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Housebuilder & Developer

September 2016

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Sadiq Khan appoints team to deliver homes

What Build to Rent means for buildings

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Editor's comment

James Parker



Hello and welcome to my first issue of Housebuilder & Developer. I am proud to be leading the title as it continues to develop and improve, and to be keeping readers up to date with a varied lineup of news, case studies and features from this exciting sector every month.

We have a great editorial team in place and are working hard to ensure that the magazine celebrates the industry but also addresses the challenges being faced to deliver the housing the country so badly needs. HBD also focuses on the product innovations and solutions which are key to delivering high quality, efficient and cost effective residential buildings. We are committed to asking the suppliers that matter the questions that matter, so that they will provide practical answers for our 15,000 readers.

Despite general good news post-recession with many housebuilders seeing increased profits and a plethora of new developments underway across the country (as well as Government promises to tackle tricky issues such as brownfield sites), we have entered a period of limbo since the Brexit vote. There is much second-guessing of how the UK will position itself in the negotiations and in the meantime the industry is characterised by a wait-and-see mentality which unfortunately extends to homeowners' investment decisions.

Despite this, house prices remained steady in the aftermath of the vote, with none of the financial collapse predicted by many having taken place. However the numbers are not all in yet for August, and while these will be skewed by the summer lull, we will not know the true effect of

the decision to leave the EU until months down the line. This is going to be a long, slow process, and the ramifications are unclear, and if there's one thing businesses and homeowners like, it's clarity.

The elephant in the room for the housebuilding industry as I see it – with many already having acknowledged the issues around curtailing overseas labour – is materials procurement. If the pound continues to fall against major currencies it could have a major impact; while this might help exporters, it's no good if you buy most of your building products from Europe, or elsewhere in the world for that matter. While most bricks used in housebuilding may come from the UK, a vast amount of products are sourced from overseas, and a hike in costs is not going to help a sector already struggling to deliver the numbers of homes required.

As we reported last month however, HBF is very upbeat about the post-Brexit future, at least in terms of demand for housing, although its director of economic affairs John Stewart said that many planning obstacles still needed to be removed. He also alluded to a new scheme from the Homes and Communities Alliance to help SMEs which will no doubt be music to the ears of the Federation of Master Builders which tirelessly campaigns on behalf of smaller housebuilders.

Watch out for our regular exclusive column from the FMB's Brian Berry (on page 10 of this issue) for a strong view on what needs to happen to ensure success is sustained across the sector, in what are uncertain times.

Khan assembles team to deliver Homes for Londoners

London Mayor Sadiq Khan has begun to recruit his team to deliver the wide-ranging Homes for Londoners policy; they will be tasked with “ensuring that housebuilding runs efficiently,” as well as developing new policy for London and boosting the delivery of new homes.

Drawing in finance surveyors and property consultant experts, the team will be “the driving force” of housebuilding, said the GLA. “Overseeing not just land assembly, investments, and the speeding up of the planning process, the team will also scrutinise viability assessments, making sure that the proportion of affordable housing remains strong.”

Confirmed members of the new team include deputy mayor for housing James Murray, Transport for London commissioner Mike Brown, GLA executive director David Lunts, and David Montague, chair of the G15.

Sadiq Khan commented: “My Homes for Londoners team will speed up homebuilding and move towards 50 per cent of new homes in London being genuinely affordable to rent and buy.”

The GLA will now undergo a review of capacity and skills to with the aim of “ensuring the Homes for Londoners team can play a more active role in the delivery of housing, particularly in bringing forward public land in London, and speeding up the planning process,” said the GLA. The team is expected to grow in due course, as further expertise is required.

David Montague commented: “The Mayor has

made housing a priority from day one, and we have been working with James Murray on a new strategic housing partnership.”

He continued: “Homes for Londoners will bring together the GLA, housing associations, local authorities and housebuilders to tackle the capital’s housing crisis.

“The priority now must be to build a long-term pipeline of clean, serviced and consented land. With this we can guarantee apprenticeships, jobs, economic growth, thriving communities and affordable homes. Without it, London will lose out in the competition for investment and growth.”

New zero carbon target

Meanwhile, changes in the London Plan to require all major developments to be ‘zero carbon’ from this October have been highlighted by those in the know in the construction industry.

Sustainable buildings assessor at Darren Evans Assessments, Graham Suttill explained: “If ‘zero carbon’ cannot be achieved then a cash in lieu contribution will be sought. In addition, further emphasis is to be placed on district heating networks, and on following the energy hierarchy, including a requirement for an in-depth overheating risk analysis.”

Currently the London Plan requires major developments to demonstrate a minimum 35 per cent improvement over Part L of the 2013



Building Regulations. Although the Government announced in July 2015 that it does not intend to pursue the zero carbon homes target across the UK, it remains in place within the London Plan and will be applied to all major residential developments received on or after 1 October 2016.

In addition to meeting the current requirements, the remaining emissions from developments will have to be off-set through a cash in lieu contribution to the relevant borough of £60 per tonne of carbon dioxide for 30 years.

Suttill concluded: “It’s pleasing to see the GLA adhering to previous commitments on carbon dioxide reduction, with viability assessments indicating ‘zero carbon’ targets will not compromise future housing development. This is essential to ensure London is ready for the Energy Performance of Buildings Directive in 2020.”

Persimmon reports 29 per cent profit increase

Persimmon plc has announced its half year results for the six months ended 30 June 2016, indicating a significant rise in profits. The housebuilder’s pre-tax profits have increased 29 per cent to £352.3m, from £272.8m in the same period of 2015. Revenue was up 12 per cent to £1.49bn, from £1.33bn in 2015.

An additional 383 new homes were delivered, and legal completions increased 6 per cent to 7,238 new homes sold. The average selling price of these homes were up 6 per cent, to £205,762.

In planning and development, 7,108 plots of new land have been secured in the half year period, bringing consented land bank to 93,519 plots. This is with continued success in securing planning consent for the Group’s strategic land bank with 2,856 plots converted in the period.

In his Chairman’s Statement, Nicholas Wrigley described the results as “robust revenue growth”, showing a “further improvement in operating

profitability, excellent free cash generation, and a very strong balance sheet.”

Commenting on the likely effect of Brexit on the future of the housing market, Wrigley wrote: “The UK economy currently enjoys improved and resilient employment levels and some improvement in real disposable incomes.

“With the cost of mortgage funding remaining at compelling levels, which is set to be supported by a competitive but disciplined lending market for some time to come, the housing market across our regions remains confident.”

Wrigley said the group will however “remain vigilant to any changes in market conditions in the light of the challenges that the country faces.” He continued that Persimmon will retain its focus on achieving the best outcomes for its shareholders, “based upon a high quality land bank which will support the future development of the business.”

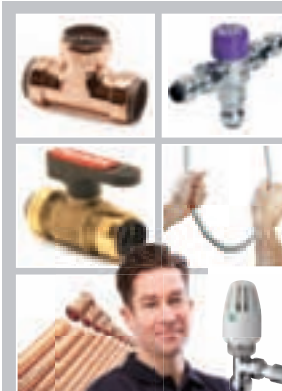


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London Mayor intervenes to boost affordable homes ratio on Old Oak regeneration

Sadiq Khan has approved plans for the first major housing development at the Old Oak regeneration site in West London, after intervening to boost the number of affordable homes in the scheme.

The Oaklands development will see 605 new homes built, together with a nursery, health centre and commercial space. A target of 50 per cent affordable housing has been agreed for the development, following an intervention by the Mayor which will increase the number of affordable homes through investment and a profit-sharing mechanism.

The GLA said: "Old Oak and Park Royal has the potential to deliver 25,500 new homes and 65,000 jobs over the next 30 to 40 years, as well as becoming the key transport interchange for Crossrail as well as HS2."

Sadiq Khan commented on the importance of the scheme: "The development marks a significant step in realising the huge potential of this part of the capital."

"I am pleased that we have been able to increase the proportion of genuinely affordable homes as part of our ongoing efforts to fix the capital's housing crisis."

"The scale and ambition for this development shows London is very much open for business. Despite the uncertainty caused by the UK's vote to leave the European Union, it remains clear that developers and investors see long-term potential in our great city."

Neil Hadden, chief executive at Genesis Housing Association, said: "We are delighted that the redevelopment at Oaklands, in one of Hammersmith and Fulham's most important regeneration sites, has been approved." He added: "We will now be able to provide hundreds more affordable homes for Londoners on a once-derelict site."

"Partnerships such as the one we have with QPR enable us to invest, not only in building new homes, but in developing new communities."

QPR co-chairman Tony Fernandes said: "We

are delighted that the Mayor has granted planning permissions for the Oaklands development, including hundreds of affordable homes for Londoners. Along with our development partners Genesis Housing Association we look forward to creating this new neighbourhood, building a sustainable community where people can live, work and play."

"We are committed to bringing forward other development sites in Old Oak as soon as possible to create the homes that London desperately needs."

Of the 242 affordable homes, half will be for social and affordable rent, with the other half being earmarked for shared ownership.

The application was approved by the Old Oak and Park Royal Development Corporation, the organisation that has planning control over the Old Oak regeneration site, on July 13, 2016.

The project will also include a new link road into Old Oak which could unlock further development north of the Grand Union Canal.



BSRIA gives support to Lords on 300,000 homes target

BSRRIA has come out in agreement with the recent House of Lords Economic Affairs Committee report which stated that in order to tackle the housing crisis, the Government must lift its target by 50 per cent and build 300,000 homes each year.

It also supported the Lords' recommendation that local authorities and housing associations must be free to build substantial numbers of homes for rent and for sale.

In its report, Building More Homes, the cross-party House of Lords Economic Affairs Committee criticised the Government's housing policy for:

- Setting a new homes target homes which will fail to meet the demand for new homes;
- Moderating the rate of house price increases;
- Restricting local authorities' access to funding to build more social housing;
- Creating uncertainty in the already dysfunctional housing market by frequent changes to tax rules and subsidies for house purchases, reductions in social rents and the extension of Right to Buy.

BSRIA commented: "All of these changes reduce the supply of homes for those who need low cost rental accommodation."

Julia Evans, chief executive at BSRIA, said: "We are facing a severe crisis with home ownership being simply unaffordable for a lot of our society. The only way to address this is to increase supply. We need local Government and housing associations to get back into the business of building."

The Lords Committee makes wide-ranging recommendations to address the crisis, including:

- Restraints on local authority borrowing should be lifted: they should be free to borrow to fund social housebuilding as they are other building programmes. This would enable local authorities to resume their historic role as one of the major builders of new homes, especially social housing.
- Council tax should be charged on development that is not completed quickly. The Government's reliance on private developers to meet its target of new homes is misguided. The private sector housebuilding market is

Continued on page 9...

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oligopolistic with the eight largest builders building 50 per cent of new homes. Their business model is to restrict the volume of housebuilding to maximise their profit margin. To address this, the Committee recommend that local authorities are granted the power to levy council tax on developments that are not completed within a set time period.

- Maximise the use of public land. The Committee recommends that a senior Cabinet minister must be given overall

responsibility for identifying and coordinating the release of public land for housing, with a particular focus on providing low cost homes. The National Infrastructure Commission should oversee this process.

Julia Evans commented: "This is indeed an issue for the newly appointed Construction Minister and Parliamentary Under Secretary of State Jesse Norman MP, to whom BSRIA will be specifically signalling this concern."

She added: "There must be houses for

everyone on the housing spectrum: from social housing, to starter homes, growing families and executive housing. This spectrum of housing is needed throughout the country. BSRIA has supported the Right to Buy Scheme which should be used as part of the mix for those who need it to get on the housing ladder.

"Government must also allow local authorities to borrow to build and accelerate building on spare public land."

Chancellor's Autumn Statement to contain combined £3bn housebuilding fund

Reuters and the Sunday Telegraph have revealed that the Chancellor of the Exchequer Philip Hammond is to announce a £3bn housebuilding fund, which will be earmarked for developers to offer them cheap loans in order to provide a boost to the sector post-Brexit.

The fund is expected to collate several existing schemes. A £525m 'builders fund' and a £1bn large sites infrastructure scheme are predicted to make up part of the £3bn total, but according to the Sunday Telegraph, the scheme will also include new money to encourage developers to build new homes.

Reportedly offering low-cost loans or financial

guarantees while reducing red tape, the fund would be targeted at small and medium-sized developers.

The fund is expected to be announced as part of the Government's fiscal response to Brexit in the Chancellor's Autumn Statement. Hammond

recently said the Statement will "reset" fiscal policy.

The Queen's Speech in May contained a pledge of up to £5bn within the Home Building Fund, aimed at smaller builders. It remains unclear whether the new announcement of a £3bn fund represents a watering-down of this promise.



New builds up 6 per cent, and loans up for first time buyers in London

The number of newly built homes has increased 6 per cent in the past year, new figures show.

The latest housebuilding data shows that 139,030 new homes were completed in the year to June and numbers have continued to build gradually over the last two years. More than 144,280 homes were started in the year to June 2016.

Meanwhile, figures from the Council of Mortgage Lenders for this year show that there are more first-time buyers that at any time since 2007, with 72,800 in England in the second quarter of 2016.

Figures have shown strong regional growth in London, Swindon and Wakefield. In London 24 per cent more homes were built in the year to June 2016 than the previous year with local authorities in Greenwich and Waltham Forest seeing completions up 216 per cent and 103 per cent respectively

over the same period. In Swindon, completions were up 104 per cent, and in Wakefield 41 per cent.

