

commercial units



pandemic, warns FMB

Dr Anastasia Mylona of CIBSE explores the major challenge of overheating for housebuilders

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VADUE FROM THIN AIR The team behind a recently completed offsite airspace develops readers through the complex; but efficient process undertaken airspace development in London walk



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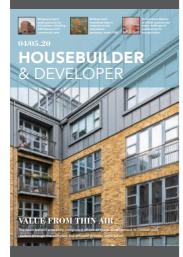
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James Parker

ON THE COVER



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FROM THE EDITOR

The coronavirus crisis, as well as catalysing construction feats like the creation of the UK's largest hospital at the ExCel centre in a couple of weeks, is also throwing up some examples that aren't putting the industry in such a good light, to say the least.

Not only have there been reports that clients have been forcing staff to work on sites despite the difficulties that entails in terms of social distancing, there have even been some rumours that outbreaks of the virus have been hidden on some sites so that they can remain in operation. Firms and their staff are fearful of lost profits, particularly when margins are often small, however justifying such behaviour is very difficult, if proven to be true.

Clearer guidance from the industry on whether sites should stay open or not would have helped. Boris Johnson's 'stay put' measures announced to the nation on 23 March seems to somehow have caught the industry on the hop. As Zak Garner-Perkins, head of content at *Construction News* put it at a recent webinar staged by BESA (the Building Engineering Services Association), the Construction Leadership Council "rushed out" its guidance on Site Operating Procedures within 24 hours, and that guidance was either "impossible, or incredibly hard to implement."

According to Garner-Perkins, during that feverish period the industry "went into a tailspin." The CLC has updated its guidance since, but it is wide-ranging, and onerous if taken to the letter (obviously being guidance, it's not enforceable). However, it also admits 'there are situations where it is not possible or safe for workers to distance themselves by 2 metres.' So it seems the industry's nominal leaders are on the one hand setting a high bar for safety, but also acknowledging it is too high for most to be expected to comply with.

Sites of course vary hugely, some have small canteens, toilet facilities that make 2 metres difficult to negotiate fully, and other constraints. Many workers are forced to get on trains and buses – leading to the regrettable sightings of construction staff standing near each other on trains – capturing news headlines.

If guidance is not clear as to whether or not sites should stay open, unscrupulous bosses have little censure for pursuing what profit they can, at the expense of everyone's safety. Leaving it to contractors or clients' good sense as to whether or not to continue work seems foolhardy at best, and dangerously negligent at worst. Many housebuilders have of course shut their sites – Taylor Wimpey and Persimmon for example have decided to close down while the country remains 'locked down.' However, what of the smaller firms, whose pockets are not as deep?

As so often, the Government seems incapable of giving clear, unambiguous direction to the construction industry, even in such a huge health emergency. Surely this of all occasions is the time for the health and safety ethos that UK industry prides itself on to be brought to the fore, and to be enforced – with no get-out clause?

James Parker

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The delivery and sale of 1,000 new homes across the UK has been supported by the Housing Growth Partnership (HGP) – a partnership between Lloyds Bank and Homes England.

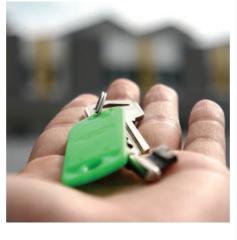
Launched in 2015, HGP has provided over £120m of support to 44 housebuilding partners on 69 housing developments across the UK. To date, small and medium sized housebuilders have committed to build 3,500 new homes – of these, 1,000 have been sold.

Set up to support the growth of small and medium sized housebuilders across the UK, the partnership offers equity on a site-specific basis to support housebuilders meet potential funding gaps, enabling them to help meet the demand for homes and grow their businesses.

Alongside financial backing, HGP provides opportunities for mentoring support for housebuilders from "highly experienced industry experts," said the new joint venture. So far, over 3,000 hours of mentoring support has been provided.

Vic Hepburn, director of HGP, commented: "It is great to pass a milestone like this as we continue our support for the UK's housebuilders. We are very fortunate to be able to partner with fantastic businesses that care passionately about the homes and communities they are delivering. 1,000 families have now taken ownership of new homes thanks to our partnerships, something that everyone involved with HGP is rightly proud of."

Gordon Moore, chief investment officer of Homes England, added: "It's incredibly encouraging to see Housing Growth Partnership hit this important milestone. Supporting SMEs housebuilders to expand their businesses is an important part of our mission and vital if we are to create a more robust and resilient housing market. A lack of competition in the housebuilding sector stifles the entrepreneurial ambition we need to increase the pace and quality of what we build, and this is precisely what HGP is seeking to address."



RTPI applauds 'world-class ambitions' for planning

Government plans to put good design and place-making at the heart of a reformed planning system have been welcomed by the Royal Town Planning Institute (RTPI).

Speaking in Parliament, Communities Secretary Robert Jenrick said that the new system would champion tree-lined streets, a "fast track for beauty," and greater opportunities for communities to influence design standards in their area.

Reacting to the announcement, RTPI chief executive Victoria Hills said: "We are delighted that the Government intends to take forward many of the recommendations in the recent Building Better, Building Beautiful Commission report, which was clear about the crucial role played by the planning profession in place-making.

"We are also pleased that the National Model Design Code will be used to set out clear parameters for promoting the design and style of homes and neighbourhoods that local people want to see, resulting in standards that are embedded in planning policy.

"More broadly, the 'infrastructure first' approach taken throughout recognises how crucial planning is in delivering on key housing commitments. The recognition of the need to ensure adequate funding for planning through a review of the fee structure is something we have long campaigned for, and is to be welcomed.

"Overall we applaud the ambition to create a world-class planning service. We have long recognised that the expertise of UK planners is widely acclaimed internationally."

However, the chief executive was less positive about the use of permitted development rights (PDRs) which Jenrick said would be extended by the summer to encourage councils and developers to take a more innovative approach to home building.

She continued: "The RTPI has longstanding concerns with the extension of permitted development rights which we feel will encourage a piecemeal, shortterm approach. Extended PDRs risk poorly designed and inappropriately located housing and will make it more difficult for communities to have a say on development. It will also result in diminished developer contributions through application fees, which go towards affordable housing and infrastructure."

Victoria believes that "one encouraging change" from when these proposals were first considered last year is that the Government says that new residential units should be 'well-designed' and meet natural light standards.

"I will be meeting with the Housing Minister Christopher Pincher next week and am looking forward to discussing PDRs in more detail then," she concluded.



THE CLIMATE CHALLENGE

A hot topic

Dr Anastasia Mylona of The Chartered Institution of Building Services Engineers (CIBSE) gives the lowdown on the major challenge for housebuilders that is overheating, explaining why it is likely to be incorporated into the Building Regulations.

S pells of very hot weather in recent summers have highlighted the fact that too many homes – particularly newly built homes – become uncomfortably hot.

Building Regulations are moving towards achieving low or zero carbon designs for homes, and are likely to focus on reducing the risk of overheating as well as increasing energy efficiency. To do this, there needs to be a greater understanding of what constitutes overheating, how it can be addressed, and the costs and benefits of doing so.

In September, the Government published the results of its research into overheating in new homes. The project involved modelling eight dwelling types in five locations across the UK. The findings are damning, saying that "in each case the dwelling has failed the TM59 overheating compliance criteria."

The research was undertaken in response to recommendations from the Committee on Climate Change, which called for a better understanding of the overheating risk in new dwellings in England and for options to help the housebuilding industry mitigate this risk.

The definition of overheating used for the project was from the Chartered Institution of Building Services Engineers (CIBSE) document TM59. New homes need to meet two criteria:

- Criterion A applies to living rooms, kitchens and bedrooms. It requires that the internal temperature does not exceed a defined comfort temperature by 1°C for more than 3 per cent of occupied hours over the summer
- Criterion B applies to bedrooms between the hours of 10 pm to 7 am, and requires that the internal temperature does not exceed 26°C for more than 1 per cent of the time.

The summer temperatures used in the modelling were taken from CIBSE Weather Files (2016 release) which represent anticipated climate conditions 2010-2039. The risk of overheating was predicted using Dynamic Thermal Simulation modelling.

A mix of dwelling types were modelled including houses and flats with single or dual aspects, and with different forms of construction and different ventilation strategies. The modelled homes were located in Inner London, Outer London, Southampton, Nottingham and Leeds and all complied with Part L of the current Building Regulations (2013).

The modelling showed that all dwelling types in all five locations failed to comply with CIBSE TM59 overheating criteria. The finding of most concern was that flats in London exceeded the allowable number of overheating hours by up to 600 per cent.

Worse still, the modelling assumed occupants were able to open their windows. In inner city locations, a combination of concerns over security, noise and air pollution concerns means that opening windows may not be an option. For this type of property the document "expects" extensive mitigation to be needed.

By contrast, houses in the midlands and north of England were shown to exceed allowable overheating hours by around 10 per cent. The research



suggests that these homes would require "relatively simple and low-cost measures" to reduce overheating risks.

Phase 2 of the research consisted of a cost-benefit analysis of strategies for these dwellings to reduce overheating risk to an acceptable level.

Only three dwelling typologies were evaluated in this phase: a single aspect apartment, a dual aspect apartment, and a semi-detached house. The dwellings were evaluated for three locations: Nottingham, London Heathrow, and Southampton.

