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The NHBC's head of standards Richard Smith on how MMC is still work in progress Page 14



The pandemic means changes in how we use outdoor spaces – and paving is key Page 47

02.21 HOUSEBUILDER & DEVELOPER

BETTER TOGETHER

A collaborative JV between a micro-developer and a Bristol housing association has led to a small but high quality scheme which tested the SME to the limit



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James Parker

FROM THE EDITOR

The Office for National Statistics reported that construction activity fell by nearly three per cent in December, the first decline since April for a sector that has seemed to ride out the stresses of the pandemic until now. Housebuilding provided the combination of endless demand and a determination to keep sites open that saw it prop up the construction industry during 2020. However, with the end of the stamp duty holiday looming, its Covid-busting strength appears to be in question.

At its January press briefing, the NHBC's chief executive Steve Wood said the new build market had "held up very well" in 2020, with housebuilders showing "resilience and adaptability." Despite the upheaval across the UK, the industry managed to maintain productivity levels close to those of 2019, while applying safety measures on site to minimise transmission.

Wood believed that firms' confidence remained strong, with larger housebuilders 'forward sold' into the summer against a backdrop of both Covid and Brexit-related economic uncertainty.

The background is not one that would cause optimism across the board. NHBC found that Covid led to new registrations falling by 23 per cent in 2020. With a defiant push seen towards the end of the year however, the final quarter saw registrations down only 2 per cent on Q4 2019, rising 34 per cent on Q3 of last year.

ONTHE COVER

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©CHI Homes go to page 16

This was impressive, but the big picture is that registrations fell to just 123,151 in 2020, compared to 160,319 in 2019. The target of 300,000 hanging over this might seem almost farcical, if it wasn't such a serious situation. One small silver lining for some was that the affordable and Build to Rent sector saw a lower fall than private sector developments. Maybe the Church of England's recent report on using its land for housing will further boost the former's fortunes.

At the same time, the Government is pushing ahead with the 2025 Future Homes Standard, mandating – from the end of 2021 onwards – a 31 per cent emissions cut for new homes from fabric improvements and renewables. In practice, homes will be expected to produce 75-80 per cent lower carbon emissions than current levels. This means, for example, replacing fossil fuel systems with heat pumps, and the jury is still out on whether homeowners can be persuaded to readily accept them.

Could this be a perfect storm of challenges for SME housebuilders?

James Parker

HOUSEBUILDER & DEVELOPER

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39pc of buyers likely to pull out after March stamp duty deadline

Half of current homebuyers would pay the stamp duty owed on their purchase if it meant completing now and avoiding the current market backlog, while 39 per cent plan to pull out of their purchase if they miss the 31 March stamp duty deadline, according to recent research.

The survey of 3,717 people by Yes Homebuyers found that those who have seen their property purchase delayed due to the current market backlog have been impacted in a number of ways.

68 per cent of those with transactions delayed stated it has "added stress to an already stressful life experience," said Yes Homebuyers, while 34 per cent of delayed homebuyers have had to make alternative living arrangements because of the backlog.

24 per cent have seen their sale fall through as a result of the current market backlog, while 35 per cent have had to increase their offer just to keep the seller from pulling out.

However, the majority "continue to keep the faith that they will complete before the end of March," said Yes Homebuyers. 69 per cent stated that they would carry on as normal and hoped to complete in time when asked what they would do to secure a stamp duty saving. 14 per cent would buy a more affordable property if it meant completing in time, with 9 per cent stating they would buy a more expensive property.

When asked what they would do if they do miss the deadline, 39 per cent stated

they would cancel their purchase, while a further 27 per cent said they would have to borrow more money to pay for the stamp duty.

Despite remaining largely hopeful about completing in time, 45 per cent of respondents said they would pay full stamp duty costs on their purchase if it meant they could complete now and avoid the market backlog. This is despite the fact that they may still complete in time to secure a saving.

Worryingly, 27 per cent of those asked regret their decision to buy and, had they known, they would have waited until after the market backlog had cleared before buying a house.

Matthew Cooper, founder and managing director of Yes Homebuyers, commented: "As with most poorly thought out government rescue plans, the stamp duty holiday has done an outstanding job of fuelling demand, while completely neglecting how the market will actually deal with such an uplift."

CoreHaus launches its first UK modular factory

Modular housebuilder CoreHaus is opening its first UK manufacturing site at a County Durham business park as part of its scale-up plans.

The builder has secured a 20,000 ft² unit at Jade Business Park, in Murton near Seaham, and recruited a skilled team to start production of its modular homes,

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which have already been successfully trialled in the North East of England.

CoreHaus will now be able to expand production and perform a greater scope of work, including the assembly of steel frames that is central to its modular homes. The company's five-year plan will see CoreHaus producing 1,000 modular homes a year.

Managing director of CoreHaus, Scott Bibby, commented: "With such a great facility situated in the heart of the north east and at such a competitive rate, it made perfect sense to set up our manufacturing site at Jade Business Park.

"County Durham has a highly skilled and rich labour market which we have already begun to take advantage of. This has allowed us to employ a diverse, highly competent and experienced team from the surrounding area which will allow best practice from multiple industries to be deployed into our products."

CoreHaus is a joint-venture company between Newton Aycliffe based Carlton & Co Group, the parent company behind North East-based Homes by Carlton, and national social enterprise Fusion21, specialists in public procurement for the built environment based near Liverpool.







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THE CLIMATE CHALLENGE

Planning for in-built sustainability

If the UK is to reach carbon net-zero by 2050 and its homes are to withstand the changing climate, sustainability needs to be 'baked into developments' from the outset. Isabella Krabbe of the Royal Town Planning Institute (RTPI) tells Jack Wooler why planning will be key to success in a challenging context.

The transition to a zero carbon society – meeting the Government's 2050 targets and developing the resilience necessary for homes to face up to the changes in climate already here – will involve every part of the construction sector, and planning is no exception.

It will in fact play one of the most crucial roles, according to Isabella Krabbe, the Royal Town Planning Institute's (RTPI's) climate change research officer, who believes that engaging communities and enabling 'green' choices from the very start of projects will be key to success.

"By minimising developments' emissions through finding sustainable locations which are integrated with low-carbon infrastructure, planning can ensure design delivers climate adaptation and mitigation from the outset," she says.

"Planning can also do this as part of a wider democratic conversation with the local community, helping to both reduce emissions and build resilience to extreme weather events."

As outlined in its recent Plan the World We Need report, Krabbe and the RTPI argue that a well-resourced planning system has the potential to not just play a key role in meeting net-zero targets, but revive the economy and "seize the opportunity to tackle inequality and deliver a sustainable recovery post-Covid."

CHALLENGES

Krabbe believes that one of the key challenges is to bring local plans in line with the carbon budgets set out by the Committee on Climate Change.

She argues that a revised National Planning Policy Framework should set out a "clear pathway" for carbon accounting, monitoring and reporting, and that local authorities should monitor and report on the performance of local planning policy in meeting carbon budgets for their area.

She adds however that there is a lack of central policy clarity: "The repeal of the Zero Carbon Homes standard in 2015 caused widespread confusion across the industry, and has resulted in a large number of homes continuing to be built that will require costly retrofit."

Her organisation has welcomed the Government's commitment to the Future Homes Standard (FHS), but she says it is "unacceptable" that new homes built today must rely on the decarbonisation of the grid to reach net zero.

"The FHS should act as a 'floor' rather than a 'ceiling,' with room for ambitious local authorities to set higher targets before the implementation date of 2025."

Next on her list of challenges is a lack of focus on lifecycle emissions and embodied carbon, particularly given the drive for new housebuilding in the Planning White Paper. She says there must be a greater focus on the use of sustainable construction materials such as timber, stone and slate.

In addition, she says "policies need to be developed to monitor the 'as-built' energy performance of new developments and close the performance gap." Smart technology could play a key role in performance monitoring, allowing LPAs, developers and Building Control Officers to access live information, Krabbe asserts.

The challenge of retrofitting existing stock needs a "national strategy," she says, with a stronger regulatory framework plus powers and resources for local authorities.

Demand for energy and water will also need to be reduced to meet targets, and the RTPI believes that local authorities should have the power to align the investment strategies of utility providers with local strategies for growth and regeneration.

Lastly, Krabbe notes the challenge of reducing transport emissions at the scale and pace required. She believes it will need to be fully integrated with transport and land use planning – promoting developments that reduce travel demand and which facilitate the rollout of electric vehicle charging infrastructure.

BUILDING RESILIENCE

Beyond reducing further emissions in the longer term, Krabbe also believes it is vital that new homes be resilient to the impacts of climate change that are happening now. "Climate resilience refers to the ability of cities, as ecological, social, and economic systems, to resist, recover from, and continue to develop despite climate-related shocks," explains Krabbe.

'Resilience' recognises the need for a holistic consideration of the impacts, from flooding to heat stress, she adds. "It highlights the need for a consideration of not only geography but also the social and economic factors that make some communities particularly vulnerable and the impact this has in terms of economic stress and health and wellbeing."

Flood risk is often a top UK priority, but Krabbe says that effective adaptation strategies will require a holistic approach, which considers a range of climate impacts from flooding to heat stress.

"Local plans should consider adaptation measures from individual buildings to future patterns of development, and consider the future impacts of climate change on time horizons of 50 to 100 years," she says.

"A consideration of why levels of vulnerability to climate change vary, and how policies benefit or disadvantage particular groups is crucial when developing climate adaptation or mitigation policies."

Krabbe notes that Section 19(1A) Planning and Compulsory Purchase Act 2004 already sets out that "Development plan documents must (taken as a whole) include policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change." This is echoed in paragraph 149 of the National Planning Policy Framework which states "Plans should take a proactive approach to mitigating and adapting to climate change."

