LIVE round table to explore challenges and solutions collaboratively. The event took place on 22 May 2024 and was sponsored by WMS Underfloor Heating and Saint Gobain Construction Products UK, who both offered vital supplier-side perspectives.

A long-promised Government national retrofit strategy remains elusive, and initiatives like the Green Deal and Green Homes Grant have foundered amidst misselling allegations and installation problems. Currently it is left to industry

and initiatives like the Retrofit Academy and National Retrofit Hub to develop the holistic retrofit approaches that will work.

Questions about such as how to engage the UK’s 10-12 million owner-occupiers with large-scale retrofit programmes, beyond grant-funded projects, and our delegates offered practical insights informed by experience. These included how SME builders can benefit from refocusing on retrofit, in a challenging new build market, and why it’s vital that whole-house and not piecemeal measures are prioritised.

Our round table aligned with the Construction Leadership Council’s ‘national strategy’s second phase of “education of householders and the wider industry through clear communications.” The group we assembled had the credentials to give a no-nonsense appraisal of the proposed ways forward.

UNLOCKING HOME RETROFIT AT SCALE

The first part of the debate looked at attendees’ views on the current state of progress on retrofit at scale, including the remaining skills gap in the industry, and why takeup of training places had proved challenging in some areas.

Delegate Nik Nelberg, a south London-based builder who has pivoted to specialise in retrofits, said he was grappling with a double-whammy of “a lack of skilled people and engagement.” However, Nelberg was using fellow attendee Russell Smith’s RetrofitWorks software not only to “make retrofit pay,” but also to help homeowners see the benefits, and “give them a proper cost.”

All delegates were asked to propose a question for the debate. Sponsor attendee Alex Baines (from British Gypsum/Isover) challenged the group: “Is there a problem with terminology in the industry, such as are whole-house/holistic retrofit approaches being mistaken as ‘doing the building in one go?’” He said that such misunderstandings were holding both housebuilders and homeowners back from engaging in retrofit.

The Retrofit Academy's David Pierpoint said the industry "had been a victim of jargon; we need to reinvent the terms 'whole-house' and 'fabric first' retrofit." Becky Lane of Furbnow said that from her firm's experience, the term 'retrofit' "doesn't mean anything to the average person."

Ashley Cooper of round table sponsor WMS Underfloor Heating said that "end users are getting a lot better educated" on the home energy impacts, which had partly been driven by the cost of living crisis. However, Cooper warned that jargon was a major stumbling block for not only users but also politicians and even new build-focused industry professionals trying to grapple with retrofit. "There is so much for politicians to take in, they're not construction-oriented, so they kind of get lost. We have to make it simpler for them."

Jack Ostrovsky from Retrofit London, which works to drive retrofit across London councils, drew the distinction on simplifying jargon between "dumbing it down" and "making it smarter, communicating the differences by being clear and concise."

David Pierpoint said that takeup from construction trades had been "inconsistent," which was in line with an "inconsistency in (previous) Government policy and initiatives." And David Adams added that progress in social housing, although larger than in owner-occupier projects, had been "tiny," adding "we are not in the ballpark of where we need to be, and that is a failing of Government."

On takeup, what were the retrofit skills gaps, and should training bodies be collaborating, or 'retraining' construction trades; and what are the incentives that work? Becky Lane of Furbnow said that from experience working at the smaller end of the market, they were getting "tens of enquiries per day from companies wanting to join our framework, from installation specialists trying to move into the self-funded market, to general builders looking at the opportunity."

However, she said there was "a lot of confusion about how to transition to retrofit, how to do insurances, and particular training needs." Lane added that while major national bodies were providing advice, people were coming to her firm for that info. Nik Nelberg agreed, saying building firms were coming to him for advice, and "there is so much confusion." He advocated demystifying the subject by looking it not as "retrofit" but simply as "construction." He said: "We start talking about installation, people start sweating."

Nelberg said there were further issues to resolve to create a culture change for builders for a holistic approach to retrofit.

"You've got egos, everyone is trying to hold their position, and there is not a set system of pricing," he said, adding that customers were "petrified, largely because builders are not licensed." Alex Baines from Saint-Gobain Construction Products UK said that the National Retrofit Hub was tackling this, because it's "bringing people together with one purpose – of making it better."

Being able to sacrifice business hours for retraining in retrofit is a challenge: David Pierpoint said that general builders only made up around 5% of current Retrofit Academy students, "It's cladding, lagging lofts, filling cavities, heat pumps, solar PV, that's not what they do," but adding that this is where "there is an opportunity."

On top-down versus bottom-up solutions and strategies, Jack Ostrovsky said he that the big uptake issue was that it's "demand led, but that contractors are "afraid to take time out of their day to do their MCS 2030 certification; nobody is asking for solar PV."

David Adams said that "different drivers were needed to stimulate demand on a sustained basis, so the industries have confidence this is a good thing to get into, at scale." He said however that a "big rush" wouldn't be helpful, as witnessed with the Social Housing Decarbonisation Fund, which caused a "massive overheating of the market." He added that the previous Government had been "banking on heat pumps."

Samantha Organ commented that what was needed was "bottom up and top down, you can't have one without the other." She continued: "You need the strategy and framework," but individual players in the industry have "some really excellent measures." David Adams again stressed the need for a "sustained future" pipeline of retrofit work to provide a steady business stream for the industry.

A narrow focus on energy efficiency may not be appropriate, said Alex Baines, asking: "Is retrofit being hindered by the focus on energy efficiency savings and carbon reduction targets?" He suggested there was a vicious circle of "you can't drive things if there isn't the demand, but we don't have the demand because people don't actually know what they want, and there's no way for them to work it out." He said that "a lot of it is down to policy, we have a single-minded focus on energy, but that's not how homeowners make decisions."

Russell Smith said the industry was "rife with inefficiencies; people trying to do similar things with the same houses, and not working together. He gave a contrasting example in the north west, working across local authority jurisdictions to identify where the grid



(L-R) Jack Ostrovsky, David Adams, Russell Smith

“END USERS ARE GETTING A LOT BETTER EDUCATED ON ENERGY, BUT THERE IS A LOT OF RETROFIT JARGON”

**ASHLEY COOPER,
WMS UNDERFLOOR HEATING**



Alex Baines of
British Gypsum/
Isover

“wouldn’t cope with the demand from heat pumps, and where it would need reinforcing.” He said “huge savings were immediately reaped from doing surveys, collecting data and doing smart things in homes together.”

Alex Baines cited the 2024 BRE report which estimated there could be between £1.5bn and £2.5bn savings to the NHS from tackling poor quality housing. Ostrovsky warned however that “if you are not careful with what you do, you will have bad outcomes, e.g. moisture.” Necessary know-how on unintended consequences of retrofits like moisture was not universally available; Nik Nelberg said that lack of understanding of this factor had led to his housebuilding firm “shying away from retrofit” previously.

Ostrovsky said that despite the massive benefits of retrofitting social housing at scale, a third of London Boroughs had not drawn down the available Social Housing Decarbonisation Fund grants for retrofit schemes, potentially because of the concurrent investments needed, such as Retrofit Coordinators under PAS2035 retrofit guidance. He asserted the SDHF was “the biggest driver” for retrofits, but the capital’s G15 group of housing associations had only spent £50m on retrofit over the past two years.

POLITICS & OTHER BLOCKERS

Delegates shared thoughts on what the new Government should prioritise to encourage large-scale up of retrofit, among both owner-occupiers and social housing tenants. David Adams said “the only strategy that counts is at the government scale; we will get there in 100 years if we think changing the name of retrofit is going to incrementally move us on a little bit.” Becky Lane asserted that better terminology was key, because “the thing that is missing in local plans is awareness of demand and supply.”

Adams also warned that “difficult choices are going to have to be made in terms of the grid, there will be winners and losers,” and advocated informing the areas who will lose out as early as possible. Alex Baines said that currently government schemes have been focused on different priorities to those of consumers, and “focus on the measures rather than outcomes, ventilation is not a funded measure; we need to switch to an outcomes-based approach.”

Samantha Organ said schemes such as the Green Homes Grant, including ‘approved measures’ were “well meaning incentives and policies, but they have to be supported by industry.” Adams said that with a change of Government and a “different mindset” the industry risked “being stuck in the paradigms of the last 14 years.”

Arguably the owner-occupier sector is the missing link in the retrofit chain currently, but David Adams said that the National Retrofit Hub has (together with UKGBC and other bodies) looked at “all the kinds of drivers a politician could get their head around for health, wellbeing and energy,” and concluded it was “nudging stamp duty up and down based on the energy performance of the dwelling.”

Alex Baines added that the current model of “chasing EPC targets” was a “huge detriment to the retrofit market,” and wider metrics including location, schools, and other factors were needed. He said however the “real blockers are around consumer protection; warranties fundamentally do not protect the consumer.”

Samantha Organ said that removing some upfront costs would be critical in “avoiding undermining trust” among customers, but Becky Lane warned that mortgage lenders supporting “green financing” would “tend to drive toward single measure approaches,” rather than more holistic retrofits.

MAKING THE RIGHT INTERVENTIONS

The second session of the debate delved further into the practical solutions to retrofitting existing homes at scale, and their pros and cons, as well as their feasibility. It looked at the usefulness of the established ‘archetypes’ approach to grouping types of retrofits in social housing, and where this could realistically be applied to make gains at scale.

David Adams said that the industry needed a “starting point” for retrofit, “because if everyone does everything from first principles, we’re not at scale, and everyone going for the ‘sweet spot is too simplistic.” He said that employing archetypes was one route, and Samantha Organ agreed it was a useful starting point, but “at a very aggregated level, it’s not supposed to be a specification.”

Russell Smith said it could helping reduced the current complexity of retrofit options for professionals and customers, and other delegates agreed that simplifying the information was essential. Jack Ostrovsky said that the issue was the subject of “intense debate” within the National Retrofit Hub, but it was “collectively worth working on.”

Although some standardisation was welcome, delegates said that solutions did need to be tailored to the wide range of homeowner types involved, which complicates the issue of the appropriateness of retrofit solutions. There was agreement that homeowner or resident comfort needed to be emphasised as the overall goal.

Becky Lane wondered whether



Nik, Samantha and Jack



David Adams gives his view

“WE SHIED AWAY FROM RETROFIT FOR MANY YEARS BECAUSE WE DIDN’T UNDERSTAND MOISTURE IN BUILDINGS”

NIK NELBERG, EARL & CALAM DESIGN AND BUILD

messaging to consumers on retrofit could be an “extension of the smart meter rollout, rather than “building a brand new structure.”

Looking at the messaging to homeowners, Jack Ostrovsky said “in my opinion, what we are talking about is just modernising our homes,” but in the context of climate change this amounts to a “vision which might create the mandate for action.” David Adams said from his experience with street-by-street retrofit attempts at his former firm Wilmott Dixon, “there are all kinds of reasons why some people are just not in a place that they can allow the work to happen. So let’s not handcuff ourselves to a particular route, we need mechanisms; some will do clusters, some will do individual homes.”

Ostrovsky emphasised the importance of a lack of trust currently, including of the building industry as well as Government, but this is another thing that can be rebuilt by the right communication.

UNDERFLOOR HEATING

The Social Housing Decarbonisation Fund is onto its third wave of bids, and has already addressed swathes of homes across the UK, but what are the best practice measures for retrofitting these properties? Our sponsor representative Ashley Cooper of WMS Underfloor Heating asked: “Does underfloor heating have a key role to play in the decarbonisation of social housing?”

Jack Ostrovsky said UFH was “now a standard Employers Requirement across the G15 group of London housing associations, and layouts are better.” David Pierpoint of the Retrofit Academy said landlords could decide to “self-fund” it as part of their asset upgrade plans, and that avoiding radiators “would possibly be desirable” where internal wall insulation was the chosen retrofit measure (reducing floor area).

David Adams said while UFH may be appropriate to install during social housing during decants, and advocated that “the best way to understand this better, including the costs and operational benefits, would be for WMS to work with a housing association to design a kit and install it in a few properties.”

Samantha Organ said she believed retrofitting UFH was “likely to be an important component” of decarbonisation of heating, and would mean that many properties would be able to use heating systems such as heat pumps with lower temperatures, “which would be better suited to emitters with larger surfaces.”

EXTERNAL WALL INSULATION

The credibility of EWI installations was called into question following the

Green Deal debacle, with many examples of ‘cowboy’ installers both coercing customers and providing poor quality installs that damaged the reputation of retrofit upgrades. Alex Baines however said that thanks to “appropriate programmes under the accreditation schemes,” the risk from installs “was now very, very low.”

He accepted however that “making people feel their risk has been mitigated, and that if something goes wrong it will be replaced, because in previous iterations it wasn’t.” He also warned that growing awareness of the realistic cost of EWI installation was now “dissuading people, and they are rethinking, and retreating from 30 kW per square metre per annum targets.” Ostrovsky countered the idea of “throwing 10 grand at something, and it’ll be a magic wand,” because “retrofit is hard work.” Notwithstanding the need for robust solutions generally, the group agreed there needs to be more central investigation on what the practical as well as affordable holistic rather than ‘element-based’ solutions may be.

COORDINATED CONSTRUCTION QUALITY

The new whole-house retrofit standard PAS2035 requires Retrofit Coordinators to be appointed to oversee the quality of retrofit workmanship and supply chain management on site, as well as designs.

Jack Ostrovsky of Retrofit London told the delegates that good practice he had witnessed included a “rotating team of trusted Retrofit Coordinators employed by the authority and accessible for private consumers,” but this was unheard of outside of social housing: “if you’re not being driven by grant funding, then PAS2035 is not being used.”

Russell Smith said that some construction teams now had the view that “implementing these quality frameworks is really expensive, how can we minimise that cost?” And that “normally that boils down to not sending anyone onsite to check.” He gave an alternative example in Oxfordshire where a “fantastic team of coordinators had just instead an entire EWI job be ripped down and reinstalled, and the housing association is over the moon.”

David Adams advocated surprise visits to sites by inspectors to ensure a more robust assessment, and Alex Baines concluded that the advisory committee within the HSE which was concerned with occupant safety was having a fundamental impact on the specification of buildings, which could also be felt in the retrofit context. “They have the stick and the potential to work out what needs to be done at each level.” He added: “It is a change of culture.”



“CHASING EPC TARGETS IS A HUGE DETRIMENT TO THE RETROFIT MARKET”

ALEX BAINES, BRITISH GYPSUM & ISOVER

CONCLUSION

Our group tackled the ongoing issues for retrofit head on, but also endorsed, with some caveats, a range of proposed solutions. Combatting a potential “race to the bottom” which was cited as a risk by Nik Nelberg, means the kind of open sharing of expertise and ideas we were fortunate to witness at the round table. We need this kind of thinking urgently to take the steps to ensure our current housing stock isn’t obsolete in 2050.

We would like to thank all attendees and our sponsors WMS Underfloor Heating and Saint Gobain Construction Products UK. An extended report on the event is available free to download at insights.netmagmedia.co.uk

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INDUSTRY RECOMMENDATIONS

We asked our delegates to give their key retrofit recommendations for industry

David Pierpoint, The Retrofit Academy: We need a free at the point of access support programme for SMEs.

Becky Lane, Furbnow: We need to start the awareness and communications strategy on housing retrofit to consumers now.

Ashley Cooper, WMS Underfloor Heating: Get everyone together to simplify the top three priorities for our messaging to regulators.

Nik Nelberg, Earl & Calam Design and Build: Collaborative work; making sure the price is right, and the contracts are set up in a way that allows people to deliver quality.

Samantha Organ, University of West of England: Don't be afraid to be disruptive – whether you're big or small.

Jack Ostrovsky, Retrofit London: The industry needs to communicate the destination we need to get to clearly to policymakers, and get rid of the cacophony of targets.