Five risk mitigation packages were considered to limit the risk of overheating: • Internal blinds

- Lower g-value glazing or reduced glazing ratios in flats
- Fixed external shading with internal opening windows/reduced glazing ratios in flats/additional openable windows on third aspect for semi-detached homes
- As above, but with masonry construction
- As above, but with a reversible heat pump to provide cooling

The impact on internal temperatures was modelled once again using CIBSE TM59 for each case. The mitigation package used for cost-benefit analysis was the one which met the CIBSE TM59 overheating criteria at minimum capital cost.

To understand the potential benefit of implementing these risk mitigation measures, the document then goes on to consider ways of calculating the cost of overheating in terms of lost productivity, impact on human health, and increased mortality.

It concludes that there is a net benefit of incorporating measures to mitigate the risk of overheating in new homes in the south of England over their life. It says there is a net benefit of incorporating risk mitigation measures in flats in the north of England, but not in low-rise housing.

The Government is considering legislation as a potential route to bringing about change in current design and construction practices to reduce overheating risk in new build homes. The Future Homes Standard Consultation Document, published in October, says the Government has committed to consult on a method for reducing overheating risk in new homes and on proposals to reduce the risk. The consultation was due to be published "in early 2020" – you have been warned.

Dr Anastasia Mylona is head of research at The Chartered Institution of Building Services Engineers (CIBSE)





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Bracing for biodiversity

Environmental planning specialist Jaquelin Clay speaks to *Housebuilder and Developer's* Jack Wooler about how housebuilders need to address challenging national and local planning policy targets on enhancing biodiversity.

Biodiversity Impact Assessment Calculation provides a real challenge to housebuilders and developers, with planning policy affecting builders of all sizes. The benefits of increased biodiversity, however, can be significant.

Under the latest NPPF (2019 V3 para 170 d), planning policies and decisions should aim to minimise impacts of development on biodiversity, while striving to provide net gains in biodiversity and enhance the natural and local environment. The Environment Bill, currently in Parliament, will mandate a minimum 10 per cent uplift in biodiversity, which can be evidenced through the biodiversity metric.

Jaquelin Clay, practice principal of JFA Environmental Planning, explains that the metric is a computer model designed to calculate the net change in biodiversity units, post-development.

She comments: "Data input is based on a pre-development habitat survey using standardised habitat classifications. Data post-development is input, using information from the application master plan. An algorithm is then applied, within the model, that calculates the net biodiversity units for the development. This results in a numerical score for the proposals, which can be either negative or positive."

DEFRA'S METRIC

When discussing the new biodiversity metrics, Clay tells me that the main advantage of the DEFRA Metric 2.0 is "that it will quantify enhancement measures in a way that will make it difficult to argue that they are not sufficient."

She continues: "In practice, we have found a 10 per cent uplift is not particularly difficult to achieve. Most projects require sufficient green infrastructure, open space and so forth to provide the basis for enhancements.

"On a cautionary note, the competent authority does not have to limit itself to the BIAC in analysing biodiversity net gain. I expect in practice it will do, at least at first."

She tells me that one of the inputs to the data analysis is a condition score for the habitat, again post-development. This is based on assumptions as to the quality of the enhancement measures and longterm management.

"It may be necessary to justify postdevelopment construction scores based on submitted Landscape and Ecology Management Plans or Ecological Mitigation Strategies," Clay continues. "These are commonly required as Reserved Matters, but with the Environment Bill, it may be necessary to provide these at the application stage."

SIZE MATTERS

The practice principal tells *Housebuilder* and *Developer* that increasing biodiversity can mean different approaches depending on the size of development in question. In larger scale projects, for example, the provision of relatively large areas of open space (in excess of 1 hectare) "would certainly be beneficial."

For a large development with insufficient on-site capacity however, Clay says it may be necessary to provide compensation off site, at a distance from the development: "This is not ideal, but could be acceptable. Larger sites could support a better range and quantity of native trees, native hedgerows could either be retained or added as a framework for the development."

For a mid-scale development, "say 50-100 units," she says, open spaces could be a mixture of informal recreation and wildlife land use. Small tree groups could be provided, and native planting in boundary treatments could be used.

"Ponds can also be incorporated into mid-scale developments with ease, and pre-existing water bodies can be retained and often greatly improved by means of conservation management," she adds.

In both large and mid-sized development, Clay believes that the use of SuDS as nature conservation areas



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When it comes to small scale development, however, "these can be more challenging," adds Jacquelin, "but the compensation only needs to be greater than what was there before."

Among typical measures to consider, she listed the use of rain gardens, and the integration of bat, bird and swift boxes into the house structure – this is mandated by some LPAs.

"Small scale native planting is always beneficial," she says, "and, as in all typologies, the retention of the best native features is to be encouraged."

Even high density urban development can have an appreciable benefit, according to Jaquelin: "Green and brown roof provision is a well-established and tested architectural feature, and can benefit a range of bird and invertebrate species. Podium planting can be provided, as can rain gardens and roof level water capture and re-use."

DESIGN-LED

Cost and expertise can of course cause issues in attempting to increase biodiversity, but Clay believes that these can certainly be overcome using design: "It is really a question of being open-minded and design-led. There are costs involved to some of these interventions, but not all, and the big advantage is that an urban development that is cutting edge in this regard can be more valuable."

She says that landscape architects can



help greatly, by integrating native vegetation and features in an aesthetic way. They also can bring their design skills to bear on the interaction of people and landscapes, ensuring natural features are provided in the best possible locations for what is primarily a human-focused land use.

"We normally use CAD to generate our data for the BIAC, so a landscape architect, working on habitats identified and mapped by an ecologist using the accepted habitat categories, can run the BIAC," Clay comments.

BARRIERS

Despite all this, there are however many barriers to increasing biodiversity.

"There are three main challenges that I have experienced," says Jaquelin. "One, development sites inevitably come under great pressure to maximise the return on investment for the developer. This can limit open space provision."

Sometimes the local planning authority wants to see built features within the proposals that again put pressure on the amount of land left undeveloped. Highway authorities can have road and lighting specification that can limit tree planting.

"And finally, the end-users can resist the retention and natural management of open space, preferring a more managed landscape. A well-designed masterplan is critical to minimising these pressures. Many of our larger schemes incorporate interpretation boards and wildlife leaflets provided to residents. Residents can become members of site management committees and this can help to reduce potential conflict."

CLIMATE BENEFITS

All of this is of course worth it for the environmental and ecological gains, Jacquelin tells me – with the fact that the more diverse and ecosystem is, the better it functions in terms of carbon sequestration, water uptake and stability (resistance to perturbation – meaning temperature fluctuations, flooding, drought etc.).

According to Clay, this is best appreciated at the landscape scale: "For example, greater diversity of habitat can reduce flooding if trees and shrubs replace farmland (for example, re-wilding). These kinds of diverse habitat mosaics are also carbon sinks, sequestering atmospheric carbon."

She says that a diversity of species and habitats can also future-proof site landscape planting if it incorporates species more tolerant of global warming: "Diversity generally provides protection to a site and its habitats from exceptional events: flooding, drought, hot weather, and so it is much more common now to specify drought-tolerant planting on proposal sites."

Jacquelin concludes: "The landscape scale benefits to climate change can be augmented by site specific enhancements. In aggregate, development that increases biodiversity can have a similar impact, if it improves the local/regional green networks."



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CASE STUDY

Value from thin air

Anthony Moubarak of Click Above explains the process behind Corben Mews, a recently completed, offsiteconstructed airspace development in south west London. Jack Wooler reports on the project. **G**In a world where major cities suffer from a scarcity of available land for development, Corben Mews is a tangible solution to the housing shortage, where there's simply not enough land on which to build," so says Anthony Moubarak, head of sales, marketing and communications at modular airspace developer Click Above.

Located just off of the Wandsworth Road in the Vauxhall, Nine Elms & Battersea (VNEB) regeneration area of London, Corben Mews is the location for Click Above's latest 'airspace' development, where the team have developed two luxury penthouse apartments atop an existing four-storey residential block in a gated development.

Utilising offsite modular construction and specialised airspace development techniques, the team carried out the physical installation process over a single weekend – with the majority of the construction process taking place at an offsite facility. Additionally, important upgrade works to the existing homes were delivered, including improvements to the communal stairwells and a reinforced and improved roof.

GETTING STARTED

When the team first found the site, Corben Mews was reportedly already "sought-after," being in a popular area.

According to the developer, however, the focus on local regeneration meant that demand for homes was under increased strain, and with a lack of ground-level land on which to develop on, "the solution soon became clear – the airspace."

Click Above purchased the airspace above the existing Corben Mews building with planning permission already in place. The team were however required to make a number of "small planning adjustments" to allow for aspects of the modular construction used.

"In effect," explains Moubarak, "we were our own client handling every aspect of the build from acquisition, through the establishment of our own facility, build and installation, and the eventual completion and delivery."

In terms of sale, "the appeal of the area is clear," Moubarak notes – he lists a new underground station at Nine Elms which is due to open in 2021 as part of the Northern Line extension, and Apple's plans to move into the redeveloped Battersea Power Station around the same time, as just a few of the area's draws.

While Click Above were the designer and main contractor of the project, in order to be able to develop in this way, it was necessary to partner with some key players, including Evolusion Innovation (Module Designer); Michael Barclay Partnership (Structural Engineers), and H+H Fire Consultants.

MODULAR INNOVATIONS

As discussed, the penthouses at Corben Mews were built offsite using the "very latest modular innovations."

This allowed the structure to be especially lightweight – being approximately a third lighter than a traditional timber frame building – due to a combination of the main steel structure and the fibreboard external lining.