"PLANNING CAN BE PART OF A WIDER DEMOCRATIC CONVERSATION WITH THE LOCAL COMMUNITY, HELPING TO BOTH REDUCE EMISSIONS AND BUILD RESILIENCE TO EXTREME WEATHER EVENTS" She believes adapting to and mitigating climate change should therefore be an essential component of both plan-making and development management decisions.

NEED FOR INTERVENTION

According to Krabbe, the climate crisis requires stronger collaboration between Government, local authorities, infrastructure providers and housebuilders to plan and develop low/zero-carbon communities.

"Local authority planners continue to face challenges in ensuring the quality of development outcomes, such as around sustainable locations and low-carbon design, due to targets which focus on speed and quantity," she says.

She cites a new report by the UK Collaborative Centre for Housing Evidence (CaCHE), led by the University of Glasgow – 'Delivering Design Value: the housing design quality conundrum.' This makes clear that the responsibility for delivering good design is shared by both planners and housebuilders and developers.

The report states that housebuilders can be resistant to investing in areas of low land value, and continue to use layouts and house types which lack design value. This is reportedly compounded by local authorities feeling pressure to approve poor designs, due to a fear that develop-



ers will simply go elsewhere.

Krabbe believes this is part of the reason that the delivery of climate adaptation and mitigation 'on the ground' is generally poor, however she argues that the Government has also played a "fundamental role in this inaction."

"Constant changes to Government policy have resulted in widespread confusion, national policy has become overwhelmingly focused on housebuilding at the expense of place-making, and planning departments across the UK have seen severe underresourcing," she says.

"Government intervention is crucial in driving climate action through strong and clear political leadership which champions and prioritises climate action and ensures the planning system is properly resourced to deliver affordable homes."

RESOURCING STRATEGIC PLANNING

Climate change of course poses a problem which crosses local authority boundaries, and as such will require an approach which can consider multiple issues on a strategic scale. Strategic planning will therefore play a crucial role in delivering resilience.

In November 2020, the RTPI published 'Strategic Planning for Climate Resilience', which highlights how essential strategic planning is for delivering climate resilience and provides guidance on how to go about it. The report was produced to inform the Liverpool City Region's Spatial Development Strategy – potentially the first strategic plan of its kind in England.

One of the most notable findings was that planning departments across the UK simply "do not have the resources to effectively deliver on both climate adaptation and mitigation, and many do not have the resources available to generate the evidence base required to model the risks of climate change and respond with appropriate adaptation measures."

If the challenging targets are to be met by the construction sector, Krabbe concludes, this needs to change.



COMMENT



Brian Berry, chief executive of the Federation of Master Builders

MORE MUST BE DONE TO SUPPORT OUR SMALL BUILDING COMPANIES TO TRAIN STAFF

MATERIAL CHANGE NEEDED IN 2021

The FMB's Brian Berry takes a look at the changes that must be seen in Government policy to allow SME builders to thrive in these uncertain times.

2021 has started on a positive note. Only a matter of hours into the new year, we had already left some of the uncertainty and inertia of 2020 behind us, with the signing of the post-Brexit trade deal. This deal is welcome news for business, but it must deliver for builders by removing the barriers they face to building back better and greener.

I hope that with the security of the UK/EU trade deal, we will start to see improvements in the flow of construction materials into the UK. The FMB is constantly liaising with representatives of the merchants and manufacturers to ensure that the supply chain is in step.

Of course, the ongoing pandemic continues to make this a worrying time for everyone, and it is more important than ever to make sure that UK builders are working in a Covid-secure way.

In the run up to 1 January, builders in all sectors of the construction industry were reporting major concerns over material shortages and delays at the ports. Data from the Federation of Master Builders' latest State of Trade Survey, the only survey of its kind to track the experience of small to medium-sized (SME) construction firms across the UK, found that 86 per cent of builders were reporting material price increases. The survey also found 83 per cent of builders anticipated further price increases going into the winter months. FMB members have told me that timber has consistently been in short supply, as well as plasterboard, plaster, concrete products, bricks, roofing materials and plastics.

Throughout 2020, the State of Trade Survey painted a concerning picture for SME housebuilders, with workloads remaining firmly in negative territory for the first three quarters of the year. However, when asked to report on the level of enquiries that respondents had received, housebuilders were far from optimistic about the future.

Bucking the trend of recent years, the survey found that construction skills shortages had eased. One in three builders (29 per cent) reported challenges with recruiting bricklayers, and one in four (25 per cent) reported difficulties finding carpenters/joiners. I believe that these statistics on skills should be taken with a pinch of salt, as lower workloads will inevitably mean that more tradespeople and subcontractors are available. While access to skills may have improved in the short-term, the ongoing lack of training will again lead to shortages when output recovers. SMEs must also adapt to a new immigration system, and we must wait to see what impact this has on the skills shortage.

Concerningly, data from the Department for Education shows that total starts on apprenticeships in Construction, Planning and the Built Environment have been declining year on year since 2018. Just 21,900 apprenticeships were reported in 2019/2020. This means that the Government has failed to meet their commitment to grow this to 25,000 by 2020 as part of the Construction Sector Deal. More must be done to support our small building companies to train. After all, SMEs train 71 per cent of the industry's apprentices.

Ahead of the March Budget, I am calling on the Government to do more to help the SME housebuilding industry continue supporting our economy and creating the sustainable and skilled jobs that are urgently needed.

We are joining calls to extend the Stamp Duty Land Tax holiday to help ensure that all new sites that have been started on, as a result of this welcome boost to the market, can be completed and sold. We cannot afford work onsite, and the housing market, to grind to a halt overnight.

I will also be calling for more investment in local authority planning departments. The challenges with homeworking have inevitably caused delays, meaning there are bottlenecks in the system. My members are consistently raising the planning system as a cause for concern.

The Government has an important opportunity to take advantage of our new post-Brexit circumstances, support struggling businesses, and keep our economy going.

This is also an important year for the FMB, as it has now been 80 years since a group of small London housebuilders came together to set up a Federation that would support the rebuilding of London after the Blitz. We must go into this year with the same spirit of collaboration, and placing SME housebuilders at the heart of plans to build back better.

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A modular housing scheme developed with Bassetlaw District Council

THERE IS A REAL LACK OF KNOWLEDGE WITHIN THE SECTOR ABOUT MODULAR, AND A RELUCTANCE TO LEARN IS STUNTING INNOVATION

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HAS COVID-19 BEEN A CATALYST FOR MODULAR?

Lockdown and all the subsequent restrictions have seen greater emphasis placed on the utilisation of Modern Methods of Construction (MMC). Wayne Oakes, director at engineering consultancy Dice, looks at how this change is breaking the stigma that still persists.

The benefits of modular construction are no secret – increased safety on site, schedule certainty, less material waste, and fewer delays. But, despite many within the industry calling for greater use, the take-up of modular has remained slow, and only accounts for a very small percentage of housing delivery at the moment.

The proportion of new homes built using MMC is predicted to increase from the current 6-10 per cent to 20 per cent of the market share in the next few years, according to a recent report from Savills. However, in order to meet not only the UK's housing delivery target but also the aim of becoming carbon neutral by 2050 – this has to increase.

As an industry, we've been talking about MMC for many years, but it still only accounts for a fairly small percentage of total housing delivery in this county, with traditional housebuilding by far the primary build method in the UK. But, the last few months have forced the wider industry to start thinking differently about how they can innovate, adapt and ultimately build more homes in the face of the restrictions we all face as a result of the coronavirus pandemic.

BREAKING THE STIGMA

The industry has been slow to accept MMC; it is largely misunderstood.

There is also a stigma around modular and a general reluctance to change as people are used to working in the traditional way – there is a perception that the product is low quality and has no integrity of design, but that simply isn't the case now.

There is a real lack of knowledge within the sector about modular, and a reluctance to learn is stunting innovation and growth in the residential sector – and ultimately preventing us from building more homes more quickly.

UNLOCKING AFFORDABLE HOUSING SCHEMES

The pandemic has started to change this, as developers and landowners are starting to consider how to move forwards. For instance, we have started to see local authorities look towards modular building as a way to unlock residential sites to deliver affordable housing.

One such project that we're currently working on is with Bassetlaw District Council. The modular housing scheme is the first MMC project for the authority and will deliver 120 homes in Nottinghamshire.

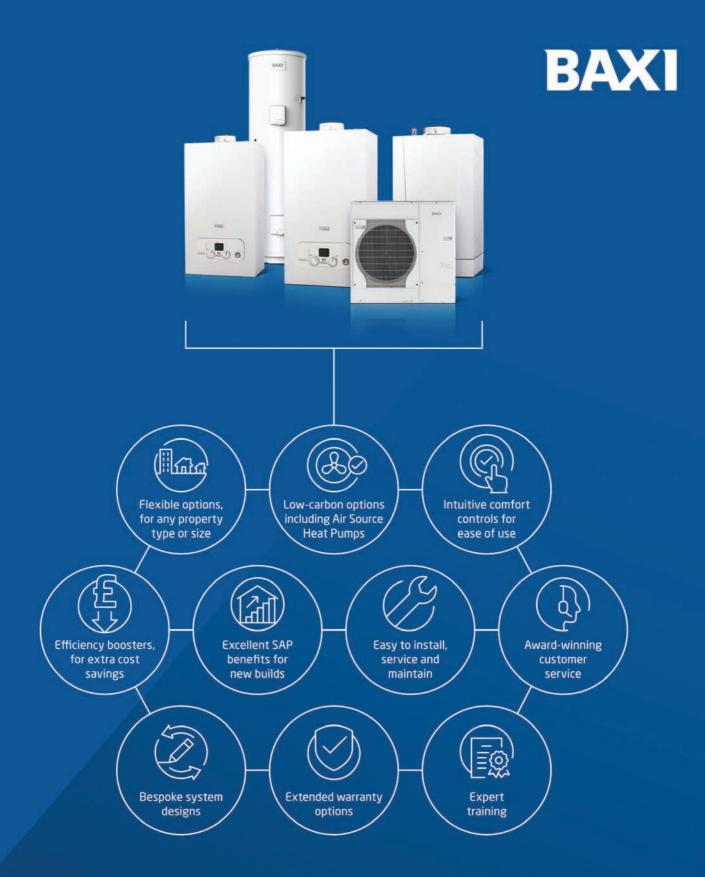
Working closely with Faithful+Gould – the project/commercial manager and principal designer for the scheme – this project marks our tenth modular scheme. We are responsible for looking at the flood risk, drainage, transport, and structural design as well as providing specialist MMC advice.