David Adams, AdamsD Consulting: For Government, something like an energy saving stamp duty incentive; for industry, gain knowledge, make little incremental steps in different spaces.

Alex Baines, British Gypsum & Isover: For Government, we need a way of getting proper assessments done, to give industry the idea of where they need to go, what needs to be done; and for industry, get involved in the Retrofit Hub.

Kate Simpson, Nottingham Trent University: Develop strong industry partnerships so you can share openly, and exchange best practice with supply chain and academics.

Russell Smith, RetrofitWorks: Think beyond tactics, and more about strategy and the big picture, collecting data; and make sure we've got a plan.

Sapphire overcomes complex logistical challenges to deliver balconies to Huntley Wharf development

Early engagement between Peter Brett Associates, PRP Architects, and Berkeley Homes ensured that Sapphire could supply balconies that reflected the architectural vision and historical significance of the Huntley Wharf site. Historically the site was home to the former Huntley and Palmer biscuit factory (famously supplying millions of biscuits to Allied troops during WW1 and WW2), today it is the new waterside destination in central Reading.



Through innovative design solutions, Sapphire was able to manufacture offsite brick columns for corner balconies, inset balconies, and balconies with brick slip fascias. These components were mechanically fixed offsite with brick slips, enabling them to blend effortlessly with the rest of the brick facade, mirroring the industrial aesthetic of the former factory.

One of the project's challenges was the proximity of one of the tower crane locations to a stack of balconies, which punched through the podium slab. This could have necessitated the costly and disruptive relocation of thousands of pounds of M&E ductwork. Sapphire's site support team devised an inventive solution, proposing the use of a compact spider crane to install the balconies from below. This approach not only preserved the integrity of the existing infrastructure but also reduced costs and simplified the installation process, showcasing Sapphire's ability to overcome complex logistical challenges through creative problem-solving.

The Huntley Wharf project stands as a testament to the collaborative spirit and innovative solutions that Sapphire Balconies brings to modern developments, marrying historical reverence with contemporary design and functionality. Through their early and proactive engagement with project stakeholders, Sapphire ensured that the



balconies contributed meaningfully to the architectural narrative, enhancing the living experience while honouring the site's rich heritage.

Berkeley Group PLC Technical Coordinator Mara Dumitru said: "I found the Sapphire team to be very professional, proactive and helpful. We have had a very good collaboration throughout and felt the team at Sapphire successfully managed to meet both architect's and client's expectations."

For more information about Sapphire Balconies and their architectural balcony solutions, visit <https://balconies.global/case-studies/huntley-wharf-reading/>

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Designer Contract's summer six spotlight



Designer Contracts has announced six new Summer starters and promotions. Mathew Gregory, Matt Miles, Georgina Lee, Mark Johnston, Stephen Miles and Bradley Stone have all joined the company or been promoted within it to strengthen its project management and sales teams. Designer Contracts, Managing

Director, Peter Kelsey added: "We're delighted to welcome all our new joins on board as well as see Mathew and Georgina take another step up the ladder. We're a company with extensive opportunities for the right people who share our passion for building strong customer relationships and service driven solutions across the flooring sector."

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A major new appointment

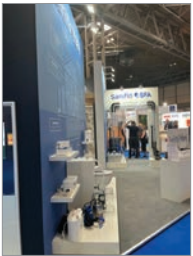


Senior Architectural Systems has appointed Mark Rossouw to the newly created role of major projects manager. A familiar face within the construction industry, Mark brings with him over 15 years' experience of helping to design and deliver multi-product fenestration packages and previously worked for Senior as one of the company's regionally based architectural advisors. Mark rejoins Senior as major projects manager to support the company's growing order book of

larger and more complex contracts, and further develop its supply chain partnerships with national main contractors, architects and fabricators.

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Saniflo and Kinedo celebrate success



Saniflo and Kinedo are celebrating the outstanding success of their presence at Installer 2024. This year, the innovative stand design featuring Saniflo on one side and the Kinedo shower brand on the other received more than 400 visitors over three days. The comprehensive Saniflo portfolio of pumps, macerators, and lifting stations, including models like the Saniflo underground lifting station and the Sanicubic GR, drew significant attention.

Saniflo UK Marketing Manager Amanda Mills said:

"We were delighted with how the show went. The stand was bustling with activity on both sides, attracting a lot of interest from attendees."

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Changing tides



As the high-end residential flagship of an ongoing project to rejuvenate Folkestone's seafront and harbour, Shoreline represents a complex, curvaceous success for a collaborative project team, as Roseanne Field found out.

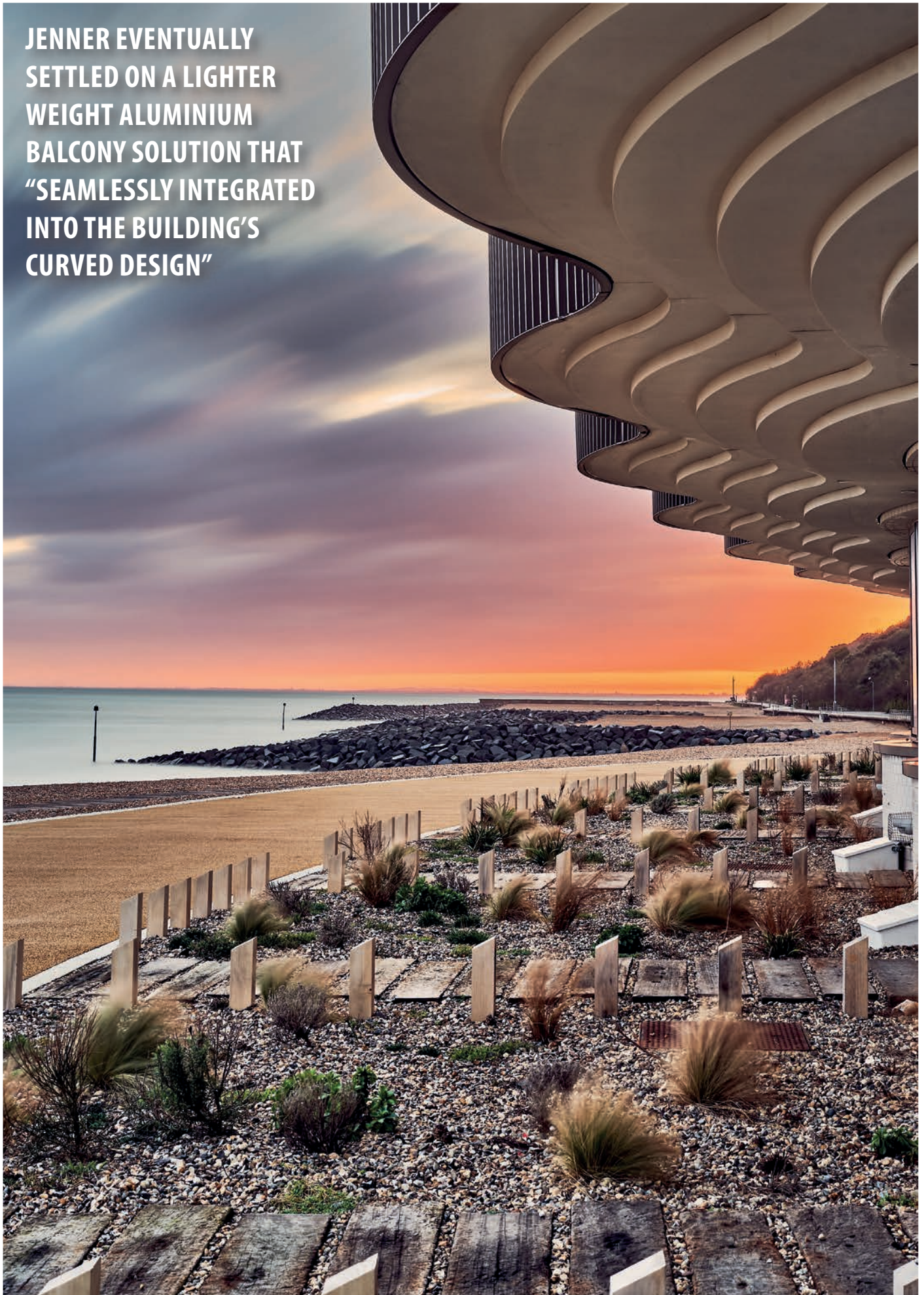
Like many UK seaside towns, Folkestone has seen times change since the heyday of British seaside resort holidays being the getaway of choice. Along with the busy ferry port and harbour station, its array of nightclubs, amusement arcades and bathing establishments tell the story of a popular holiday destination. However,

as holidaying abroad became more affordable, seaside towns suffered and Folkestone had the double whammy of losing the monopoly to Dover for Channel ferry crossings.

With the port redundant, the area around it also gradually became run down, with the adjacent fairground and flea market closing in 2003. However, the town – and in particular the seafront and harbour area – is now undergoing a period of resurrection and rejuvenation at the hands of local philanthropist Sir Roger De Haan.

The former chairman of package holiday provider SAGA plc, which is based in Folkestone, felt that he owed a debt to the people of the town following his sale of the company to a private equity firm in

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“SEAMLESSLY INTEGRATED
INTO THE BUILDING’S
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2004. Having become a place with little to offer the younger generation, De Haan was determined to make it somewhere people wanted to remain and build their lives in.

He purchased the harbour for £11m in 2004, setting up the Folkestone Harbour and Seafront Development Company with the aim of regenerating what was a dilapidated area. After years of investigation into the best way forward, in 2016 the company invited architecture practices to reimagine the seafront. ACME won the competition with their design for a mixed-use development including up to 1,000 new homes, as well as a variety of public spaces and amenities.

The first parts of the project have now been completed, with the Harbour Arm transformed into a social hub, home to a mix of independent bars and food outlets – including a champagne bar in the Grade II listed lighthouse. The Boardwalk – a new pedestrian route constructed from reconditioned railway sleepers, trails along the cleared and reconditioned beach, and links the Harbour Arm to the Lower Leas Coastal Park. The former harbour station has been refurbished

to provide a further route between the Harbour Arm and Boardwalk, as well as providing a space for community events.

The masterplan also includes provisions for several types of residential accommodation, stretching west along the beach from the Harbour Arm behind the boardwalk. Those closest to the harbour are earmarked for affordable housing, while those further along offer a more high-end style of living.

Shoreline is the first of these residential buildings to be completed, sitting impressively at the far end of the site at the foot of the Grade II* listed Leas Lift, one of the UK's oldest water lifts. It comprises a total of 84 units, made up of 54 one- and two-bedroom apartments, each with a balcony or terrace. In addition there are four duplexes facing the beach, six three-bedroom penthouses each featuring two balconies and a roof terrace, and 20 five storey beach houses boasting direct access onto the beach. The beach houses and duplexes occupy the central portion of the building, with the apartments and penthouses in the two 'bookends' on either side. Every unit has its own private outdoor space, either

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balcony or terrace, with the beach houses having private front and rear gardens and roof terraces.

Since Shoreline's early planning stages it's faced mixed reviews from locals. Concerns have been expressed over its beachfront location, as well as the fact that it's only offering high-end options, with the one-bedroom apartments starting from £395,000 and beach houses north of a million. However, director at ACME James Denner asserts that the luxury nature of the apartments was a natural result of the "exclusive beachfront location; a suitable choice." Although another controversial part of the plans, the variety on offer within the scheme from one-bed apartments to beach houses was an intentional way to "approach different ways to live by the sea," says Denner.

PLANNING & DESIGN

The building's design puts the emphasis on curves, from its balconies to curved walls throughout; the entire building's facade curves from one end to the other. This is a "contemporary take on the traditional Edwardian curved terrace," referencing Marine Crescent which sits

just behind Shoreline. The form has the benefit of maximising the sea views from every unit, explains Denner. A communal garden sits at the rear of the building at podium level above the undercroft car park, and framed within the curve of the building, this is sheltered from coastal breezes.

Planning constraints included the fact the building needed to sit within the consented masterplan envelope, explains Denner, however this facilitated the height variations and variety of units which contribute to the building's character. "From a planning perspective, it had to offer exciting features visible from the public realm, such as the facade or the communal garden; although fully private, the latter can be seen from the street, too," he explains.

The curvaceous forms of the facade were also intended to echo the flow of water and shape of waves, pebbles and the coast, Denner explains. The materials used have been chosen to reflect the historic location but also serve the stringent durability requirements of a seafront – white glazed bricks, from La Paloma in Spain, refer to the "white stucco Regency houses at the top of the

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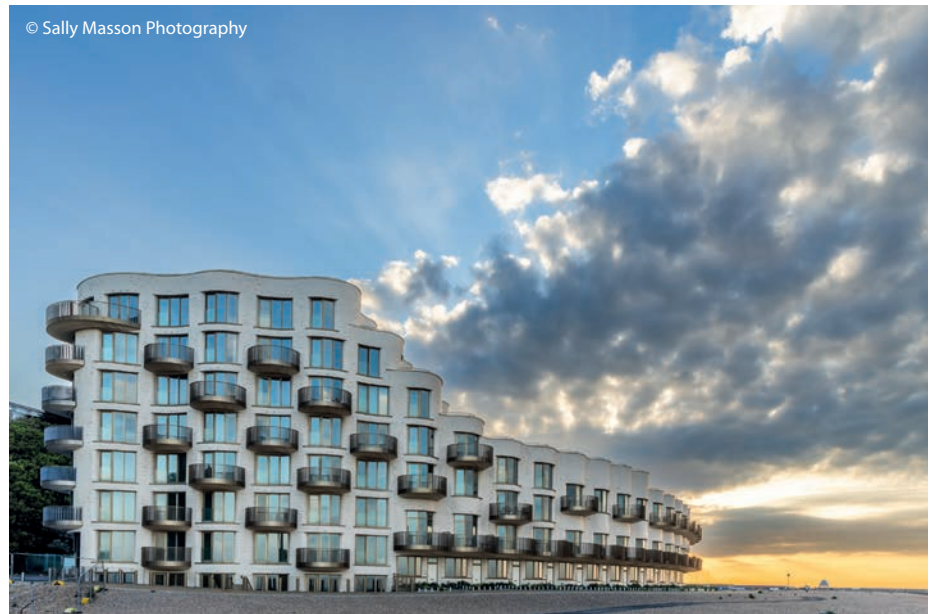
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Leas,” he says. Tying into this aesthetic was fundamental for the project’s success, with the team wanting to design something that “belonged to Folkestone.” He continues: the “crafted” facade acts as a hard shell with all external elements being of the highest specification possible to endure the marine environment.”

In total over 28 brick ‘specials’ were used, individually cut to fit the curves and contours of the building. The result is a glistening facade that “reflects the sun and sea in sync with local weather patterns,” says Denner. In addition, he says, “a playful interpretation of clinker brick sits within the concave rhythms of the south facade, where individual shaped bricks are pulled forward to create interest and animation.”

Other facade finishes were considered during the design process on their potential aesthetic merits, but disregarded when they were shown to fall short on durability credentials in this location. “Materiality was explored thoroughly, always considering solutions that would adapt to curved geometry while also considering costs and the installation and application process,” says Denner. “Pebbledash and crushed glass render were considered but a mock-up onsite showed they weren’t as enduring to the strong winds and salt in the air.” He adds however that as a “tectonic element,” the bricks’ glazed finish “is efficient in repelling the moisture and salt, ageing much better over time and requiring very little maintenance.”

A PILE OF CHALLENGES

Shoreline was constructed using a reinforced concrete frame, which sits upon foundations consisting of over 200 piles, and there are also marine

grade wall ties and stainless steel frame elements. The reinforced masonry frame is “the same material used on deep sea oil rigs for longevity and sustainability,” explains Martin Sandall, managing director of contractor Jenner, who also built the exciting F51 project for De Haan nearby – a multi-storey concrete and steel skate park and gym designed by Guy Hollaway.