Moubarak says that the additions being built in a factory environment "ensures

quality assurance is tested not only to withstand the demands of a traditional build, but also the stress of transportation and craning onto foundations."

As such, each component was inspected at every phase and approved by thirdparty inspectors, complying with precise certifications and building regulations.

Work on the site itself was focused on stripping back the existing roof finishes, the installation of the relevant support structure in preparation for the installation, loading the modules on site and then preparing the weather finishes between the existing structure and the new elements.

COST BENEFITS

"From a developer's perspective," Anthony explains, "the modular approach means that there are noticeable time and cost benefits."

"Simply put," he says, " offsite construction results in at least half, and often 60 per cent, time savings compared to a traditional build."

This reportedly directly impacts wider costs as well, with the template-based design allowing the team to be accurate with expenditure and avoid unplanned material or labour costs, while avoiding waste. This predictability also avoids any "unprofessional renegotiations" mid-way through a project, and with less time on site and a building that is quickly marketready, Anthony believes that constructing a home in this way "can easily equate to a cost per square metre saving in the region of £200."

He adds: "Time and cost savings don't however impact negatively on standards – far from it. A factory environment ensures quality assurance is tested not only to withstand the demands of a traditional build, but also the stress of transportation and craning onto foundations."

LOGISTICS

Developing in airspace and utilising modern methods of construction did however mean that special consideration needed to be paid to the logistics.

Road closures, over-sailing during the crane lift, specialist structural surveys of the existing building and preparation of the roof to be developed on – all were vital steps, and meant that it was a concept that required dedicated specialists.

The developer found it reassuring however that the existing tenants at Corben Mews were all surprised at "just how easily the extension" was delivered.

According to Anthony, one resident commented: "The build caused minimal impact to the residents and was much less



Corben Mews' rooftop view

"SIMPLY PUT, OFF-SITE CONSTRUCTION RESULTS IN AT LEAST HALF, AND OFTEN 60 PER CENT, TIME SAVINGS COMPARED TO A TRADITIONAL BUILD"







painful than first imagined.

"I was impressed by the process and how quickly the new apartments were craned on – the place was kept clean and tidy and there were no major issues."

While the impact of the works undertaken appear to have had little affected the existing residents in terms of disturbance during the construction process, improvements were in fact introduced to bring benefits to them instead.

These improvements have included refurbishment of the communal stairwells, a new secure two-tier cycle store and, of course, a new roof. The addition of the new units also has the potential to reduce the management fees to the existing residents by virtue of more revenue to cover the costs.

LUXURY PENTHOUSES

Now finished, the penthouses reflect contemporary design with high-end finishes, dressed to demonstrate everyday living comfort. The architectural style combines the look of the existing building with a zinc finish and, "the hallmark of luxury penthouses," namely floor to ceiling windows.

"The two penthouses that we've developed at Corben Mews are truly impressive homes that kick into touch any preconceived notions of 'prefabrication' equalling 'boxy' or 'sub-standard," comments Anthony.

Apartment 17 is 84 m², and offers two

bedrooms and two bathrooms (one of which is en-suite), while Apartment 18 is slightly smaller at 82 m^2 and also offers two bedrooms.

Both the penthouse apartments offer luxury kitchens, with integrated branded appliances and stylish contemporary fixtures and fittings, designer bathrooms and Juliet balconies. Some other important features include skirting heating, air source heat pumps, solar reflective glass, a mist sprinkler system, WiFi-enabled smart controls for heating and kitchen appliances, and winter gardens to bring the external space inside.

According to the developer, people who've visited Corben Mews particularly comment on how light and spacious the apartments are – the windows in particular allowing plenty of sunshine in and making the spaces feel "airy."

Open plan living and dining areas were also included to be in keeping with the needs and demands of the young professionals and investors, who are the target market for these homes.

Alongside these features, Moubarak says that "penthouse homes usually have one thing in common: fantastic views – the homes we've delivered at Corben Mews are no different, and so it was important to ensure these views were integral in the overall design."

Aside from this, when discussing the energy efficiency of the project, Moubarak tells me that the "very fact that the homes



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we've built at Corben Mews were manufactured offsite means that the development had less environmental impact than a traditional build, which would have taken far longer."

The units also meet and exceed both sound proofing and insulation standards, and, assisted by being on the top floor, they have impressive thermal qualities, minimising the need to heat the apartments.

VALUE OUT OF THIN AIR

In order to achieve all this, Anthony tells me that Click Above has invested in R&D for almost a decade to ensure its offer is viable and can be delivered.

He says: "Corben Mews is evidence that it can, and the project has attracted a huge amount of interest and feedback from a variety of audiences.

"We pride ourselves on specialist bespoke solutions, developing airspace above buildings that may not be considered, and believe this sets us apart in the market."

He also believes that for freeholders and building owners, the company has demonstrated how airspace development can "quite literally increase the value of their asset and generate income from air."

"Additionally," he adds, "Corben Mews

is a tangible example to these audiences of how additional accommodation can be delivered when there's seemingly not space on which to do so, and it has also provided evidence of how the appearance and facilities of the existing building can be enhanced through development of this kind."

Click Above offers free evaluations of the airspace above their investments, and enquiries of this nature can be managed via its website.

The developer has also drawn the attention of several local London Boroughs looking to increase their housing supply without having to look for traditional land for development.

He says: "These are conversations which we are now actively developing, and we're able to utilise Corben Mews as a positive example of how offsite constructions methods and airspace development can offer solutions to the housing shortage, through well thought out design."

"Finally, but importantly," Moubarak concludes, "these penthouses don't just serve as an exemplar of airspace development in practice, they are real homes which are now available for sale and they've already attracted significant levels of interest from both young professionals and investors alike."

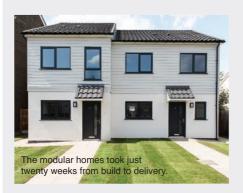


"WE'RE ABLE TO UTILISE CORBEN MEWS AS A POSITIVE EXAMPLE OF HOW OFFSITE CONSTRUCTION METHODS – AND AIRSPACE DEVELOPMENT – CAN OFFER SOLUTIONS TO THE HOUSING SHORTAGE"

Protect Membranes is supplier of choice for flagship modular development

Wall construction membranes, roofing underlays and accessories from Protect Membranes have been used by modular construction specialists Totally Modular as part of an innovative pilot scheme, built offsite on behalf of social housing provider Citizen in partnership with Coventry City Council.

Built in compliance with BOPAS, CML and LA Building Control requirements, the scheme involved the manufacture of a two-bedroom and a three-bedroom two-storey dwelling in light gauge steel frame, built in controlled factory conditions in Totally Modular's premises.



Four fully furnished modules were created, delivered to former disused land in Willenhall and craned into place before being connected together onsite. Taking just twenty weeks from build to delivery, time on site was reduced significantly in comparison to traditional housebuilding construction. The pilot was deemed to be successful with the potential for roll out across Citizen's housing stock where suitable land is available.

A number of Protect products were supplied and installed in both dwellings to help ensure the management of moisture. This ensured condensation control and strict airtightness levels were met to help meet a minimum level of 4.00m³/h.m.² or lower. This included Protect BarriAir, an internal airtightness and vapour control layer to contribute to energy efficiency and Protect Zytec, a roofing underlay offering strong wind uplift resistance and good vapour permeability. The roof structure also included Protect RediRoll, a universal dry fixed ventilated ridge and hip system and the Protect Eaves Skirt and dry verge system.

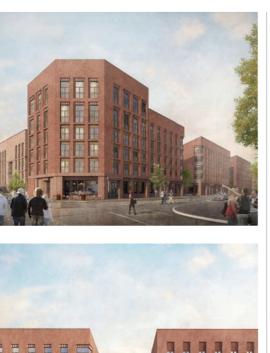
Mick Pettitt, Director at Totally Modular commented, "Protect's comprehensive package of solutions was the perfect fit for this project



to help us meet the detailed specification, using materials that we know are tried and trusted. In particular, the use of BarriAir helped to achieve strict airtightness and vapour control, contributing to an outstanding energy efficiency rating for both properties that exceeded Building Regulation requirements. Protect understood our needs and provided detailed technical support along the way, whilst ensuring our products were delivered on time to meet our busy schedule."

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Plans for 349 new homes and 9 commercial units have been submitted for a Glasgow development which has already seen a large-scale regeneration of the Gorbals district.

Plans have been submitted for the third phase of an award-winning development in the Gorbals area of Glasgow.

Urban Union – part of the Robertson Group – are seeking planning permission from Glasgow City Council to deliver the homes and commercial space as part of the 'Laurieston Living' scheme.

In the first phase at the development, a total of 364 affordable and private homes were delivered in partnership with New Gorbals Housing Association. A further 190 homes are currently being developed as part of Phase 2, which is due to be completed by autumn 2021.

In a more than £140m revitalisation of the Gorbals area, Urban Union plans to deliver four phases over a nine-year period. The site forms part of the wider 'Transforming Communities: Glasgow' programme that aims to regenerate eight key neighbourhoods across the city.

Architect Stallan Brand's plans for Phase 3 consist of a new-build residential development providing 349 dwellings, a mixed-use ground floor along the site's primary edge, and the final section of an ambitious civic park for the neighbourhood.

Neil McKay, managing director of Urban Union, commented: "In this new phase of the Laurieston Living project we're proposing to diversify and build on the homes delivered by both phase one and two of the development, helping to further transform the area into a dynamic quarter of the city.