Figures from last year show that the total number of new homes across the country rose by 25 per cent in 2014/2015, when taking into account all homes, including new builds, houses that have been converted into flats and building whose use has been changed to residential.

Communities Secretary Sajid Javid said: "With more new homes started and built than this time last year, there is real progress but there is much more to do."

The CML also reported that home buyers in London have borrowed £5.5bn for house purchases in the last quarter of 2016, down 23 per cent quarter-on-quarter and 3 per cent on a year ago, but figures for first time buyers' borrowing saw a strong rise year on year.

Home buyers took out 17,500 loans, down 17

per cent on the previous quarter and 8 per cent compared to the second quarter 2015. First-time buyers borrowed £3.0bn, up 3 per cent on Q1 and 10 per cent compared to last year. This equated to 10,800 loans, up 3 per cent on a quarterly basis, but down 1 per cent year-on-year.

In contrast, home movers borrowed £2.5bn, down 41 per cent on quarter one this year and 14 per cent compared to a year ago. This equated to 6,700 loans, down 37 per cent quarter-on-quarter and 18 per cent on quarter two 2015.

Remortgage activity totalled £4.3bn, up 6 per cent on the first quarter of 2016 and 29 per cent compared to a year ago.

Paul Smee, CML director general, commented: "First-time buyers have continued to drive mortgage lending in London, with 10 per cent more first-time buyer lending in the second quarter than the first."

Comment

Thought leaders from across the sector give their views.

The industry advocate

The chief executive of the Federation of Master Builders Brian Berry gives his thoughts on why land availability is a major cause of the reduction of SMEs' role in housebuilding, in his second exclusive monthly column.



“Local plans tend to be overwhelmingly focused on larger strategic sites...small developers are left largely reliant on bringing forward developments on which the risk is much higher”

It is often remarked on that the proportion of new homes built by SME developers has fallen dramatically in recent decades. Accounting for around two thirds of new homes in the late 1980s, last year SMEs built little more than a quarter. I don't need to rehearse all of the many and complex reasons for this – these will be more than familiar to most of us – but the issue of land availability is fundamental here.

Though it varies by location, to sum up the problem small developers have significant difficulty in finding sites of the right size, in the right locations, and which they can have reasonable confidence in getting planning permission for. How small sites are treated within the plan-making process and the planning application process is absolutely at the heart of this.

For starters, local plans tend to be overwhelmingly focused on larger strategic sites. There are numerous reasons why this might be the case, from the cost of identifying and assessing the development opportunities of large numbers of the smallest sites, to the cost of administering many smaller applications, to the politics of the disproportionate resistance by local residents to smaller developments.

The effect of all this though is that small developers are left largely reliant on bringing forward windfall applications on which the risk is much higher. The risk is increased both by the unpredictability of the outcome and the fact that the planning application process for small sites is disproportionately costly, complex and slow.

Writing for Housebuilder and Developer, I realise I am probably preaching to the converted here. But I think it is worth setting out some of the problems, not least because politicians and policymakers are at last starting to listen to the FMB, and others in the industry, who have long been busy pointing all this out.


One of the reasons they are listening is that, with a view to expanding the capacity of the industry, Government is extremely keen to see SME house builders growing in output and numbers. Policies like the long-fought-for 10

unit threshold for affordable housing contributions are a clear reflection of this. There is also recognition of the excessive bureaucracy that can be imposed by the applications process. It is in response to this that we have the soon-to-be-introduced 'permission in principle' route (equivalent to a redline outline application) for minor development.

But the other reason the penny has dropped is build out rates. Government has realised if it is going to shorten the time between planning permissions and delivery then it needs to loosen the over-reliance on large sites. In some cases, we may be able to speed up build out rates by breaking up larger sites between more and smaller developers, as was done for instance on a scheme in Didcot, Oxfordshire. As former Housing Minister Brandon Lewis loved to point out, it was achieving build out rates of 400 units per year on the same scheme.

However, a much greater emphasis also needs to be placed on getting a wider range of sites, and many more small sites into the pipeline. One means of doing this should be the Government's proposed 'housing delivery test', under which local authorities which are not seeing homes delivered at the rate they should be under their local plans will be required to take action to try to rectify this. The FMB is strongly recommending that failure to meet the delivery tests should lead to a buffer stock of small sites being quickly identified and allocated for housing. This one action alone could play a major role in improving the supply of sites suitable for small developers.

However, we need a much wider debate about the role of small sites in delivering new housing. In order to do this, the FMB is currently conducting research in partnership with the Local Government Information Unit on precisely how councils and SME housebuilders can better work together to make greater use of small sites. If you would like to input ideas into this or have thoughts on any of the above, I would be keen to hear from you. Email externalaffairs@fmb.org.uk.



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Clarity is in short supply

Patrick Mooney of Mooney Thompson Consulting wonders what the new Housing Minister Gavin Barwell can do to provide more clarity and certainty on social housing policy.

The new housing minister could endear himself to the social housing sector by urgently delivering greater clarity on a number of key Government policies.

Since the passing of the Housing & Planning Act 2016 earlier this year, several deadlines have been missed for providing details of how a host of new policies, such as Pay to Stay, fixed term tenancies and the sale of higher value council homes will operate. On top of this a controversy has emerged over how the voluntary RTB discounts to HA tenants, will be funded and implemented.

In addition there is the continuing uncertainty over the Local Housing Allowance cap and how its linking to private sector rents will impact on supported housing, which is mainly provided for vulnerable tenants.

At present social landlords are trying to fix details for next year's work programmes and budgets. But they are doing so in a near vacuum with lots of guesswork and assumptions being included and 'what if' scenarios to the fore.

Gavin Barwell has been conspicuously quiet since his appointment as housing minister. Some housing figures have complained about his dual appointment as Minister for London, in addition to Housing and Planning, on the basis that this could take his attention away from the housing crisis.

Other commentators have pointed at his role in opposing housing schemes in his home constituency of Croydon in south London, but

Alistair McIntosh of consultants HQN has wisely counselled his colleagues to give Barwell a chance before 'putting the boot in' to the new Minister.

Welfare cuts to continue?

Despite the ever-changing financial environment, from the Brexit vote to cuts in Bank of England base rates, the Government has been ploughing ahead with its focus on encouraging house sales – both of new houses and of properties currently owned by councils and housing associations.

We wait with bated breath to find out what new Chancellor Philip Hammond has in mind for public finances, in particular welfare reforms, when he produces his Autumn Statement. Will he continue to enforce George Osborne's cuts?

Perhaps the biggest clue that policies will continue has been provided by the re-appointment of Lord David Freud as the Minister for Welfare Reform at the DWP. We wait to see if Damian Greene is as committed to Universal Credit as his two predecessors.

The growing bill for Housing Benefit – which has now reached a staggering £25bn a year – also suggests the Chancellor will continue with efforts to limit who qualifies for support and by how much. But what, if any, impact will any measures have on the benefit bill, which does appear to be on an uncontrolled upward trajectory?

Over the last 10 years, Housing Benefit expenditure in Britain has increased substantially in real terms, rising from £17.4bn in 2004/05 to £24.7bn in 2014/15, which represents an increase of 42 per cent.

Housing Benefit expenditure has also increased as a proportion of overall benefit expenditure, today accounting for 14 per cent of the total benefit bill. This growth has largely been fuelled by a growing number of private renters, many of them in work, receiving Housing Benefit.

Public spat

This also led to a rather unseemly public spat between two representative bodies, with the NHF in the red corner and the NLA in the blue corner, with each organisation pointing their fingers at the other and squaring up like two prize fighters before a title contest.

The National Housing Federation got the first blow in when its chief executive David Orr said "It is madness to spend £9bn of taxpayers' money lining the pockets of private landlords rather than investing in affordable homes. The lack of affordable housing available means that a wider group of people need housing benefit."

Over at the National Landlords Association, head of policy Chris Norris hit back by saying the private rented sector was responding to the increasing demand for homes from a growing proportion of tenants who are being failed by the

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social housing sector and housing associations.

"The NHF is clearly still reeling from the news that its members have been ordered by Government to reduce spending over the next four years, so it comes as no surprise that they are looking to shift the emphasis and point the finger elsewhere," he said.

"However, the private rented sector plays a pivotal role in providing much-needed homes for tenants so there seems no real purpose in the NHF taking a cheap shot at landlords for what is a failure on behalf of successive governments to adequately allocate its housing budget and to incentivise the building of new homes."

All of this detracts from the real reasons for the huge rise in benefits which is that not enough new social homes for rent are being built and increasing numbers of people are being pushed into the private rented sector, which almost always has higher rents. What is unusual and makes the current situation worrying, particularly for Government ministers, is that so many of the new claimants are in full-time work.

Answers needed

The areas where details of how the new policies will work are keenly awaited in are:

- The rules governing the sales of vacant, higher value local authority homes. Council leaders have estimated this could reduce their stock in high demand areas by as much as a third. With the sales proceeds going to Government, they see no way they can afford to build replacement properties, which could push homelessness figures up.
- Pay to Stay rules – we do know that tenants with a household income of at least £40,000 in London and £30,000 elsewhere, will face the prospect of paying much higher rents to stay in their home, or move out. (Realistically they will not be able to afford to buy their home.) But the rate of increase and how much of the higher rent can be retained could have a major impact on social landlords, who will have to do a lot of additional administration.

- Compensation for voluntary RTB discounts, payable to the selling HA – how much will they receive and when? If it is correct that 30 per cent will be retained until construction of a replacement starts, then the Government may find itself accused of sharp practice. This arrangement was not what many HAs thought existed in the NHF brokered deal.

Meanwhile properties sold under the RTB continue to far exceed their replacements. Analysis by the Local Government Association (LGA) showed that 12,246 council homes were sold to tenants in England last year, but just 2,055 replacement properties were started by councils – a drop of 27 per cent on the previous year.

Since the RTB was launched by Margaret Thatcher in the early 1980s, almost two million properties have been sold by English councils and the proportion of homes that are social housing has fallen from 31 to 17 per cent. Use of the scheme was slowing until the Coalition government relaunched the scheme in 2012 and increased the discounts available to London tenants. As many as 40 per cent of the sold properties are understood to now be owned by private landlords.

And the building of new homes for social rent has nose-dived as the Government's focus has remained on the wrongly titled 'affordable' rents and housing for sale. Kate Davies of Notting Hill HA has acknowledged that even discounts of £100,000 will not be enough for many tenants in London to buy their own homes, where 3 bedroom family homes sold by councils and associations can easily command open market values of between £0.5m-£0.75m.

It is of course a little ironic that these conditions and uncertainties in England are co-existing with the ending of the right to buy in Scotland, after 36 years and almost half a million of completed sales. The Welsh Assembly is expected to follow suit shortly.

Mergers continue

Do not expect to see the recent spate of merger activity to slow or die down, despite the collapse

of two high profile deals involving Hyde and L&Q, and Sanctuary and Housing & Care 21. However, these incidents do highlight the difficulties in getting everything sorted out to everyone's satisfaction. This is particularly difficult or problematic when the deal is a proper merger of well-matched partners in terms of size and income streams.

The reasons given publicly for the breakdowns in the two big mergers of "cultural differences" and "differences of opinion over timings" obviously mask a host of reasons and factors, but it is probably for the best that people recognise difficulties when they occur and are prepared to walk away from a deal, if the terms are not correct. The consequences of ploughing on regardless could be extremely difficult particularly if they impact on customer service.

Mergers are much easier when the deal is in reality a takeover of a smaller organisation by a larger landlord. The latter is often in a position where it is rescuing an association that has encountered difficulties and it needs an injection of new blood or money, or both, to safeguard their future.

It was interesting that Sanctuary came out very quickly after the collapse of its deal with Housing & Care 21 to announce they were very much open for more merger business, particularly if it meant rescuing smaller landlords that are struggling in the changed financial climate.

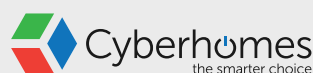
With growing numbers of associations embarking on partnership deals or creating consortia for new building and/or major repairs contracts, it could be that looser arrangements will become more popular than formal mergers. These can have the benefit of sharing the risk and expertise, as well as providing savings from larger contracts while at the same time retaining local ownership, control and decision-making.

If the new Housing Minister Gavin Barwell can bring clarity and certainty to the above issues, he will at least have contributed to a big step in the creation of policies for dealing with the current agenda. To say this is a dense and complex set of issues however, would be a massive understatement.

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Build to rent, and the need to future-proof housing designs



Tom Shaw from consulting engineer Ramboll discusses one of the fastest growing markets in the UK, and what it will mean for the future of building design.

As the dream of home ownership becomes more unrealistic for many due to increasing house prices, build to rent is seen by many as one of the solutions to solving the UK's housing crisis. With this increased attention, we are seeing a change in attitude towards the design and construction of these purpose built blocks for rental. To date many of these schemes in the UK have been no different to standard private sale developments; utilising a standard design approach, based on the typical apartment layouts seen in the UK for many years. However, we are seeing changing trends with a new generation of renters demanding more.

Changing trends

No longer can we assume that those renting are young savers waiting to get on the housing ladder. There are those priced out of the market but still earning good salaries and looking for high quality environments. There are sharers who prefer apartments with equally large bedrooms and en-suite bathrooms, and we can expect a larger number of families that desire good sized family rental homes with the flexibility to accommodate larger broods.

We also need to consider the new Millennial and iGeneration renters, constantly connected and focused on technology, as well as visiting professionals. There are demands on quality and a provision of services to make life as convenient as possible.