The steel for Shoreline was specially designed for the curved facades, and all metal used externally is stainless. The building’s flat roofs are covered in shingle pebbles to not only provide a visual connection to the beach but also deter seagulls from nesting. This has been taken a step further by the regular flying of hawks from the penthouse terraces to scare them off.

The foundation piles were driven to a depth of 27 metres which, explains Sandall, makes the building almost as deep as it is high. These works began just before Covid hit, which naturally brought challenges but also some unexpected benefits for the team. Because construction was in the early stages and still outdoors, work was able to continue uninterrupted, in line with lockdown rules. However, it wasn’t long until the project team began to find huge boulders beneath the site. “Some were as large as double decker buses, which the original piling rig couldn’t handle,” explains Sandall. In a stroke of luck, the largest piling rig in Europe – “typically booked months in advance” – was immediately available due to reduced demand during the pandemic. This enabled what could have been an insurmountable obstacle to the schedule to be removed.

Alongside piling issues, the curved design of the building meant construction

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was always going to be more complex than many other high-end residential developments. “Standardised’ was never going to be an option,” says Sandall. Each brick had to be cut in half in order to create the curve, ultimately doubling the number of bricks to be laid; in the end there were over two million on the project.

The balconies also proved somewhat complicated. Originally white precast concrete was planned, but weighing up to nine tonnes each, the risk associated with crane lifting in this location “effectively ruled this design feature out,” Sandall explains. Jenner explored many different balcony options, eventually settling on a lighter weight aluminium solution that “seamlessly integrated into the building’s curved design.”

The building’s complex geometry also meant installing the balconies and other elements wasn’t straightforward. “The curvature could have led to slab edge congestion and clashes between reinforcement and balcony brackets,” says Sandall. While some of the balconies were standard, with others being of differing sizes and shapes, bespoke balcony arms had to be manufactured. “This involved designing and manufacturing them for fixing to a curved concrete frame while carefully working around the clashes in the reinforcement of that frame,” he explains. A total of five different balcony designs were created to mirror the curves of the building.

Parapet walls feature coping stones that are each individual in both size and shape, meaning special moulds were required, and bespoke window sills were created, with each unit being scanned as a 3D image.

SUSTAINABILITY & INTERNAL COMFORT

High thermal and environmental standards were imposed, and as well as the double and triple glazing specified to apartments depending on the overheating modelling, mineral wool insulation was included. “The building envelope is designed to high thermal standards

to minimise heating and cooling requirements,” says Denner.

Many of the units have floor to ceiling glazing, which given the location meant there were potential overheating issues. To combat this, a full analysis of the potential for overheating was undertaken, and depending on rooms’ orientation, windows are either double or triple glazed, and include a solar control coating. The energy analysis done by the team also helped to achieve the “right balance being struck between solid walls and glazing.”

Internally, the communal areas are clad with timber acoustic walls and feature shingle terrazzo tiles. The apartments and beach houses feature a mixture of natural wood floors and woven carpet to “continue the sense of the beach,” says James Denner.

In the townhouses, the staircase soffits have been left exposed to act as a thermal mass to moderate temperatures, and all homes have an MVHR system installed, as well as openable windows. All parking spaces feature EV charging points, though storage units and cycle parking are also included to encourage bike use. All apartments and common areas feature LED lighting and a communal boiler provides more efficient heating. Shingle gardens have been designed to provide an “ecological habitat,” and rainwater harvesting systems are also in place.

Construction was completed on Shoreline earlier this year. Despite its controversial nature locally, the units have been selling well, and the project team couldn’t be prouder of the finished building. Sandall credits the overall collaboration and coordination achieved by the team as the reason for the success of this complex project: “It demanded a truly customised approach necessitating close coordination between design engineers, from both the masonry and structural connection teams, and the Jenner production team,” he says. “The exceptional quality stands as testament to the remarkable work of the entire project team.” ■

Commitment to the young is vital for the future



West Fraser has a long-standing commitment to its local communities and has forged close relationships with schools and colleges in the Inverness and Cowie areas to provide the best possible start to young people's working lives through the provision of Mechanical and Electrical (M&E) engineering apprenticeships. The

comprehensive four-year programme prepares apprentices for a career at West Fraser, with opportunities for future leadership roles. And the apprenticeship scheme not only addresses immediate skills needs but also nurtures talent for future leadership, contributing to the company's growth and sustainability. The company ensures apprentices are well-prepared to contribute effectively and advance within the organisation.

uk.westfraser.com

Garador's tried and tested Carlton proves popular



Garador's Carlton up & over garage door is one of the most popular garage doors on the market. The Carlton offers exceptional value for money with a tried and tested design that's both long-lasting and low maintenance. Constructed from high grade galvanised steel, the crisp vertical swage complements modern architecture but also sits well on traditional builds or alongside other garage doors where

there are blocks of garages in a row. The door has a rivet free design meaning the surface of the door panel is smooth and a durable powder-coat paint finish protects the door from the elements. The Carlton comes in a choice of 20 standard colours and is available in the full range of sizes up to 5,500 mm wide including standard, made-to-measure and double door sizes.

01935 443722 www.garador.co.uk



Pro-Tiler UK Wall & Floor Ltd wins Best Domestic Project category at TTA Awards

Pro-Tiler UK Wall & Floor won the Best Domestic Project 2024 Award at this year's esteemed TTA Awards for its work within the iconic Stage Penthouses in Shoreditch, London and in a sophisticated pool area in Manchester. Situated on the historic site of Shakespeare's Curtain Road Theatre, the Stage Penthouses project presented a unique opportunity to blend modern luxury with cultural heritage. Pro-Tiler meticulously executed this vision using 3,200 x 1,600 large format tiles at a slender 6 mm thickness. The edges, a critical detail, were expertly mitered and resin-filled, ensuring a seamless and sophisticated finish. The next chapter in Pro-Tiler's portfolio unfolded in Manchester, where the contractor undertook the ambitious task of transforming a pool area into a haven of luxury and relaxation – cladding all walls with 6 mm 3,200x1,600 porcelain tiles and adorning the floor with 20 mm porcelain – as well as the creation of a steam room area and Jacuzzi with carefully integrated bespoke sinks. The success of both projects hinged on the team's ability to innovate and adapt to unique challenges presented by each space and deliver a precise installation of large format tiles. Working closely with Apex Grange for the supply of Schlüter-Systems materials ensured a harmonious workflow, allowing the contractor to focus on the intricacies of installation.

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F.H. Brundle's steely resolve



Founded in 1889 by Fredrick Henry Brundle, F.H. Brundle remains family-owned and is currently managed by Fredrick's great-great-grandson, Michael Brundle. The company is well-known among housebuilders for its extensive range of steel products, including mild steel box sections, steel tubes, universal columns and RSJs. Its offerings also span non-metal products, ensuring it meets diverse construction needs. Quality is paramount, with all steel products manufactured to grades S355, S275, and 500B, ensuring strength and durability. The company's dedication to quality is further evidenced by their willingness to

produce test certificates for specifiers, building trust across its product range.

DIVERSE PRODUCT RANGE & UNIQUE DIFFERENTIATORS

Serving over 100 industries, F.H. Brundle offers nearly 11,000 products. While traditionally known for metal products, it has expanded into GRP, wood plastic composites (WPC) and toughened glass, enhancing its traditional offerings. The company supplies a wide array of products, from steel welded mesh and stainless steel handrailing to metal flooring and stair treads. Its market includes

residential and commercial construction, as well as metal fabricators, who rely on F.H. Brundle for timely and cost-effective material solutions.

The company manufactures its own products as well as acting as a distributor for other manufacturers. Key product brands like Pro-Railing™ and Fortitude® are designed, engineered and distributed by F.H. Brundle. The company also partners with complementary manufacturers, offering an exclusive range that no other UK supplier can match. This extensive range allows F.H. Brundle to offer significant quantity discounts and competitive pricing.

MEETING HOUSEBUILDERS' NEEDS

F.H. Brundle caters to a wide market, from self-builders to large contractors. It offers impeccable service, including free expedited delivery on orders over £150 (excluding VAT) and 98% stock availability, usually fulfilling orders within 48 hours. Regional branches with knowledgeable experts, free CAD and specification tools, and a live configurator enhance the company's service offerings. Reliability and excellent customer service are why many housebuilders depend on F.H. Brundle for their developments.

The company's website is continually improved to enhance the customer experience, featuring online tools for specifiers, architects, and estimators to calculate needs and





OUR CUSTOMERS ARE OUR EXTENDED FAMILY, AND THEY ARE FRONT AND CENTRE OF EVERYTHING THAT WE DO

costs including:

- Calculators: fhbrundle.co.uk/calculators
- Glass Selector: fhbrundle.co.uk/glass-select
- Live Configurator: liveconfigurator.co.uk

ADDRESSING CURRENT CHALLENGES & FUTURE OUTLOOK

F.H. Brundle helps housebuilders navigate the current challenges they face including pricing and compliance. The company ensures its products meet Building Regulations and provides necessary testing certificates. Competitive pricing and the ability to quote on significant projects helps its customers secure contracts and maintain profitability.

The company focuses on delivering products that meet the demands for style, durability, safety, and sustainability. Its range includes long-lasting fencing and decking products, glass balustrading and structural glass. It also prioritises sustainability, offering recyclable products like aluminium decking and steel ground screws, which provide eco-friendly foundation solutions.

A standout project saw the company supply toughened glass and composite decking for The Hermitage, a luxury home in Nottinghamshire, built to precise specifications. Customer needs are key in shaping the company's future, with a commitment to maintaining outstanding relationships and delivering exceptional service.

ADVICE FOR THE HOUSEBUILDING SECTOR

F.H. Brundle advises housebuilders to consider all aspects of a build, including non-structural elements, when seeking regulatory approval. It encourages early consultation to avoid delays and ensure compliance with Building Regulations.

F.H. Brundle's dedication to its customers is unwavering, viewing them as an extended family and placing them at the centre of its operations, striving to exceed expectations in every project undertaken.

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SHOW PREVIEW

16 - 20 SEPTEMBER
COVENTRY BUILDING SOCIETY ARENA

ONE WHOLE WEEK FOCUSED ON OFFSITE

The Offsite Expo has been integrated into a week boasting educational seminars, interactive panel debates, and factory tours, as part of Offsite Construction Week.

A UK-first, taking place from 16-20 September, Offsite Construction Week (OCW) is a multifaceted showcase that revolves around three major industry events – Offsite Expo, the Offsite Summit and the Offsite Awards, with a wide range of parallel activities taking place in the UK and overseas.

Uniting industry leaders from different construction and material sectors, the newly-formed Advisory Group has curated the Masterclass topics and panel debates agendas, and nominated some of the most renowned voices in offsite construction as Panel Speakers. The Advisory Group will act as an unbiased Ambassador for Offsite Construction, ensuring that the key trends and challenges of the industry are addressed during the series of events that form Offsite Construction Week.

UNANIMOUS SUPPORT

The brainchild of industry associations operating across the sector, Offsite Construction Week presents a unique proposition. Trade bodies, industry alliances and material groups have come together to support the most comprehensive series of offsite events yet witnessed in the UK.

PAN-INDUSTRY COLLABORATION

Offsite Construction Week will serve as a pivotal platform for fostering collaboration amongst policymakers, clients, contractors and offsite manufacturers, by bringing these key stakeholders together to address shared challenges and present opportunities in the construction industry. Through a series of panels, seminars, site tours and competitions, participants will share knowledge and best practices, exchange experiences, and develop cohesive strategies that align with evolving regulatory frameworks and market demands.

EVENTS & THEMES

Organisers of the influential Offsite Expo and Offsite Awards have partnered with industry leaders with the specific goal of inspiring strategic collaboration across the offsite

construction sector.

Offsite Construction Week will bring together clients, manufacturers, developers, architects, specifiers, project managers, legislative and accrediting bodies for a week-long series of events, debates, and discussions on how to accelerate sector growth by removing current barriers to MMC implementation. Sharing lessons learned at the Masterclass Seminars and providing insight into international best practices at the International Summit, Offsite Construction Week is a platform for launching common strategies for the wider adoption of industrialised construction.

THE MOST COMPREHENSIVE SHOWCASE OF OFFSITE TECHNOLOGY IN THE UK

With a precision focus on the technologies and trends that are bringing transformative change to the construction industry, Offsite Expo will be held from 17 – 18 September.

Visitors at Offsite Expo will be invited to immerse themselves in the next big breakthroughs in sustainable construction as well as learning how revolutionary digital innovations are accelerating the pace of the industry. In addition to live demonstrations of offsite technologies' success.

Co-hosting with Buildoffsite (BOS), this year's Offsite Expo will run a parallel two day International Offsite Construction Summit. Featuring talks from global expert speakers and an Innovation Challenge competition, the new Offsite Summit will serve as a platform for sharing international best practice and strategies for offsite success.

A KNOWLEDGE-BUILDING ENVIRONMENT

With an emphasis on construction industrialisation, kit of parts and platform design, skills and productivity challenges – the event brings together those who are focused firmly on the future. In an era dominated by remote and digital experiences, this live event offers unparalleled opportunities to escape the virtual world, chat face to face and look to new horizons that can address the sustainability challenges and productivity issues that have plagued the construction industry for decades.

Article supplied by Offsite Construction Week

To book your free visitor pass for Offsite Expo scan the QR code here:



For information about all events taking place during Offsite Construction Week, see full programme for the Masterclasses, International Summit and panel discussions by scanning the QR Code below:



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SHOW PREVIEW

01 - 03 OCTOBER
NEC, BIRMINGHAM

UKCW BIRMINGHAM

UK Construction Week Birmingham (UKCW), the UK's largest built environment trade show, will take place from 1-3 October at Birmingham's NEC.

Continuing from the success of UK Construction Week London which included the biggest ever display of international pavilions from China, Turkey, Italy, Estonia and Sicily, as well as high profile speakers including Dragon's Den star Sara Davies MBE, architect & TV Presenter George Clarke, and former England footballer and now mental health ambassador Trevor Steven. The next Birmingham edition will bring you to the forefront of the construction industry's development.

Across three days industry professionals will have access to unparalleled networking, face-to-face meetings with high profile brands and knowledge boosting seminars, workshops and CPD sessions.

UKCW Birmingham will feature hundreds of leading brands, including Artex, Kingspan, SIG, Don & Low, Biffa, Fischer Fixings, Reco Surfaces, Hexagon, PlanRadar, BetonBlock, Build Warranty, MERS, Reconomy, Ford and Utility Parts.

This year, the event introduces a new stage dedicated to Net-Zero and Sustainability along with the return of several meticulously curated hubs such as Main Stage, Digital Construction Hub, Live Demo Theatre, Skills & Training Hub, Culture Change Hub and CPD Hub, Skills and Training Hub, highlighting the most pressing topics across the sector.



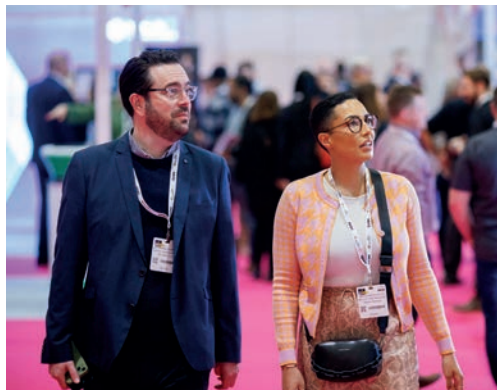
Additionally, due to growing demand, two new shows will be launched, the Roofing, Cladding & Insulation Expo (RCI Expo) and Onsite On Hire, bringing six shows under one roof.

The Roofing, Cladding & Insulation Expo (RCI Expo) is the only show in the UK committed to the building envelope and will be connecting Tier 1 contractors, suppliers and the wider industry together as the most demanding sectors right now. With major exhibitors already confirmed such as Cromar Building Products, Rubberseal, SIG, Giromax, G & B Northwest, Britmet, Don & Low and more. The RCI Expo is proudly partnered with Women in Roofing and the National Federation of Builders.