"These new plans have been designed to build upon the successful transformation and regeneration of Laurieston where hundreds of residents are already enjoying quality affordable homes."

Urban Union and Stallan Brand hosted a Public Information Day in March at New Gorbals Housing Association. The company is keen to ensure projects benefit the local landscape and community so the site features a civic park and a mix of accommodation, with potential for commercial opportunities and retail outlets.

According to the developer, as one of Glasgow's eight Transformation Regeneration Areas (TRAs) great importance has been placed on embedding Laurieston into the community, linking together aspects of the neighbourhood like the Gorbals and the Citizen's Theatre and connecting Laurieston to other parts of the city.

Paul Stallan, managing partner of Stallan Brand, commented: "we have been involved in the regeneration of Laurieston for close to 10 years, and our aspiration has remained throughout to promote development that enables diversity, good placemaking, and engages with the city fully."

Stallan concluded: "We have been collaborating with practice McGinlay Bell, on three building types within the masterplan to develop a rich and nuanced design response, and have worked closely with Landscape Architects Oobe on the next phase of the Park."

Latest Wembley success for the Schöck Isokorb

he massive Wembley Park regeneration project continues apace. And one of the latest completions is The Alameda. It comprises 10-storey and 15-storey, blocks providing 340 new residential apartments with cafes and restaurants planned at ground level. The slide-on balconies are a striking feature, but critical to their structural and long-term insulation performance is the incorporation of Schöck Isokorb structural break units. Early involvement was necessary to ensure that the connectors were accurately cast into the building during the mainframe construction phase. A stub bracket was attached to the Isokorb units and the balcony cantilever support arm attached. The fully pre-assembled balcony chassis was then slid on to the cantilever arm and locked in position.

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Sapphire glides to success on balcony project



Sapphire's Glide-On[™] Cassette® balcony system has risen to the logistical and timescale challenges posed by Kennet House, an office-to-residential refurbishment by Crest Nicholson on the river Kennet in Reading. Surrounded by the river on two sides, the building's location was a major challenge. Also, because the project was a refurbishment of an office building, anchors needed to be fixed to the existing slab, rather than cast-in. This

meant ensuring balcony rigidity while the slab strength was uncertain. Post-fixed brackets were chosen to connect Sapphire's innovative 1-piece arms to the existing slab. These allowed the Glide-OnTM Cassette® to be installed quickly and easily, while keeping deflection to a minimum.

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he next generation of aluminium bi-fold, folding sliding door has arrived from Comar Architectural Aluminium Systems. Designed with demanding specifications in mind including industry leading door leaf weights and widths, slim sightlines, high security ratings and contemporary styling.

COMAR FSDX EXTRA - GLAZING

The view out of the FSDX door offers the homeowner that little bit eXtra. With the slimmest sightlines available of 60mm, the doors maximise daylighting into the home. The maximum width of the doors has been increased allowing door sets over 4m with only 3 doors while achieving uncompromised performance.

COMAR FSDX: Superior, stabilised rolling action with the quietest roller in the industry and improved weight bearing capacity means fit once and easy maintenance. The new outer-frame is a single profile all round, used for the track, jambs and threshold, reducing fabricators' stock holding. The frame construction is mitred with 2 crimping options: pinned cleats for creating pre-assembled outer frames that can be shipped to site or mechanical cleats allowing outer-frames to

be shipped for on-site assembly - a key consideration when larger door sets are to be installed.

COMAR FSDX EXTRA ROLLER

The stainless-steel dual roller always keeps perfect contact with the stainless-steel track due to stabilisers, meaning that even if building tolerances cause slight track misalignment the smooth rolling action is ensured. The weight bearing capacity is a substantial 120Kg which with FSDX's 62mm glazing pocket allows triple glazed or acoustic glass to be easily incorporated.

COMAR FSDX EXTRA - THRESHOLD

Superior thermal performance with the integrated stainless-steel track means that low U-values and performance are guaranteed. The efficient profile design offers threshold, jambs and head all in one. In service the profile is simple for occupants to maintain, reassuring for designers and installers alike by minimising call backs

COMAR FSDX EXTRA - HINGES

The new hinge design, duplicated in the roller hinged pillars, thoughtfully includes pre-applied foam pads to give a draught free seal when the



doors are closed, increasing home-owner satisfaction and no call backs for the installer. Gasket detailing between the sliding doors ensures that a long-term weather resistant solution is guaranteed.

COMAR FSDX EXTRA – SECURITY

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A development of five stylish townhouses in East Sussex three of which feature the traditional finish of slate hanging, fixed across Magply boards with horizontal battens, providing a substrate offering excellent weathering and fire resistance, as well as a secure

fix. Pivotal to the specification was the need to create a wall zone which can resist the passage of fire from outside the structure. This is a role to which Magply is ideally suited: frequently being specified for flat developments and buildings in very close proximity to neighbouring properties.

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Garador's timber effect garage doors



When it comes to choosing between a natural timber garage door and a timber effect one, you might be swayed more toward the timber effect version given how realistic the appearance of the surface finish is. **Garador** offers two "timber effect" steel garage doors in their up and over garage doors range, where a

foil-coat is applied to the surface of the steel for a realistic appearance and durable surface that will last well. This gives the impression of a real woodgrain texture on the surface of the door, but has a lower price point and requires less maintenance than a timber door, which would require regular staining and treatment to help protect it from the elements.

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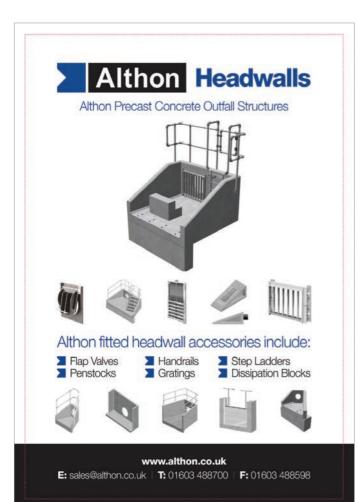
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2019's GRAND DESIGNS: The Street series and has also been chosen for the Build It Education House at Graven Hill in Bicester. Make an appointment to visit **Total Home Environment's** showrooms in Moreton in Marsh.

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New homes builder chooses Stelrad



Acorn Property Group in South Wales has selected **Stelrad's** Compact with Style radiators for its new development at Bonvilston, near Cardiff. The design of the radiators with the horizontal line on the fascias, mirrors the design of the doors being utilised in these 3,4 and 5

bedroomed homes that enjoy the benefits of village life, in easy commuting distance of Cardiff city centre. The en-suites and bathrooms feature Stelrad's Classic Towel Rails. Stelrad is seeing an increasing number of developers – especially regional developers upgrading the radiators they use in new homes from standard panel radiators to premium panel or even designer or decorative styles as in this development.

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CHIMNEYS ARE CHANGING

The British Flue and Chimney Manufacturers Association (BFCMA) gives an update for housebuilders and developers on the latest in chimney design and installation.

himney standards are changing. The first of a new suite of standards were published in 2019, with more to follow in the next two years. Approved Document J, Combustion appliances and fuel storage systems, has not been updated since 2010. It is increasingly becoming out of date and does not reflect the use of new flue products and installation practices.

The BFCMA is lobbying MHCLG to update Document J as quickly as possible. The Association represents the UK in European Standards on behalf of BSi (the UK national standards body) and works closely with Government departments. As a result, BFCMA member companies are in the best place to keep you up to date on product and installation standards.

GUIDANCE & ADVICE IS READILY AVAILABLE

BFCMA members can advise on chimney design and installation. This includes using industry standard software to check that the flue design will create the required draw in the chimney.

The function of a chimney or flue is to allow the products of combustion to escape freely to the atmosphere. This however is not as straightforward as it may sound. Most chimneys operate under negative pressure, relying on the laws of

STOVE MANUFACTURERS HAVE EMPLOYED A NUMBER OF DESIGN FEATURES TO REDUCE EMISSIONS UNDER THE 2022 ECODESIGN REGULATIONS thermal dynamics to transport the flues gases up the length of the chimney/flue to the atmosphere. This requires an unimpeded flow path to the top of the flue that maintains the temperature of the gases above the dew point.

Good flue design and product choice are key. A straight chimney is always the preferred option, but where this is not possible due to the construction of the dwelling, the flue design software will identify potential problems.

Stove manufacturers, for example, have employed a number of design features to reduce PM emissions under the 2022 Ecodesign regulations. One of the ways in which they have reduced emissions is to retain the products of combustion in the fire chamber longer before releasing them into the flue. This needs to be factored into a chimney/flue design as this can reduce the velocity and temperature of the flue gases as they enter the flue.

Chimney or flue height is also important, both in terms of the draw of the chimney and air quality. In accordance with Document J the minimum chimney height recommended for the minimum performance of an appliance is 4.5 metres

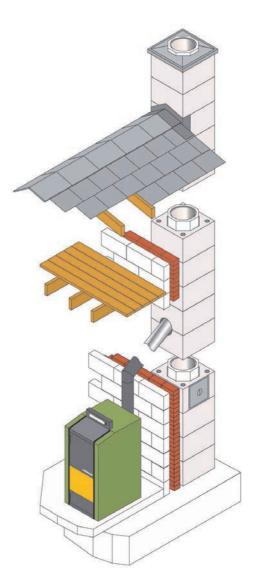
from the top of the appliance to the top of the chimney. It should be stressed that this is the minimum height, and some Ecodesign stoves for example may require more height. It is always advisable to check with the stove manufacturer's recommendations and the chimney/flue company.