Design approach

For developers/investors/providers, solutions are required to meet the varying demands and produce high quality products that are durable and easily maintainable. With these developments being long term investments there needs to be a change in attitude to focus on the operational costs; the buildings need to be as 'future proof' as possible to minimise requirements for future investment and works that may result in reduced revenue.

For residents location is a priority; the most successful of purpose built rental blocks will be conveniently located with good public transport access and transport hubs. A change in attitude to the design of the building is also key. For example apartment layouts increasingly boast more similar sized bedrooms and provi-

sion of good storage space.

Knowing a neighbour greatly reduces the chances of a rental tenant moving on and therefore landlords should strive to create an environment where the tenants can socialise and form bonds, maximising long-term tenures and minimising lost rental through changeover of tenants. We can expect to see increased amenity space in build-to-rent blocks – whether this is communal roof terraces, dining spaces or other facilities.

Even with the intention to secure longer-term rentals, the turnover rate of tenants will be higher when compared with private ownership. With this in mind the building needs to be designed to allow regular removals. This may mean larger lifts capable of carrying larger pieces of furniture with easily accessible loading bays; perhaps even a designated goods lift – unheard of for many residential developers to date.

Landlords need to create an arrival experience from the outset to secure future tenants and keep demand high. As a result entrance spaces are becoming more hotel-like in nature – generous in size with concierge facilities.

Engineering solutions

Cost certainty is a priority, both for the short-term construction and long-term operational costs. Solutions are required that allow high quality products and robust finishes, so structural build costs are kept to a minimum by being as simple and efficient as possible – allowing money to be spent where it is more critical.

Developers need to decide what their key drivers are at the start of the project – this may be flexibility to allow varying flat layouts for varying tenures. It may also be speed of construction – the sooner built the sooner there is likely to be a return on investment.

To maintain ultimate flexibility, there is an argument for large open structural grids that allow alternative apartment layouts of varying size over the lifetime of the structure, allowing the landlord to adapt to changing needs and trends.

If programme and providing an operational building as soon as possible is a key driver there are modern methods of construction and offsite manufacture that enable quick construction time. Cross-laminated timber or precast concrete framed buildings can provide savings in both cost and programme if designed efficiently from the

outset. Steel modular pods offer an even more radical solution, allowing rooms to be completely fitted out in a factory environment before being stacked up on site.

Building services are a major consideration when considering the lifetime costs of a building. These need to be easily maintained and accessible for landlords in a build-to rent environment. To keep costs to a minimum, provide consistency across the development, and potentially across the portfolio of developments, building services need to be designed and specified using a common kit of parts. Economies of scale will provide efficiencies allowing swift repair and replacement in the event that something stops working, with services cupboards located along landlord corridors for ease of access.

In a fast-moving market developers and building operators need to consider the future proofing of their buildings to meet changing demands of a new generation of renters. By adopting some alternative ways of thinking about design and modern methods of construction clients will be able to differentiate their rental product from competitors by providing a superior product whilst at the same time maximising returns on their investment.

Tom Shaw is buildings director at Ramboll.



Events & awards

Key upcoming events, conferences and awards

HBF Planning Conference
14 September, Birmingham
www.hbf.co.uk/events-meetings

HBF Technical Conference
15 September, Birmingham
www.hbf.co.uk/events-meetings

Homebuilding & Renovating Show
23 - 25 September, London
london.homebuildingshow.co.uk

The Midlands Construction Summit and Expo
27 September, Coventry
builtenvironmenthub.org/summitandexpo

24housing Awards
6 October, Coventry
www.24housingawards.co.uk

Housing Market Intelligence Conference
6 October, London
www.hbf.co.uk/events-meetings

London Housing Summit
6 October, London
www.cih.org/events

Women in Housing Conference South
13 October, London
www.womeninhousingconference.co.uk

British Homes Awards
14 October, London
britishhomesawards.co.uk

UK Construction Week
18 - 20 October, Birmingham
www.ukconstructionweek.com

The Build Show
18 - 20 October, Birmingham
www.ukconstructionweek.com/build-show

Grand Designs Live
19 - 23 October, Birmingham
www.granddesignslive.com/nec

London Build Expo
26 - 27 October, London
www.londonbuildexpo.com

Housebuilder Awards
3 November, London
www.house-builder.co.uk/awards

Women in Housing Conference North
3 November, Manchester
www.womeninhousingconference.co.uk

Women in Housing Awards
3 November, Manchester
www.womeninhousingawards.co.uk

CML Annual Conference
9 November, London
www.cml.org.uk/events

Homes
16 - 17 November, London
www.homesevent.co.uk

Redrow recognises best trainees

Redrow homes is recognising the vital contribution that apprentices make to the business by awarding its most talented trainees the accolade of Apprentice of the Year.

The company has awarded the title to 12 talented individuals who impressed judges with their performance in the last year. A further nine apprentices were highly commended. Jemma Lewis, 20, from Buckley, North Wales, was named Redrow Group's Apprentice of the Year.

Jemma, who has now completed her apprenticeship and was recently promoted to HR assistant at Redrow's headquarters in Ewloe, North Wales, said: "It was a real surprise to win an Apprentice of the Year award and I'm delighted."

"I live near a Redrow development and joined the business two years ago unsure about what I wanted to do. After a short work experience placement, I was offered an apprenticeship role within the HR team and I quickly realised this is the route I wanted to take my career in."

Each year, Redrow recognises the success and hard work of its apprentices with the award.

Persimmon site manager wins award

Site manager at Persimmon Homes West Midlands, Craig Thomas has been selected as a winner in the Pride in the Job Quality Awards.

Craig was recognised for the work he has carried out at Meadow Grove, a Persimmon Homes development in Newport.

In recognition of his achievement, Craig will now be invited to a West Pride in the Job awards dinner in October, to be held at the ICC, in Birmingham.

During the dinner, it will be announced who will go through to the next round to compete for a Seal of Excellence and Regional Award.

John Cosgrave, managing director of Persimmon Homes West Midlands, said: "This award recognises the very best in our industry, and we are very proud that one of our site managers has been recognised for his excellent work."

Craig said: "It's fantastic to win one of these awards from the NHBC. It shows the dedication of the trades teams on site that their hard work is recognised in such a way and it has raised team spirit."

Miller Homes to raise £100k for charity

Miller Homes pledged to raise £100k for charity this year and with just over four months left to go, it has already hit the £80k mark.

Habitat for Humanity is the housebuilder's nominated charity for 2016 and, over the course of the year, cash is being collected for the charity's Hope Builders campaign. The aim is to raise enough money to build over 30 'Habitat Homes' and make a real difference to those living in poverty housing.

With over three quarters of the funds raised in just eight months, the team at Miller Homes is sharing what it has learnt to help other companies raise money for their own chosen charities. Fundraising initiatives can include everything from charity balls to sporting challenges, bake offs and volunteer trips, and the infographic highlights how much companies could expect to collect from each activity.

Chris Endsor, chief executive at Miller Homes, said: "I'm extremely impressed and genuinely proud of all the hard work that has been put into raising the tremendous sum already achieved by our team."

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New developments:

Oxford Heights project sees Southampton office transformed

An office-to-apartment conversion in Southampton has transformed the former concrete 1960s office block at 66-70 Oxford Street, which has been renamed Oxford Heights and now comprises 12 stunning flats and two penthouse apartments.

The refurbishment of the landmark building had a number of constraints due to its position at the start of the Conservation Area of Oxford Street. The prestigious location is popular with cosmopolitan restaurants and bars.

The design team retained the look and feel of the original building, while striving to bring new vibrancy and a modern twist to the outdated building.

Details of the build

An existing three storey unoccupied office building was converted into 14 flats (three 1 bed and eleven 2 bed units), including the construction of a fourth floor rooftop extension, to create 2 penthouses with large balconies. The flats were to be completed to a high specification for private sale with a 10 year warranty from national structural defects insurance specialists CRL, and rooftop PV panels, all achieved on a budget of £1.1m.

The existing concrete frame structure required a new staircase, formation of new windows in the external pre-cast concrete panels and a new timber frame structure to the roof to house two new penthouses. Steel beams were added to support the new staircase.

The new penthouse floor was engineered

to spread its load onto the existing columns. The steel grillage was designed to run down the existing building to utilise the existing foundations with steel connectors so that no additional load was forced on the existing structure. This ensured the existing concrete columns took the weight of the steel beams to hold the load of the rooftop penthouses.

“The existing concrete frame structure required a new staircase, formation of new windows in the external pre-cast concrete panels, and a new timber frame structure to the roof to house two new penthouses”

The new timber staircase is positioned in the middle of the building over four floors and features oak treads and risers. The staircase installation was the most complex part of the build as the openings in each floor needed to be cut without compromising the overall structural envelope, with the loads being tied in to each floor as opposed to sitting on a new base.

With regards to the design, Zelda Investments were limited by the building being in a Conservation Area but with the introduction of a modern take on bay windows, it has transformed the aspect.

The predominantly grey/light colour scheme

needed to match the vernacular, giving character while also introducing a modern feel. This was helped by the use of glass and new openings to add light to the new flats, while leaving the nature of the building unchanged. The balconies on the top floor are set back from the edge to not compromise the street view, with glass balustrades used so as to not interrupt the lines of the building.

The project was completed on time in March 2016 and to budget. Strip out works were carried out in advance of Building Regs issue in order to meet the tight project programme. There were significant opportunities to exceed the budget but due to the close collaboration between the client, QS, engineer, planners and HH Drew, the majority of constraints were overcome.

Insurance

National structural defects insurance specialists CRL was able to tackle the complexities of the build and assist Zelda Investments in arranging appropriate cover that suited their requirements, allowing them to focus on this unusual conversion.

Mark Richards, managing director of Zelda Investments, said: “We’d worked with another warranty supplier in the past, but they could not understand how to offer a warranty for a refurbishment project of this kind.

“CRL totally understood our requirements and was able to price the warranties accordingly.”

Industry movers

The latest movements and appointments within the housebuilding industry.

Hill

Hill has appointed Colin Campbell as its head of strategic land. This newly created role within Hill will focus on the medium and longer term development pipeline, reflecting the company's commitment to growth under its new five year strategy.

With a strong presence already established in areas including London, Cambridge and Oxford, Hill is seeking to expand its portfolio across the wider south east area. Colin will be responsible for sourcing land and new sites to support the business target of delivering 2,500 homes each year by 2020.

Storey Homes

Milton-Keynes based Storey Homes has appointed Mark Plowman as its new construction manager to oversee all its residential developments.

Mark will also help identify new land investment opportunities, oversee all sub-contractors, materials and on-site Health & Safety, and work to recruit construction site staff in line with the company's growing business model. Mark who started his career as a bricklayer, has been in the construction industry for over 34 years.

BSRIA

BSRIA has announced the appointment of Tassos Kougonis as its new principal consultant – residential in its Sustainable Construction Group.

For the past five years, Tassos worked as the technical manager of the Zero Carbon Hub. His work focused on energy efficient homes, sustainability, health and well-being standards, policy development, research and innovation.

Tassos said: "I am very excited about this opportunity, in interesting times for the industry."

Crest Nicholson

Award-winning developer Crest Nicholson is pleased to announce the appointment of Darren Dancey, group design & technical director, to its executive management team. Darren will be responsible for Crest Nicholson's conceptual design team, developing the Group's procurement strategy, and encouraging the adoption of modern methods of construction and smart technology across the business.

Darren joined Crest Nicholson in October 1990, working in the South West Region's technical department before progressing to production director in July 2006. He was then appointed group technical director in April 2011.

In his new role Darren will be pioneering a completely new range of group house and apartment designs from Crest Nicholson which seek to respond to customer demands for smarter construction methods. The role will involve Darren leading the group



commercial and quality teams to create modern good quality sustainable homes which will offer home buyers access to greater smart technology and customisation options.

Darren also sits on a number of external steering groups such as the Home Builders Federation National Technical & Sustainability Committee (HBF NTSC) and NHBC Standards Committee.

Larkfleet Homes

Larkfleet Homes has extended its land and planning team with two new appointments which will help to cement its reputation as a successful housing developer with expertise in developing larger sites. Joining the team are senior land manager David Morris and planning manager Hannah Guy.

David's new role will encompass sourcing and securing new residential land opportunities for Larkfleet Homes and Larkfleet Homes Norfolk and Suffolk, the new company recently established to develop new homes across those two counties. He has a strong track record of progressing major development projects from conception through to consent and has most recently worked for housebuilder Persimmon Homes.



Hannah joins Larkfleet Homes as planning manager. Her role will cover all aspects of the planning process, from initial presentations and submissions through to ensuring local communities are involved and informed. She too has gained valuable experience at other housebuilders – Persimmon Homes, David Wilson Homes and Barratt Group.

Daryl Kirkland, group land director, said: "I am delighted to welcome both David and Hannah to our team at Larkfleet. They both have important roles as we work toward meeting our expansion plans."



Case study:

A man's home is his (Elephant &) Castle

By Rob Heasman

Elephant Park, situated in the heart of Elephant & Castle in central London, is one of the last major regeneration opportunities in the heart of the capital. The developer behind it is property and infrastructure company Lendlease, who, in partnership with Southwark Council, are driving forward a 15-year, £2bn transformation of the area.

The result is the creation of a new community of 3,000 sustainably-built homes, shops, restaurants, community facilities and more than 11 acres of publicly accessible green space – all of which is helping to cement Elephant & Castle's reputation as a healthy space for people to live and play.