Similarly, the Onsite On Hire show is dedicated to one of the fastest-growing sectors – equipment hire. The showcase will highlight the latest tools and compact plant equipment, featuring technologies and innovations such as solar/hybrid systems and zero-emission fuel products that aim to reduce the carbon footprint in construction.

UK Construction Week Birmingham is the catalyst for growth in the built environment sector where real change can happen with the face-to-face connections forged between global players, policy makers and industry professionals, across the three day event.

Article supplied by UK Construction Week



Scan the QR Code below to secure your complimentary ticket:



UK CONSTRUCTION WEEK BIRMINGHAM IS THE CATALYST FOR GROWTH IN THE BUILT ENVIRONMENT

Stonewood Homes and AeroBarrierUK bring airtight homes to the South West

Stonewood Homes has partnered with AeroBarrierUK, a pioneering technology company renowned for its innovative solutions in ensuring airtight building envelopes. AeroBarrierUK's ground-breaking approach to air sealing is raising the bar in airtightness at Elm Grove, Stonewood Homes' 52-house development site in Somerset. In keeping with the UK construction industry's growing commitment to sustainable, future-proofed living, Stonewood homes' collaboration with AeroBarrierUK underscores the critical importance of airtightness in sustainable construction.

All 52 homes at Elm Grove are meticulously designed and constructed to meet the stringent criteria of Passivhaus. The Passivhaus Standard is the world's leading solution for offering exceptional comfort and low running costs to residents all year round. The Standard necessitates high levels of insulation, ventilation systems and an airtight building envelope to ensure residents enjoy optimal thermal comfort with minimal energy consumption.

The stringent airtightness target of 0.6 ACH50 that Passivhaus demands is met through high-performing materials and high-quality construction. AeroBarrierUK's position as the lynchpin to Elm Grove's airtightness strategy takes this development to another level; The state-of-the-art sealing system uses a blower



door system to pressurise the building before releasing a non-toxic sealant mist drawn directly to areas of air leakage, sealing them in real-time. Airtightness levels are monitored and measured and reduced throughout the process, offering real-time data to ensure reliability.

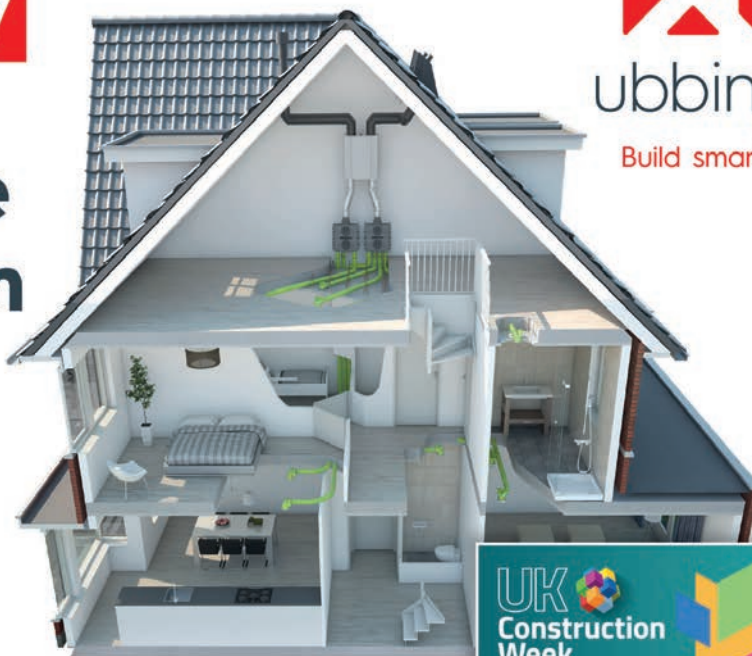
The System can close gaps ranging from as minuscule as a hair width up to 12 mm and is highly efficient, requiring less time and labour

than conventional taping methods, whilst eliminating the risks of human error. Through the integration of Passivhaus principles and cutting-edge technology, Stonewood Homes and AeroBarrierUK have their sights firmly set on the future of UK construction.

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- **MID Meter and kWh Reader:** Integrated MID metering enables precise and legally compliant customer billing. Users can easily monitor their energy consumption, enhancing transparency and user experience.
- **Patented Technology:** Zaptec takes pride in its patented Automatic Phase Rotation technology, setting it apart from competitors by automatically selecting the optimal phase for the fastest charging speed every time.
- **Cloud-Based Load Balancing:** Utilizing the Zaptec cloud, our solution ensures real-time static and dynamic load balancing without the need for additional site-level hardware or infrastructure.
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Cost Savings

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Freefoam roofline & gutters chosen for sustainability

Vistry Group's groundbreaking Vistry Innovation Centre features a range of progressive products the leading housebuilder is using both now and in the future to achieve its net zero carbon target by 2040. Launched earlier this year, and based in Vistry's timber-frame construction factory in Leicester, the Innovation Centre includes the Vistry 'Home of the Future', featuring fascias, soffits, and gutter products by **Freefoam Building Products**, selected for their sustainability performance. Freefoam's Northampton factory has the ISO 14001 accreditation for Environmental Management, and recently expanded on this with a voluntary Climate Change agreement with the Environment Agency. This year Freefoam retained its prestigious EcoVadis Silver medal despite more stringent criteria, and is now rated in the top 9% of all companies EcoVadis assesses for sustainability practices. Its approach to sustainability is rooted in the principles of the Circular Economy, prioritising the re-use and circulation of resources, retaining economic value, and eliminating waste in its own business and its supply chain. Vistry constructed the fully functional future home using 18 different trades and 54 suppliers, featuring more than 100 different products and smart technologies.

0800 002 9903 www.freefoam.com



ISO Chemie's WINFRAMER specified for redevelopment project

ISO Chemie's thermal insulating and load bearing bracket support system has been specified to provide energy efficiency improvements on a residential conversion project in South West England. The move sees WINFRAMER units specified by Bristol architects Argyll Design Partnership for a private residential development that includes the renovation of several old stone cottages in the Bristol South West area. The project features the use of the ISO Chemie system to attach new windows to the properties before the installation of insulation around the WINFRAMER units and the application of an exterior screed finish, in a move designed to significantly improve the building's U values and heat retention capabilities. Passivhaus certified and fire rated to up to 30 minutes, WINFRAMER is a prefabricated installation frame, manufactured to accommodate cavities up to 250 mm that allows windows to be supported independently from the face of the wall regardless of any external cladding being in place. The composite WINFRAMER brackets can bear heavy windows loads, including bi-fold doors, to provide a reliable, strong and high-performance support frame. Installation is quick with windows attached directly and secured mechanically using either standard fixing screws or fixing lugs in the usual manner.

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EXTERNAL DOORSETS NO LONGER A BAD CATEGORY

Vista provide full onsite installation training for all joiners and fitting teams on how to expertly install an Xtreme composite door, taking away the stress and strain of poorly operating doors. The same team are also on hand to help when things don't go to plan. Vista are not just a manufacturer but a partner from start to finish.

- Lead times from 5 working days.
- On site installation demos with our team of experienced engineers.
- Low U-Values from 0.87W/mk² meeting future homes standards.
- Highly specified PAS24: 2022 accreditation.

"Over the last few years Vista have worked with us and we have developed an excellent trading relationship. I had previously described External Doorsets as a 'bad' category, but then we discovered Vista – what a revelation!"

Lee, Group Category Manager

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COMBINED VERSATILITY FROM COMPOSITE

Distinction Doors' Owen Jones explains the performance benefits of composite entrance doors, and why their versatile aesthetics make them an appealing option for small and large-scale developments.

Today, customers want products which deliver return on investment while offering an improved standard of living. Composite doors are one such product. They balance performance with aesthetics to create a door type that's popular with both private and social housing decision makers.

These doors meet, and exceed, modern expectations. Known for their abundant benefits – including security, low maintenance and product choice – their contribution to a thermally efficient building is being increasingly understood.

OUTSTANDING THERMAL PERFORMANCE

To understand the thermal performance of a composite entrance door, consider the U-value and Doorset Energy Rating (DSER), when calculated for the complete doorset not just the door blank or glass.

To comply with the latest regulations, entrance doors used in refurbishment schemes, which account for most door sales in the UK, must now achieve a 1.4 W/m²K U-value or Doorset Energy Rating (DSER) B.

Performance can vary depending on the structure of the composite door. When compared to a solid, timber core composite door (48 mm) and a timber panelled door (44 mm), calculations prove that composite doors are 50% more thermally efficient than the alternatives.

LOWER HEATING BILLS

Over time, composite doors can reduce household heating bills by boosting insulation levels and reducing draughts and cold spots, and help to create a warmer, more welcoming home. The difference is clear when replacing a PVC door. They also support developers in achieving carbon reduction targets and go some way to reducing environmental impact of developments.

ENTRANCE DOOR SECURITY

Security benefits have long been associated with composite doors. The solid rigidity of a composite option means that it not only feels secure but is secure.

Many composite door suppliers have



sought proof of performance by attaining the enhanced security standard, PAS 24. This standard is updated regularly as the industry advances, the latest version is PAS24:2022 (as of June 2024).

The door leaf and glazing are major components in a doorset (the complete door assembly) and in some instances, these have proven ability to achieve PAS24:2022 in their own right enabling manufacturers to produce the ultimate enhanced security doorset.

SECURED BY DESIGN

PAS 24 is a prerequisite in attaining Secured by Design (SBD) accreditation, a police initiative to protect against unlawful intrusion. Consumers are becoming more aware of Secured by Design and the positive impact on home security and the peace of mind it offers.

The Secured by Design accreditation exceeds the requirements of Approved Document Q. Specifiers can also be reassured that in achieving SBD the doorset has been tested rigorously and certified by a third party.

LOW MAINTENANCE & STYLISH

Usually white as standard, composite doors can be painted under factory conditions. This produces a robust and attractive surface finish. It also means that

the door does not need to be repainted or varnished to stay looking good and retain its weather resistant properties. Most composite doors simply need a regular wipe down with warm, soapy water and a clean, lint-free cloth.

PERSONALISE COMPOSITE ENTRANCE DOORS FOR CUSTOMERS

People also love to personalise their entrance door – using colour, decorative glass, hardware, and furniture. The doors can be painted on both sides and the colours don't need to match!

MAXIMISE NATURAL LIGHT WITH COMPOSITE OPTIONS

Natural light is also a key factor in building design and renovation. Modern composite door suppliers recognise this, with many expanding their range to include door designs with larger glazed apertures. Glass designs have modernised to reflect this change in demand.

Clear, obscure, stippled and satin glass units are now widely available. These are often laminated, low-E and double glazed, and offer excellent thermal performance when fitted into a thermally efficient composite door.

Owen Jones is technical director at Distinction Doors



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WINDOWS TO FUTURE SUSTAINABILITY

Emily Page of window fabricator Stedek, charts the evolution of energy-saving windows, from early innovations to low carbon solutions for future homes.

Windows might only make up a tiny part of the average building – but when it comes to sustainability, their impact is huge.

A brick wall, for example, has a fraction of the U-value that a window provides. However, since few of us fancy living in brick boxes without any light, we have to live with the fact that glass is inevitably less thermally efficient than other types of structure.

The good news is that window technology has advanced drastically over the last 40 years. It wasn't all that long ago, historically speaking, that single-glazed timber framed windows dominated the market.

While aesthetically pleasing, they present significant sustainability challenges. Together with single panes of very basic glass, they unsurprisingly offered very poor energy efficiency, and created major thermal weaknesses in the structure of the building.

This was followed by the first wave of aluminium windows – a world away from the modern, high-performance aluminium windows on the market today. Still largely single-glazed, they offered a much more durable option than timber – but as a metal, aluminium's thermal conductivity posed a problem. Early aluminium windows struggled to retain heat, leading to higher energy bills and carbon footprints.

THE DOUBLE-GLAZING BOOM

The '80s brought two significant shifts – the development of double glazing, and the rise of PVCu.

Double glazing dramatically improved thermal efficiency. And PVCu did the same – advanced profiles with multi-chambered designs reduce energy consumption for heating and cooling. They were also durable, cost-effective and recyclable, making them an excellent choice.

INNOVATIONS IN GLAZING

However, while the frame material plays a crucial role, the glass itself significantly impacts a window's sustainability.



Advancements in glazing technology have unlocked new possibilities for energy-efficient windows. Low emissivity features a special coating that reflects long-wave thermal radiation (heat) back into the building, reducing heat loss in winter.

Solar control glass allows visible light to pass through while reflecting infrared radiation from the sun, keeping the interior cooler in the summer months.

Replacing air in the gap between panes with argon gas which provides lower thermal conductivity, further enhancing insulation.

SMALL COMPONENTS – BIG DIFFERENCE

Spacer bars also play a crucial yet often overlooked role in window performance. These thin strips separate the panes of glass within a double or triple-glazed unit.

Traditionally, metal spacer bars were used – however, these brought the same problem as aluminium windows. They conducted heat, creating a “thermal bridge” that reduced the effectiveness of the glazing.

More advanced warm-edge spacers, made from materials like foam or

composites, have significantly lower thermal conductivity. They minimise heat transfer between the panes, enhancing the overall performance.

GREAT LOOKS, GREAT PERFORMANCE

During that initial double glazing boom, there weren't many who'd say they preferred the look of PVCu to timber.

PVCu windows were more durable, cost-effective and easier to maintain – but when it came to aesthetics, they were extremely basic. You could have any colour you liked, as long as it was white.

In choosing them, homeowners and housebuilders were having to make a trade-off – worse looks for better performance. Today, that trade-off is no longer necessary. Manufacturers have made huge strides, allowing them to deliver high-performance windows that also provide exceptional aesthetics.

It means that the window products available today offer better energy efficiency than they've ever done – without compromising on performance in other vital areas too.

Emily Page is director of Stedek

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Hydro International incorporates future-proof design as standard

Hydro International, an industry leader in water management products and services, is redefining the hydraulic efficiency and adjustability standard with an upgrade to its most popular and highest-performing flow control. Hydro-Brake® Optimum Hydraulic Efficient vortex flow controls will now incorporate an adjustable inlet as standard. The adjustable inlet will enable engineers to future-proof their drainage design with up to plus or minus 20% change in design flow should additional developments or urban creep cause an increase in flows, saving the cost of a replacement flow control. Ben Puddy, product manager for Hydro International, comments: "With the ability to adjust flows post-installation as standard, Hydro-Brake® Optimum can help designers be prepared for the effects of climate change, urban creep, or changes in regulations. In addition, saving money with the ability to adjust to future flow rates, without the expense of fully refitting the system and ensuring projects can be delivered on time, every time. At Hydro International, we have 40 years' worth of expertise which has gone into to development of this feature, ensuring risk is mitigated."

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W40 steel profiles an ideal match



The versatile W40 window profiles, specifically developed by the **Steel Window Association (SWA)** for its members, are a stylish and modern solution that suit both new-build and refurbishment applications. While the classic W20 section continues to be preferred by

conservationists and many property owners for early 20th century and older properties, W40 exemplifies how steel fenestration systems have kept pace with modern tastes and technical demands, while retaining key attributes such as strength and excellent daylight transmission. Today's W40 profiles provide greater flexibility than their predecessors, being able too accommodate thicker double or even triple glazing units. They are also capable of creating larger window openings without coupling individual frames together.

www.steel-window-association.co.uk

Seal the deal on sustainability with Rad-Seal 15

In the search for greener building practices, Rad-Seal 15 offers a sustainable and efficient solution for housebuilders, architects and homeowners alike. Rad-Seal 15 is the face-fixed radiator pipe guide and seal designed to provide an effective air leakage barrier around the entry points of 15 mm plastic radiator pipework. 15 mm pipework is becoming more frequently used in developments incorporating energy efficient heating systems such as Air and Ground Sourced Heat Pumps.