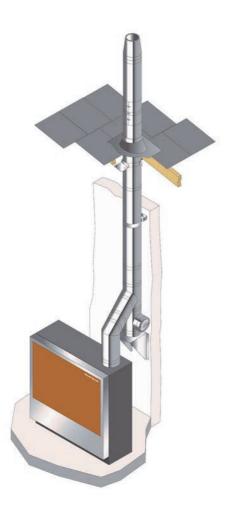
SAFETY

Safety is the overriding priority of the chimney standards, and BFCMA chimney and flue companies can also advise on key design features like distance to combustible material. Product testing is the backbone of setting standards. Chimney and flue components are rigorously tested to prove that they can meet the required performance.

Chimneys and flues are required to discharge a variety of combustion gases. Different types of flue will be required to safely handle the different gases. A key feature of the chimney and flue standards is a user-readable classification system that designates the features of the flue components. The features covered include temperature and pressure rating, fire, condensate and corrosion resistance and distance to combustibles. The classification system is known as the CE Designation. With stainless steel components a label showing the classification must go with each flue component, so that its specification can be easily verified.

Product standards and CE marking apply to both flue components and to system chimneys. It is worth pointing out that a CE mark for a system chimney applies to the complete flue system, including add-on components like rain caps. The use of components that have not been tested with the flue invalidates





the CE mark, and turns the system chimney into a custom flue.

WHY EUROPEAN STANDARDS POST-BREXIT?

It may seem strange to be talking about European Standards now that the UK has left the EU, but the intention is for the UK to continue to be involved in the development and publication of European Standards, as it was before Brexit.

BSI's membership of the international standards organisations ISO and IEC is unaffected by the UK's exit from the EU. The BFCMA will update the chimney and flue guides on its website when new standards are published.

BFCMA

The BFCMA is the UK's only trade association representing manufacturers and sole UK distributors of chimney and flue products.

It works closely with Government, public bodies and other organisations to promote the advantages of chimneys and encourage continued improvements in standards, efficiency and service.

The British Flue and Chimney Manufacturers Association represents the majority of manufacturers and sole distributors in the UK









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THE HOTTEST TRENDS

Steve Birch of Vogue (UK) explores the latest bathroom heating trends for 2020.

The desire for versatile, energyefficient solutions in the home has given the industry the opportunity to create new designs which are lightweight, non-polluting, durable and most of all, visually appealing.

Showing the same level of attention to the home accessories is essential this year, and feature radiators and towel warmers will become a necessary bathroom component that is now considered central to a design and interior scheme. Look out for simple and elegant shaped heating solutions which are elevated by distinguishing design features and details, as these are set to dominate the home over the course of 2020.

In fact, transitional home products will continue to grow in popularity as more interior schemes ride the line between contemporary and traditional design, and are no longer defined by a clear time-period. From stylised tubing and rails to 'opposing' finishes and combination models, style trends in 2020 propose specifiers throw away the rulebook when it comes to multi-layered heating design, and opt for a timeless blend of contrasting styles and finishes.

For that reason, cutting-edge heating design continues to inspire new variations in texture, colour and finish, and this will again play a huge part in tactile home interiors over coming months. Heating solutions are a great way to introduce colour and tone, as well as depict the latest trend for inspirational tone and texture. Innovative surface treatments and hand-finishing techniques are paving the way for special finish options never before seen on a radiator or towel warmer. With the desire for a new level of tactility in the bathroom, a sensory heating solution that delivers on both form and function is the on-trend answer.

In terms of colour palette, the bathroom market continues to favour black-coloured interior solutions, and this shows no signs of abating in the near future. To add to this, trend predictors forecast that the monochromatic shades of white, grey and black will continue to top the charts and undergo constant reinvention, thanks to new and special finishes being introduced just



like special iridescent and/or weathered finishes.

You can also get the best of both worlds with metallics in 2020 by embracing both warm and cool metals – independently and in combination – alongside colour matched heating controls, valves, brackets and fixtures. Antique bronze, polished gold, alongside matt and satin lacquered finishes are going to help define the look of the towel warmer and radiator in 2020, creating a showpiece in the room that can compete with the latest interior decors and designs.

In fact, special-order product design is



set to grow in the coming years, as a bespoke blueprint can now be brought to life, and factor in everything from colour and finish to electrical connections, and even country-specific design requirements. An unprecedented level of creativity is being seen in all areas of interior design and product development, and this has led to a renewed focus in 2020 for lifestyle home-heating



that plays to the individual and core design values from the outset.

Sometimes the industry underestimates consumers' desire to have 'something extra' or 'something special' which will enhance their quality of life, with minimal effort on their part as homeowners. Be sure to consider foldaway storage rails, mirrors and remote control functions to make modern life easier. It's true that this sort of attention to detail does need to be priced in, but when the end user is going to reap the benefits every day, the cost-per-use is really quite negligible.

A helpful way of bridging the gap between the perception of highly priced bespoke products and off-the-peg heating is the ability to offer 'custommade' design solutions. This is something that can allow for quick modification in terms of design and construction. This win-win solution helps customers save money while achieving a 'luxury look for less,' and reaping the benefits of an enhanced amount of choice and a greater level of personalised customer service.

As sustainable living becomes increasingly important to protect the planet, cutting down on laundry by reusing towels is also desirable, saving time, money and energy. With much uncertainty around the economy, consumers will be inclined to invest in their properties in 2020, and so bespoke heating options can be a helpful way of adding personality and flair to a bathroom, as well as serving a practical purpose.

Steve Birch is sales director at Vogue (UK)



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and this

exodraft releases new ESP wood stove filter



The highly effective wood stove filter, or electrostatic precipitator, is the latest development to ensure the future of wood stoves as a clean and CO₂-friendly heat and energy source. **exodraft**, a Danish-owned company that for over 60 years has developed, manufactured

and sold chimney fans to control chimney draught, announces that they have developed – and now released – a highly effective electrostatic precipitator (ESP) for wood stoves in private homes. exodraft's ESP filter is guaranteed to reduce the number of large, fine and ultrafine particles that negatively affect both human lives and the environment by more than 90 percent, making it the most effective wood stove filter on the market.

01494 465 166 www.exodraft.co.uk

Kaldewei Cayono bath



The Cayono bath from **Kaldewei** packs a punch with compact dimensions starting from 150cm length and a very attractive price point. The clever design features space-saving outer dimensions with a generous interior with steep sides. The flat base allows safe footing for showering and

the wide ledge at one end allows for a deck-mounted tap to be positioned. As with all Kaldewei baths, the Cayono is made from superior steel enamel which is robust, scratch-proof and easy to clean. Guaranteed for 30 years. All Kaldewei steel enamel bathroom solutions are 100 per cent recyclable.

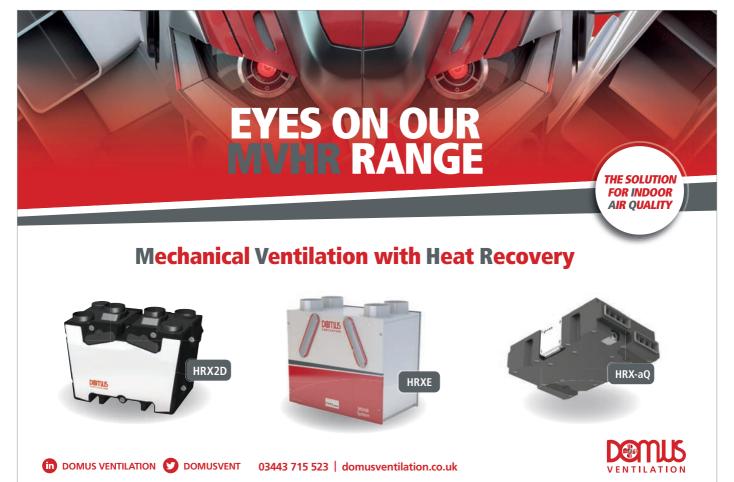
01480 498053 www.kaldewei.co.uk



The new generation of pre-wall bathroom technology

Viega has introduced a new generation of pre-wall bathroom technology with the launch of Prevista. It features a newly redesigned pre-wall element alongside award winning flush plates that mix classic design, bold new ideas and the latest innovations. At the heart of Prevista is a new cistern that has been developed in collaboration with customers and builds on the success of the previous Viega pre-wall systems. The Prevista pre-wall element is compatible with all Viega Visign flush plates, providing design freedom without compromise. Prevista has been designed for easy installation, long-term reliability and superior flexibility. The frame is height adjustable, as standard, to allow up to a 60 millimetre adjustment to meet the needs of customers. It also features a universal shower toilet connection, providing simple compatibility with this increasingly popular choice of WC. With flush plates featuring glass, wood, metal and high-quality acrylic available, Visign flush plates project quality while supporting or even enhancing the design of any bathroom or washroom. The flush plates also provide the option for LED illumination to complement the bathroom lighting scheme. The Visign range includes products with touchless flush actuation for improved hygiene, such as the Visign for More 205 sensitive and Visign for Style 25 sensitive.