Homes fit for the future

Elephant Park is set to be one of the UK's greenest developments. It is the only scheme in the UK – and one of just 19 around the world – that is set to be rated 'climate positive' by the time it is complete by the global C40 Climate Positive Development Programme. This means that Lendlease is committed to ensuring that the site will be carbon positive, producing less carbon than the development offsets.

Designed to exceed Level 4 of the Code for

Sustainable Homes as a minimum, the 'healthy homes' at Elephant Park have been fitted with large windows and filtered ventilation systems intended to maximise fresh air and natural light. Each home will be constructed from a range of non-toxic and energy-efficient materials, including timber flooring sourced from suppliers certified by the Forest Stewardship Council and paints that are low in volatile organic compounds. One new paint currently being tested has even been developed to remove harmful toxins from the air through its photocatalytic properties.

This is a far cry from the Heygate Estate, the former occupant of Elephant Park. In the post-war rush to build homes across the UK, mistakes occurred in the design and quality of homes and the Heygate – a neo-brutalist structure of more than 1,200 council homes constructed in the 1970s – quickly fell into a cycle of disrepair and dilapidation. Just 40 years later, the entire estate was demolished.

Lendlease has worked with some of the UK's top architects, including Allford Hall Monaghan Morris, Panter Hudspeth and dRMM, to ensure Elephant Park is fit for the future. Not only has the number of homes on the former Heygate site been doubled, they have also been equipped to be 30 per cent more energy efficient than current

regulations require and use 30 per cent less water than the average London home.

Creating central London's new green heart

Lendlease is transforming over 28 acres across three sites in Elephant & Castle. 47 per cent will be high-quality public space, meaning that roughly half of the site will be covered by streets, parks, squares.

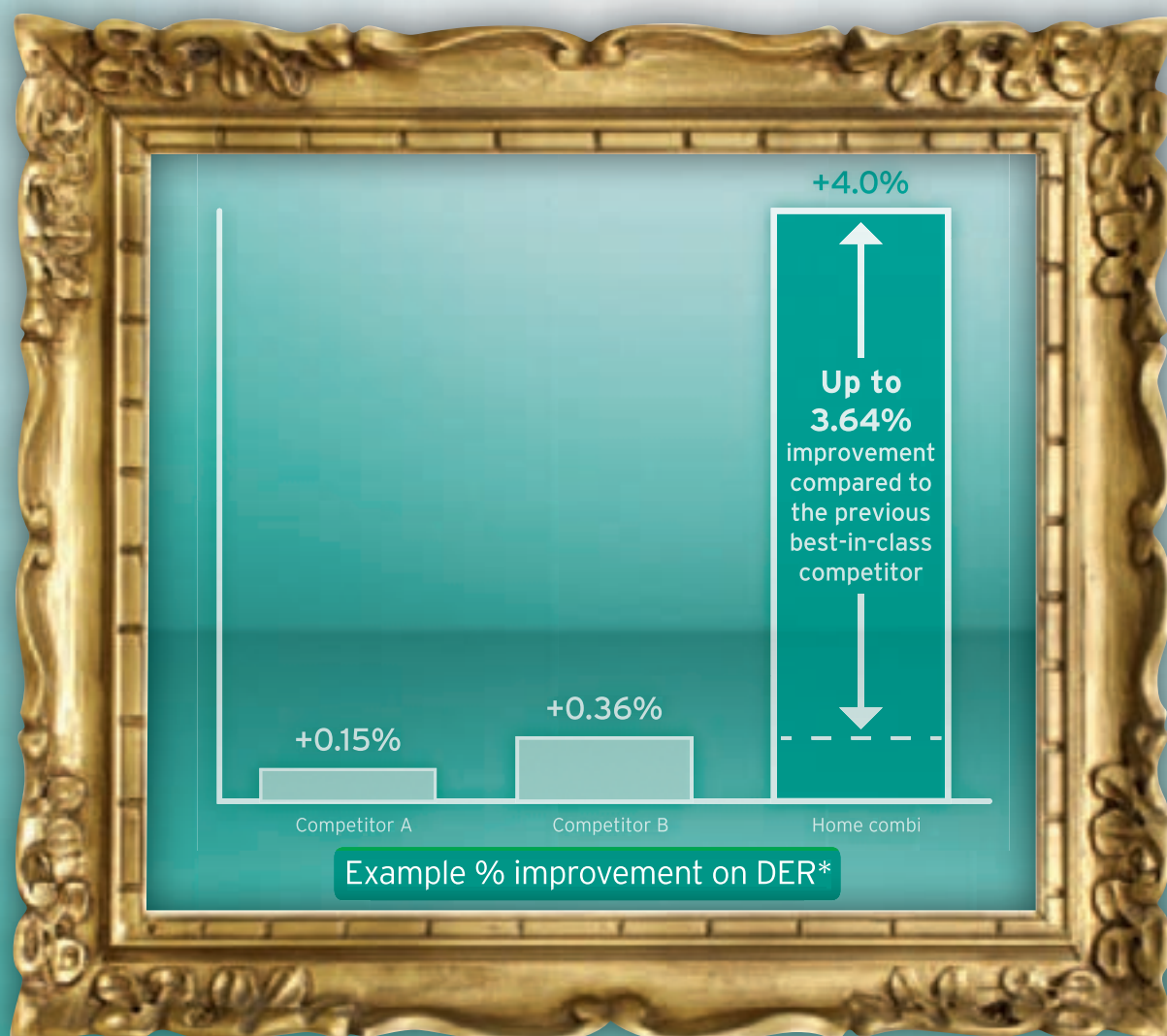
A large new park – the capital's largest in 70 years – will provide a sanctuary in the heart of the city. It provides a connection via a series of green links to seven other parks in the area, ensuring the development is connected with its surroundings and people can mix and move easily. Homes with front doors at street level encourage activity in the public realm, while the park's design ensures the landscape complements the surrounding architecture.

In and around the park, Lendlease has made a made a commitment to plant hundreds of new trees, ranging from native species such as English Oak, Field Maple and Lime, to ornamental trees such as Cherry and Himalayan Birch. They are in addition to the 122 mature trees retained from the previous estate, which are helping to attract

Continued on page 23...

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Enq. 110

wildlife, as well as naturally reducing surface water run-off and improving air quality.

Another highlight of Elephant Park is the 'communal grow' gardens located throughout the site. These spaces offer residents the chance to cultivate fruit, vegetables and herbs by working with their neighbours – whether by maintaining the space through a dedicated gardening club or simply by exchanging tips and tricks.

Bringing nature back to our cities

Lendlease has worked closely with a team of environmentalists to develop its Biodiversity, Ecology and Nature (BEN) strategy, underpinning the aspiration to create one of the most bio-diverse urban developments.

BEN encourages designers to use every surface of Elephant Park as a palette of specific BEN ingredients including rain gardens, green walls and green roofs, so that all the elements of the development – the parks, public squares, building walls and roofs contribute to the project's ecosystem. Architects have been challenged to come up with a palette that's beautiful for all 12 months of the year but which is also useful to nature, providing homes and habitat to bees and other wildlife.

Lendlease's approach seeks to provide a minimum 10 per cent uplift in biodiversity, and residents and visitors alike will be encouraged to enjoy this enhanced landscape whether on their feet or travelling by bike, as Elephant Park will also

introduce a number of new pedestrian and cycle routes through the development to encourage people to get out of their cars.

A place for all

A quarter of the homes at Elephant Park will be delivered as affordable housing and they will be delivered completely tenure-blind, which means that the architectural quality will be the same across all homes on the development. They will be delivered as a mix of affordable rent (maximum 50 per cent of market rent), social rent and shared ownership, meaning Elephant Park will be a place for people on a range of income levels and, therefore, a genuinely mixed community.

Elephant Park will build on the area's rich history and culture. There will be space for new shops and restaurants, with affordable spaces available for local business, offering access to a vibrant scene that brings together diverse cultures, from Eastern Europe to the Caribbean, Latin America and beyond.

These will sit alongside new leisure facilities, courtyards, cafes, community spaces and children's play areas, available for all the local community to enjoy.

Urban legacy

As a developer, Lendlease has established a reputation for successfully turning areas in need

of investment and regeneration into flourishing urban quarters. However, it is striving to make Elephant Park a game-changer. The company hopes that where Elephant Park leads today, others will one day follow.

By Rob Heasman is project director of Elephant Park for Lendlease



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www.canopiesuk.co.uk

Email: **greg@canopiesuk.co.uk**



canopies uk

Enq. 111

Product Focus

STEICO

Combining high performance STEICO Joist and LVL with the durable, higher density new durelisdek in one package gives house builders and developers a simple specification choice and ensures the floor deck performs fully to its designed potential. The floor unit is a vital part of the new build structure and any on site problems due to excessive deflection, movement or exposure damage can result in expensive remedial work and dissatisfied customers. STEICO offers design support and works with the supply chain to ensure products are correctly used, value engineered for efficiency and provide excellence in performance.

Enq. 112



Evinox Energy

Evinox Energy are happy to announce the launch of their new company website, which has been redesigned and updated to make it easier for Housing Developers, M&E Consultants and Social Housing providers to find information specific to their needs. The website provides comprehensive information about communal & district heating systems, including products, services and the market. Whether you're looking for the facts about the Heat Network (Metering & Billing) Regulations, or technical information to use in your design and product selection, the Evinox site can help. You can also find out about smart metering & communication networks.

Enq. 113



Topseal Systems

Topseal is excited to announce that it has recently become a partner of the National Self-Build and Renovation Centre and has just completed the installation of a permanent exhibition stand. Topseal has joined 200 exhibitors in the centres 'Trade Village' showcasing the Topseal system and the Topseal Overlay system to visitors. The National Self Build and Renovation Centre is the UK's only permanent venue for independent advice and support for self-builders and renovators. The centre is a unique and inspiring resource at the heart of the UK's homebuilding community, they provide knowledge and support needed to make informed decisions.

Enq. 114



Consort Claudgen

Consort Claudgen's new CRX1 wireless controller features a large easy-to-read backlit LCD display and offers up to six temperature settings a day, seven days a week. It has four different operating modes and features a 15-minutes Boost with temperature control to provide the maximum comfort quickly. The CRX1 wireless controller works with all Consort RX heaters and can operate different products at the same time, allowing total heating systems to be effectively controlled; for example, in an apartment, plinth heaters and panel heaters could use the same controller. This modern design controller is supplied with a security wall bracket and a table top stand.

Enq. 115



Cyberhomes

Smart homes technology specialists Cyberhomes have won this year's CEDIA Award for 'Best Home Cinema over £100,000'. The award recognises the technical excellence of a London home cinema room that was designed, built and delivered by Cyberhomes. The interior design of the room was just as important as the technology as the homeowner wanted to recreate the feel of the old cinemas he enjoyed visiting as a child. Cyberhomes Director Andy Mack said: "We're all really proud of this project at Cyberhomes, and for it to be recognised by CEDIA as an 'exceptional design' is very rewarding."

Enq. 116



Pegler Yorkshire

Rigorous testing has shown that Pegler Yorkshire's innovative Tectite push-fit system can cut installation times by up to 75 per cent without sacrificing durability and versatility. Using Tectite fittings, MEP's installers were able to create a prefabricated module containing three separate services four times faster than when using the threaded joint method. Tectite's flexible, easy-to-use system also proved twice as quick as press-fit. Tectite passed MEP's examination with flying colours, surviving a 500-mile trip around UK roads without picking up a single leak. For more information, please visit the company website.

Enq. 117




Cost efficiency never looked so good

Calor gas gives developers a low-cost, hassle-free energy solution that provides rural homes with all the benefits of mains gas:

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Geoff Hibbert, Engineering Manager,
Bloor Homes Midlands.

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Calor launches dedicated developer team



Calor has further strengthened its offering to rural housing developers with the introduction of a new specification division, making it the only LPG supplier in the UK with a dedicated team for the housebuilder and developer market. Matt Raybould has joined Calor as Specifiers' Consultant for the North and Scotland while Ian Thornton has been promoted to

Specifiers' Consultant for the Midlands and South. The team is headed up by Ian Digby, Specification Manager who has worked in the LPG industry for over six years and manages larger and more complex installations for major housebuilders.

Enq. 119

Kingspan TEK achieves BES 6001



Kingspan Insulation is once again taking the lead as its TEK and OPTIM-R product ranges became the first in their respective classes to achieve 'Very Good' BES 6001: Responsible Sourcing of Construction Products certification. The certificate covers all Kingspan OPTIM-R products manufactured at Kingspan's Herefordshire site and Kingspan TEK

panels produced at the facility in North Yorkshire. BRE Global also confirmed Kingspan Kooltherm, KoolDuct and Therma product ranges have retained their 'Excellent' ratings.

01544 387 384 www.kingspaninsulation.co.uk

Enq. 120

Gemini UPVC crowned Best Employer



Oldham's Gemini UPVC Ltd, a fabricator of industry-leading PVC-U systems from The VEKA UK Group, has staved off competition from 38 other companies to win a revered local business award. The annual Oldham Business Awards recognise companies in the region across 12 categories. Gemini picked up the award for Employer of the Year, topping a

shortlist of three finalists in attendance at the Queen Elizabeth Hall prize-giving. The company also reached the final three in the Business of the Year (£1m – £5m turnover) category.