DELIVERING HIGH QUALITY HOMES

It's clear that more and more decision makers are waking up to the fact that modular housing is an incredibly viable option for a post pandemic recovery. But we still need to go further.

Schemes such as the one with Bassetlaw District Council help deliver modern, innovative and energy efficient housing schemes that improve neighbourhoods, support local jobs as well as the council's ambition to increase the amount of housing.

However, we need it on a wider scale to really make a dent in the 300,000 new homes target set by the government. The scale of our work has definitely increased – from roughly 10 units on a development to almost 700 on our most recent scheme – so I just hope we continue to see action, rather than all the talk prevalent in pre-Covid times.



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NHBC's Richard Smith

WHY AREN'T MMC MORE COMMON?

A new NHBC report on Modern Methods of Construction (MMC) has just been released which looks at the benefits to industry, as well as current reluctance to adoption. The organisation's head of standards, research and innovation, Richard Smith, explains.

Prefabricated homes have been longheralded as the future of housebuilding; but, if the arguments for homes to be manufactured like cars are so compelling, why is factory-built housing not more common?

That's the question a new NHBC Foundation report 'Modern methods of construction: building on experience' examines, by scrutinising notable periods of transformation in the industry and exploring the elements of design, as well as the social and economic influences, that fuel change.

The potential benefits of MMC are well rehearsed and compelling, but clearly have not been realised, and conventional construction remains dominant in the UK. In the Foundation's first report of 2021, we explore why this may be so, cutting out the rhetoric and focusing on technical developments to build on experience and explain why factorybuilt housing is not more widespread.

This guide aims to educate and inform consumers, builders, investors and insurers about MMC. It dispels the abiding image of post-war emergency housing that, despite its reputation, contained some clever engineering and durable details.

OPPORTUNITY

As we navigate the Covid-19 pandemic and fully come out of the EU, there is an opportunity to innovate. This new report looks at the best features of homes from the past to inform the homes of the future.

We can learn the lessons of the past and harness technological advances and digitally enabled design, and deliver efficient factorymade homes to respond to pressing housing need and the climate crisis.

Homes should be better performing, good-looking, long-lasting, be spacious and comfortable for their occupants, and enhance neighbourhoods, creating a distinctive sense of place.

'Modern methods of construction: building

on experience' is split into three main sections focusing on advancements from the early 20th century to the present day, looking at the roles of steel, concrete and timber materials and how these have evolved over time.

As Mark Farmer, CEO of Cast Consultancy and MMC advisor to the Government, states in the report's foreword: "We are able, today, to cherry-pick the best of the previous decades, and, in collaboration with advanced manufacturing methods, can transform the productivity and quality of housebuilding. I hope that this guide can be an enabler to change."

NO SHORTCUT

In conclusion, there is no shortcut when commissioning and designing offsite construction systems. Early investment in design, appropriate choice of system, and oversight of onsite operations is essential to deliver high-performing, long-lasting and good-looking homes that meet the reasonable expectations of their occupants.

Factory-made homes could help to unlock the UK's housing crisis and contribute to tackling the climate emergency if the lessons of the past are learned. These include: following basic good practice construction detailing; using a standard template with homes not appearing monotonous but responsive to their site; and systems built upon and employing existing prefabricated building components.



THE POTENTIAL BENEFITS OF MMC ARE WELL REHEARSED AND COMPELLING, BUT CLEARLY HAVE NOT BEEN REALISED



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CASE STUDY

Micro developers and macro barriers

A collaborative JV between a microdeveloper and a local housing association is building four homes on a semi-rural Bristol site. CHI's Alli Gay tells Jack Wooler how the developer navigated the many challenges SMEs face to achieve this.

A small development of fourbedroom homes, set for imminent completion in Bristol on the site of a derelict farmhouse, illustrates the tough challenges SME firms face currently.

A joint venture between microdeveloper CHI and Lime Property Ventures, the commercial arm of Elim Housing Association, the 0.5 hectare project offers flexible, open market home executive homes with a "familyled" design.

Demonstrating its collaborative ethos, the housing association provided half the funds for the project, while letting the developer lead on what it's best at – development.

While purchased with partial planning, this was already going to appeal under the previous owner, CHI then changing the existing planning permission once in its possession. There were multiple challenges gaining the scheme's approval here, which the developer largely puts down to its SME nature.

The challenges didn't end there, with the impacts of Covid and the hoopjumping required for an ecologically diverse and protected site causing multiple delays.

Through innovation and hard work however, these barriers were overcome, and all the plots have now been sold.

FLEXIBLE HOMES

The elevated site, with views over the neighbouring horizons, now hosts four 2,200 - 2,500 ft² homes, all built using timber frame.

The design of these properties was driven by CHI's strong desire to build high quality homes, says CHI owner/director Alli Gay. As such, CHI has tried to set itself apart from volume builders by designing additional features which make day to day living that bit more comfortable.

Flexible rooms are one such element, designed to be able to be used for various purposes. The open plan ground floor snug-kitchen-diner and separate lounge and study, for example, could equally be used as a fifth bedroom, separate dining area and large wrap-around lounge.

"We are offering more opportunities to buyers to use their homes in whatever way suits their family lifestyles," says Alli. "Rather than cramming in extra bedrooms, each house has four large bedrooms with several other flexible rooms, and each garden should be a haven for wildlife."

She continues: "We wanted to create an exclusive development, maintaining the biodiversity and original features, so that any children could play freely in the street and the occupants could use the whole area socially and we feel we have achieved this."

The homes also come with full-width bifolds and a separate set of French doors so that during the summer months, the garden can be accessed easily and the views enjoyed widely from the rear of the house.

OPPORTUNITY

Rewinding to 2019, CHI's first move on the project was to approach the commercial arm of the local housing association with a land acquisition opportunity.

Covering 0.5 acres, the land included the derelict farmhouse, but also a fully functional 30-foot mobile home, and a variety of wildlife and Category C trees, most of which were reportedly diseased and in poor condition.

CHI embarked on a lengthy negotiation with the HA which took 9 months for senior management to sign off on.

"We were all keen to create an agreement that afforded each party sufficient protection while still allowing us the freedom to create designs and manage the project that would provide a high return on investment," says Alli Gay.

While the build and development costs were split 50/50, the HA wasn't keen to get involved in the day to day operation. This worked in CHI's favour, however: "It was important for us to have total control of the project and for our partner to have enough security over delivery, so we could do what we do best."

The JV agreement described by Alli resulted from a collaboration of both parties, an important way of working to result in a document that achieved protection of both parties. Without a JCT agreement, the JV still set out the fine details of obligations and payment terms and profit split.

"Being such a small family run business, JCT penalties had the potential to sink us if any unforeseen events took place, like Covid!" says Alli. She adds: "The HA were taking a measured leap of faith and each party needed to have an element of trust in our arrangement."

According to Gay, this high level of collaboration meant that the inevitable problems to tackle in such a scheme were dealt with pragmatically, rather than punitively.

APPROVAL

While the land was purchased with planning permission, the team had to pursue the Variation of Condition route, as the most straightforward approach to achieving a redesign, which was needed following the initial scheme having gone to appeal.

"The initial designs were poor in terms of amenity space, creating a dark, uninviting living area and were overall quite standard," she says.

The build costs were also reportedly high, and the buildings were not "particularly" thermally efficient, and so they were deemed unlikely to provide a good return on investment, nor be particularly appealing to a buyer, and it was vital that they were updated.

Once updated, the approval was expected to take eight weeks, but ended up taking four months.

One of the main complications at this

stage was the demolition of a 19th Century farmhouse, which saw "considerable local opposition."

The developers were keen to assuage any issues the locals had, however. They recycled stone from the farmhouse where possible, created and maintained breeding and living habitats for wildlife, and added additional "healthy" tree species back into the development – all moves which "resonated well with the neighbours," says Gay.

While waiting for planning approval, CHI decided to add additional floor to ceiling windows spanning two floors to two of the houses in order to maximise the elevated position of the site.

This additional approval then took the planning period up to nine months, incurring additional planning consultancy fees. A further planning pre-commencement condition approval for SuDS was "severely" delayed, says Gay, and ultimately the team had to install the SuDs scheme and windows at risk – to do otherwise would have potentially led to major cashflow issues at the end of what was a protracted build.

Obtaining planning was also hampered due to Community Infrastructure Levy (CIL) issues. Sites in the local authority attract CIL once planning is received, and on here a CIL assessment had already taken place for the previous approval, but the local authority refused to take this into account, which further delayed demolition.

BREAKING GROUND

With planning finally assented, the team broke ground on a frosty January day in 2020. Once things got moving, CHI progressed quickly to foundations during February and March, and the timber frame was erected over the summer months.