0330 111 4568 prevista.viega.co.uk



Pr fix

PROFIX[™] PLUS - PIPE IN VOID SYSTEM

NEW PRODUCT

SELF-ADHESIVE · FAST FIX · LOW PROFILE 14mm to 17mm DIAMETER PIPE

The Profix[™] PLUS Pipe in Void System is a 'dry-fit' low profile fast fix warm water underfloor heating system particularly suitable for well insulated buildings. 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 beginning at 50mm and increasing in 50mm increments (100mm, 150mm etc...). Whilst the Profix[™] PLUS Panels are extremely robust, at just 1.6kg / m² they contribute low added mass to any floor construction.







creed replacement board

Flooring grade chipboard (or similar)

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

Stylish carpet launch from Designer Contracts



Designer Contracts has introduced a stylish, neutral carpet collection into its wide-ranging portfolio of floorcoverings. Primo Naturals is an easy-clean, twist-pile carpet, made with 100 per cent Excellon polypropylene – a fibre recognised for its stain resistance and hardwearing proper-

ties. Said Designer Contracts md, Peter Kelsey: "Carpet remains a core choice for many – particularly in the new-build sector. We work hard to identify key trends, along with core staples to ensure every interior preference and budget is catered for." Available in nine heather shades, Primo Naturals is bleach cleanable, naturally stain resistant and easy-to-care-for, making it an ideal choice for families and homes with pets.

01246 854577 www.DesignerContracts.com

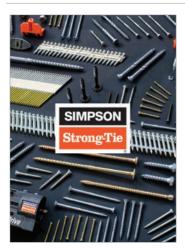
New brochures from BLANCO



BLANCO UK has launched a set of three stunning brochures for the residential market; one is specifically for the trade and retailer, the other two are designed with the consumer in mind and will also prove invaluable to retail sales and design team. The "BLANCO à la Carte Collection 2020" is a concise yet comprehensive

80-page guide to the array of kitchen sink and tap pack ranges from BLANCO. Colourful, easy-to-navigate, full of advice and featuring size, price and upgrade information, it's a must for the retailer when designing a new kitchen scheme for a customer.

www.blanco.co.uk



Simpson Strong-Tie's Fastener Range Goes Premium

Introducing the brand new Premium Fasteners range by leading construction manufacturer **Simpson Strong-Tie**; featuring superior strength nails and screws to cover almost every application and showcased in the newly released Premium Fasteners Catalogue.

Europe's leading range of superior nails and screws includes stainless steel, structural and collated options. "We're excited to launch our new Premium Fasteners product collection" explains Jesper Hebbelstrup – European Fasteners Product Manager.

"Quality and reliability is our top priority. The fastening system you choose is as important as materials and finishing touches; cheap nails and screws can cause decking to loosen over time causing uneven surfaces. Fasteners can even deteriorate over time if used an inferior quality product is used.

We've got the Premium Fastening systems you need to guarantee long-term performance and safety, whether you're fastening connectors, structural timber, CLT, concrete, light gauge steel, flooring, roofing or cladding." The Premium Fasteners Catalogue is packed with technical information and installation advice and available now

01827 255 600 www.strongtie.co.uk



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For more information: Call Philip Slater 07801 726826 or e-mail: philip_slater@whirlpool.com

THE MULTI-GENERATIONAL LIVING OPPORTUNITY

The growing trend of multiple generations living together in one house offers a whole new market for housebuilders – they just need to consider age-inclusive and flexible design options, says David Schill of Aritco Lifts.

when the seen made of the complex social issues that an ageing global population presents in the near future, and yet surprisingly, entrepreneurs and brands – housebuilders among them – have been slow to recognise the potential opportunities of this dramatically shifting demographic.

In a decade from now, one in five of the UK's population will be aged 65 or over, and in 50 years' time, this age group will have increased by 8.6 million, roughly the population of London. In this time of unprecedented change, the wealthiest segment of our population today is aged over 50 —The McKinsey Global Institute (MGI) has noted that individuals in the 75-plus age group are now spending more on average than younger consumers.

A NEW TREND IN HOUSING

Although they tend to be more financially secure, older generations struggle to find social care and suffer from loneliness and isolation, while younger generations struggle to find affordable and available homes. No matter what age we are, our homes contribute to our mental wellbeing – our feeling of safety, identity and the quality of our social interactions.

Inter-generational living is a win-win solution, and recent research suggests it is on the rise. According to the Office of National Statistics, around 6.8 per cent of households in the UK (1.8 million homes) were multi-generational in 2019, and 125,000 new families are set to embrace this trend every year. Courting this new, blended consumer group needs foresight and flexibility from the building trade, and a focus on homes that can be adapted to changing needs as we age.

AGE-INCLUSIVE DESIGN

According to housing research agency the NHBC Foundation, British builders need to look to Asian countries, where newbuild housing aimed at multiple generations is considered a market in its own right. Construction techniques such





as modular housing with moveable walls are popular, as they allow for flexible living spaces that can be expanded, contracted and customised as requirements for space change. Innovative new materials are favoured as they can play a role in the circular economy by being recycled or re-used.

Another critical element for a house designed for intergenerational living is a home lift. In Asia, accessibility is not seen as a requirement exclusive to the older generation. The convenience of a home lift to access different floors is considered just as valuable to young parents with small children, for example, as a matriarch or patriarch confined to a wheelchair. A lift with a modular design that can be customised, extended up to an additional floor, moved or even recycled is seen as important in order to future-proof a home in the long term. It will both add value for the homeowner, and will help the developer attract capital investment at an earlier age.

A NEW, COLLABORATIVE APPROACH

With so many stakeholders involved in the design of a new home, collaboration, inclusive design and customisation are key when it comes to deciding the layout of the house and elements within it. The inter-generational family home needs the option of areas or floors designated to different generations that can be modified over time, with a mix of private spaces (bedrooms, bathrooms and rooms for entertaining guests) linked to communal ones for family meals, for example. The technology and cabling embedded within the building will need to be adaptable as smart home systems evolve beyond energy automation and security, to include improved voice recognition and health and wellbeing monitors.

Beyond the functionality of the building, customisable design elements to suit every member of the family will make a new-build much more saleable and desir-

THE HUMBLE HOME LIFT, FOR EXAMPLE, SHOULD BE SO MUCH MORE THAN A METAL BOX THAT MOVES BETWEEN FLOORS

able. The humble home lift, for example, should be so much more than a metal box that moves between floors. It should be a 'canvas' for personalised artwork, with adaptable lighting to suit a mood or interior, and it needs to be either showcased like a prized piece of furniture or cleverly disguised behind bookcases.

Housebuilders need to wise up to the new marketing trend of customer experience – or 'CX' – which courts consumers of every age and considers their long-term needs. Research conducted by the NHBC Foundation found that multigenerational households do not require vastly different layouts to many homes already being built, they just need foresight from the housebuilders on how we will all be living in the future.

David Schill is the marketing director at Aritco Lifts



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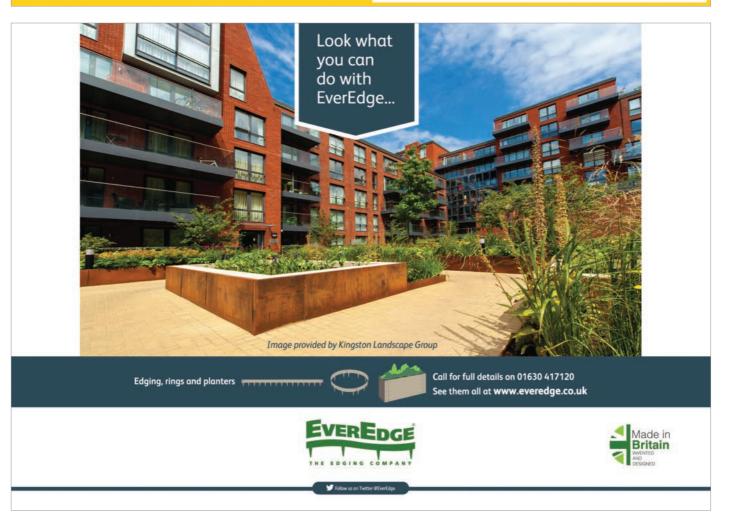
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WHEN YOU ADVERTISE

Arbor introduces Trex Lighting range



Arbor Forest Products, exclusive UK distributor of Trex, the world's number one decking brand, has unveiled the new Trex lighting collection. The Trex Lighting Collection features a versatile range of three lighting options which can be used in isolation or together to suit any deck and to create the desired ambience. The range includes the recessed deck light, which sits flush with the surface of the deck; the stair riser lights for use on raised decks; and finally the post cap lights for use with Trex

railing posts. The lights are available in black and bronze colours and feature high-performance energy-efficient LEDs.

01469 532 300 www.arbordeck.co.uk

Sustainable drainage covered with Flowloc



Marley Plumbing & Drainage is pleased to announce that it has relaunched its Flowloc system. Designed to work in conjunction with a stormwater attenuation tank, the Flowloc system helps to control and manage the rate at which stored water is released into natural water

courses or underground sewer systems, during a heavy rainfall or storm event. Able to accommodate flow rates ranging from 2.5 l/s to 18 l/s, Flowloc comprises a Vortex flow control unit and pre-fitted inlet filter – designed to provide protection against potential blockages or silt build-up – all supplied within a chamber base.

01622 858888 www.marleyplumbinganddrainage.com

The new generation shower-toilet



Introducing the new generation showertoilet; designed exclusively for **Duravit** by Philippe Starck. The SensoWash® Starck f Plus and SensoWash® Starck f Lite can be operated via a remote control or a free app. The technology is now housed within the ceramic body creating a stylish

minimalist product. Comfort is guaranteed thanks to technical finishing touches, such as the motion sensor for automatic cover opening, plus the wide range of setting options for seat heating, the shower flow and the controllable hot air dryer. The SensoWash® app also enables individual, personal configuration of the shower-toilet.