01282 716611 www.vekauk.com

Enq. 121

New Fire Protection specialist for Nullifire



Andrew Taylor has been appointed as Fire Protection specialist for the Nullifire Sales Division of tremco illbruck. Andrew is a specialist in passive fire protection. After graduating with a PhD in "The Material Science of Intumescent Coatings", he joined Leigh's Paints which was recently taken over by Sherwin Williams. During his 25 years with them, he developed

considerable experience in this field and has operated all over the world. Andrew comments "I am looking forward to working with this well-respected name in the industry." For more information on tremco illbruck, visit the company website.

Enq. 122

Invasive Weed Control Conference agenda



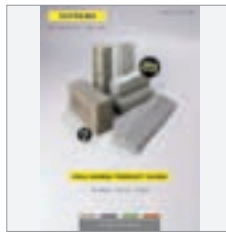
Leading figures from across the public and private sectors will be discussing cutting-edge strategies to deal with non-native invasive plants at a national trade body conference. The Property Care Association's second annual Invasive Weed Conference features informed speakers with expertise in areas including law, academia, ecology and technology.

Entitled 'Risk, Roots and Research' the event takes place on 22nd November at the Institution of Engineering Technology (IET) Savoy Place in London.

0844 375 4301 www.property-care.org

Enq. 123

Supreme publishes pocket guide



Pre-cast concrete specialist, Supreme Concrete, has published a handy pocket-size guide designed to help stockists and users sell, select and install its market leading range of cast concrete structural and fencing products. The new pocket guide has been designed for display and distribution at point-of-sale, and is a must for every stockist counter and site

office. Easy-to-use, it contains valuable technical guidance, as well as product applications, enabling customers and counter staff to quickly decide on the most appropriate solution for each job.

01487 833317 www.supremeconcrete.co.uk

Enq. 124

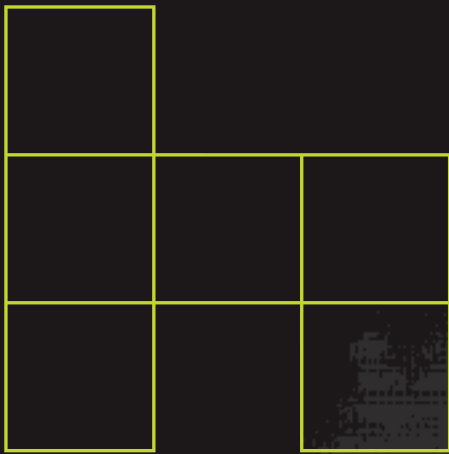
Business success means expansion for Reynaers



Aluminium systems company Reynaers has outgrown its existing office and warehouse facilities in Birmingham, thanks to significant growth over recent years. The new headquarters is a major investment of £6 million for Reynaers, and proves the ongoing commitment the company has to the UK market. Justin Hunter, managing director at Reynaers, said: "We are all really looking forward to moving to our new premises this winter. We have purchased an existing building which has undergone a complete redesign. Work is well underway on an extension and complete refurbishment and refit of the interiors. This will give us a modern, purpose-built facility that can really showcase our aluminium windows, doors and curtain walling products. The building envelope will feature the new Hi-Finity corner solution, Structurally Clamped curtain wall, and parallel opening windows." The new premises will have more than twice as much warehouse space to allow greater stock holding and shorter lead times. To allow for future expansion, more than double the amount of office space will be provided to accommodate more staff. A new canteen, breakout areas, a state-of-the-art gym and other recreational areas will be available, as well as a spacious communal outside space.

0121 421 1999 www.reynaers.co.uk

Enq. 125



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“

Homes 2015 was an excellent couple of days which really helped us validate our thoughts on our future property strategy. At Homes 2016, I would like to hear how regeneration and asset management combined can bring about neighbourhood sustainability.

Russell Thompson, Director of Property Services for Tees Valley-based Thirteen Group

”



“

“I really enjoyed the Homes 2015 conference and in particular finding out from others what they are doing to support women wanting careers in construction. In November I would like to see whether the government is prepared to invest in new affordable rented housing post-2018 as well as housing for sale.”

Jez Lester, Assistant Chief Executive (Asset Management) at Incommunities Group based in West Yorkshire

”



Home ventilation for all with Airflow Entro



Airflow Developments has launched the latest addition to its Duplexvent MVHR range. The Duplexvent Entro utilises high performance heat recovery technology to provide optimum efficiency and protection against harmful indoor air contaminants. Available in DV250, 300 and 400 models, Airflow's latest product offers a simple installation method as well

as easy to use controls making it an ideal option for domestic properties. The Entro range consists of side entry supply and extract ventilation units, suitable for use in dwellings up to 220m².

01494 525252 www.airflow.com

Enq. 126

Polypipe Ventilation launches BIM Library



Polypipe Ventilation has set up a BIM (Building Information Modelling) Library, available free of charge. The Polypipe Ventilation BIM Library features an extensive array of products, including energy saving, whole house Silavent HRX Mechanical Ventilation with Heat Recovery (MVHR) appliances and Silavent CMX Mechanical Extract

Ventilation (MEV) units, as well as award winning Domus Radial semi-rigid duct systems and its full range of Domus rigid ducting and accessories, which incorporates Domus Thermal duct insulation and duct sound attenuators.

Enq. 127

Unique Modular Wet-Floor System



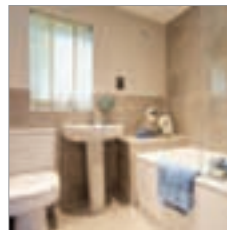
The unique Modular Wet-Floor System from **CCL Wetrooms** – a UK leading wetroom specialist – allows any size or shape of wetroom to be quickly and easily created on a timber floor. The key to the system is its design flexibility, allowing a stunning linear drain to be situated in almost any position within the shower area. As the trend towards longer and

narrower floor grills continues, particularly along the back wall of the shower, the Modular Wet-Floor System is the ideal option for creating a stunning, up to the minute wetroom.

0844 327 6002 www.ccl-wetrooms.co.uk

Enq. 128

Ventilation at former Grenville College site



Vortice has supplied energy efficient ventilation fans to Newland Homes' new Grenville Place site in Bideford. Vortice has supplied the stylish Punto Filo and the ultra-modern Vort Quadro fans to this development. Both these ranges of fans offer the houses an energy efficient and sleek design within the kitchen, utilities and bathrooms, ensuring the desired

ventilation rates are achieved but not compromising on style. For further information about both the Punto Filo and the Vort Quadro fans, visit the website.

01283 492949 www.vortice.ltd.uk

Enq. 129

Saniflo extends Kinedo Moonlight range



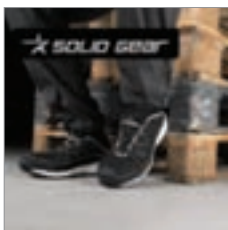
Saniflo has further extended its range of prestigious Kinedo shower cubicles to include a quadrant version of its popular model, Moonlight. Previously only available as a corner unit, the extremely versatile design can be fitted with any shower, allowing for complete customisation and integration into any bathroom, whether traditional or

contemporary. With its understated elegance and neutral styling, the Moonlight features a brushed aluminium effect panel that can be easily drilled for any fixings.

020 8842 0033 www.saniflo.co.uk

Enq. 130

Solid Gear athletic safety trainers



Part of the **Hulafors Group UK**, Solid Gear delivers top quality safety footwear for professional craftsmen. With modern, sporty looks, it's Athletic range of Safety Trainers brings together superb functionality and top class safety in a range of styles, designs and colours to create versatile safety shoes that are well suited to a variety of work tasks.

Superlight high performance EVA midsoles combine with anti-slip rubber outsoles and lightweight, breathable uppers to ensure optimal comfort and functionality. There are six different styles which deliver market-leading comfort.

Enq. 131

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Enq. 132

Cementing our past and future

From the ancient world to the present day, Kim Barton of IMS Consulting (Europe) explains why concrete is the most commonly used material in construction, and how it can be made more sustainable in future.

Cementing materials have been used widely, from as far back as the ancient world. The Romans were probably the first to master cement, which helps to explain why many of their buildings have survived for so long. In the first century BC, the Roman architect and engineer, Pollio, wrote the 'Ten books of Architecture' that discusses 'pozzolanic' cement made from volcanic ash and lime from the village of Pozzuoli near Vesuvius. The cement was used in breakwaters at Pozzuoli Bay that still stand today, despite being eroded by the sea for over 2000 years.

When the Roman Empire fell, concrete expertise was all but lost, not being rediscovered until two centuries later. Joseph Aspidin was granted the first patent for Portland cement and the process of roasting limestone and clay before grinding into a powder to make artificial stone. His son William refined the process, creating a material that is very similar to the cement still used today. The process requires limestone and clay to be heated at temperatures approaching 1000°C, where they break down to provide the element of cement called 'clinker', which is then ground into a powder and gypsum added. Water and aggregate is then used to convert the cement mixture into concrete. Although cement and concrete are often used interchangeably, cement

is actually only one of the ingredients of concrete, making up only 7-15 per cent by weight of concrete's total mass.

Today, concrete is the single most widely used construction material; besides water it is thought to be the most commonly used material on earth. As populations increase, with city populations estimated to double by the middle of the century, it is anticipated that demand for cement can only grow. However, this growth presents a problem; cement production contributes five per cent of global annual carbon dioxide emissions. The reason that it has such a big carbon footprint is because of the sheer quantity used. In fact, concrete manufacturing uses very little energy compared to other materials, with recycled steel requiring up to ten times more energy. Despite its carbon footprint, concrete has some core sustainability attributes that are often overlooked.

As we can see from the Romans' use of the material, concrete is incredibly durable – withstanding 2000 years of sea erosion can safely be described as sustainable. Concrete's resilience can make sure that buildings are able to last for hundreds of years, with limited maintenance costs. Its durability means that fewer resources are required for construction over time. Minimal maintenance is also a great sustainability asset. Materials such as timber may require treatment

over time for woodworm or termite, requiring the use of harmful chemicals. In addition, concrete does not melt or burn.

Concrete is a great insulator and can make sure that a building is energy efficient and maintains a stable temperature. Concrete will also absorb heat and release it over several hours, usually at night. Also, using concrete minimises the loss of energy from a building due to the minimal amount of joints or connections.

The resources necessary to make concrete are sand, aggregates and limestone; all naturally abundant. Producing concrete locally means that transport is limited and local communities benefit from the economic growth.

The cement industry is coming together, companies beginning to look at how they can work together to reduce emissions. At last year's climate summit in Paris, the cement industry released its Low Carbon Technology Partnerships initiative (LCTPi). The LCTPi is led by the World Business Council for Sustainable Development and looks across nine sectors to develop unique, action-oriented programmes. These bring together companies and partners to accelerate the development of low-carbon technology solutions to stay below the agreed 2°C rise in average temperatures. The initiative has gathered over 150 global businesses

with 70 partners to work collaboratively on the climate challenge. The programme for cement is looking at how it can reduce emissions through the identification of existing and new technologies, and promoting cross-industry collaboration.

The Cement LCCTPi was led by the Cement Sustainability Initiative (CSI), a global effort by 24 major cement producers with operations in more than 100 countries who believe there is a strong business case for the pursuit of sustainable development. Collectively these companies account for around 30 per cent of the world's cement production and range in size from very large multinationals to smaller local producers.

Concrete can also be beautiful. It has of course had its ugly moments and its association with 'Brutalism' could be misinterpreted as it being 'brutal'. However, it's actually raw and mouldable, creating buildings unlike any others. In a book called 'The Brutal World', released this year, Peter Chadwick brings together impressive concrete structures from around the world, demonstrating concrete's versatility and beauty. Among the impressive buildings featured are the Centro de Exposições do Centro Administrativo, Bahia, Brazil, 1974 by João Filgueiras Lima and the TWA terminal at JFK Airport in New York.

Cement and concrete are undoubtedly fascinating materials that have shaped architecture and our built environment. The Roman



structures that pioneered the material, and still stand today, may hold the key to reducing concrete's carbon footprint and increasing its sustainability. Researchers analysed the Pozzuzoli Bay breakwaters and believe they have uncovered its secrets. Analysis pinpointed why Roman concrete was superior to most modern concrete in durability, why its manufacture was less environmentally damaging and how these improvements could be adopted in the modern

world. Ongoing research, collaboration, new technology and initiatives are all helping to reduce the carbon footprint of cement.

With its many sustainability attributes and our dependence on it, cement is undoubtedly helping to build our future. We need to recognise that there is no single solution to climate change, no perfect material or building. But, we do need to understand the whole life-cycle of materials, their benefits and their flaws.

Enq. 133



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Enq. 134

Wraptite-SA conquers airtightness at 1066



Wraptite-SA airtight membrane from **A. Proctor Group** has been specified to achieve a highly efficient building fabric as part of a concept to create a terrace of five Zero Carbon homes in a site close to the historic Hastings Castle. The design has transformed a derelict site into a modern development combining high quality with highly efficient homes, during the year,

which coincides with the 950th anniversary of the battle. The use of Wraptite-SA makes a significant contribution to a building's thermal performance by preventing lateral air movement.

01250 872261 www.proctorgroup.com

Enq. 135

Snickers RUFFWork – Heavy duty clothes

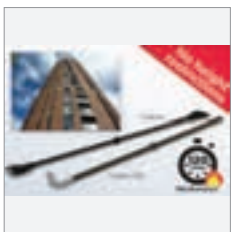


Part of the Next Generation Workwear range, **Snickers' RUFFWork** working clothes are modern, heavy-duty garments that combine an amazing fit with reinforced features throughout. Packed with loads of functionality, the trousers are specially designed for those professional craftsmen who really rely on their gear in demanding on-site working

conditions. The special 'Dobby Pro' fabric used in these garments provides a unique combination of comfort and durability. The 'Cordura 1000' reinforcements are up to three times more durable than regular Cordura with a special DWR coating.