Designed and manufactured by Timloc Building Products, the patent-pending Rad-Seal 15 helps to preserve room temperatures and reduce energy consumption and costs for the homeowner. For housebuilders, it is a simple yet effective way to help achieve Part L's required air leakage performance and the new Future Homes Standard effective from 2025.

The Rad-Seal 15 is manufactured from 100% recycled materials, demonstrating Timloc's commitment to sustainability without compromising on performance. As a carbon-neutral manufacturer, Timloc Building Products is dedicated to building a greener future with around 75% of products in the Timloc range currently made from 100% recycled materials.

The environmental benefits of Rad-Seal 15 extend beyond regulatory compliance. Made from recycled Polypropylene and Thermoplastic Elastomer, the product not only diverts waste from landfills but also reduces the demand for virgin materials. This contributes to lower



greenhouse gas emissions and supports the circular economy adopted by Timloc Building Products.

The straightforward installation of Rad-Seal 15 ensures secure pipe positioning, eliminating pipework kinking. The slim 23.5 mm profile and ability to accept various pipe routing methods, including ground floor, upper floor, and horizontal configurations, make it the ideal choice for a range of projects.

Alternatively, for projects utilising 10mm pipework, Timloc have the Rad-Seal Face-

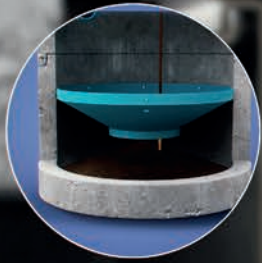
Fix available with the same material and performance benefits.

Incorporating Rad-Seal 15 not only helps to meet stringent building regulations but also champions environmental best practice, exemplifying how sustainable products can seamlessly integrate into modern construction, paving the way for a greener future in the industry.

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AN AIRTIGHT CASE FOR MVHR IN NEW HOMES

Ruth MacEachern of EnviroVent explains why mechanical ventilation with heat recovery systems are the key to improving energy efficiency in modern homes.

Housebuilders are building to ever more stringent Building Regulations requirements for airtightness, however to ensure an energy efficient home with a good level of indoor air quality, mechanical ventilation with heat recovery is essential.

Mechanical Heat Recovery Ventilation (MVHR) is effective in extracting excess moisture in the air to prevent humidity build-up and condensation in wet rooms like bathrooms and kitchens, yet by also recovering the heat from the outgoing stale air, it reduces the energy demands of the home.

HEAT RECOVERY & ENERGY SAVING

MVHR systems can be the answer to making an airtight home energy efficient, whilst achieving high levels of indoor air quality.

These systems are designed to recover the heat from the outgoing air and transfer it to the incoming fresh air. This heat exchange process means MVHR systems can significantly reduce the energy required to heat or cool the incoming air, resulting in lower energy consumption and reduced carbon emissions. Heat recovery systems can typically recover about 73-95% of the heat in exhaust air – they can also significantly improve the energy efficiency of buildings.

Overheating can be mitigated with the summer bypass function measuring indoor and outdoor temperatures and adjusts the ventilation speed accordingly. However, it is important to firstly consider the main fabric of the building, orientation and shading to avert any potential overheating issues.

While mechanical ventilation systems offer numerous benefits, their integration in airtight homes comes with its own set of challenges. Maintaining the integrity of the building envelope is crucial as any unintended air leakage can compromise the performance of the mechanical ventilation system.

Typically in newly constructed buildings, duct leakage can range



from 25-40% (Source: Department of Energy Report), which is unacceptable for high-performance buildings such as Passivhaus designs. To address this challenge, it is essential to ensure correct sealing of ductwork, which should minimise leakage to less than 3% of the system's air volume. This requires a combination of effective design, quality installation and rigorous testing to achieve optimal airtightness.

Insulation and seals should be inspected to ensure they are intact and there are no gaps or leaks that could compromise the airtightness inherent to the Passivhaus concept. Carrying out regular checks and maintenance is particularly important with Passivhaus ventilation systems.

BUILDING THE HOMES OF THE FUTURE

For housebuilders, the integration of MVHR supports the requirement to build

homes that are not only compliant with current standards but are future-proofed to address the evolving requirements, such as the Future Homes and Building Standard (FHBS). The latest Building Regulations require that all new build homes need to be future-proofed with low carbon heating and world-leading levels of energy efficiency. They set out the ambitious target of a 30% reduction in carbon emissions for new dwellings as an interim target, up to the introduction of the Future Homes and Building Standard in 2025.

Achieving this requires a comprehensive approach that extends beyond traditional insulation methods. As this standard sets a higher benchmark for energy efficiency, incorporating highly efficient MVHR systems has become essential.

As technology advances, it further strengthens the position of MVHR systems

as an indispensable component of energy-efficient homes. Smart ventilation controls can also provide greater control to the user and ease of commissioning for the installer. Innovations in MVHR continue to enhance precision, automation and monitoring, which not only improves the user experience but also contributes to optimised energy usage.

When it comes to MVHR, the design of the system is crucial to the overall efficiency of the building. If a ventilation unit is undersized, it could lead to the under performance of the system, with an air flow rate that is too low, which can result in high humidity levels in dwellings. It can also mean a unit has to work extra hard in an attempt to achieve airflow rates, resulting in excessive noise and increased energy usage. This is why manufacturers work closely with specifiers from the design stage to ensure that new homes can meet the requirements for both ventilation and air tightness.

PASSIVHAUS – MEETING THE STANDARD

As the Government has strict limits to meet on carbon emissions, housebuilding requirements are set to become even more stringent.

The Passivhaus concept is being adopted by many social housing providers and some developers because it sets a



benchmark for achieving energy efficiency through ventilation and heat recovery.

Passivhaus, obviously, presents another dimension in the need for energy-efficient ventilation systems. Achieving Passivhaus certification requires meticulous attention to detail in terms of insulation, airtightness, ventilation and overall energy performance. MVHR fits into this framework, providing a comprehensive solution that addresses the requirements of Passivhaus construction. Ventilation systems must be certified to meet the Passivhaus standard to be part of a Passivhaus build.

LONG TERM BENEFITS

The advantages of MVHR extend beyond compliance. Housebuilders with a long-term vision recognise the value of incorporating MVHR as standard

in their projects. It can be seen as a strategic investment that enhances the marketability of homes, positioning them as forward-thinking by offering eco-friendly dwellings that meet the growing demand for sustainable living spaces. MVHR can also lead to long term benefits for homeowners such as lower energy bills, and can potentially lead to an increase in property value.

So MVHR becomes a compelling choice on the road to zero carbon. The combined benefits of energy efficiency, good quality indoor air quality and compliance with building regulations, means MVHR systems are future-proofed to meet the demands of today and tomorrow.

Integrating mechanical ventilation systems in airtight homes, including Passivhaus buildings, presents both challenges and opportunities for the new build market. Effective MVHR system design can go a long way to address the potential challenges posed by airtightness.

With the benefit of ventilation systems with heat recovery, airtight buildings can enjoy high levels of indoor air quality, energy efficiency and reduced carbon emissions over the lifetime of the dwelling.

Ruth MacEachern is product manager at EnviroVent

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Gaia to install more underfloor heating as new UK government confirms housing targets

Underfloor heating experts – Gaia – are expecting to install even more underfloor heating in new-build developments as the new Chancellor announces plans to “get Britain building again.”

Following Labour’s win at the UK general election, Starmer’s government is reintroducing housebuilding targets, with Chancellor Rachel Reeves unveiling their plan to build 1.5 million homes in England over the next five years.

With underfloor heating already an increasingly popular choice for new-builds, these changes will inevitably create more opportunities for underfloor heating installations.

“With 1.5 million new-build homes on the way, we’re predicting that even more developers will choose to install underfloor heating – particularly as these homes will be built in adherence with recently changed Part L regulations and the upcoming Future Homes Standard,” states Steven Rooney, director of Gaia Underfloor Heating.

Part L Building Regulations outline that all new-build homes must produce 31% fewer carbon emissions than was previously acceptable, to help meet the UK’s 2050 Net Zero targets.

Industry experts have identified underfloor heating as a key solution to low carbon heating for future new-build homes, due to its energy



efficiency and low operating temperature.

“Underfloor heating is up to 30% more energy efficient than radiators! Plus, it can be paired with heat pumps, another low carbon heating solution – making it the ideal option for the proposed new-build homes,” adds Steven.

Gaia have extensive experience designing, supplying and installing underfloor heating for large-scale residential projects.

They have worked with a number of developers across the UK, including Taylor

Wimpey, Berkeley Group and Hambridge Homes.

“We’re proud to have worked with so many leading developers. These housebuilding targets will certainly be positive news for them – and for the underfloor heating market too. We’re looking forward to continuing to be the underfloor heating partner of choice as Britain gets building again!” concludes Steven.

01359 242 400 www.gaia.co.uk

SHORT CHIMNEY = CHIMNEY FAN

Traditional chimney design required a minimum flue height of 4.5 m. In theory, this was enough to ensure sufficient natural flue draught to clear the products of combustion from a wood-burning stove.

Unfortunately, the chimney draught was never guaranteed and the provision often resulted in unsightly tall chimneys when appliances were installed in single-storey buildings and orangeries.

A recent change in chimney design (see source) states that a chimney can be designed using the calculation method in BS EN 13384-2005 which allows for the installation of shorter chimneys, provided sufficient chimney draught can be proved. A chimney fan will guarantee this chimney draught even on a shorter flue design.

“[...] the calculation procedure within BS EN 13384-1:2005 can be used as the basis for deciding whether a chimney design will provide sufficient draught.”

Source:
Document J Building Control
Combustion appliances and fuel storage systems
page 30 - §2.8 - “Height of flues”

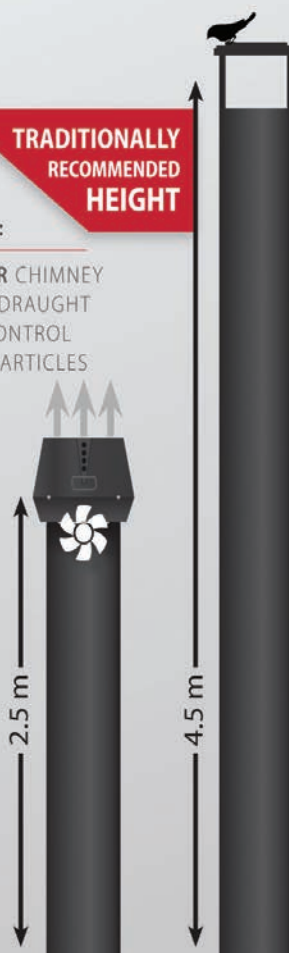
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Electric radiators sparking interest...



The latest electric radiator series launched in the UK and Ireland by radiator manufacturer **Stelrad**, has sparked significant interest in the heating sector. The range is currently made up of 13 expertly selected steel and aluminium radiators and towel radiators, which provide unbeatable quality and design

to suit any room or décor. As well as offering effective and functional heating in the home, as you would expect from Stelrad, the radiators in the Electric Series are aesthetically appealing and provide attractive options for the décor in the home and come with a five-year warranty on the heating parts and a two-year warranty on the electric components.

0800 876 6813 www.stelrad.com

Fernox adds new filter to its product range



Fernox has launched the new sealed and ultra-compact TF1 Sigma Mini, providing a practical filter solution for smaller volume systems with restricted space. With an excellent collection capacity to capture system contaminants, it is simple to install and service. By adding the TF1 Sigma Mini to the extensive Fernox portfolio, installers can now find

a filter option to suit every requirement. Combining the quality of the Fernox brand with a simple, ultra-compact design, the new magnetic TF1 Sigma Mini from Fernox is ideal for social housing, new build properties and smaller volume heating systems. The filter comes ready-to-install and is easy to fit in under two minutes thanks to its slip socket manifold design.

0330 100 7750 www.fernox.com/tf1-sigma-mini

Sentinel Econiq Cool-Flow tackles overheating



Vent-Axia has launched the Lo-Carbon Sentinel Econiq Cool-Flow to help housebuilders manage overheating in new homes. A groundbreaking step for Vent-Axia, the innovative Lo-Carbon Sentinel Econiq Cool-Flow is the company's latest flagship mechanical ventilation with heat recovery (MVHR) system combined with its intelligent Econiq Cool-Flow Module. As global temperatures rise and homes become ever more air tight to reduce carbon emissions, new build residential properties are increasingly overheating. Designed to mitigate overheating conditions in warmer temperatures, the Lo-Carbon Sentinel Econiq Cool-Flow improves indoor air quality (IAQ) while delivering the highest level of thermal comfort.

0344 856 0590 www.vent-axia.com

MVHR features in new SME Energy Centre



Domus Ventilation is proud to be a participant in the newly opened SME Energy Centre in Surrey, where it has provided an HRXE-HERA Mechanical Ventilation with Heat Recovery (MVHR) unit for display, along with wall mounted graphics for the informative showroom explaining the benefits of this ventilation technology. The Domus Ventilation HRXE-HERA on display at the SME Energy Centre is a high performance MVHR that combines supply and extract ventilation in one system. It efficiently recovers the heat typically lost in waste, stale air and uses it to temper the fresh air drawn into the building via a heat exchanger. HRXE-HERA is an energy efficient MVHR unit, thanks to its advanced heat exchange proficiency and the low Specific Fan Power (SFP).

vent.info@domusventilation.co.uk domusventilation.co.uk

Lo-Carbon Sentinel Econiq for new builds



British ventilation manufacturer **Vent-Axia** has launched its first Passivhaus-certified Mechanical Ventilation with Heat Recovery (MVHR) system, the Lo-Carbon Sentinel Econiq. With the new Future Homes Standard looking set to reduce carbon emissions for new build homes by a further 75-80% than current Building Regulations, the Sentinel Econiq is designed to provide low carbon heat recovery ventilation for air-tight thermally efficient new build dwellings, making it ideal for Passivhaus projects. The Sentinel Econiq offers exceptional efficiency, near silent operation and complete controllability, providing excellent indoor air quality (IAQ) and occupant comfort.

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Panasonic partners with Plug Me In



Panasonic is excited to announce its collaboration with heat pump installers, Plug Me In, to provide Panasonic Aquarea heat pumps as part of ScottishPower's clean heating customer offering. The new partnership will deliver accessible heating solutions across the UK. Panasonic's commitment to deliver low carbon heating solutions continues, in its new collaborative role. In this future-proofed approach to residential heating, engineers from ScottishPower's installer company, Plug Me In, will install Panasonic Aquarea L or J Series air-to-water heat pumps with Panasonic Smart Cloud controls for customers on behalf of the ScottishPower Customer Business in the UK.

www.plugmein.com/heat-pumps www.aircon.panasonic.eu



Gilberts elevates the standard in ventilation @ Nine Elms

A brownfield industrial site along the banks of the River Thames is going from "rags to riches", where even the background detail of ventilation is being given a high-end finish. One of London's biggest regeneration projects, Nine Elms is being completely transformed into a new mixed-use area, including the addition of 20,000 homes. One of the latest structures being delivered is Building N6, a 19-storey premium residential block. To achieve the high-end finish, **Gilberts'** grilles and diffusers, supplied via DBA Air Solutions have been installed throughout all the apartments by ESG (Essex Service Group). A combination of Gilberts HSL high-capacity slot diffusers and LN linear bar grilles ensure efficient supply and extract of ventilation in bedrooms, and open plan living spaces and kitchens for the central MVHR and 10no fan coil four-pipe heating & cooling systems, with the strategy validated by BIM. The HSL diffusers deliver high capacity – up to 150 l/s/m – of smooth, accurate airflow which makes them particularly suitable for integration into a fan coil strategy. With the multi-function LN grilles, which can attain up to 77% free ventilation area, the directional bars are manufactured level with the surrounding flange. Gilberts has a reputation for delivering discreet ventilation solutions for high-end projects.