01908 286 680 www.duravit.co.uk

How to create the perfect gravel driveway



Gravel is the popular choice for driveways but it's not without its problems - it gets everywhere, thins out or gets rutted, and is difficult to walk or cycle on. But not if you install **Beauxfort's** Gravelrings grid system. Gravelrings' interlocking tiles feature circular cells with an integral mesh base to prevent gravel migration and silt

build-up. Designed to provide hidden but effective support, Gravelrings are intended to be overfilled to prevent the grid showing through the gravel, a problem common with alternative systems, and are flexible allowing gravel to follow the contours of your driveway.

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DECKING – DO YOUR HOMEWORK

Sarah Francis of Arbor Forest Products gives an insight into how to spot quality decking products – both timber and composite.

Brits are a nation of garden-lovers: even if it's just for a few weeks of the year, there's nothing we like more than soaking up the summertime in our own home.

Increasingly, gardens are seen as an extension of the indoor space, as is proven by the trend for bi-folding doors and decking – both of which help to blur the lines between the interior and exterior of the property. What's more, research by the Homeowners' Alliance has shown that installing decking in a garden can add thousands onto the value of a property – so it's definitely a worthwhile investment!

However, when it comes to decking, there are many options to choose from and not all boards are created equal, so it's worth doing your research to find the right product for your project.

THE RISE OF THE DECK

The popularity of decking has been on the increase for some 30 years now, ever since Alan Titchmarsh and his Ground Force team first extolled its virtues back in the 90s. Since then decking has gone from strength to strength, with homeowners and developers alike recognising its positive points. Then, as now, decking was seen as a cost-effective and long-lasting solution, a way of adding an extra dimension to gardens of any size.

At first, softwood timber decking conquered the market, and for many people its natural feel and appearance, ease of installation and relatively low price point makes it the first choice even now.

However, homeowners' leisure time is becoming more and more precious, especially for young couples who may be buying their first home – those buyers are unlikely to want to spend their weekends cleaning and maintaining a deck. Luckily, the decking market has broadened considerably, with composite decking launching in the UK nine years ago. Unlike softwood decking, composite decking doesn't require sanding and re-coating, and if installed correctly, it will look just as good in a decade as it does the day it is installed.

Composite decking is usually made from a combination of recycled plastic and wood fibres, and it's not subject to rot or mould like timber decking, and they won't fade or stain either. Good quality composite decking usually requires just a wash with soapy water to bring it back to its pristine best, and leading brands will even offer 25 year warranties for domestic decks.

The choice of which deck to install isn't quite as straightforward as opting for timber or composite, though: much like choosing carpet or wood flooring indoors, there are many options on the market and developers need to consider what their buyers are looking for before making their selection.

NOT ALL CREATED EQUAL

Purchasing from a reputable supplier will set housebuilders off on the right path, as a knowledgeable merchant will be able to advise on the quality of the product and how suitable it is for the house or development.

That said, there are some pointers on what to look out for when specifying a decking product. This is relatively simple for timber decking: high-quality timber decking boards tend to be heavier as they will be made from mature, slower grown timber. They'll also have fewer knots and be free of issues like splitting or rot – all flaws that will be obvious to the naked eye.

With composite timber, it becomes more difficult, and often specifiers are at the mercy of sales pitches where brands promise the earth, but often don't deliver! As composite decks are factory-made, the quality of the product is hidden in the decking board's core and manufacturing process. There are more than 40 composite decking brands available in the UK, so it might seem impossible to establish the quality, performance and expected service-life for each one before it's installed.

However, there are some simple visual checks specifiers and installers can perform to discover whether or not the product is up to scratch. For example, a co-extruded or shelled deck board would perform better than a non-shelled, and a solid board would be better than a hollow product.



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Overall, when it comes to composite decking, it is important for specifiers to do their own research and look for the brands that have been proven to stand the test of time.

INSTALLATION MATTERS

While decking is still seen as a job for a keen DIY-er, when looking to add value to

a development or property, a wellinstalled deck can make all the difference. Whether it's a softwood timber or composite deck, using a qualified installer is always the best option.

Some composite decking companies offer dedicated training and initiatives, in which experienced decking installers receive an accreditation from the decking

WHILE DECKING IS STILL SEEN AS A JOB FOR A KEEN DIY-ER, WHEN LOOKING TO ADD VALUE TO A DEVELOPMENT OR PROPERTY, A WELL-INSTALLED DECK CAN MAKE ALL THE DIFFERENCE.

company in recognition of the standard of their work. Commissioning an experienced installer will mean that the deck is installed correctly, on time and to the highest possible standard – helping to add the all-important 'wow factor' to properties and developments.

Taking the time to properly research the decking market and working with suppliers and installers who know their stuff will allow developers to add real value to properties and effortlessly extend a home's living space into the great outdoors.

Sarah Francis is product marketing manager at Arbor Forest Products.



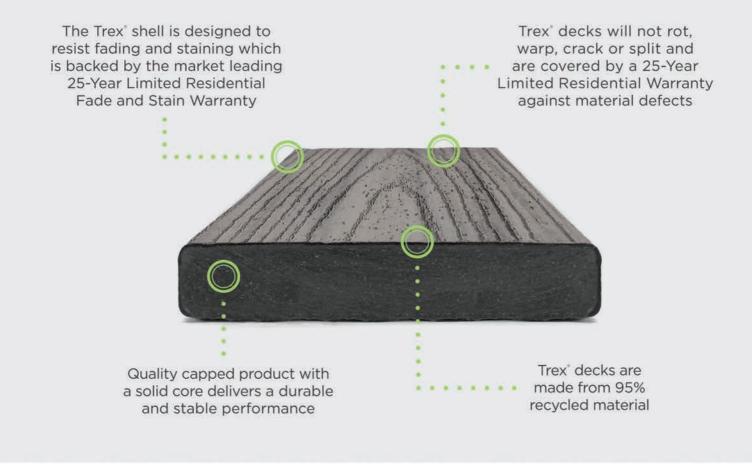


Norcros Rock-Tite capitalises on tile trends

Norcros Adhesives is launching a new three-part system for fixing increasingly-popular 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 longterm lifestyle trend to enhance living areas by making better use of external space. The Norcros Adhesives system is therefore designed to be simple to use by anyone who wants to create a seamless transition from internal to external living space in and around the home. It comprises firstly Norcros Rock-Tite Porcelain Primer, which is supplied in three 5kg bags, complete with a 15kg mixing bucket. Secondly there is high strength fibre-reinforced Norcros Rock-Tite Mortar, which is supplied in a 25kg bag and simply requires the addition of water. Finally the system includes a ready-to-use Brush-In Grout, which comes in three 5kg bags supplied in a 15kg bucket. It is air-curing and matches other grouts from Norcros Adhesives.

01782 524 140 www.norcros-adhesives.com





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Protech VOC Flex awarded BBA Certification



The **A. Proctor Group** is delighted to announce that its' Protech VOC Flex high performance membrane has been awarded a BBA Agrément Certificate. Following extensive research and development, Protech VOC Flex was introduced as a high performance VOC membrane, part of the Group's comprehensive range of ground gas

protection products. Protech VOC Flex is a six-layer flexible proprietary reinforced VOC gas barrier suitable for use on brownfield sites that require protection from dangerous contaminants such as hydrocarbons.

01250 872261 www.proctorgroup.com

New EVO®VISTA™ DUALSWITCH™ helmet



The EVO®VISTA™ DUALSWITCH™ helmet, from JSP, provides the perfect solution and protection for those needing both Head Protection for working at ground level and working at height combined with Eye Protection in the form of a lens or shield which is fully integrated and fully

compatible. Combining the new EVO®VISTA[™] retractable eyewear helmet technology with the innovative DUALSWITCH[™] chinstrap harness system, it is easy for the wearer to switch between working at ground level standard EN397 and working at height safety standard EN12492 by flicking a switch. The helmet offers the choice of either a VISTAlens[™] or VISTAshield[™] depending on the levels of protection and performance required.

01993 824000 www.jspsafety.com

Snickers LITEWork working clothes for Summer



A change of season means a change of focus on what you wear on site. That's why **Snickers** NEW LITEWork clothing can help you keep your cool when you're working in sunny, warm and humid environments. The ergonomic, body-mapping Trousers, Shirts, Shorts, mid-layer Jackets and Windproofers have all the comfort and functionality of other Snickers Workwear stretch

garments but give extra freedom of movement on site. Just like high performance sportswear, they are super-light, quick-drying garments – with ventilation and moisture transport features - that keep you looking smart and feeling cool wherever you are on site in warm weather.

www.snickersworkwear.co.uk

Snickers new stretch work shorts



Fabric, functionality and fit are hallmarks of **Snickers Workwear**, it's the innovation and fabric technology in the design of the new Stretch Shorts for men and women that really set these new garments apart. Delivering superior flexibility and comfort, these lightweight work shorts come in a body-mapping design and a range of new colours including

Hi-vis options. Made from a self-ventilating stretch fabric with Cordura reinforcements for all-round mobility and durability, they're packed with comfort and functionality and specially designed for the fast-paced professional who's always on the go for delivering top class work on site.

www.snickersworkwear.co.uk

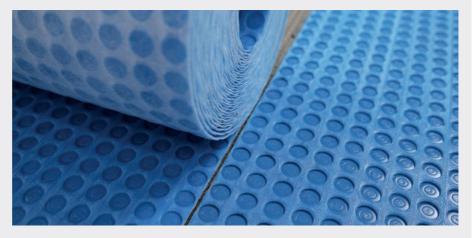
Mapei has you covered with Mapeguard UM 35 waterproofing membrane

Appendix appequate UM 35 is the new decoupling waterproofing membrane. Suitable for use with cracked, damp and imperfectly cured substrates, when installing ceramic, porcelain and stone material to interior and external floors. It is used by laying the membrane between two applications of a Mapei adhesive, in order to accommodate any potential stresses and improve the bond strength of adhesive applied on both sides.