Enq. 136

Ancon Teplo reaches new heights



Following recent fire tests at BRE Global, **Ancon** is pleased to confirm that its innovative basalt-fibre, low thermal conductivity wall ties, Teplo-BF and Teplo-L, offer 120 minute fire resistance, making them suitable for buildings of any height (subject to structural performance), in line with Building Regulations, Approved Document B. This

extended fire testing brings to an end the previous 18m building height restriction. Teplo-BF and Teplo-L ties are now fully comparable with the fire resistance of stainless steel wall ties.

0114 275 5224 www.ancon.co.uk

Enq. 137

Worker of the Year 2016 – a month to go



Entries for UK WOTY have been flooding in, but there is still time to enter and win the incredible prizes, including £250,000.00 cash, a Honda Jazz car, a Honda Crosstourer 1200cc motorbike, a Honda Marine Rib boat, a year's free shopping at ASDA, a luxury holiday and many more goodies. Sponsored by workwear giant **Dickies**, in association

with Honda and ASDA, the competition is open to anyone in the UK who works, just go to the UK WOTY website and answer two simple questions.

0191 258 2758 www.dickiesworkwear.com

Enq. 138

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Enq. 139

Latest U-Power workwear and footwear



U-Power's inspiring new 2016 catalogue of original, Italian-designed work-to-leisure safety clothing and footwear is newly available for download from the website. Packed with information and ideas on the complete range of U-Power's prestigious products, the new catalogue features workwear and footwear that not only protect people in the workplace from

injury and discomfort, but keep them happy and productive everywhere they go. U-Power's footwear collection has been increased by an additional 130 unique styles to a massive 340 models, including several new designs for the UK market.

Enq. 140

Western Red Cedar Boards create a home



Western Red Cedar Trim Boards have always been immensely popular with Landscapers and Garden Designers building stunning slatted screen fences however they are a perfect option for cladding purposes too. Silva Timber's Western Red Cedar 19x38mm Trim Boards were used extensively on the exterior of a residential project in

Southwest London. By using Western Red Cedar rather than a man made material, the home was given warmth and character. The defined horizontal lines give the structure a strong urban presence.

01514 953111 www.silvatimber.co.uk

Enq. 141

VOC barrier provides flexible protection



The A. Proctor Group has extended its range of ground gas protection products to include Protech VOC Flex, a new and innovative solution in membrane technology, specifically to make the development of brownfield sites safer and easier. Protech VOC Flex is a high performance six layer flexible proprietary reinforced VOC barrier suitable for use

on brownfield sites that require protection from dangerous contaminants such as hydrocarbons. For more information or to view more visit the website.

01250 872261 www.proctorgroup.com

Enq. 142

Engel LIGHT keeps you cool



Known for its long lasting and superbly fitting workwear, Danish company, F Engel, is now introducing its range of 'LIGHT' garments ready for the Spring and Summer. Slightly lighter than the company's standard selections, but still maintaining the same levels of protection and practical benefits, the 'LIGHT' two-colour range is made from TC Twill

65 per cent polyester/35 per cent cotton. 250g/m², ensuring wearers are kept comfortably cool both indoors and when working outside in warmer weather conditions. For more information, please visit the company website.

Enq. 143



More is more from Simpson Strong-Tie

The 2016/17 edition of Simpson Strong-Tie's flagship catalogue is here. Alongside the UK's largest range of connectors for timber and masonry construction, sit over a dozen new products and several range extensions, including: Post Bases; I-Joist hangers; Angle Brackets; Structural screws and Masonry Ties. The catalogue is also brimming with installation advice, performance characteristics and safe working loads. Sales Director, Jon Head explains: "It's been a busy year for Simpson Strong-Tie, with all new ranges for Light Gauge Steel and CLT construction, as well as our significantly expanded nails and screws ranges. We've really pushed the boat out to increase our core range though, which, coupled with our rapid made-to-order service, we really can say that if we don't have it – you don't need it". The latest version 'Connectors for Timber and Masonry Construction' is available from Simpson Strong-Tie on request or from the website.

01827 155600 www.strongtie.co.uk

Enq. 144



Axter showcase FORCE DALLE

Axter is proud to provide the waterproofing for Berkeley Homes' prestigious Victory Pier, an award winning development in Gillingham comprising one, two and three bedroom apartments overlooking the River Medway. The development provides ample amenity space with green podium areas, balconies and terraces, creating luxury waterside living. Axter specified their pioneering FORCE DALLE system, a hybrid structural waterproofing system combining the proven benefits of hot melt with advanced bituminous membrane technology. Due to its versatility, FORCE DALLE offers a range of choices for designers and can be used in all roof construction types (warm, inverted, cold), on all structural decks (concrete, metal, timber) and can be combined with all roof finishes (green, brown, blue). The system was installed by Tilbury Contracts, approved Axtershield Installer, following the key steps: Prepare, Prime and Torch. Installation is quick and simple, and the result is a robust, reliable waterproofing system that is guaranteed for a minimum of 20 years. See how good working relationships, skills and expertise made waterproofing Victory Pier a success.

01473 724056 www.axter.co.uk

Enq. 145

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Enq. 146

NEW FROM DURAL

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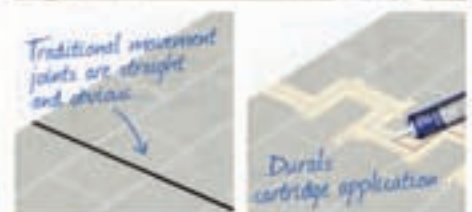
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- Cost effective

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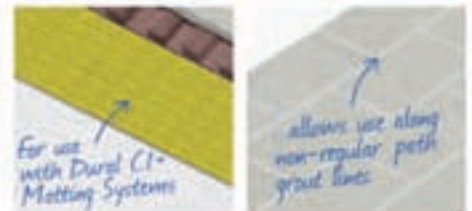
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Build show stand no B3/308

Enq. 147

The award-winning show returns to Build on its success

The UK's build community will once again come together for this year's Build Show, being held as part of the award winning UK Construction Week from 18-20 October at the Birmingham NEC.



Building on the success of last year's show, which attracted visitors with a combined purchasing power of £36bn, the Build Show will return with many of the industry's biggest names in attendance. The show provides the industry with a space to network, develop and grow – bringing together the right people, in the right place, at the right time. This year's event promises to be the most comprehensive exhibition in decades with hundreds of exhibitors and several unique feature areas.

As well as forging new business opportunities and sourcing new products, the Build Show plays an important role in cultivating debates and solutions to issues holding the industry back. The discussion will be further amplified through the support of industry leading trade associations such as the Royal Institute of British Architects (RIBA), TRADA, the Builders Merchants

Federation (BMF), the Construction Products Association (CPA) and the Chartered Institute of Builders (CIOB) who will all be in attendance.

What's on at the show?

From SMEs to national housebuilders, the Build Show promises to have something for everyone. Already signed up to exhibit are some of the biggest names in construction, with leading sector organisations entering into exciting new partnerships to further facilitate business and learning at the show as well.

One such partnership can be seen with the announcement of the Builders Merchant Federation (BMF) Pavilion. Designed to offer a specific platform for merchants and suppliers to meet and do business, the BMF Pavilion is not to be missed by attendees who really want to make

the most of the show.

Equally, the National Federation of Roofing Contractors (NFRC) has pledged its support to a dedicated roofing section of the show. James Talman, NFRC chief executive, said: "The exhibition provides our sector with a great platform for our members and ourselves to engage with stakeholders across the whole spectrum of the industry. We look forward to fully contributing with advice and in debates during the week."

As a result of the strong support of the show by leading associations, its comprehensive seminar programme is full of high quality content that will make visiting well worthwhile. The Home Building Theatre will provide the perfect opportunity to get a heads up on the latest developments in the industry and represents the first major event in the industry following the EU referendum.



Registering to attend the Build Show is quick, easy and free and can be completed by visiting www.buildshow.co.uk. What's more, by completing the form trade visitors can access all nine shows taking place at UK Construction Week

Testimonials

Stephen Henagulph, business to business manager at Screwfix commented: "We were really impressed with the great response our stand received over the three days of last year's show. As a result of that success, we decided we would take a much larger stand and play a far bigger role in the Build Show this year!"

Jamie Govier, managing director at Easytrim Roofing & Construction Products Ltd, commented: "We've been really impressed with UK Construction Week, there was a lot of activity and a real interesting mix of visitors."

Chris Lynch, managing director of APC Solutions, commented: "As one of the largest and most exciting construction and build events in the UK exhibitions calendar we felt it essential that APC was present and exhibiting in 2016, we feel it will be the perfect event to showcase new products and reach new clients within the sector."

James Fairclough, UK marketing manager at Cemex, commented: "The show has given us a great opportunity to showcase our innovative products and the value they can add for customers and end users. We're pleased to have been a part of the first UKCW and feel that it's been a great success."





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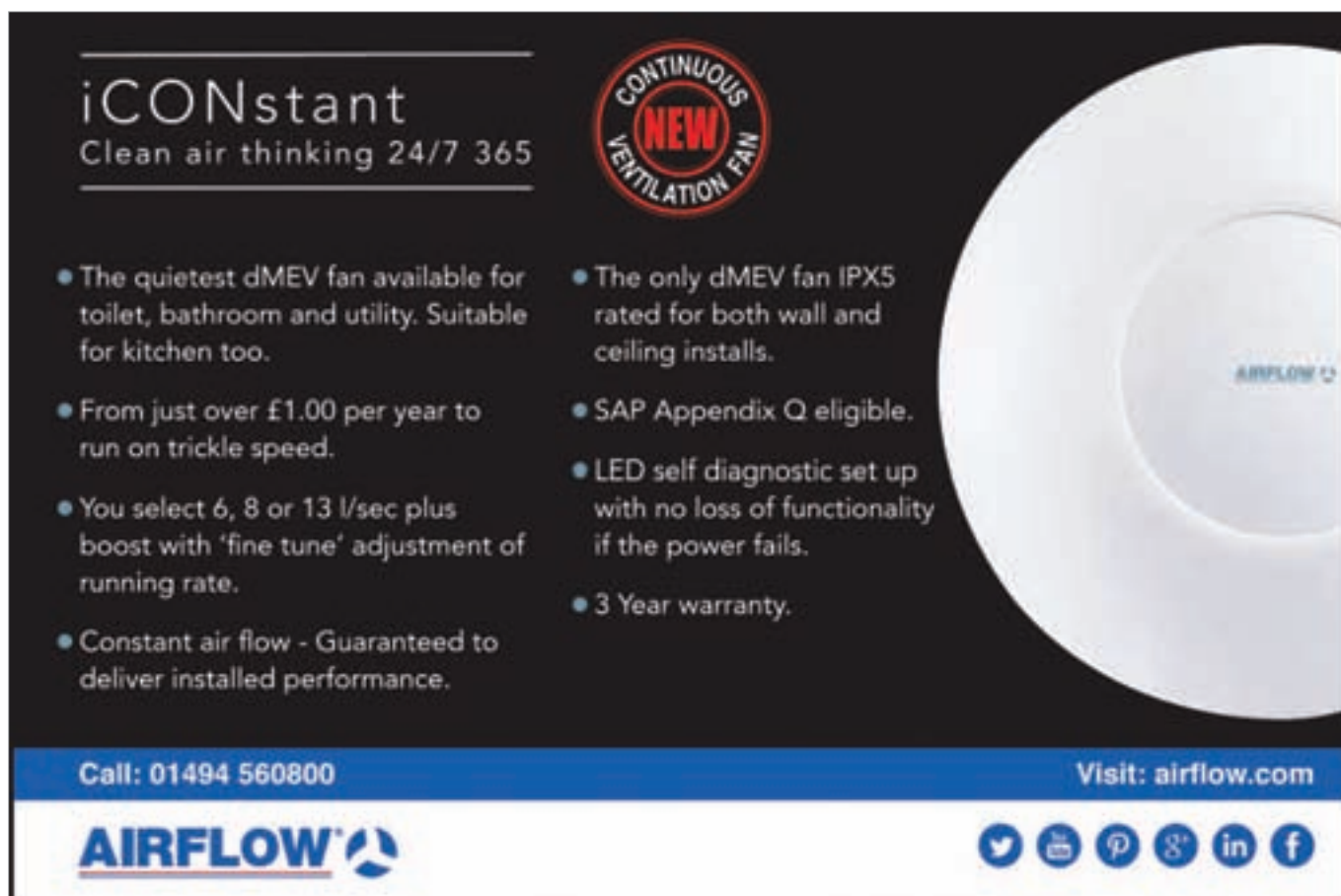
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UKCW show stand no H4/601

Enq. 149



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UKCW show stand no H4/720

Enq. 150

UK CONSTRUCTION WEEK | 2016

18-20 OCTOBER | NEC | BIRMINGHAM



Nine shows under one roof

The award winning UK Construction Week returns to host more than 24,000 trade visitors and 650 exhibitors at the NEC in October.

The award winning UK Construction Week is back, following its successful launch in 2015. Bringing together nine shows under one roof to form the most comprehensive industry event in decades, UK Construction Week will return to the Birmingham NEC on 18-20 October 2016.

With some of the industry's biggest names already signed up visitors will not want to miss the show. In 2015, UK Construction Week attracted more than 24,000 trade visitors and 650 exhibitors and this year's show is set to be even bigger, building upon the solid platform of the inaugural event.