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Juwo SmartWall Monolithic single skin thin joint building systems to meet the new future homes standards for 2025



Future Homes Standards 2025 are all about improving the thermal efficiency of new homes in the UK and to ensure lower running costs, which in turn will reduce the carbon footprint of a new home. The changes proposed in the Future Homes Standards consultation are to look at the Notional Dwelling specification for carbon emissions, Primary Energy and the Fabric Energy Efficiency Standard closely considering U-values, thermal bridging values (Psi Values), as well as the thermal mass of the structure, which affects internal and solar gains as well as airtightness of the property.

Future Homes Standard in 2025 is suggesting that the heating demand of a dwelling should be limited to 15-20 kWh/m²/year, which would require far higher thermal efficiency in the fabric of the building, in particular the U Value of the walls as well as using materials that can offer better Thermal Mass with potential target U Values being circa 0.15 W/m²K.

Using traditional masonry cavity wall construction to reach these types of U values would need to have wall thickness to be as high as 430-450mm wide with cavities being more than 200mm wide using a full fill insulation system which has implications on the foundation widths used as well as requiring more robust wall ties with design consideration in the structural performance against wind and sway.

The answer is to design external walls using the Juwo SmartWall systems as a Monolithic Single Skin structure incorporating the insulation requirements within the structure of the blocks and to reduce thermal bridging (Psi Values) eliminating mortar or adhesive on the interlocking vertical joints and using a thin bed adhesive bond to the horizontal plane. No Cavities. No Wall Ties. No Additional Insulation. Resulting in a quicker and subsequently less expensive construction to build.

The Juwo SmartWall Monolithic Single Skin clay blocks are manufactured to include all the insulation values required within the system, using one of three main products. The "S" system is our standard aerated product. The "MZ" system which includes mineral wool within the structure, and our "RX" system which uses our PoroTec insulation bead, again bonded within the block.

All our Juwo SmartWall systems do not require a wall tie for structural stability nor a cavity to provide the required U values from 0.18 to as low as 0.11 W/m²K. Manufactured with a tolerance

of 1 mm in height, the Juwo SmartWall range of systems reduces the Thermal Bridging (Psi Value) by over 15% as well as having a high Thermal Mass being a masonry clay based product. In addition, the Juwo SmartWall system comes as a complete package that includes lintels, corner and shaped blocks, insulated mortar, adhesive and applicators.

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Juwo SmartWall systems are structural blocks which can be used to any height required and have been used in the UK and Europe for many years for load bearing and non-load bearing walls, for external & internal applications. They have full approval and comply to BS EN 771-1 and carry both a UK CA & CE mark with an A1 fire rating, making them the ideal building system for low and high rise developments as well as for the self-builder.

The Juwo SmartWall systems are manufactured from Clay therefore possibly one of the most sustainable materials used in construction. It is a natural material that it easy to work with and provides a comfortable living environment.

Juwo SmartWall system delivers a much faster build time. The thin joint adhesive allows you to continually work without being restricted to the number of lifts in a day, on average, up to 40+ m² can be achieved per day.

Juwo SmartWall being a monolithic building system, means that you have just one skin for your building structure, no cavities, therefore minimising areas for complicated detailing and areas for insulation to be missed.

The Juwo SmartWall system provides a thermal bridge free method of construction without the need for complicated detailing.

JUWO SMARTWALL™ BENEFITS:

- Excellent Thermal Performance can offer U Values as low as 0.11 W/m²K
- Meets & Exceeds Building Regulation requirements
- Quick Construction Time
- Single solid wall construction
- Modern Method of Construction
- Thin bed mortar technology
- Complete Building System
- >85% less water in construction
- Completely Vapour permeable

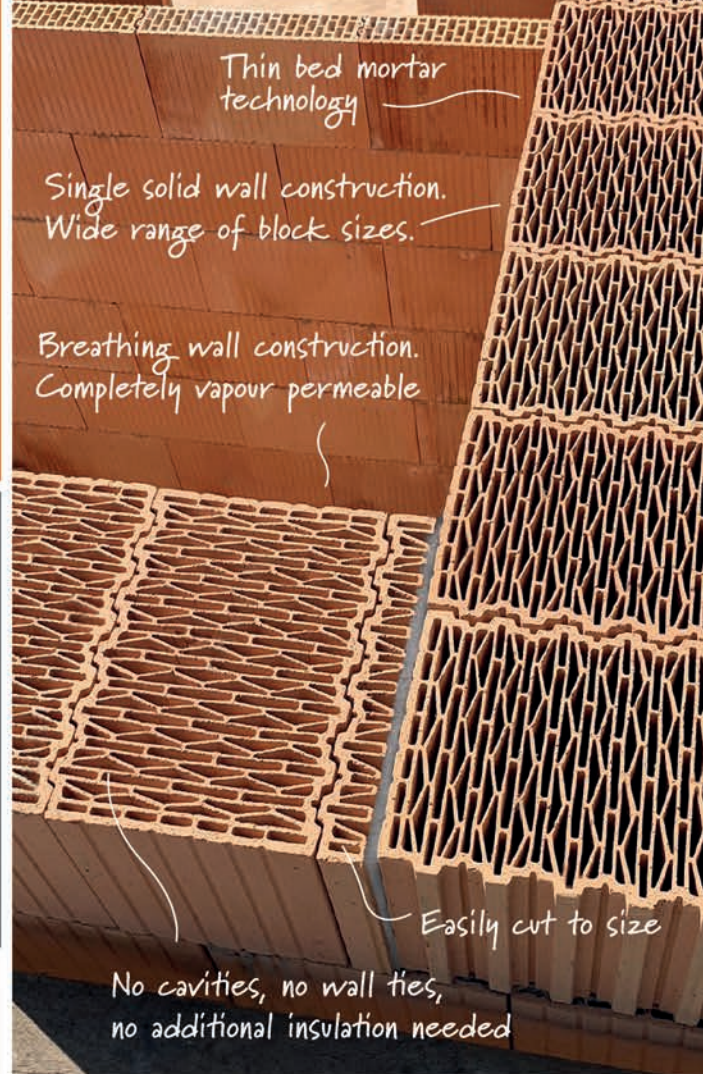
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The system offers a full array of block types and sizes to meet any thermal requirement from 0.18 U Value through to 0.11 U value, all in a single block.



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Wide range of block sizes.

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Easily cut to size

No cavities, no wall ties,
no additional insulation needed



The JUWO Evolved SmartWall™ system comes with all the necessary ancillary items such as Insulated Steel Box lintels, fixings and finishing plasters, renders and brick slips options.


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RAISING THE STANDARD?

Jonathan Ducker of Kingspan Insulation GB, discusses the shortcomings of the Future Homes Standard, and why a more ambitious approach is needed for the building fabric in particular to create 'net zero ready' homes.



Thermal conductivities down to 0.019 W/mK are achievable with Kooltherm insulation



Detailing guides on common insulation thicknesses and applications assist specifiers in complying with the incoming Future Homes Standard

At the end of 2023, the Government published its consultation on the Future Homes Standard (FHS) in England. This standard was intended to ensure all new homes in England are “net zero ready.” However, the consultation recommendations have been criticised as lacking in ambition – particularly in relation to fabric performance. This is largely unchanged from the existing requirements, which already lag behind those in Scotland and Wales. If applied, this may mean new homes fall short of “net zero ready” performance, could be more expensive to heat and could place additional strain on the National Grid. It could also require the properties to be retrofitted in the future at considerable extra cost.

All of these issues could result in reputational damage for housebuilders, despite new homes being fully compliant with the FHS. It should therefore be a priority for everyone within construction to ensure the FHS is fit for purpose and delivers on its promise.

FHS PROPOSALS

Perhaps the most notable changes proposed within the FHS consultation are to the Notional Dwelling specification in SAP. This is applied to a theoretical

building of the same dimensions as the proposed home within the energy modelling software to generate the performance targets (for carbon emissions, Primary Energy and the Fabric Energy Efficiency Standard (FEES)). The latter considers only the U-values, thermal bridging values, thermal mass, internal and solar gains and the airtightness of the property.

The consultation provides two options for the Notional Dwelling, both requiring the use of low carbon heating. Option one retains the current fabric specification (shown in the second column of the table below) but requires air-leakage to be reduced with a mechanical ventilation heat recovery system used to provide ventilation. It also includes use of wastewater heat recovery and photovoltaic (PV) panels covering the equivalent of 40% of the ground floor area. Option two is virtually unchanged from the existing requirements aside from the addition of low carbon heating.

As with the existing system, developers would be free to differ from the Notional Dwelling specification on the actual building providing they meet the mandatory performance targets and that no areas of the specification are worse than set limiting values and compulsory

requirements (such as the use of low carbon heating).

The decision to leave the fabric specification unchanged from the existing version of Part L was unexpected. In the consultation for the 2021 Part L change, the Future Homes Standard in 2025 was suggested as introducing ‘world leading standards of energy efficiency’ and included a more ambitious indicative specification (shown in the third column of the table on following page). Similarly, the Climate Change Committee had recommended that heating demand in new homes should be limited to 15-20 kWh/m²/year – similar to the requirement for Passivhaus properties.

Limiting heating demand for new homes is important, not only to lower heating costs for homebuyers, but also to avoid placing unnecessary strain on the National Grid as we switch to electric-based low carbon heating systems, such as heat pumps. This is key, as estimates suggest that the electrification of heat, transport, and industry means demand for electricity is expected to grow fourfold by 2050. If the fabric targets for new homes are not tightened, this may mean they have to be retrofitted in the future at considerable cost.

A better approach would be to use the

Selected fabric performance requirements from Notional Dwelling/Notional Building specifications

	Proposed FHS Notional Dwelling	2021 Consultation Indicative Specification	Wales Part L 2022 – Notional Dwelling	Scotland – Section 6 (Energy) – Notional Building
External wall (W/m ² K)	0.18	0.15	0.13	0.15
Floor (W/m ² K)	0.13	0.11	0.11	0.12
Roof (W/m ² K)	0.11	0.11	0.11	0.09

fabric requirements which were outlined in the 2021 consultation. This approach is laid out in the third column of the table. As you can see, while the requirements are a step-up from existing requirements in England, they are still less demanding than those already being delivered in Wales. As such, they should be practical to achieve.

While these lower U-values may have an impact on the thickness of insulation required, this can often be minimised by using products with lower thermal conductivities (lambda values). The lower the thermal conductivity of a material, the better it is at preventing heat loss. This can reduce the thickness of insulation needed to achieve a desired U-value.

In addition, many manufacturers now provide thermal detailing guides for products. These will typically be designed to achieve better psi-values than the default values or global values within the energy modelling software. This can

support compliance, particularly with the FEES requirement.

MONITORING

Aside from these changes, the consultation also looks to address the performance gap between the designed and actual energy performance of buildings by introducing a Voluntary Post Occupancy Performance testing requirement for new homes.

While this is a welcome inclusion, a compulsory requirement for all new homes would seem to make more sense. This would allow the causes of underperformance to be more easily identified across our housing developments, and lessons learnt to prevent this. The simplest way to do this would be to replace the current Primary Energy Metric (which considers not only the energy use in a home but also in upstream activities such as refining of the energy source) with a

simpler Delivered Energy Metric which looks solely at end use in the home. This would allow easy comparison of the designed and actual energy performance.

LASTING SOLUTION

The FHS is a key step in the country's journey to net zero emissions. By targeting a fabric specification that is more ambitious than the current proposals but still reasonable and practical to achieve, we can help to ensure that new homes do not place unnecessary strain on the national grid, that they are affordable to heat and that they do not need fabric retrofits in the future. This should ultimately help to minimise future regulatory upheaval on energy performance for housebuilders, supporting specification and long-term planning.

Jonathan Ducker is head of regulatory affairs at Kingspan Insulation GB

Overcoming impossible toilet installation



Some installers embrace finding solutions to seemingly impossible situations. Lee Hammond is one such installer. His customer in Wigan was looking to create a downstairs cloakroom in a hallway cupboard adjacent to the stairs. Step forward Lee, with his problem-solving skills and he soon realised that all he was needed was a **Saniflo**. A macerator pump would be able to pump the waste up into the ceiling above, along the kitchen ceiling and into the central internal soil stack. Whilst plumbing in the small-bore pipework to take the waste away from the WC, Lee plumbed pipes for hot and cold water to go back the other way, along with heating pipes to plumb in a towel rail. It was agreed that the perfect unit for the converted space was a Sanicompact.

020 8842 0033 saniflo.co.uk

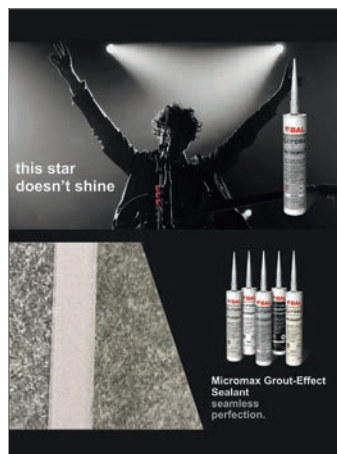
Create a timeless statement in your bathroom



HiB has launched a new collection of contemporary mirrors, featuring 'Nova', a range of stunning arched shapes – making it the perfect focal point for a bathroom. Unveiled this spring, Nova mirrors are available in three stylish finishes: black, brushed brass, and the increasingly popular gunmetal. Each finish has been chosen to complement a wide range of bathroom styles. The sleek black offers a classic look, brushed brass brings a touch of luxury, and the gunmetal finish is perfect for those looking to add a contemporary edge. The product also comes in two sizes, H80 x W50 cm and H90 x W60 cm. Users can enjoy the convenience of touch-free operation, and customise the ambiance with colour temperature changing LED illumination.

020 8441 0352 www.hib.co.uk/products/nova-led-mirror-black

BAL launches new Grout-Effect Sealant – for seamless perfection



BAL have launched a new innovative "Grout-Effect Sealant" for seamless transitions. BAL Micromax Grout-Effect Sealant is formulated with a unique technology which provides a textured, matt-finish that blends perfectly with your grout – no more shiny, stand-out high gloss sealant! Colour-matched to BAL Micromax3 ECO Grouts, it provides a uniform finish in colour AND texture, across all joints; whether they are grouted tile joints, sealed perimeter joints, movement joints or internal corners. BAL Micromax Grout-Effect Sealant is waterproof with excellent adhesion and is perfect for sealing between tiles and other materials including sanitary, acrylic, fibreglass, glass, glazed tiles, porcelain and painted surfaces in dry and wet interior and exterior environments. It can even be used in high-traffic areas and is also perfect for external tiling installations for example when sealing between 20 cm porcelain tiles and drain grates. BAL Grout-Effect Sealant is also formulated with long-lasting Microban® antimicrobial protection against black mould – which provides market-leading protection for hygiene areas when subject to the usual cleaning regimes. BAL Micromax Grout-Effect Sealant will be available from BAL stockists, with a total of 25 contrasting or complementary colour tones, providing a seamless colour-matched grout and sealant solution for every tile colour or type.

01782 591100 www.bal-adhesives.com/products/bal-micromax-grout-effect-sealant

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With a focus on steel, timber and glass, **Complete Stair Systems Ltd's** staircases are designed to create an impact within a hallway. They cater for all straight, quarter and half turn configurations and offer a comprehensive range of spiral staircases. Looking for an alternative to a conventional, mundane carpeted

softwood /mdf/ply staircase? Perhaps a staircase that will enhance the style of the property whilst creating a strong impression on those entering the house? Then have a look at the Complete Stair Systems website, request the brochure and forward plans through for a quote.