Despite being a well drained site, the build soon faced issues with parking, but this was solved by a helpful local resident lending workers a field to park in. With the site accessed via a single narrow lane, the team had to halt work during bad weather in April and May and install a temporary road, putting things back "a week or two."

CHI also experienced problems with utilities at this time: "One of the electricity joints failed locally in the street, which stopped any access to our site for 10 days whilst the road was being dug up" – as a result, all second fix trades had to carry their tools by hand onto site each day.

Included in the scheme was the construction of a dilapidated dry stone wall to provide a breeding ground for Great Crested Newts, as well as help to increase local support, presenting further practical challenges. It was reconstructed using recycled stone from the farmhouse and locally quarried stone. The wall stretching 50 metres, proved complex, taking a dry stone walling expert nearly ten months to complete.

Despite the myriad of challenges, by November 2020 the first plot was completed and staged as a show home. The remaining three plots are reportedly advancing well, and are anticipated to complete by the end of March 2021.

COVID CONCERNS

While the construction process appears relatively quick in hindsight despite the issues, Alli says multiple delays occurred throughout thanks to the pandemic. "There was inevitable disruption," says Alli, "though thankfully our site has remained safe and open."

She says it was in fact the "biggest challenge" overall as it slowed both progress and the resultant sales. Consistently procuring even basic materials like plaster and timber was threatened by Covid throughout the build. The team was also challenged by large developers coming back online in April and attracting subcontractors away using what she says were "inflated" day rates to ensure their projects completed.

Addressing the materials challenge in particular, Alli says the team worked extensive extra hours, showing "large amounts of resilience" in sourcing materials from all over the UK, even "sometimes driving miles to collect them."

She continues: "During the early days of Covid, the banks became quite twitchy, and at one point we were under threat of our finance being pulled mid project." Following some "difficult and strained" conversations however, the lenders were assured that CHI would be carrying on despite the difficulties faced.

A WILDLIFE HAVEN

Another factor that slowed construction considerably was the careful treatment of the ecology the site came with.

Located directly in the middle of a wildlife haven, among fields untouched for many years, the site had a thriving bat, slow worm, dormouse and Great Crested Newt populations.

As well as carrying out extensive surveys at specific times of the year before demolition of the farmhouse could commence, CHI were required to separate the site from the surrounding area with amphibian fencing as the newts are a protected species. An onsite ecologist conducted a search before groundworks began, and ecologists visited daily for a month to move the newts.

Beyond this, CHI incorporated a pond









THE HOMES COME WITH FULL-WIDTH BIFOLDS AND A SEPARATE SET OF FRENCH DOORS







THE TEAM HAD TO PURSUE THE 'VARIATION OF CONDITION' ROUTE AS THE MOST STRAIGHTFORWARD APPROACH TO ACHIEVING A REDESIGN



for the protected amphibians, with specific planting and log piles, plus bat boxes, and planting and replacement trees to encourage more birds into the local area. As well as the relocated newts, slow worms, frogs and toads, plus a single shrew were also safely relocated, and all tree removal was done before the breeding season began.

While the developer succeeded in its mission to "encourage, restore and enhance biodiversity," the measures reportedly caused significant logistical difficulties. "Due to the timing of the land purchase, we were only just able to complete our newt survey with a day to spare within the specified season, otherwise we would have had to wait another nine months," explains Alli.

SME BURDENS

Though these barriers were overcome in the end, Alli believes they were all exacerbated significantly by CHI's position as a small builder.

"SMEs are the lifeblood of the UK, yet we face disproportionate challenges to those experienced by the large-scale developer, both in terms of buying power for labour and materials and the planning system," she says.

Alli argues that local authorities tend to prioritise large sites over small ones as they have limited resources. As such, she says, it's a "frequent occurrence" for small builders to wait between nine and 12 months for planning permissions to be granted or rejected, and to have "little or no contact" with their planning officer to discuss the scheme.

"Due to the scale of our developments, we can rarely hold land for this long without activity, or sustain substantial delays once committed to the development without it reducing our profits to the point the sites become unviable," she adds. She further criticises larger builders' "frequent land banking," and decries the fact that developer contributions such as CIL are negotiable when building more than 10 homes, which is the threshold for affordable units, thereby disproportionately weakening the micro developer's position.

"Even if building at the scale of 10+ units, as an SME it is likely you are paying a professional to negotiate these agreements on your behalf – so either way we are at a disadvantage."

Alli says that what she sees as an "inconsistent" approach to the inclusion of small sites in local plans also puts SMEs at a disadvantage, with larger sites afforded greater priority because they fulfil local housing requirements at a greater pace.

REACTIONS

So far, Alli Gay says the reaction to the completion of this challenging project has been "really positive."

"We have strived to maintain positive relationships with the neighbours," she says. "Nobody likes development on their doorstop, and the removal of the farmhouse was disappointing for the community, but people seem to appreciate that we've strived to recycle the stone, and enhanced the wildlife."

The development has had continuous viewings since the show home was launched in November last year – Alli believing this attention is in part due to it being gated and private, offering a haven for growing families. With all the plots now sold, occupants are set to move in from the end of February 2021.

Looking back, Alli concludes that while nobody anticipated the impact of Covid and the planning system being "extremely broken," her firm would, "if we had to do it all over again, approach the redesign in the same way."



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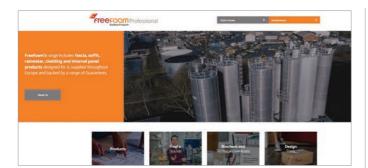
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Freefoam launch new look website

Freefoam Building Products announce the launch of a new update to its website - freefoam.com. With a fresh new look featuring video content to bring the manufacturing process to life, and easy to navigate search category blocks, all the information site vistors needs is instantly to hand straight from the home page. Freefoam analysed the most popular and most visited pages and have put those centre stage. Using simple blocks, that also contain further options when the user hovers of them, the main navigation now gets visitors straight to the pages they use most. With such a wide product range information is key to site visitor satisfaction and the updated site contains a wealth of key documents and useful tools to help customers find the product they need, including Brochures, Technical Data, Technical Frequently Asked Questions (FAQ's), Product Dimensions And Product Guarantees. Louise Sanderson, UK Marketing Manager summarised: "We've seen a big increase in web traffic over the last 10 months and wanted to ensure our site was giving visitors the best online experience possible. This updated site gives us a platform to both showcase our business using professional high quality video, and to provide the detailed, specific product data that customers require."

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Designer Contracts donates to stricken hospice



Designer Contracts has donated more than £100,000 to Chesterfield-based Ashgate Hospice. The company ran an online Christmas prize draw to raise funds for the hospice which has been hit hard by the pandemic and then added a £100,000 donation to the £4,865 raised from the competition. It is the second time Designer

Contracts has stepped in to help the hospice which provides care and support for families, patients and carers across North Derbyshire. Designer Contracts md, Peter Kelsey, said: "Charities had a really rough ride in 2020 and we wanted to help in any way we could."

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Senior frames Nottingham's waterside views



Senior Architectural Systems has provided a high-performance fenestration package for a stunning new residential development in Nottingham. The Waterside Apartments scheme, aptly named owing to its prominent location on the banks of the River Trent, comprises a

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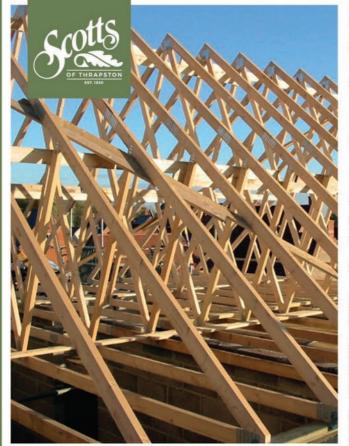
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AVOIDING PITFALLS FROM ROOFS

Marley's Stuart Nicholson pinpoints the most common roof specification pitfalls, and advises housebuilders on how to avoid them for a best practice approach.

The quality and security of pitched roofing in housing has seen some huge improvements over the last decade – with the introduction of more stringent British Standards, masses of new product innovations, and the development of single-source roof systems.

However, with ongoing reforms to the building safety regulatory system and increasing focus on accountability in the housebuilding sector, more needs to be done to make sure that the BS 5534compliant roofs that are being specified end up on the finished property.

Roofing experts often get called out to investigate issues with newly constructed pitched roofs. Some of the problems seen include condensation caused by lack of ventilation, leaks, non-compliance with British Standards, incompatible dry fix systems, insufficient fixings for the level of exposure, tiles being used below minimum pitch, and health and safety risks from inferior battens.

Often these issues are caused because there has been a change in the specification between the design and construction phase, or because inferior or incompatible products have been used further down the supply chain.

This potential gap between design and actual built performance continues to be a concern and, to reduce risk, there needs to be a shift towards more robust roofing specifications that consider the impact of the full roof system, not just the tiles. This means that little is left to chance or value engineering, and housebuilders have more control over the quality and safety of the whole roof.

MORE NEEDS TO BE DONE TO MAKE SURE THAT THE BS 5534-COMPLIANT ROOFS THAT ARE BEING SPECIFIED END UP ON THE FINISHED PROPERTY



Below are some of the most common roof specification pitfalls and how to avoid them.

RE-USING SPECIFICATIONS

It is quite common for roof specifications to be re-used, but it can't be stressed enough how important it is to create a new roof system specification for every project to avoid risks to liability, and keep pace with product advancements and changes in standards.

NOT CONSIDERING THE MINIMUM PITCH OF A ROOF TILE

The minimum pitch that a roof tile can be used at can vary greatly depending on type of tile and the length of the rafters being used. This needs to be considered in the original specification, or it could lead to problems with weather tightness further down the line.