Not only will the show provide visitors with the chance to benefit from exclusive deals from leading brands but it will also give them the first opportunity to network with fellow professionals since the EU referendum, learn more about the latest legislation and the future of the construction industry, see the latest innovations first hand and progress their careers through learning new skills. The show this year will be hosted by some of the biggest names in broadcasting and beyond including Victoria Fritz, George Clarke and Steph McGovern. A full seminar schedule can be found on the website.

For exhibitors, the event provides a unique opportunity to interact with decision makers and purchasers from across the industry as 70 per cent of the UK's top housebuilding firms, 60 per cent of the UK's top architectural firms and all of the



UK's top construction companies attended the show last year. This unique mix of visitors is why so many exhibitors have rebooked from last year's event and is the key behind UK Construction Week's success as it brings the whole industry together.

Seminars

UK Construction Week will benefit from the most comprehensive seminar schedule of any UK

trade event. The Main Stage will tackle top-level challenges and opportunities faced by the construction industry, while the individual shows will delve into sector specific issues.

These sector specific seminar areas include: the Home Building Theatre (Build Show), the BIM Prospects Theatre (Build Show), the Timber Focus Theatre (Timber Expo), the Infrastructure Hub (Civils Expo), the HVAC Hub (HVAC 2016), the Surface & Materials Hub (Surface and Materials Show), the Energy Hub (Energy 2016), the REA Seminar Theatre (Energy 2016) and the Smart Buildings Hub (Smart Buildings 2016).

Who's exhibiting?

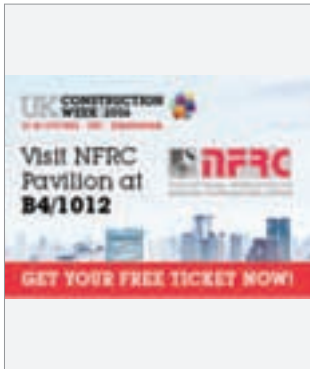
With the show just around the corner, more and more industry leaders continue to sign up to exhibit at this year's event.

One of the most reputable names exhibiting this year is JCB, showcasing its products at the Build Show. Also joining JCB at the show will be the UK's largest multi-channel supplier of trade tools Screwfix plus Caterpillar Inc.,

Continued on page 39...



NFRC Roofing Pavilion coming to UK Construction Week 2016



The **National Federation of Roofing Contractors (NFRC)** in partnership with the Build Show, will be hosting a dedicated roofing pavilion at the show this coming October as part of UK Construction Week. The NFRC Pavilion will be hosting some of the biggest names in the roofing industry including Fixfast, IKO Polymeric, Kingspan Insulated Panels, Quinn Building Products, Proctor Group Ltd and Topseal Systems Ltd. NFRC will also be involved in a number of panels during the three-day show, discussing the collaborative approach to the construction supply chain to Health, Safety and Wellbeing.

James Talman, NFRC Chief Executive, commented: "We are pleased to support the Build Show and to showcase standards and excellence within our sector. The show provides our sector with a great platform for our members, and ourselves to engage with stakeholders across the whole spectrum of the industry. We look forward to contributing throughout the week with advice and debates."

For all the latest news on the NFRC Pavilion and book your free tickets – head to the UK Construction Week website.

020 7638 7663 www.nfrc.co.uk

UKCW show stand no B4/1012

Enq. 151

Hitachi showcases new heat pump product line-up at UK Construction Week



Hitachi's expanded Yutaki air source heat pump product range is one of the widest on the market and is being showcased at HVAC 2016 (part of UK Construction Week) at the NEC from 18th-20th October.

Completely redesigned to meet the needs of specifiers, installers and homeowners – and utilising common components, common outdoor units and simplified design to benefit both end users and installers – the extended Yutaki product line-up includes a total of 70 new models which are more compact for small installation spaces and are lighter weight for easier handling. The introduction of common components and controllers, streamlines product training requirements, reduces the need for carrying multiple spares, and lowers installation and maintenance time. Performances have also been improved, with higher COPs, better seasonal efficiencies and higher capacities. All Yutaki models also be supplied with a new Cooling Kit accessory to enable both heating and cooling modes. The Yutaki range comprises four models, Yutaki-S split, high temperature Yutaki-S80, Monobloc Yutaki-M and the new all-in-one Yutaki-SCombi. Hitachi's innovative Yutaki-SCombi integrated solution has been designed specifically for the UK market.

01628 585 394 www.hitachiheating.com

UKCW show stand no H4/601

Enq. 152

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Grand Designs show stand no B28

Enq. 153

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UKCW show stand no T3/200

Enq. 154



Festool, Milwaukee and Manthorpe Building Products Ltd.

Civils Expo will see one of the world's top civil engineering companies CEMEX exhibit. In the UK, CEMEX generates around £775m in annual sales and the company has more than 40,000 employees worldwide. In addition to CEMEX, Tideway Tunnels and Instant Upright will also be present.

Another historic company taking part in UK Construction Week is timber provider Vandecasteele, exhibiting at this year's Timber Expo. Other companies attending the show include W. Howard Group, Arch Timber Protection and Rothoblaas. Exhibiting at HVAC 2016 will be UK's leading insulation manufacturer Knauf Insulation as well as Airflow Developments Ltd and Hitachi.

Ranking amongst the top six power companies in the country, Scottish Power will be exhibiting at Energy 2016 alongside British Gas and Pavegen. At Plant & Machinery Live, global provider of construction machinery Case Construction Equipment will be showing its latest innovations as well as GT Lifting Solutions Ltd.

Filling the roster at Smart Buildings 2016, Finnish acoustics specialist Framery will showcase its products alongside Theben, Savant and Voltimum. This year's Surface & Materials Show sees established brands such as Johnson Tiles and FunderMax returning to the show alongside French newcomers Panaget.

What else is there to do at UK Construction Week?

Following the success of last year's event, UK Construction Week will once again offer much more than just access to hundreds of industry

leading exhibitors and associated products and services. With several new industry awards celebrating excellence in the sector the entertainment programme will also see the return of its popular beer and ale festival and much more.

Free to enter for all UK Construction Week visitors and exhibitors, the beer and ale festival will provide a vibrant and social way to unwind at the show with more than 30 craft ales to try and live music. Entry is completely free as part of visitors' trade registration to UK Construction Week and there will be a selection of gourmet food options from various stalls surrounding the venue.

The world-renowned Genting International Casino at Resorts World Birmingham will be hosting a dedicated UK Construction Week casino night on the second evening of the show (19 October). Just a five-minute walk from the doors of UK Construction Week and conveniently located to nearby hotels, the night offers a chance for visitors and exhibitors alike to relax, network and perhaps chance their luck in one of the many games on offer.

Furthermore, UK Construction Week will host a number of Innovation Hubs. Construction is an innovative industry and there are exciting products and services in the pipeline that will revolutionise how we build. These hubs will showcase the latest products and prototypes, many of them seen for the first time.

Taking place at the Birmingham NEC from 18-20 October, UK Construction Week combines nine shows in one location. Visitors are able to attend Timber Expo, the Build Show, Civils Expo, the Surface and Materials Show, Energy 2016, Plant & Machinery Live, HVAC 2016, Smart Buildings 2016 and Grand Designs Live.

Testimonials

Dr David Hancock, head of construction, infrastructure and projects authority, commented: "Having participated in the first UKCW and been part of the steering group, it was very apparent to me that this event has the potential to change the image of construction. It can act as a catalyst for all of the construction supply chain, from products and manufacturers to end users, to meet and do business and be a place for us all to tackle the challenges we face head on. This is an incredibly exciting time for construction in this country and UKCW can make sure we all benefit."

Alan Siggins, managing director at Airflow Developments Ltd, commented: "UK Construction Week has enabled us to reach key specifiers, contractors and installers in the field. Everybody at UKCW was extremely professional and helpful, and we've thoroughly enjoyed meeting so many customers face to face at the event."

Nicola Bagworth, general manager at JCB Industry commented: "We are looking forward to exhibiting at the Build Show and highlighting the unique benefits of JCB's telescopic forklift, the JCB Teletruk. It's a platform to show the time and space saving benefits this innovative product offers the industry."

Amit Ravat, managing director of Retrotouch and Lithe Audio, commented: "Exhibiting at UK Construction Week is a key event in our sales and marketing calendar, being centrally based in the UK and housing several shows in one event enables our company to maximise exposure of our product range at great value in a short space of time."

Nathan Garnett, event director for UK Construction Week, commented: "As the largest event dedicated to knowledge sharing, championing good practice and problem solving, UK Construction Week is the environment for the whole industry to look, talk, plan, learn and do business; providing answers for what, when, where and how we build our future. Research proves that the biggest attraction for visitors is the vast number of products and diverse range of services on offer. There is no other construction event that can compete at this level."

Registering to attend UK Construction Week is quick, easy and free and can be completed by visiting www.ukconstructionweek.com

Managing the condensation risk: solid walls

As the Government strives to improve energy efficiency in the UK housing stock, existing methods of predicting condensation do not resolve problems with upgrading solid walls. HBD reports on a new software solution.



The current housing stock in the UK of solid walls, and hard to treat walls, is causing a serious issue on how best to address the thermal solution. Iain Fairnington, technical director of the A. Proctor Group explains: "The problem with existing solid walls is not always recognised and designers would be wrong to assume the conditions are likely to be similar to any other wall conditions. The existing walls, in their current state, will be breathable, and can withstand precipitation as they will dry out throughout the year as there is nothing in place to stop this vapour movement externally or internally, with either a vapour control layer or render.

"When an upgrade of internal insulation is introduced the whole dynamic of the wall is changed, as depending on the insulation and VCL layer, vapour cannot pass through the wall and heat cannot dry out the wall from internal heat drive. This can be detrimental to the wall structure."

Avoiding excess condensation

Professionals involved in the design and construction of buildings should consult BS5250: 2011 'Code of practice for control of condensation in buildings.' As the authoritative document for the industry on the subject, BS5250 states the following:

"In order to avoid the occurrence of excess condensation, which can result in mould growth and damage to building fabric and/or contents, designers should assess the amount of water vapour likely to be generated within the building

and determine the resultant increase in internal vapour pressure above that of external air. They should then give careful consideration to the physical properties of the construction separating inside from outside.

"Designers should consider the effects of the external climate, which, being site related, is beyond direct control but may be moderated by the building's form and orientation in relation to topography, prevailing winds, sunlight and over-shadowing.

"There is a growing understanding of the importance of condensation control for all areas of the building envelope, in order to control moisture"

"Designers should also bear in mind that the rate at which humidity is generated can change over time as buildings are adapted to different functions or levels of occupancy; furthermore, the cost of energy might well deter occupants from maintaining an adequate heating regime."

Measuring the risk of condensation

Key guidance on assessment methods in relation to the risk of condensation in buildings is given within BS EN ISO 13788:2012: "Hygrothermal performance of building components and building elements. Internal surface temperature to avoid critical surface humidity and interstitial condensation methods."

BS5250 makes the following recommendations with regard to risk assessment:

"Designers should assess the risk of surface condensation, mould growth and interstitial condensation using the methods described in BS EN ISO 13788, which determines three criteria for assessment.

- 1) The design of the structure and the heating system should ensure that, over the coldest month, the average relative humidity at internal surfaces does not exceed 80 per cent, the limit for mould growth.
- 2) Any interstitial condensation, which might occur in winter, should evaporate during the following summer, preventing an accumulation of moisture year on year.
- 3) The risk of degradation of materials should be assessed in terms of the maximum level of condensate, which might occur."

Assessment methods

There is a growing understanding of the importance of condensation control for all areas of the building envelope, in order to control moisture, and protect both the building fabric and the health of its occupants. Previously the methods for assessing the likelihood of condensation have been limited, and at best offered a simplified average with limitations.

BS5250 highlights the need for greater accuracy of measurement with the following statement: "Designers should be aware that BS EN ISO 13788 considers only the risks arising from the diffusion of water vapour through the building fabric; it does not take account of the

much greater risk of condensation occurring as a result of air leakage, which transports water vapour through gaps, joints and cracks in the building fabric."

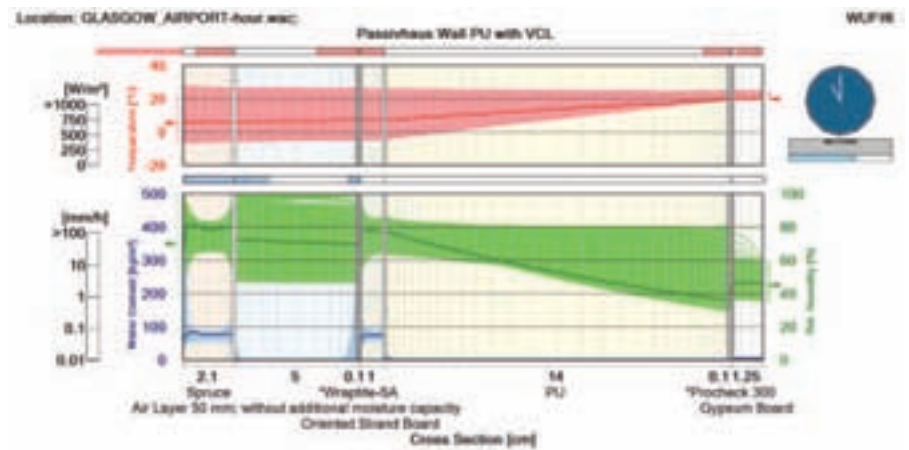
WUFI calculation

Traditional methods of assessment in the past have been based on the Glaser method – a standard static interstitial moisture calculation. More designers are recognising the limitations of this method, which offers a simplified approach, developed back in 1958 for use in lightweight buildings.