01794 522444 www.completestairssystems.co.uk

Keller announces partnership



Keller appoints Project Kitchens as the national contract partner for the UK. The partnership is already up and running and both companies are working on several major contracts around the UK. Project Kitchens celebrates its 25th anniversary this year so the timing of this appointment comes

at a key point in time for the company. Belinda Sewell, Managing Director of Project Kitchens comments, "By partnering with Keller, we are excited to enhance our product portfolio with kitchens renowned for their outstanding quality and ecological ethics. Keller's commitment to sustainability is unparalleled in the high-volume kitchen manufacturing sector, making them the perfect partner for our environmentally conscious initiatives."

www.kellerkitchens.com

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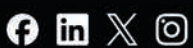
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THE KEY STEPS TO STAIRCASE SAFETY

Kevin Underwood of the British Woodworking Federation outlines the vital importance of good staircase design when it comes to preventing injuries

The risks presented by stairs are self-evident. While a homeowner may believe that this type of accident would not happen to them, the Royal Society for the Prevention of Accidents' (RoSPA) report 'Can the home ever be safe' revealed that there are over 300,000 visits annually to A&E departments following falls on stairs.

These accidents underscore the crucial role that good staircase design can play in prevention of trips and falls. This article outlines the key features of safe staircase design, and how achieving these characteristics can help mitigate risks.

THE RISK

Falls on stairs claim the lives of over 700 people annually, and over 43,000 people are hospitalised every year as a result of falls on stairs in the home, according to RoSPA.

While it's important to remember that the NHS highlights that "most falls do not result in significant injuries," there are simple steps that can be taken to reduce the risk, such as adequate lighting.

However, one of the main factors affecting the ability of a user to navigate a staircase safely is its design. The geometry of the stair, the rise, the going, the position and shape of the treads can affect the ability of the user to safely place their feet and avoid accidents.

There are five key elements in stair design that can help reduce the risk of trips and falls, as described in the following few paragraphs.

CONSISTENT RISE & GOING

A key cause of under-stepping or over-stepping in both ascent and descent is where there is inconsistency in the rise (the height of a step) and going (the horizontal distance between the nosings of two consecutive treads) of a stair. When a person starts to ascend or descend a stair, they subconsciously determine the appropriate movements they need to make with their legs and feet based on the first one or two steps they take. This process, known as 'proprioceptive



VARIATIONS BETWEEN STEPS ARE UNEXPECTED AND CAN LEAD TO THE USER TRIPPING OR SLIPPING ON STAIRS

feedback,' makes the user vulnerable to variations in the rise and going of a stair as they expect to step up or down by the same amount throughout the flight. Variations between steps are unexpected and can lead to the user tripping or slipping. For this reason, it is important to allow only small variations between steps of 1% of the design dimensions.

OPEN RISE

Where stairs are designed to have an open rise, the treads should overlap and there should never be horizontal gaps between treads when the stair is viewed on plan. To protect children who may use the stairs, the vertical gaps between treads should be small enough to prevent a 100 mm diameter sphere from passing through.

HANDRAILS

Handrails are essential for safety, allowing users to stabilise themselves quickly in case of a loss of balance. The handrail must be positioned within easy reach to

ensure safety at any point on the stairs.

GUARDING

To adequately protect users from falling from the side of the stairs, any fall of more than 600 mm should be protected by guarding. This should be strong enough to withstand weight and tall enough to stop people from falling over the top. For children's safety, gaps in the guarding should be small enough to prevent a 100 mm diameter sphere from passing through.

SURFACE FINISH

The surface finish or covering of a tread can affect the likelihood of slipping. For example, worn coverings can cause trips. For stairs with a going of 300 mm, slipperiness is less of an issue, but for treads less than 300 mm, slip resistance at the nosing is important. This is where first contact is made in descent and a slip-resistant surface can help turn a potential slip into a slight loss of balance which can be corrected by gripping the handrail.

DRIVING BEST PRACTICE

At the BWF, we believe that stair safety is of paramount importance and is founded in the design, specification and installation of the staircase. To champion best practice in safe staircase design, the BWF Stair Scheme has a range of guidance documents including two comprehensive design guides which are free to access.

The BWF also has a 'Overview of Timber Stairs' e-learning course, which provides an overview of timber stairs, their design, manufacture and installation.

There are many factors that influence the design of a staircase including its location and aesthetic style. But only by ensuring that stairs are designed appropriately and safely can the risk of trips and falls be reduced.

Kevin Underwood is technical manager of the British Woodworking Federation

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New DuraPost® SLEEK aluminium fence range



The new DuraPost® SLEEK aluminium range from Birkdale is a contemporary and durable fence panel solution that is incredibly easy to install thanks to its modular structure. It is available in two high-quality design options, the SLEEK Privacy Panel and the SLEEK Screen

Panel, with a matching SLEEK Aluminium Gate also available. The DuraPost® SLEEK Privacy Panel is a contemporary take on the classic tongue and groove timber panel, while the SLEEK Screen Panel emulates a classic slatted fence panel design. Unlike timber, the SLEEK panels are highly durable and low-maintenance, extruded from 6063 aluminium and powder coated Sahara Black as standard to ensure longevity of finish.

0345 450 9000 www.birkdalesales.com

Cavity Tray Capability



The NHBC and LABC advocate the use of preformed trays for complicated junctions, and trays play an important role, wherever the external cavity wall is punctuated by a window or door opening. In the case of arched openings, bespoke preformed trays provide the assured way of integrating DPC protection, regardless of whether constructing using

traditional centring, stone, concrete or arched metal lintels. The demand is growing for purpose-made trays, according to the longest-established UK specialist, **Cavity Trays Ltd of Yeovil**. The Company operates a Helpdesk service and a tailor-made service for all industry disciplines, providing specific suitability solutions in line with NHBC and LABC guidelines.

enquiries@cavitytrays.co.uk www.cavitytrays.co.uk



Enhanced confidence with new EGGER Peel Clean Xtra exposure rating

EGGER is delighted to announce an extension to the exposure rating of its popular Peel Clean Xtra flooring board, increasing from 42 to 60 days. Tested and verified by a third party and approved by KIWA, the enhancement reflects EGGER's continued commitment to providing durable and reliable solutions for UK housebuilders. Manufactured with a minimum of 45% recycled materials, Peel Clean Xtra features a P5 chipboard core and high strength, anti-slip peelable Polypropylene film, which can withstand heavy traffic for the lifespan of a construction project. This easy-to-peel film helps to prevent moisture ingress and can be easily recycled upon completion, leaving a clean and well-presented floor ready for site handover. This update to the exposure rating provides housebuilders with increased flexibility and confidence on projects, allowing them to leave the structural flooring exposed to the elements for up to 60 days while surrounding work continues. Available in two thicknesses, 18 mm and 22 mm, the boards feature diamond tip machined tongue and groove profiling on all four sides, ensuring consistent joints. Suitable for NHBC projects, the structural integrity of the flooring system is protected by the EGGER Advanced Lifetime Guarantee when installed using EGGER's recommended fitting method and EGGER Joint & Joist Adhesive.

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The magazine is published 12 times a year with an ABC-audited circulation of 12,500 UK housebuilders, developers and housing associations. The magazine offers a highly credible platform from which to communicate with the industry.

Website	https://www.hbdonline.co.uk/
Industries	Publishing
Company size	11-50 employees
Headquarters	Heathfield, East Sussex

proteQ10 guarantee is simplified

VBH, the specialist behind the greenteQ hardware range, has made improvements to the registration process for its proteQ10 profile cylinder anti snap guarantee.

Under the guarantee, which covers the popular greenteQ Orion TS007 3 star profile cylinder, consumers can expect a payment of £2,000 should an Orion snap to allow a successful break in.

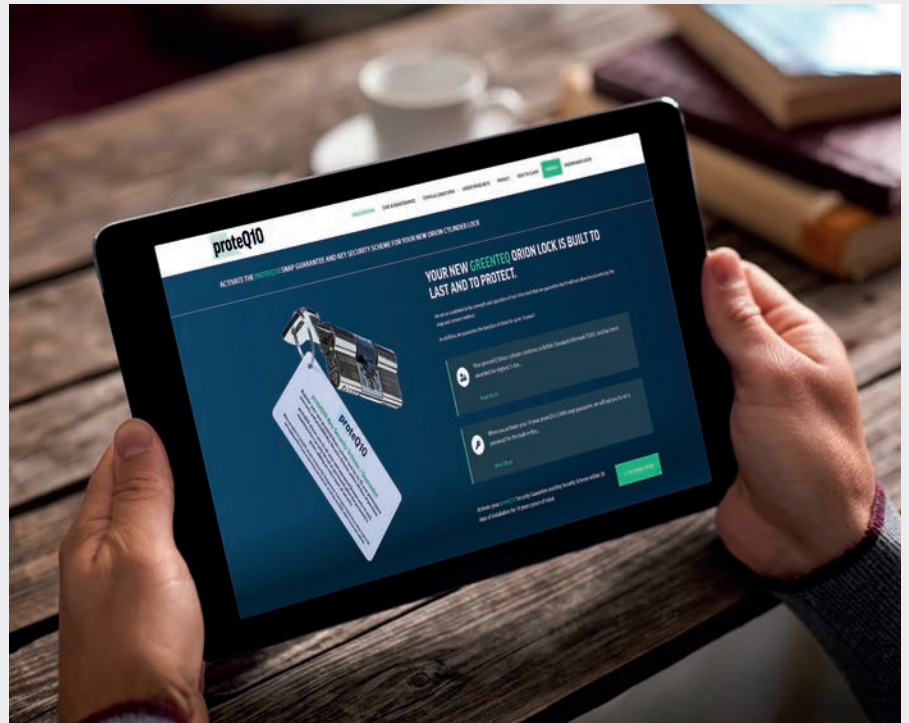
VBH has launched a completely new registration process to make it 'even easier' for the end customer to register their cylinder.

The information card that comes with each cylinder has now been updated to include a QR code that takes the customer directly to the registration page of a new website.

The easy-to-use site takes the visitor through the simple registration process in just a few clicks. Once registered, the cylinder's 10-year anti-snap and function guarantees are activated. In addition, by setting a Key Security Password during registration, the user activates the free Key Security Scheme, which prevents additional keys from being ordered via the key number unless the password is provided.

Dan Powell head of brand at VBH, says: "We have had over 18,000 individual registrations since launching the proteQ10 guarantee and security scheme.

"These improvements to the key card and website make product registration easier than ever. greenteQ Orion is the obvious choice for installers and lock replacement specialists, as it is easy to explain the benefits of the cylinder



and the process of registering for proteQ10 to potential customers.

"Once the cylinder is registered, VBH takes over responsibility for all dealings with the end user in the unlikely event of an issue, saving our

customers the potential headaches and costs of call outs and providing replacement products."

01634 263263
info@vbhgb.com

Explore Ubbink's total solutions at UKCW



Ubbink, one of Europe's leading innovators in residential MVHR products and systems, will be presenting a full system example on Stand B5060 at UK Construction Week Birmingham NEC, on 1st to 3rd October 2024. Ubbink is unique in offering total system solutions, comprising: Ubiflux Vigor heat recovery

unit; Air Excellent ventilation ductwork; Aerfoam insulated mass flow ductwork; insulated and non-insulated roof and wall terminals and Haelix inlet and outlet valves. The company also provides a complete range of support services for UK customers. Meet Ubbink's team on stand B5060.

01604 433000 www.ubbink.co.uk

Engineered solutions are taking over



Natural timber is gorgeous; and has been the building material for eons! It still has a huge place in our heart even amongst the multitude of new technological advances in the construction industry. Timber is a natural product and, like all products of nature including us, it is neither consistent nor guaranteed free of defects. Prone to warping, twisting and splitting, sawn timber is still widely used. **West Fraser** leads the way in the manufacture of innovative timber panel products and has done for decades. Today's wood panel products are among the best-known examples of engineered wood. SterlingOSB Zero, the leading brand of OSB, is a vital component in many so-called 'Modern Methods of Construction'.

uk.westfraser.com



Self-builder shields basement structure using Wykamol solution

The comprehensive product range offered by waterproofing and timber treatment specialist Triton Systems, part of the **Wykamol Group**, has proved to be the perfect fit for a Kent self-builder undertaking his first self-build project in challenging ground conditions.

Internally, the walls are lined with the BBA approved Wykamol-Triton's CM8 Waterproofing Membrane, while a layer of CM20 will be laid across the top of the floor slab. Both of these products are made from high density polyethylene and are installed with their 8 mm or 20 mm studs against the face of the concrete. Sureproof Ultra comprises a very stable polyethylene film offering a consistent reaction to longitudinal and transverse forces, having been developed for the waterproofing of basements, foundations, walls and flat or ventilated roof structures. The self-adhesive material is self-sealing and forms an effective barrier against methane and radon while being resistant to chemicals and physical damage. As well as being ideal for protecting concrete and masonry, Sureproof Ultra is also compatible with metal substrates.

01282 473 100 www.wykamol.com

FabSpeed launches CMS40, the lightweight brick facade system.



Introducing the CMS40 Facade System by FabSpeed, a Michelmersh Group brand, in collaboration with fellow industry leaders, Cladmate Facade Systems.

The CMS40 is a lightweight, easy-to-install, cost-effective system that integrates mechanically fixed, non-combustible brick slips to offer the beautiful clay aesthetic that we all know and love. It is suitable for multiple construction projects, ranging from volume high or low-rise projects to new builds or retrofit applications and can be applied to both indoor and outdoor facades. By seamlessly blending traditional brickwork aesthetics with advanced rain screen cladding solutions, CMS40 sets a new standard in architectural versatility and performance.

CMS40 offers numerous benefits, including

reduced on-site labour meaning shorter project durations, installation cost savings, improved production safety and quality procedures, enhanced precision and environmental advantages through waste reduction, system recyclability and re-use.

Pairing the innovative CMS40 system with the durability and longevity advantages of clay bricks, in an easy-to-install system, reinforces its appeal in the wider construction industry. Renowned for their strength, fire resistance, thermal and acoustic performance and beauty, clay bricks provide enduring quality alongside their famed long-life expectancy. With a variety of colours and textures, clay brick slips offer unparalleled design flexibility and adaptability which can evolve over generations whilst also complementing change in architectural vision. With confidence in CMS40's versatility, why not choose a less standard brick bond or even projecting brickwork patterns to give your facade more depth?

Furthermore, the CMS40 support system incorporates 70% recycled aluminium as its primary component and as such is fully recyclable, promoting circular principles, similar to its clay brick counterpart. Its dismantlable and reusable nature coupled with clay brick slips, can ensure a full aesthetic revision with only mortar replacement, ensuring it aligns with sustainable building practices and makes it an ideal choice for secondary applications.

CMS40 stands ready to be adorned with a wide selection of clay brick slip products from Michelmersh's core range. Additionally, FabSpeed's team of skilled craftspeople can customise slips from various manufacturers' clay products, providing tailored solutions to meet every project's challenges.

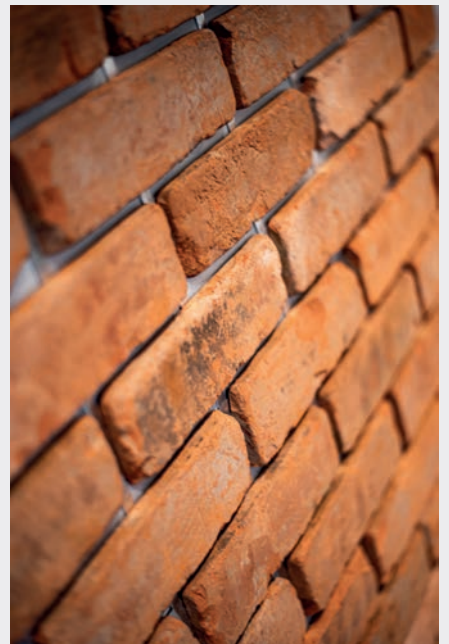
Certified for fire safety and environmental standards, CMS40 has undergone rigorous testing, including BS 8414-2:2020 and CWCT standards, with BBA certification covering both Parex lime-based and Instamac cement-based mortars. This lightweight framework system

not only reduces structural load but also boasts an A1 non-combustible rating, ensuring safety throughout its lifecycle.