ALLOWING TOO MUCH SCOPE FOR PRODUCT CHOICE

Specifying the roof covering but leaving the choice of dry fix systems and other components to roofing contractors means housebuilders are losing control over some of the most important structural and weatherproofing parts of a roof. This could lead to value engineering, or the use of generic products that may not be compatible with the specified tiles.

The best way to avoid this is to specify a full pitched roof system from one manufacturer, which reduces this risk and guarantees compatibility and compliance.

SPECIFYING A GENERIC ROOFING BATTEN

This is one of the biggest areas of concern. All roofing battens should meet BS 5534 grading criteria, which allows them to be used as a secure foothold during installation. Unfortunately this



isn't always the case, and we have heard of numerous incidences where noncompliant battens have unintentionally been used and been identified by building control. This is not only a quality, but also a serious health and safety concern. The best way to avoid this is to specify a batten by name from a trusted manufacturer or a full roof system which includes BS 5534 compliant battens.

OVER OR UNDER VENTILATING

Either having too little, or too much, ventilation is a common pitfall with roof specification. Inadequate ventilation, i.e. using a breathable underlay as the sole means of ventilation, can cause condensation. However, overventilation can add unnecessary cost.

To avoid this, always comply with BS 5250:2011+A1:2016 'Code of practice for control of condensation in buildings' and BS 9250:2007 'Code of practice for design of the air tightness of ceilings in pitched roofs'.

NOT INCLUDING A FIXING SPECIFICATION

Often, a fixing specification is not included and is left to the contractor. However, this is one of the most important parts of a roof specification and shouldn't be left to chance.

Some contractors will get a bespoke fixing specification from a manufacturer, but others may simply fix to the way they have always done. Not only does this mean the roof may not have enough fixings for the level of exposure, but it also makes it hard to compare prices if contractors are working to different fixing specifications.

By including a fixing specification, the housebuilder can reduce the risk of inadequate fixing and ensure they are comparing like with like on price.

REDUCE RISK

With all elements of construction coming under tighter regulations, inevitably there will be more scrutiny on roofing specifications. One of the best ways for specifiers to reduce risk is to specify a full, tested roof system, rather than individual components such as tiles or underlays. This helps to minimise product substitution, or use of inferior materials further down the line, and gives a clear line of accountability.

NOT TALKING TO A MANUFACTURER

Finally, many issues that occur further down the line with pitched roofs could be avoided if the roofing manufacturer was involved in design discussions earlier on in the process.

Stuart Nicholson is roof systems director at Marley



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ESTIMATING A FULL RECOVERY

Marcus Jefford of Build Aviator explains how some of the supply challenges faced by housebuilders and developers as a result of Covid can be relieved with the help of intelligent estimating software.



The coronavirus has had a profound effect on every aspect of our daily lives, and unfortunately, housebuilding hasn't been spared. The number of starts on site dropped an eye-watering 52 per cent between April and June 2020 versus the previous quarter (Ministry of Housing, Communities and Local Government) and likewise, the number of completions fell by a massive 62 per cent.

While confusion on whether construction workers were able to be on site – and latterly, the challenges of social distanced working – have undoubtedly contributed to these figures, supply and demand has also disrupted our industry enormously.

The construction supply chain was particularly hard hit. Some building product manufacturers closed during our initial seven-week lockdown or faced port restrictions leading to a lack of raw materials. When you then add in the challenges of adapting to social distancing, you can see why the Manufacturers' Organisation predicted it won't be until 2022 before companies are back to pre-Covid form. So, where does that leave construction in the meantime?

While initially, it was doom and gloom for our industry, as summer 2020 came we started to see green shoots. Quotes and conversions of quotes increased, and there was, broadly, a sense of optimism.

While this rebound was just what our industry needed, the days of always being able to get the materials or subcontractors you need at the drop of a hat are now few and far between.

FORWARD PLANNING

While some in the construction industry have found ways around product availability with clandestine WhatsApp groups for bricks, blocks and plaster, this approach isn't sustainable. Instead, estimating software could hold the key to many of the challenges we now face as we recover from the pandemic by, amongst other things, enabling better forward planning.

The better estimating software available can help with product availability by integrating with merchant software, giving a truer picture of lead times, and flagging potential supply issues even before the start of a project.

What's more, as robust estimating reports also include a schedule of works, you can easily see when you'll need harder-to-source materials and how much you'll need, too. This means you can work with your merchant to make sure it's ordered well in advance and there ready and waiting when you need it.

COMPARISONS

But of course, there's always a time when something you've specified just isn't available. In these instances, estimating software can help too.

Some comparison tools created by construction software providers can show the difference between an original estimate and an amended one, as well as highlight changes that may impact on safety, performance and Energy Performance Certificates (EPCs).

Removing the need to go through a quote line by line and side by side, these tools can save you lots of hassle, help you



develop better quality buildings, and make it easier for you to understand why the price of an estimate has changed.

Beyond materials, estimating tools can also help with labour, with the complementary schedule of works giving you a better idea of when you'll need to find an electrician, a plumber or a plasterer, rather than only knowing a few days before.

MANAGE YOUR BUSINESS

As well as helping housebuilders and developers to overcome product and

people shortages, estimating software can be instrumental in establishing good practice in your business.

By working with an estimating software provider rather than using 'guesstimates' for your quotes, you can ensure you save valuable time and achieve a more accurate and detailed figure. Simple omissions like plant hire or miscalculations of material volume can be the difference between profit and loss, a satisfied customer or a complaint, and a night off rather than a night spent number-crunching.

THE DAYS OF ALWAYS BEING ABLE TO GET THE MATERIALS OR SUBCONTRACTORS YOU NEED AT THE DROP OF A HAT ARE NOW FEW AND FAR BETWEEN

Market leading software providers can help housebuilders and developers by providing real life support to complement digital services. Experienced estimators, for example, work in tandem with developers to go through a job, asking questions and making suggestions to make sure an accurate quote is produced as seamlessly as possible.

Recovery from a global pandemic is never going to be easy, but by using estimating services, you can ensure projects are built better, faster and more profitably. This is certainly a big step in the right direction.

Marcus Jefford is managing director of Build Aviator

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A FLOOD OF ENQUIRIES

With many homes still being built on flood plains, and flooding an increasing risk, there are a host of issues for housebuilders to address when it comes to drainage. Chris Green of ACO Water Management explains further.



S ince 2013, one in 10 of all new homes in England have been built on land which is at the highest risk of flooding, amounting to 85,000 homes.

When you consider that the UK weather is increasingly unpredictable, and what were previously one in 50 chance storm-level events are happening more regularly, there is a clear need to position water management as a top priority in residential projects.

SUSTAINABLE DEVELOPMENT

Sustainability is of course a major trend across construction, and the anticipated update to the Environment Bill looks set to cement this focus. For housebuilding in particular, there is a big push to ensure water management solutions contribute positively to the surrounding environment.

Sustainable drainage systems (SuDS) are a key component of this, aiming to control the rate and volume of runoff from site, relieve pressure on sewerage systems, and mimic natural drainage as closely as possible. Used effectively, they can help housebuilders deliver green water management that is built to last, and should be an integral part of a project's planning.

There is also an onus on housing developers to minimise their impact on biodiversity. From a water management perspective, this can often mean installing wildlife guidance systems in cases where the migration of small animals is interrupted.

LOAD CLASS REQUIREMENTS

Getting to grips with the different drainage load class requirements is another key aspect of delivering effective drainage to a housebuilding project. There are a number of different standards which must be adhered to, depending on the application and location of the drainage channel.

In accordance with BS EN 1433:2002, all channels are rated according to one of six load classes. These are effectively different categories that detail the maximum load-bearing capacity of that product, and range from A 15 for pedestrian footpaths and patios, through to F 900 for airports and industrial yards. The system is a quick way of ensuring that the right channel and grating is selected.

There are some common pitfalls that housebuilders should be aware of when it

WITH STORM-LEVEL EVENTS HAPPENING MORE REGULARLY, THERE IS A CLEAR NEED TO POSITION WATER MANAGEMENT AS A TOP PRIORITY IN RESIDENTIAL PROJECTS

comes to load class. One is that some channels are compatible with different gratings – some builders may be tempted to choose an A 15 grating with a B 125 channel, or vice versa. In this situation, the load class of the system will default to the lowest load class.

Another pitfall is underestimating the pressure that driveways are likely to be subjected to. The ever-increasing presence of home delivery vans means that more large vehicles are encountered on driveways than ever before. B125 channels and gratings should be considered as a minimum.



AESTHETIC CONSIDERATIONS

The critical role that drainage plays in managing rainfall and keeping sites safe can often mean it is approached in purely practical terms. However, it is important to note that there is a trend towards increased investment in outdoor spaces, with people spending more time than ever before at home during the various lockdowns and continued remote working.

This means there is a greater expectation that outdoor areas of the house offer more than just functionality – they have to meet certain aesthetic standards. Housebuilders should identify how groundworks can contribute to an overall look, embracing drainage systems as part of the design rather than simply being a necessary part of water management.

There are an increasing number of drainage solutions that offer a sleek and discreet finish, alongside sufficient hydraulic capacity to mitigate the effects of stormwater. Housebuilders should ensure they keep abreast of the latest drainage technology to allow them to deliver visually striking results.

KEEPING UP TO DATE

It isn't just the outside of a house that has seen key design trends influence construction projects. Some features within the home require particular styles of drainage too, such as wetrooms. These are proving to be a popular choice for domestic projects, and often require drainage that can also meet the individual styles and tastes of the end user. Housebuilders should be aware of the range of different gratings suitable for these types of features.