When used as part of a waterproofing system, Mapeguard UM 35 is completely watertight with the capability of protecting the substrates from water penetration, resulting in an increased durability.

Mapeguard UM 35 has also been specially designed to guarantee that the heat is distributed more evenly when applied on heated substrates.

Available in 30 x 1m rolls, the design structure of the membrane makes it easier to distribute the adhesive; the dimples on the surface of the membrane are filled which prevents air being trapped, and instead ensures complete coverage between the tile and membrane. Thanks to the air channels on the back of Mapeguard UM 35, any humidity



present in the substrates can evaporate without affecting the tile finish.

Additionally, its semi-transparency backing makes application much easier for installers to check the coverage of adhesive when bonding the membrane. This additional benefit also helps to easily locate the presence of potential elements on substrates, such as drains, which makes any essential cuttings to the membrane straightforward.

The membrane allows the control of cracks in

the substrate, while allowing the distribution of stresses on floorings subject to heavy loads. In accordance with TCNA test reports complying with ASTM C 627, therefore Mapeguard UM is certified as 'Extra Heavy Commercial Rating'.

Mapeguard UM 35 ensures long-lasting protection from water infiltration and heavy loads. Mapei has you covered.

0121 508 6970 www.mapei.co.uk

AN 'I' ON INNOVATION

Angus Macfarlane of James Jones & Sons discusses the increasing popularity of I-joists, and their inherent economic, technical and environmental benefits for addressing the current challenges the housebuilding industry faces.



While the Government's promise to build 300,000 new homes per year to address the current housing shortage, developers are under more pressure than ever before to meet new build targets. Amidst these pressures, developers are also facing environmental challenges as the Government calls for 'carbon neutral' homes.

The Zero Carbon Homes Agenda set a range of milestones that the housebuilding industry must meet. It is believed these targets, coupled with the influencing

THE INHERENT PRODUCT BENEFITS HAVE SEEN I-JOIST USAGE GROW NOT ONLY FOR ROOFS AND WALLS, BUT INCREASINGLY IN FLOORING SYSTEMS factors of the housebuyer themselves has impacted on the popularity and growth of the use of timber as a prime construction material choice. A recent poll by Public First cited that when those who are considering buying a new-build were asked what factors might influence their views when deciding between two different housebuilders - 'the respective companies' environmental credentials was the third most popular answer, only behind 'reputation for quality work' and 'how attractive their homes are.' The driving force behind this purchasing decision however tended to be motivated by a desire to save money on energy costs rather than wider concerns about the environment.

Nonetheless, these recent government initiatives have encouraged the use of Modern Methods of Construction (MMC) and Off-Site Manufacture (OSM) within the housebuilding industry. It's believed this has contributed to the existing popularity of specification of the I-joist, as it lends itself well to both construction methods, allowing faster on-site builds and can also be engineered and pre-fabricated in the factory. I-joists possess many technical, installation, economic and environmental benefits, often making them the specification of choice in both modern and traditional housebuilding methods.

To look at the technical benefits initially, I-joists are extremely stable, with an excellent strength-to-weight ratio, and reduce prime costs for building completions. They also lend themselves well to service installation as the OSB or fibreboard can be easily drilled and can even be pre-drilled off-site.

Their economic benefits are particularly appealing to housing developers, as they can be twice as fast to install as traditional methods, and can be supplied as a complete system inclusive of all ancillary items, reducing overall building costs. The well documented skilled labour shortage within the UK construction industry makes the I-joist system even more



appealing, as it requires fewer components and therefore introduces less complexity on-site.

I-joists also use less material than solid timber joists to perform the same function, and are a lower embodied energy product when compared to other building materials.

The use of I-joists within panellised roof systems has seen this market innovate and develop rapidly in the UK. Long length joists enable the roof panels to run vertically (as a rafter) or horizontally (as a purlin), in conjunction with glulam (gluelaminated timber) or LVL supports.

However, the inherent product benefits have seen I-joist usage grow not only for roofs and walls but increasingly in flooring systems, making them a market leading solution based on performance, cost and ease of installation.

This increase in usage has led to innovations within the industry, with insulated I-joists being a recent introduction to the marketplace. They offer a much needed benefit where consistent

quality, speed and efficiency of manufacture are critical to the supply process.

It's expected, with reduced energy costs being high on the list of purchasing influences for the house buyer and low carbon homes being high on the political agenda, that the I-joist will continue to be a go-to solution, with more product innovations expected in the near future.

Angus Macfarlane is general manager of James Jones & Sons'Timber Systems Division

Protect Membranes chosen for first multi-storey Passivhaus building in Scotland

Protect BarriAir and VC Foil Ultra, the air and vapour control layers from Protect Membranes, have been specified and installed by design and build contractors Stewart & Shields in Scotland's first multi-storey Passivhaus building, providing social housing apartments for Shettleston Housing Association. Used as part of a conversion project at Old Carntyne Church in Glasgow, the construction involved mixing traditional construction with new, with the church structure being restored alongside a new build extension which was built offsite. Renamed Cunningham House, the development is one of Scotland's most energy-efficient affording housing



developments and the city's largest Passivhaus development to date, winning the Best Affordable Housing Development (Urban) category at the 2019 Inside Housing Development Awards.

Working with Page Park Architects for the main project design and John Gilbert Architects for the Passivhaus element, Stewart & Shields delivered 19 apartments. 14 of these were conventionally built flats within the existing church structure, with the remaining five units being constructed within the new build timber frame five-storey extension which was built to full Passivhaus Standard and is independently certified by the Passive House Institute.

Derek McIlreavy, Business Development and Design Manager at Stewart & Shields Ltd commented, "The specification of materials for this development was based on the need for a high quality end result to meet strict Passivhaus criteria. We knew that Protect BarriAir and VC Foil Ultra would be up to the job in terms of airtightness to help us achieve the critical results needed to be independently certified. We had to beat 0.6 ach⁻¹ @50Pa for airtightness and our tests showed a result of 0.33 which overall gave an added value solution to our



client that helps to future proof these homes going forward."

Protect's BarriAir and VC Foil Ultra membranes form part of a comprehensive range of wall, ceiling and floor construction membranes alongside roofing underlays and accessories which are ideal for traditional and offsite construction, to help ensure the whole building envelope and internal structure can be controlled in terms of moisture management, condensation control and thermal resistance.

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Building products & services

Everbuild Building Products Tel: 0113 200 9494 www.everbuild.co.uk

Schock Ltd Tel: 01865 290 890 www.schoeck.co.uk

Ubbink (UK) Tel: 01604 433000 www.ubbink.co.uk

Coatings, sealants & paints

Barrettine Group Tel: 0117 960 0060 www.barrettine.co.uk

Doors & windows



Evolution Windows Tel: 01767 310980 www.evolutionwindows.com

Garador Ltd Tel: 01935 443791 wwww.garador.co.uk

Intratone UK Ltd Tel: 02070 926 613 www.intratone.com

Electrical and Mechanical Design Consultants

BEM Services Ltd Tel: 0115 7788227 www.bem-services.co.uk

Floors & Floorings

Deck Tile Tel: 0845 2700 696 www.thedecktileco.co.uk

Finance & Insurance

Moody Venture Capital Tel: 01277 351860 www.mvcfinance.co.uk

Groundworks

Althon Ltd Tel: 01603 488700 www.althon.co.uk

Heating, ventilation & plumbing

Domus Ventilation Tel: 03443 715523 www.domusventilation.co.uk

Landscaping & external works

Grass Concrete Ltd Tel: 01924 379443 www.grasscrete.com

Wykeham Mature Plants Tel: 01723 862406 www.wykehammatureplants.co.uk

Lead Products

Midland Lead Tel: 01283 224 555 www.midlandlead.co.uk

Oak products



Passenger & home lifts

Terry Lifts Tel: 0345 365 5366 www.terrylifts.co.uk

Plasterers & ceilings

Plaster Ceiling Roses Tel: 0161 408 2882 www.plasterceilingroses.com

Pumping stations

J T Pumps . Tel: 0844 414 5800 www.jtpumps.co.uk

Rainwater products

Aluminium Roofline Products Tel: 0116 289 44 00 www.arp-ltd.com

Yeoman Rainguard Tel: 0113 279 5854 www.rainguard.co.uk

Roofing & cladding

Kemper System Tel: 01925 445 532 www.kemper-system.com

Traditional Clay Roof Tiles Ltd Tel· 08008 886 633 www.traditionalclayrooftiles.co.uk

Smoke & fire protection

Envirograf Tel: 01304 842555 www.envirograf.com

Temporary accommodation

Worcestershire Caravan Sales

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Timber products

Hoppings Softwood Products PLC Tel: 0800 849 6339 www.hoppings.co.uk



www.hbdonline.co.uk

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