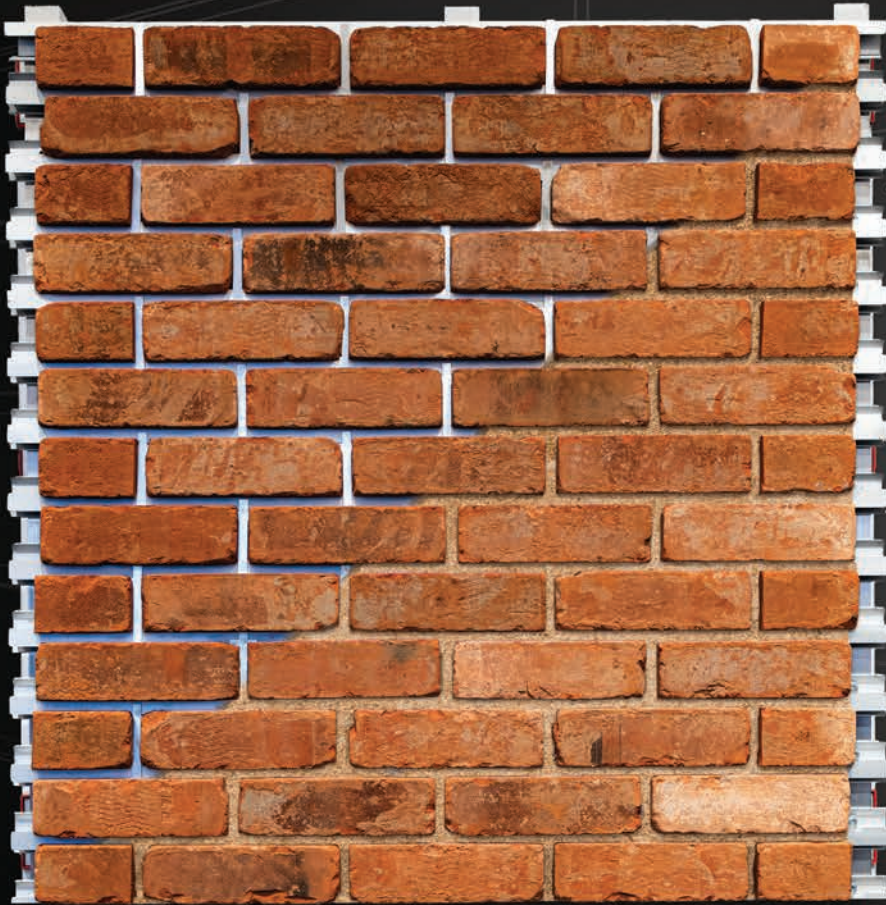
CMS40 is available through FabSpeed with components which can be supplied directly from Cladmate to offer an efficient and reliable supply chain. FabSpeed's integration within the Michelmersh Group and its decades of readily available expertise on brick finishes and design aspects will ensure that designers looking for a lightweight and innovative prefabricated facade system will be in safe hands.

If you would like to discuss your desired aesthetics or further details on our CMS40 facade system, please contact FabSpeed.

0844 931 0022
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Making brickwork lightweight



CMS40

The clay brick façade and aluminum bracket system offer an A1 non-combustible rating.

Tested to the Centre for Window and Cladding Technology (CWCT) standards and BS 8414-2 tested in accordance with BR135.

BBA certification of the CMS40 system, covers both Parex lime based mortar and Instamac cement based mortars.

Easier and quicker, non-weather dependent on-site installation.

Accuracy of installation when using pre-spaced mortar joints and mechanically fixed slips.

Lightweight framework system reduces structural load.

Slim system allows for reduced wall thickness for external retrofit applications or increased floor space.

The system components and facing brick slips can be re-used and recycled.

A wide selection of clay bricks of varying textures, styles, sizes and colours can be cut into slips by FabSpeed and used on CMS40.

The advanced brick façade system

In conjunction with industry leaders Cladmate, FabSpeed has co-produced the CMS40 Façade System. CMS40 uses mechanically fixed non-combustible brick slips, in a lightweight, easy-to-install, cost-effective product. Suitable for volume high or low-rise applications, newbuilds or retrofit projects, internal and external use, CMS40 fuses traditional brickwork façade aesthetics with the latest advanced rainscreen cladding systems. Speak to FabSpeed today.

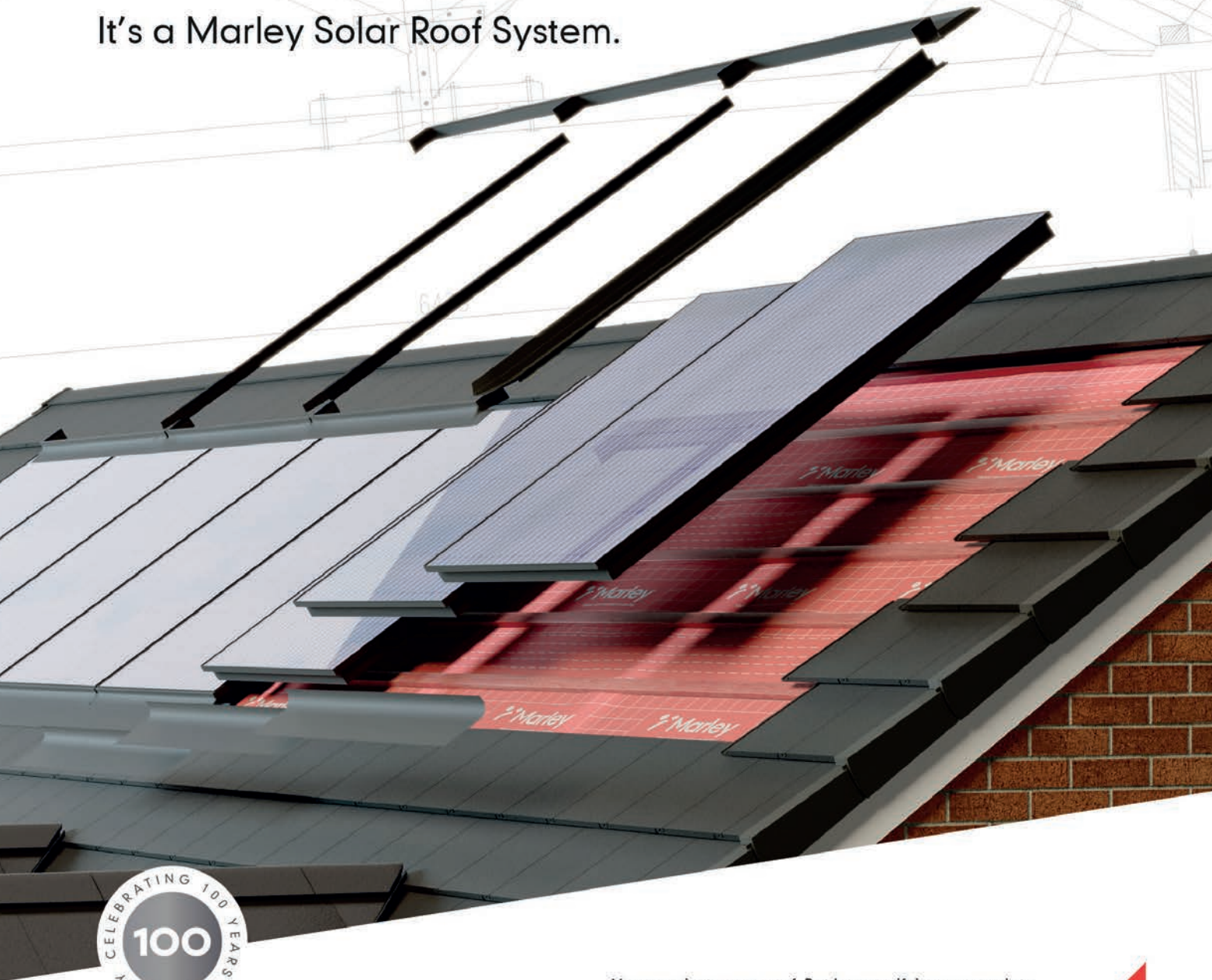


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THE HANDMADE TALE

Jason Hughes of Imperial Bricks lays down the reasons for using handmade bricks, from increasing kerb appeal, to home value and saleability.



TEXTURE AND WEATHERING CAN MAKE A HUGE DIFFERENCE TO HOW WELL A DEVELOPMENT SITS WITH NEIGHBOURING BUILDINGS

In the past few years there's been a significant increase in demand for handmade bricks. The variety of colours and blends available is much broader than it was a decade ago, and we're also seeing a jump in specifications for regionally appropriate bricks – due in part to planners being more particular, but also housebuilders want something to set their development apart in the current market.

Traditionally handmade bricks, with their natural imperfections and texture, have a charm that just can't be matched by mass-produced, machine-made bricks – even generic simulated 'handmades'. Every truly handmade brick is unique, adding character and kerb appeal to any property, making it easier to sell and often at a higher value. The facade is the first thing any buyer sees, and is just as important (if not more so) as high-spec kitchens and bathrooms.

MORE OPTIONS FOR MORE DEVELOPMENTS

In the past decade or so, an increasingly wide range of handmade bricks has become available in metric sizes, to fit with modern lintels and blocks. This opens up many more options for housebuilders.

We're also seeing handmade bricks

being requested as brick slips. Brick slip and facade systems are an economical, effective way of adding an authentic looking finish to block or timber construction for fast-track builds. Slips are frequently specified for urban developments, for infill projects between two properties, where space is tight, or used internally on feature walls for an industrial 'penthouse' look.

BRICK MATCHING

Matching bricks to the local architecture is particularly important to avoid delays in planning, especially for infill projects, conversions of disused industrial sites, and of course in conservation areas. It's not just about the shade, size or pallet mix – the texture and weathering can make a huge difference to how well a development sits with neighbouring buildings.

Working directly with a reputable brick supplier can give housebuilders access to a wider range of bricks than those available via a merchant, with bespoke blends and specification advice. Look for a supplier that's experienced in working with planners and conservation officers. They should be able to offer expert advice on what's right for a particular region, period and style, and offer samples and onsite visits. If there isn't a perfect match

from stock, bespoke bricks or blends can be created – or 'tinting' or 'weathering' solutions can be applied.

SIZE, SHADE & STYLE: THE RIGHT BRICK FOR YOUR DEVELOPMENT

As a general rule, properties built before 1965 used imperial sized bricks, which are slightly larger than the modern, mass produced metric brick we see today. In the North and Midlands 3 inch bricks are common, while the 'standard' imperial size commonly found in the South is 2¾ inch. Longer linear bricks are also available, although these tend to be specified more for mixed-use developments, or very contemporary designs.

Colour varies significantly across the UK too. Before the days of easy transport bricks were made from local clay, making for big differences around the country. So you'll find reds and oranges in much of the north, but also blues and multi-hued bricks (from 'Clamp' kilns). Soft reds are common in the south, with buff shades in Cambridge, and yellows in London – although the latter are often blackened and weathered by pollution.

New handmade bricks can be aged, sooted, darkened or tinted to suit, or even 'tumbled' to soften edges and add



more texture for a truly authentic look.

CASE STUDIES

Weathered and tumbled bricks can be used in a wide range of projects. For example, red and orange handmade bricks with an aged weathered finish were used in a luxury timber-frame development of four and five bed homes in Cheshire by Cobnut Homes on the grounds of a former 1921 boarding school, with panoramic views of Delamere Forest. An aged, weathered finish was specified to give a high-end feel and accentuate features like the timber porches and windows painted in French Grey, Blue Grey, or Cromaty (Green-Grey).

Meanwhile in London, 'The Grand', a former cinema in Bermondsey, has been converted into extravagant two bed apartments by MH Corp. The design gained planning support with handmade 'Original London Stock' brick slips and bricks selected as the most appropriate choice for the facade. Featuring the yellow tones London bricks are traditionally known for, coal-spotting and weathering adds to the authenticity, matching the existing buildings on either side.

A similar brick was also used in Moray Mews, an award-winning development of eight contemporary courtyard houses located near Finsbury Park. The

weathered metric bricks were chosen by the developer for their ability to add an instantly established appearance to the properties, while juxtaposing with the sharp lines of the build and modern projecting glass windows.

QUALITY & QUANTITY OF SUPPLY

Reliability of supply in the quantities required is crucial for easier project management and planning – especially for handmade bricks and more unusual options. Brick specialists are increasingly being asked to help source alternative products for projects where supply is an issue. So it's best to look for a supplier that holds a large amount in stock.

Any bricks specified should be high quality and from ethical, responsible suppliers, who can reliably provide them in the quantities required. All new bricks should be UKCA/CE marked, and tested to meet UK and EU standards for freeze-thaw, water absorption, compressive strength, and soluble salt content. Look for Sedex-auditing – the benchmark for ethical trading, used by Dyson and M&S – and ISO 14001 (for Environmental Management) and ISO 9001 (for Quality Management) factory accreditations.

Jason Hughes is managing director of Imperial Bricks

New government, new building policies

Labour have committed to boost the building of affordable housing. Their plan is to build 1.5 million new homes in the next five years. However, the anticipated UK water deficit is projected to be 4017 megalitres per day by 2050. To offset this projected deficit, major water companies have been developing plans to upgrade the UK's water supply and reduce current usage from 150 litres per person per day to 110.

While Labour have pledged to 'clamp down on water companies that harm the environment and pollute our rivers with automatic and severe fines,....' There is no mention of the impact that the extra homes will have on the projected UK water deficit. Until the new government announces its plans to mitigate the impact of their building targets on water supply, it must be assumed that these plans remain in place. Reducing daily consumption and ensuring all new homes are water efficient must be the way forward.

SMART SYSTEMS – LOCATION IS THE KEY

Smart meters are seen as a significant part of the solution to reducing domestic water usage. Thames Water have recorded post installation savings of 12-17%. Following multiple trials, all water companies are now working on plans for Advanced metering infrastructure, where all new connections or meters use the latest generation of smart meters.

The issues raised in the early trials has led much of the UK water industry to recognise that

the most effective methods of installing the advanced metering infrastructure is to locate the meter above ground.

The use of the Groundbreaker water management system co-locates the water meter on the exterior wall of the dwelling, alongside gas and electric meters. It has the advantage of providing a better environment for smart technology and the additional benefits of extended signal transmission and easy meter exchange.

DESIGNING OUT LEAK PATHS

The unique location of the Groundbreaker water management system allows for an unjointed water supply. The use of an uninterrupted supply has been recognised as best practice by Water UK and the Home Builders Federation. It future proofs the network by maintaining the integrity of the supply and minimising the risk of future leaks.

WATER EFFICIENT HOMES

United Utilities have recognised that water efficient homes are the key reduce consumption further. In all new properties, developers will be encouraged to design in water conservation measures, including the installation of a flow regulator. These modulate the flow entering customer premises, so limiting the amount used by the customer and creating a 'natural' reduction in consumption.

These products are fitted to the main water supply, and not each individual outlet. This



removes any risk of consumer interference and ensure that minimum standards of water supply are maintained as specified within the Water Industry Act and Water Fittings Regulations.

Groundbreaker supply two products. In properties with a meter Groundbreaker's NRv2 LoFlo can be installed between the water meter and manifold in any water meter enclosure. For unmetred properties, the LoFlo InLine is fitted on the main water supply pipe, normally just after the main stop tap.

In either unit, several flow modulation ranges are available which enable the perfect balance between usage reduction and service provision. As an added benefit, the Groundbreaker's LoFlo Check Valve systems have the unique property of providing whole site protection against contamination by back flow (up to fluid category 2) as standard.

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