Indeed, this is a critical part of a housebuilder's role – to stay up-to-date with the latest design trends, as well as the drainage solutions that are designed SUDS CAN HELP HOUSEBUILDERS DELIVER GREEN WATER MANAGEMENT THAT IS BUILT TO LAST, AND SHOULD BE AN INTEGRAL PART OF A PROJECT'S PLANNING

to facilitate them. Designing and implementing surface water management can be a complex task, with many products available; all with different benefits and uses. From the placement of access units for maintenance, to correctly understanding the hydraulic calculations, support should always be sought if needed.

Crucially, incorporating groundworks at the early stages of the design process will minimise disruption, and ensure the best drainage solution is delivered.

Chris Green is key accounts director at ACO Water Management



Keyline Civils Specialist: delivering quality service



Keyline Civils Specialist has introduced a new delivery service, to streamline the process and improve reliability. As part of this improved service, customers will now be provided with a delivery time slot, so they can accurately plan deliveries into the working day and improve on-

site efficiency and safety. Keyline's new service is designed to improve its delivery offering in line with customers' needs. On the day of delivery, the new system provides customers with a two-hour delivery window, as well as access to live tracking. They will also be told what products are being delivered and will receive an update when the delivery is 20 minutes away – meaning site agents are well informed and able to plan ahead.

customerservice@keyline.co.uk www.keyline.co.uk

Get into the groove with Keller



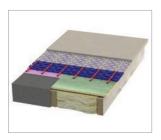
The warmth of timber guarantees its continued reign in the kitchen for eternity; and the material is now a serious contender in the contemporary style world too. **Keller Kitchens** leads the way with its modern, inviting Black Cottage design which includes the Sutton door. Boasting a tactile

textured finish, formed from coarse timber veneer, the Sutton range is almost a slab door, except for one distinctive detail: a single vertical groove that bisects each frontal. Creating a striking feature that looks particularly impressive on a long run of units, this groovy attribute certainly sets Black Cottage and Sutton itself apart from the crowds.

www.kellerkitchens.com

HEATING & RENEWABLE ENERGY Supplement





The UK has committed to becoming carbon neutral by 2050.

With 32 per cent of UK carbon emissions produced by heating buildings, low carbon / low temperature heating systems will be key to achieving this commitment.

Profix[™] thin screed warm-water underfloor heating systems, powered by an air source heat pump (ASHP), are capable of delivering high heat outputs even at low water temperatures. With build-ups starting from just 15mm, a 'future-proofed' thin floor heating solution is now achievable for both new build and retrofit projects.

www.profixpanel.co.uk



Founder of Hawkes Architecture, Richard Hawkes first came to prominence for an ambitious self-build passive house featured on Channel 4's hit TV show Grand Designs. Richard has gone on to become a pioneer in ingenious, sustainable building and when he first came across the innovative far infra-red heating technology supplied by Energy Carbon, he immediately wanted to learn more. Energy Carbon's thin heating fleece, just 0.4mm thick, can be plastered into the ceiling or fitted behind the plasterboard to provide the same safe, healthy Far infra-red heat. Its faster than standard convection heating and it uses less electricity as a result.

www.energycarbon.co.uk



The Stovax Sheraton 5 woodburning and multi-fuel stove range features a bevelled doorframe with matching cornicing to the cast iron top and bottom. Timeless aesthetics characterise this elegant stove, alongside state-of-the-art, low emission combustion systems. Designed to suit everything from a country cottage to a modern townhouse, the Sheraton 5's innovative firebox design also ensures an extraordinary high efficiency burn, making it suitable for smoke control areas as well as being Ecodesign Ready. The Sheraton 5 is also available in gas and electric versions, as well as a larger format Sheraton 5 Wide.

www.stovax.com



The mesmerising eReflex electric fire range from **Gazco** is the perfect addition to any contemporary home, offering not only a realistic impression from its eye-catching flame display and fuel bed, but also a range of energy-saving features and sizing options for a host of installations – including media walls.

Designed with Gazco's signature Chromalight LED technology, this innovative electric fire range lets you decide on the perfect ambience to suit your mood – with only your imagination to hold you back.

For more, visit Gazco's website.

www.gazco.com

LOW PRESSURE? NO PROBLEM.

AQUABOOST COLD WATER BOOSTING SYSTEMS

The NEW Aquaboost iBolt and iMatic range of high flow, high head, cold water pressure and flow boosting solutions. Designed to optimise space and provide a very quiet, simple to install solution for domestic and commercial applications.





Pr fix™

PROFIX™ PLUS – PIPE IN SCREED SYSTEM

NEW PRODUCT

VERY LOW PROFILE SELF-ADHESIVE · HIGH HEAT OUTPUT 14mm to 17mm DIAMETER PIPE NEW BUILD OR RETROFIT

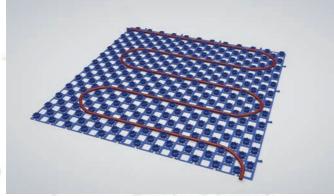
Overall screed thickness as thin as 20mm for tiles and engineered wood flooring

Overall screed thickness as thin as 25mm for carpet and LVT

Overall screed thickness as thin as 30mm over rigid insulation*

*150 kPa compressive strength @ 10% compression (minimum) and taped joints

The Profix[™] PLUS Pipe in Screed System is a very low profile (as thin as 20mm) warm water underfloor heating system capable of delivering high heat outputs even at low water temperatures making it an ideal floor heating solution for both new build and retrofit projects. The independently tested self-adhesive backed interlocking pipe retention panels enable rapid installation of 14mm to 17mm diameter pipe in either serpentine or snail pattern with pipe centres starting at 50mm and increasing in 50mm increments (100mm, 150mm etc....).





01923 725180 | sales@epicinsulation.co.uk | www.profixpanel.co.uk Registered Office: 22 Wycombe End, Beaconsfield, Bucks, HP9 1NB Registered No. 7702051 VAT No. 121 5128 60

Future Fires introduces installation service



Future Fires has introduced a new installation service for their contemporary wood burning stoves. It has a dedicated team of installers that are Hetas registered that travel the whole of the UK. Making over 95 per cent of installs to be completed within one day are covered by a 5-year guarantee. All installs are carried out to the highest quality possible, they use the industry's best flue pipe (Pojoulet), and do

not employ contractors. Future Fires have invested in the latest production techniques to stretch what is possible in design. Providing hand designed bespoke hearth options from Quartz to Granite and Glass.

01709 581168 www.futurefires.co.uk

Helping speed Blundell Street development



Established in 2017 to predominantly operate in the UK's 'Build to Rent' sector, Brickland Limited is making rapid progress on a nine-storey, 200-apartment property in a buoyant area of Liverpool, turning to the fabrication service offered by **Marley Plumbing & Drainage**. Produced using the manufacturer's versatile HDPE system, the supply of bespoke storey height soil stack units helps to save time and reduce costs. James Scully, the

Commercial Manager for Brickland Limited, added: "While this was the first scheme on which we have implemented this system from Marley, we have been really happy with the system and know our consultants are also."

01622 852585 www.marleypd.co.uk

Stuart Turner extends Aquaboost range



Stuart Turner has further extended its Aquaboost range of cold-water pressure and flow boosting solutions for multiple applications with the NEW iBolt and iMatic intelligent variable speed boosting solutions. The Aquaboost iBolt range of variable speed booster pumps and pump sets feature horizontal multistage pumps controlled by aircooled variable speed frequency inverters mounted

directly on the pump motor. The Aquaboost iMatic range of booster sets features one or two pump submersible multistage pumps controlled by a dedicated variable speed frequency invertor and packaged with a polypropylene break tank, making them extremely quiet in operation.

01491 572 655 www.stuart-turner.co.uk/our-products/aquaboost

Housebuilder & Developer website

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The Housebuilder & Developer (HBD) website is an online provider of past and present products and news items for the housebuilder and developer. hbdonline.co.uk is a one-stop source for all the latest press releases providing any visitor with access to information about products and services that they may require. From the website, you can find links to digital issues that have live

links to advertisers' sites, as well as daily email alerts to keep you as informed as possible.

www.hbdonline.co.uk

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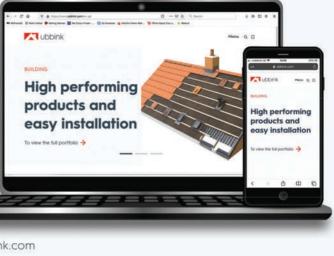
New warehouse & offices
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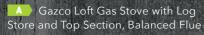


The future is bright for UK construction. That's why we've invested in new infrastructure, enabling us to maintain our excellent service levels as we continue to grow. So you can expect the innovative, high quality roofing & ventilation products you need – right when and where you need them.

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FUTURE HOMES STANDARD: THE END IS NIGH FOR FOSSIL FUEL HEATING OF HOMES



whomes constructed from this year onwards will be expected to produce 31 per cent lower carbon emissions in preparation for the 2025 Future Homes Standard, the Government has announced, responding to the completion of its initial consultation.

New homes will be required to have "low carbon heating" and to be "zero carbon ready" by 2025, said the Ministry for Housing.

The Future Homes Standard consultation contained two options; one for a 20 per cent reduction in emissions using very high fabric standards, or option two, a 31 per cent reduction delivered by carbonsaving technology and improved fabric standards, such as double glazing.

As a result of the decision to go with 'option two,' new homes will be expected to produce 75-80 per cent lower carbon emissions compared to current levels.

As part of meeting this demanding target, MHCLG's consultation response

confirmed plans to move forward with proposals to ban fossil fuel heating systems, such as gas boilers, in new build homes from 2025, with heat pumps intended to become the primary heating technology for new housing.

Standards for existing homes are also set to tighten, with a "significant improvement" expected on the standard for extensions and replacements, repairs and parts, including the replacement of windows and building services such as heat pumps, cooling systems, or fixed lighting.

There will reportedly be "stringent" transitional arrangements to provide all developers with certainty about the standards they are building to. These are planned to last for a year, and apply to individual homes, rather than an entire development.

Nigel Banks, director of specialist projects at ilke Homes, said the announcement was "welcome news," but "the timetable for implementation is too slow, meaning over a million new homes built between now and 2026 will need to be retrofit in the 2030s."

Banks asserted that, through its own modular building practices, his firm had demonstrated that homes can be delivered to zero-carbon standards now, "on sites across the UK and for public and private sector clients."

According to the Housing Minister, Robert Jenrick, the Government believes that "improving the energy performance of buildings is vital to achieving net-zero emissions by 2050 and protecting the environment for future generations to come."

The Government stated that overall total emissions from homes have been reduced by about a fifth since 1990 despite approximately a quarter more homes having been constructed.

The consultation continues and will be open for responses until 13 April.

Grant heat pumps just got even better.

The latest generation of Grant Aerona³ air source heat pumps deliver exceptional SCOP's for maximum RHI return.



The Aerona³ R32 range 6kW | 10kW | 13kW | 17kW

- £ Excellent SCOP's for maximum RHI payment
- (?)) Quiet in operation
- Compact monobloc units
- 🚯 R32 refrigerant
 - Simple to install and handover









01709 581168 info@futurefires.co.uk www.futurefires.co.uk

FUTURE FIRES

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CONTEMPORARY WOOD BURNING STOVES

Help to make your house a home with our contemporary wood burning stoves. Not only do our stoves offer you a reliable source of heat, but they also can give your room an impressive focal point by adding and creating a beautiful ambience. A contemporary wood burning stove can be a wise investment due to its ability to save you money on your energy bills in the long run, whilst also being an environmentally friendly alternative to normal heating. View the key benefits and other information below.

LIST OF BENEFITS:

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

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- (Eligible for Government grants
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Standard call charges apply

New Doors for a New Age

Www.ith the world in turmoil, changing attitudes, social and economic upheaval everywhere, you could be forgiven for thinking that innovation within the interior doors market was likely to be on hold for a while. However at Vicaima the desire to move forward and push boundaries in design and performance has never lost momentum, even in the face of such challenges. And so, with the introduction of the 2021 Interior Door Selector; Vicaima bring new doors for a new age.

Their latest brochure contains over 100 pages of inspiration for professionals looking to transform homes, hotels and other private and public spaces, fit for tomorrow. With its easy to navigate layout, ideas and solutions go hand in hand. Whether the criteria is for cost effective

Vicaima Brochure - Interior Door Selector (IDS) 2021



simplicity or high end performance and trend-setting designs, the 2021 Interior Door Selector (IDS) has something for everyone.

WHAT'S NEW IN THE 2021 IDS?

While some existing ranges have been developed, Vicaima have also taken the opportunity to introduce some striking new interior door products for 2021. Using their expertise and understanding of design trends and modern build requirements, this fresh approach allows specifiers the opportunity to expand their senses, with ideas that engage in both sight and touch; either capturing nature or taking it to another level. These new ranges include:

- Naturdor Stained Extra Vertical and horizontal semi-translucent stained veneers
- Heritage Oak Real Oak veneer with random grain and knots
- Dekordor 3D Vertical Embossed face in 2 new Oak designs
- Dekordor SD Touch Subtle textured foil in rich tones
- Visual Sensations Cross Directional Woodgrain in Forest and Alpine designs

Download your copy of the 2021 Interior Door Selector today or for further inspiration



and new age ideas, visit the Vicaima website.

01793 532333 www.vicaima.com

FUTURE HEATING





Great Scott! There's now less than five years before the government brings in its Future Homes Standard – the strict new home sustainability rules that mean a new-build house will have to produce up to 80% less carbon than the average property does today.

Easily plastered into the ceiling or placed behind the plasterboard, Energy Carbon's state-of-the-art far infrared heating technology can help house builders hit those tough new targets, and is perfect for modular and new-build.

> 40% discount for Passivhaus projects!*

Speak to **Energy Carbon** today: 0203 507 1659 | hello@energycarbon.co.uk *We love Passivhause and support all new projects built to the standard with a huge 40% discount!

It's good to stand out from the rest



Introducing the new

Titon Ultimate[®] dMEV

The new high performing Titon Ultimate[®] dMEV is an ultra quiet low profile fan, which is specifically designed for new build or refurbishment projects. With its one fan fits all solution, it is ideal for bathrooms, kitchens and utility room applications.

With adjustable continuous and boost speed settings available, the Titon Ultimate* dMEV utilises an efficient DC motor and incorporates a uniquely designed impeller/guide vane combination to produce high flow rates and pressure.

. The best dMEV performing fan on the market

- Low specific fan power down to 0.11 W/I/s
- 3 configurable speed options (Trickle, Boost and High Boost)
- Constant flow to guarantee ventilation performance
- Meets stringent 20 Pa back pressure requirement
- Quiet running, only 10 dB(A) at 3m, low speed
- . Low profile aesthetic circular design
- 4 button and LED display to allow for simple control
- Quick and easy commissioning and set up
- Extremely low running costs
- High performance brushless DC motor
- Unique high performance impeller and guide vane design
- PCDB listed for inclusion within SAP

www.titon.com/ultimate













Make a house a home with Königstone



Königstone has added a new colour to the popular Königquartz portfolio: Monaco. The pale grey shade incorporates a marble-like effect with a natural-looking grain to create a unique and stylish surface. As quartz is one of the toughest natural substances in the world, it

is a great material for a kitchen or bathroom worktop. The beauty of new colour, Monaco, is that homeowners can brighten the look of their kitchen with a lighter shade, without the fears of stains or scratches. Whether its chopping beetroot for a salad or making a smoothie the homeowner doesn't need to worry about any mess as the quartz is highly scratch-, stain- and heat-resistant, and can easily be cleaned with a damp cloth.

info@konigstone.co.uk

Reginox unveils latest addition sink range



Reginox UK has unveiled its latest addition to its stainless-steel sink range – the New York. The New York has been crafted from premium quality stainless steel with a matt inox finish. It's available in a wide range of different bowl sizes, all of which include an integral strainer and comfort waste as standard. Featuring an easy to

clean design with tight corners with 10mm radius, the New York is easier and quicker than standard sinks to fit and is visually minimalist in style. The New York can be fitted in three different ways – undermounted, flush with the work top or simply inset (surface mounted) installation – making it an incredibly versatile product and suitable for any modern kitchen.

01260 280033 www.reginox.co.uk

Keeping in the warmth



The beautiful 'Designo' from **Premier Loft Ladders** is certified by the Passivhaus Institute for use in passive buildings. It features the latest innovations in loft ladder design to perfectly balance aesthetics with performance. Excellent thermal efficiency (U value 0.60 W/m²K) and an airtight seal (class 4 certified) help to ensure that you keep in the warmth during the cold winter months. The Designo also benefits from a high

strength ladder; rated to 180kg per tread. Furthermore, the Designo features concealed hinges and a discrete, recessed operating latch. The result is a high quality, seamless finish.

01394 214413 www.premierloftladders.co.uk/designo

Norcros Rock-Tite capitalises on tile trends



Norcros Adhesives is launching a new three-part system for fixing increasinglypopular 20mm external porcelain and stone tiles, called Norcros Rock-Tite Exterior Porcelain & Stone System. The Rock-Tite system comprises a Primer, a Mortar and a Brush-In Grout. It is designed for use by landscapers and garden designers, as well

as tile fixers, and capitalises on a key trend in the tiling market currently. This is where internal tiled space is being extended to terrace or patio areas outside a building, which is part of a long-term lifestyle trend to enhance living areas by making better use of external space.

01782 524 140 www.norcros-adhesives.com



Advanced Aico alarm series utilised in luxury development





Stothers M&E Ltd provide building engineering services across the UK and Ireland, with regional offices in Glasgow and Warrington, the Belfast-based national contractor was awarded a £75m development of two tower blocks in Manchester. In order to ensure the residents were safe and protected from fire, Stothers worked with Aico to utilise their flagship 3000 Series throughout the development.

The new homes for private rent will transform the area of Cornbrook in Trafford, Manchester,



bringing a new lease of life to an underused site near the tram station.

Comprising of one- and two-bedroom units, duplex and townhouse apartments, the development will also incorporate a library, gym, private gardens and resident lounge areas with the view to creating strong community bonds.

In line with requirements, the project will see over 1,800 Aico Fire and CO alarms installed in the 363 apartments. Aico are proud to be the leader in home life safety, offering a variety of



devices and solutions to guarantee protection for every home. The Cornbrook development will utilise Aico's technologically advanced 3000 Series, including the pioneering Multi-Sensor Fire alarm, for complete coverage.

Aico Regional Specification Manager, Duncan Orr, worked closely with Stothers to ensure the correct fire alarm solution for each property and was on hand to provide technical support for dwellings with unusual layouts. Duncan comments "It was a pleasure to work with Stothers on this prestigious project of 363 luxury apartments. Thanks to our unique Multi-Sensor technology, we were able to overcome the challenges presented by the open plan design of the apartments, thus ensuring a reliable, nuisance-free system for future occupants."

"With a Category LD1 install required for the dwellings, Stothers M&E have selected Aico due to the high level of customer support, technical advice and extensive product range" says Neil Alexander, Electrical Contracts Manager for the project. "We pride ourselves with installing high quality equipment which is evident in an extremely low number of defects throughout the post-handover stage. With over 1800 Aico devices on this project, reliability is key".

The large development of luxury dwellings in Cornbrook is due to be completed August 2021. For more information on this project, please visit www.stothersm-e.co.uk

01691 664100 www.aico.co.uk

POST-PANDEMIC PAVING

Outdoor space has taken on a fundamental new importance with Covid-19. Chris Hodson of Interpave explains why a fresh approach is needed when designing and selecting paving for housing, to meet a wide range of new requirements.

A part from social distancing measures directly related to Covid-19 itself, it is now clear that the pandemic has triggered a fundamental rethink about other aspects of how we live and work. Many longer-term, wider issues – considered important for some time but left on the back burner – are now resurfacing, with the current emergency acting as a catalyst for accelerating action.

These issues – including flooding from rainwater runoff, vehicular pollution of watercourses and introduction of green infrastructure – have major implications for the built environment, including the paving for housing projects, whether new or regenerated.

The Government has recently launched 'active travel' initiatives, encouraging walking and cycling to reduce obesity, while home working and the growth of on-line shopping have also created debate about new '15-minute neighbourhoods' and the reinvention of the suburbs. These 'low traffic neighbourhoods' – a reminder of previously adopted 'home zones' – highlight a change away from paving for cars, in favour of shared spaces where pedestrians and cyclists feel at home.

These initiatives are now starting to be embraced by local authorities in planning policies and masterplans. But for housebuilders and developers, uncertainty about how new requirements will pan out calls for a flexible and adaptable approach to paving.

MODERN METHODS OF PAVING

Modular concrete paving systems are ideally placed to meet these challenges, whether on new or retrofitted schemes.

Adopting the principles of 'modern methods of construction', factoryproduced modular concrete paving delivers fast, low-cost installation, with limited intervention that makes it particularly helpful for retrofits. Importantly in these uncertain times, layouts can easily be altered and modular concrete paving taken up and re-used to meet changing demands, providing a long-term, sustainable asset. These principles generally apply to all precast concrete block, flag and kerb products.

They are fully engineered and manufac-

tured under sustainable, controlled conditions - consistently providing accurate sizes, colours and textures, as well as slip/skid resistance and other performance characteristics. The distinct, modular units and designed variations in colour, texture and shape can break up areas visually, giving 'kerb appeal' and a human scaled that's difficult to achieve with monotonous, formless materials. Modular concrete paving delivers a unique combination of predictability, safety and accessibility for all, with scope for endless variety in shape, scale, colour and texture to enrich the urban environment. It offers potential for real 'places for people' that are both multifunctional and adaptable to change.

In addition, weather-independent 'dry' construction methods optimise available working times to fit in with the requirements of residents on regeneration projects. There are no curing delays before the paving can be used, noxious fumes or 'hot work', and, as only small plant and equipment is needed, noise and disturbance is minimised.

SUDS WITHOUT LAND-TAKE

Another key consideration today – particularly with climate change – is storm-water flood prevention, and concrete block permeable paving is an essential part of the SuDS toolbox, providing a multifunctional sustainable drainage technique.

In addition to paving, it also provides an inherent drainage system that requires no additional land take for water storage, treatment or conveyance. It removes water-borne pollution and provides a gradual flow of clean water at the head of the 'SuDS management train' enabling safe, open SuDS features on the surface and enhancing landscape design and biodiversity.

Rainwater 'ponding' is eliminated, reducing the risk of ice forming on the surface and preventing splashing from standing water. Permeable paving can





provide a completely level, well-drained, firm and slip-resistance surface accessible to all, without the need for cross-falls, channels, gulleys or other interruptions. These and other savings resulting from SuDS are being demonstrated at the Lamb Drove SuDS Monitoring project in Cambridgeshire.

COST SAVINGS

The Lamb Drove project assesses various SuDS techniques – including concrete block permeable paving – in a management train, compared with a conventional piped drainage system nearby. Its Monitoring Report noted that capital cost savings of £314 per home were achieved using SuDS, with further potential savings available when SuDS are integrated with layout design from the start.

The SuDS design optimises natural flow routes through the site for low and high flows, as well as for exceedance. SuDS have been integrated with landscape design adding amenity, interest and biodiversity to a conventional housing layout with no reduction in density, in a scheme that is also popular with residents.

LOW INTERVENTION REGENERATION

Bringing these issues together, an award-winning, exemplary SuDS scheme near Australia Road, London, demonstrates the multifunctional benefits of retrofitting permeable paving in place of conventional surfaces. It introduces the innovative concept of concrete block

FACTORY-PRODUCED MODULAR CONCRETE PAVING DELIVERS FAST, LOW-COST INSTALLATION

permeable paving as a thin overlay for existing conventional paving, removing rainwater straight from the surface without gulleys and providing some water attenuation and treatment before discharging to adjacent, well-planted SuDS basins for green infrastructure. The low cost, low intervention concrete block paving overlays can also be used over existing carriageways to provide a well-drained shared surface that is level with the footway.

Modular concrete paving offers designers the potential to create safe, attractive and comfortable urban spaces for the post-pandemic environment. While offering maximum flexibility to meet future challenges and minimal interventions for retrofit, it also reduces flooding, pollution and urban heating.

Chris Hodson is a consultant at Interpave



Get failsafe external tiling with a BAL solution

BAL – market-leaders in full tiling solutions – can provide trusted systems for external tiling. Looking for a true drainage system? BAL's external tiling range features innovative AquaDrain drainage mats and drain grates to ensure water is taken away from the tiled surface, protecting against water and frost damage. BAL also offers the TerraMaxx TSL pedestal system – fully pre-assembled and easily adjustable, it allows quick and easy installation of panels/elements on balconies, terraces and other walkable areas. Rainwater flows through the open joints, and cables and floor drains can be hidden in the cavity between the flooring and the substrate and remain accessible.

As a market-leader in tiling, BAL's range of powdered adhesives are water and frost resistant – fully suited for direct fixing in external areas. BAL recommends the use of BAL Pourable One floor tile adhesive for large format external porcelain tiles, natural stone or slabs. Easy to mix and pour out the bucket over large areas, it can be built up to 25mm bed depth – perfect for uncalibrated stone or uneven backgrounds.

01782 591120 www.bal-adhesives.com

New Jackets, Work Trousers & Topwear



With a focus on comfort, performance and sustainability in its new products, the 2021 digital catalogue has all you need to know about Snickers Workwear, including new products that now use REPREVE, the world's number one brand of recycled performance fibre. There's also new AllroundWork Topwear with the cooling 37.5° moisture transportation fabric, as well as upgraded FLEXIWork Stretch Trousers with extra functionality and durability. By popular demand, there's also

a stretchy hi-vis Work Jacket with great comfort and flexibility for high-performance work and high visibility in low-light conditions.

www.snickersworkwear.com/page/product_guide_media

ClearView takes partnership with Quelfire



For the construction of the 22-storey Build to Rent Accommodation, ClearView Communications has chosen and installed **Quelfire's** 'one-stop-shop' QuelStop Firestopping System to effectively fulfil the passive fire protection requirements of the high-rise project. Alan Ward, Sales Director at ClearView Communications said: "We have used the QuelStop Firestopping System on a few projects, including on our largest project to date, Gatwick Hilton Hotel. We really enjoy using

Quelfire products, they are of higher quality, durable and better to install than other passive fire protection products that we have experienced."

0161 928 7308 www.quelfire.co.uk





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Winners of the Pioneer Award



In its 15th year, the British Renewable Energy Awards hosted its latest 2020 awards evening as a virtual event on 26th January 2021. Mike Ramsden hosted the event this year and virtually presented **H.D. Services** with the Pioneer Award. Having not knowingly been nominated, the award came as a welcome surprise to the company – what better way to start off 2021

than being recognised for your hard work and dedication towards renewable energy. "We are proud to be recognised as pioneers in our field and would like to thank the judges and the REA for their support." Rebecca Taylor, Business Development & Compliance Manager, H.D. Services Ltd.

01494 792000 www.hdservicesltd.co.uk

East Calder homes receive first-class protection



The new development of 2 residential properties at Lime Kilns has been provided with a highquality VOC protection barrier in the form of Protech VOC Flex from the **A. Proctor Group.** Martin Taylor, Commercial Director of Structureseal Services commented: "We have successfully used

Protech VOC Flex on several VOC vapour protection projects. It offers highperformance protection in compliance with CIRIA C748, is extremely robust and has many benefits which make it easy to install on site." The A. Proctor Group has over twenty years of experience in providing solutions for the safe development of brownfield land, and a range of ground gas protection products to make the development of these sites safer and easier.

01250 872261 www.proctorgroup.com

Jackon's ICF solutions for the UK market



New construction systems from JACKON are revolutionising the UK construction market. The company has over 60 years' experience in EPS and XPS manufacturing. There are two separate products – JACKODUR ATLAS Extruded Polystyrene (XPS) insulation and formwork system for constructing foundation slabs for

energy-efficient houses. THERMOMUR insulating concrete formwork system comprises a robust pre-formed block manufactured from Expanded Polystyrene with a hollow core, which is filled with concrete during construction. The systems enable fast and easy installation on site, bringing the advantages of very high insulation levels, elimination of thermal bridging, air tightness, moisture and mould resistance and acoustic insulation.

01204 221089 www.jackon-insulation.co.uk

Ensuring consistent quality and reliability



SpaceJoist helps reduce the amount of time contractors spend on-site, essentially speeding up construction and saving money without compromising safety. With SpaceJoist, longer spans are achievable in comparison to solid timber. This can eliminate the need for intermediate load-bearing

internal walls, reducing a building's overall cost. With the open web design, it removes the need to cut or drill holes in the joist, resulting in faster and simpler installations of services. SpaceJoist can also be designed top hung to eliminate the rim board in timber frame construction, improving airtightness and reducing thermal bridging. Visit the **ITWCP** website.

01592 771132

www.itwcp-offsite.co.uk/spacejoist-metal-open-web-floor-fabrication





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It's what's underneath that counts