The simplified calculation used by the Glaser method is based on average monthly temperatures, vapour pressure and steady state conduction of heat to determine if critical condensation points are reached within one year.

The Glaser method identifies vapour diffusion as how easily water vapour can pass through the fabric of the building. However, the limitations of this approach are that Glaser assumes vapour moves only one way (inside to outside). It completely omits the key feature of driving rain from its calculations, does not measure absorption or porosity, and therefore misses the potential risk attributed to the aspect of moisture storage.

In order to provide architects and designers



with a more accurate assessment, WUFI software can be utilised which is fully compatible with BS EN 15026 and able to dynamically predict moisture movement and storage as well as condensation for each location. Using WUFI enables architects, designers and developers to identify the likelihood and risks of condensation, and enables designs to be optimised for longevity of the building fabric, and for the health and wellbeing of the buildings occupants.

The designer is able to achieve a minute-by-minute prediction over a given period of years, as specified by the designer. The programme considers a worst-case scenario with the injection of

a moisture source at the source to predict the robust drying out of the fabric build up.

The way forward

BS5250 will shortly be amended to specify the conditions when the simplified Glaser modelling is not appropriate and when the more sophisticated modelling to BS EN 15026 is needed. WUFI can be used to carry out this modelling to ensure that housing stock remains healthy, and effectively ensures that the balance of heat, air and moisture is addressed, to achieve the ultimate performance.

Enq. 156

Innovative Brett Landscape leads industry



Brett Landscaping has announced its range of high quality commercial hard landscaping products has now been listed on the National BIM Library, making the company one of the industry's earliest adopters of BIM (Building Information Modelling) technology. These BIM objects can be sourced for free through the National BIM Library, an online resource

of thousands of building products that have been BIM registered – and this library now includes many of Brett Landscaping's most popular commercial products.

0845 60 80 577 www.brettpaving.co.uk

Enq. 157

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Enq. 158

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Enq. 161

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Enq. 163




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Enq. 164



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Enq. 167

VBH unveils new TS007 one-star cylinder



VBH has unveiled greenteQ Q-Star, its TS007:2014 one-star rated profile cylinder. Q-Star is the latest addition to VBH's own greenteQ range and sits alongside Gamma, the company's standard six pin anti-drill product. The cylinder features effective protection against bumping, picking and drilling, and is designed to be used with a two-star door

handle to provide full three-star protection to TS007. Both sides feature a sacrificial break point to hamper attempts to gain entry by snapping and extracting the cylinder.

01634 263300 www.vbhgb.com

Enq. 165

Hydro-Brake® Flow Control Series



Hydro International is launching The Hydro-Brake® Flow Control Series, a versatile toolbox of precision-engineered devices for surface water, watercourse, foul and combined sewer network control. Building on Hydro International's leadership in flow control technology for more than 35 years, the launch unites each product in the series with the reputation

for quality and repeatable, high performance embodied in Hydro-Brake® brand name. The series provides sustainable, performance-optimised water attenuation and control.

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Enq. 166



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Enq. 168

Designer Contracts is Recycling winner again



Designer Contracts has been named 'Take Back Partner of the Year' by Carpet Recycling UK (CRUK) for the second time at the annual awards and conference held at Leicester City Football Club. Graham Kempton, Designer Contracts' logistics director was also honoured with the Recycling Champion of the Year award, for an individual who has gone the

extra mile to ensure as much carpet as possible is recycled. The company initially trialled a recycling scheme in conjunction with CRUK before rolling it out to all 12 regional offices.

01246 854577 www.designercontracts.com

Enq. 169



Latham supplies for rustic barn conversion

James Latham has supplied 110m² of Amboise French Oak wood flooring from their Bausen range to complete a barn conversion in Ulmes Walton, Lancashire.

The flooring was specially cut and engineered to fit around the original brick walls of Calverts Barn, and was fitted by Inspired Solutions in Standish.

The super rustic graded wood which runs throughout the property, was chosen to fit in with the barn's exposed wooden ceiling beams. The Oak itself has a natural dark finish, with a very visible grain and beautiful knots which, again, feature in the original beams in the barn. Similarly, the French Oak also fits with the characteristic dark barn doors.

To find out more about this and James Latham's full range of products please visit the company website or contact the company directly.

Enq. 171

Panasonic Pro Awards now open for entries!



Panasonic Heating and Cooling is delighted to announce that the second PRO Awards are now open for entries. Panasonic is inviting entries from installers, specifiers and consultants, for a chance to win a prestigious PRO Awards 2016 Trophy. Additionally, successful applicants will gain recognition, PR exposure, plus an invitation to join a VIP

trip to visit Panasonic's HQ in Japan. The Panasonic PRO Awards celebrates industry excellence in the design, specification, installation and commissioning of Panasonic systems. Panasonic is looking for projects that showcase sustainability in design.

Enq. 170

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Enq. 172

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Enq. 173

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Bills are down on the farm

Owners of holiday cottages in Yorkshire are benefitting from lucrative RHI payments for a new renewable heating installation. HBD reports



Steve Holtby and Elaine Robinson have purchased multiple ground source heat pump units over the years to provide heating and hot water to a number of luxury holiday cottages that they have renovated on Broadgate Farm, near Beverley in Yorkshire.

Ground source heat pump technology is based on extracting heat energy stored in the ground from sunlight and rainfall, and converting this to a higher temperature for use in a building's heating distribution system. Ground source heat pumps extract heat energy stored in the ground from sunlight and rainfall, and convert this to a higher temperature for use in a

building's heating distribution system.

To extract this heat energy ground source heat pumps can use a number of different ground collectors, sometimes known as 'ground arrays'. At Broadgate Farm, Steve and Elaine initially used a mixture of coiled pipes called 'slinkies'. These were buried in the ground in trenches to a depth of 1-2 m where the temperature remains a fairly constant 8-10°C all year round.

As the development features multiple properties that pay business rates and are rented out separately, it is eligible for the Non Domestic RHI enabling Steve and Elaine to receive 20 years' worth of quarterly payments from the

Key facts:

- Six self-catering luxury holiday cottages
- Four Kensa heat pumps ranging in size from 4kW – 17kW
- Mixture of straight pipe and slinky coils
- Eligible for the Non Domestic Renewable Heat Incentive (RHI)
- Installed under Kensa's MCS Umbrella

Government based on the metered heat usage of the cottages. The Renewable Heat Incentive (RHI) has been introduced by the Government to encourage the installation of renewable heating systems.

Steve and Elaine bought the 19 acre Broadgate Farm site in Beverley in 2006. The farm site consisted of numerous outbuildings and old barns that were in various states of disrepair, so Elaine and Steve decided to renovate them into luxury self-catering cottages with the first ones opening in late 2009.

The barns needed heating systems installing, but as the site is off-gas the traditional heating options available would have been liquid gas or oil, which Elaine and Steve knew would be expensive and unpredictable. They decided to look into ground source heat pumps, as they believed the technology could provide lower running costs and knew this would be a better decision for the business in the long run.

Steve knew of a trusted electrician and a plumber who could fit the heat pumps, so enlisted the help of the manufacturer in overseeing the installation, which took responsibility for designing, sizing and commissioning the system. This also meant that the systems were fully eligible for the RHI, allowing Steve and Elaine to claim for those lucrative payments.

To harness heat from the ground, coiled slinky pipe was installed in trenches underneath a nearby field. Straight pipe was used for future installations as the property had plenty of land and could accommodate this cheaper option. The cottages are all fitted with underfloor

Continued on page 49...



Kingspan Environmental already ahead of the curve

When, last year, Kingspan Environmental launched the new 'A rated' Tribune XE, the leading UK hot water storage manufacturer was already looking ahead to planned changes in the performance standard for unvented cylinders that would become part of British building regulation guidance. Not only that but performance and costs have leapfrogged to the top of the selection criteria for building professionals and their customers, when choosing which hot water cylinder to specify.

Crucially the latest revision in cylinder testing is designed to more accurately quantify the amount of usable hot water a cylinder produces under normal conditions. This new V40 testing, which defines usable hot water as the volume of water that can be drawn from the cylinder at 40°C, is now an essential part of the BS EN 12897:2016 standard.

Under strict test conditions, the Kingspan Environmental's new cylinder design, containing a built-in thermal expansion space with side mounted hot water draw off has far surpassed the

performance set by the previous design, which used an external expansion vessel and top draw off. The new design, now featured in both the Tribune XE and Ultrasteel Plus ranges, provides on average a staggering 14 per cent more usable hot water at the required 40°C. It is amazing that the same capacity cylinder could have such a dramatic difference in output, but the tests results speak for themselves. "The key factor is our unique combination of the 'bubble top' and side mounted hot water draw off", says Ian Hughes, technical director at the Wakefield company. "In a standard unvented cylinder using an external expansion vessel the water that expands into the vessel is cold, as it is drawn from the cold part of the cylinder. However, the expanded water in our cylinders with a built-in expansion space is hot at 60°C, and this small amount of extra hotter water goes an extremely long way, when mixed with cold water to achieve the 40°C temperature specified in the standard," he adds.

By anticipating design improvements that meet the new performance test criteria and



procedures, Kingspan Environmental aims to future proof all products regarding the ever higher standards of building efficiency that need to be achieved.

All the proven benefits of built-in thermal expansion combined with the new hot water capacity performance should give architects, specifiers and installers alike even more reason to recommend both the Tribune XE and Ultrasteel Plus series to customers as the best stored hot water solution their money can buy.

02838 364400
www.kingspanenviro.com

Enq. 175

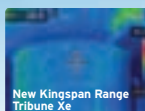


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more usable hot water in new V40 testing†



* 'A' Rated score for 120L and 150L indirect cylinder models

† Average increase in hot water output at 40°C compared to the equivalent Tribune HE using the new V40 testing in accordance with BS EN 12897:2016 standard.

www.kingspanenviro.com/kingspan-range

Enq. 176

“The installations were fitted into the ongoing programme of building works at Broadgate Farm and completed within the winter months causing minimal disruption”

heating, plus oversized radiators and heated towel rails upstairs which increase the efficiency of the heat pump.

Based on the good performance of the first two units installed in 2009 and the high level of customer service provided by the manufacturer, Steve and Elaine purchased two more ground source heat pumps in 2011 and 2015 respectively to provide heating and hot water to a further two renovated cottages. The installations were fitted into the ongoing programme of building works at Broadgate Farm and completed within the winter months causing minimal disruption.

Steve and Elaine decided to use straight pipe for future installations. There is no difference in efficiency between these two types of ground collectors and they both need the same amount of ground, but as Steve was digging his own trenches it was easier to use straight pipe as it



meant he could make the trenches narrower, which cut down the installation costs.

Steve and Elaine used an installer for the first few heat pump installations, but as Steve runs his own building company and knows skilled plumbers and electricians, he was able to oversee much of the work involved in future

Non domestic RHI key facts:

- Quarterly payments for 20 years
- Based on metered heat consumption
- At a rate of 8.84p/kWh of heat generated
- Once on the scheme, you are locked in to the prevailing tariff rate
- The RHI is enshrined in law and open to new installations until 2021

installations himself. This allowed the work to be conveniently accommodated into the schedule of ongoing renovations at Broadgate Farm and completed within the winter months causing minimal disruption.

Elaine said: “Being able to access the Non Domestic RHI was a bonus as it has helped us cover the costs of the ground source heat pump installations. Having a ground source heat pump is a unique selling point for the properties; lots of customers appreciate the fact that we have a sustainable heating system installed.

“I would definitely recommend ground source heat pump technology to other holiday letting businesses. It is very important that our guests are warm and comfortable and have enough hot water.”

Enq. 177

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Enq. 178

DRU launches new Global gas fires, including ground breaking new cavity wall model

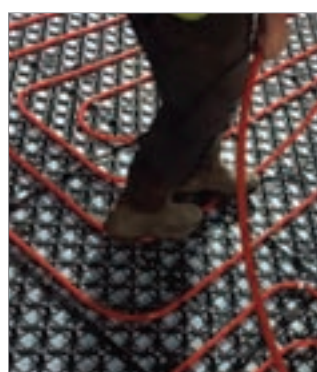


DRU Global gas fires combine ingenious designs and high energy efficiency at prices that are affordable for all households. There are 17 models in total, including balanced and conventional flue, two and three-sided, see-through tunnel and freestanding fires. The most popular model in the range is the Global 55XT. At only 55cms wide and 54cms high, it fits neatly into a Class 1 chimney, has an eye-catching log fire display and can be combined with a selection of frames or fire surrounds. Now, for homes with no chimney, the new Global 55XT BF balanced flue model offers a clever and attractive solution. With the addition of the unique DRU cavity wall kit, the fire can be installed directly into an outside facing brick wall or pre-cast flue, with no need for a false chimneybreast and minimal building work. At only 255mm deep, it is the slimmest and most flexible gas fire in the DRU Global range, with an energy efficiency rating of 84 per cent. The Global 55XT utilises a blend of extra insulation around the cavity wall kit and discreet ventilation points under the mantle of the fire surround to channel warm air into the living room. At the same time, this prevents any build-up of excess heat in the brickwork above the fire.

0161 793 8700 www.drufire.co.uk

Enq. 179

New Spider system brings underfloor heating solution



In October 2014, Kenwick Leisure Centre in Lincolnshire, was completely destroyed by a fire. Since then a £5 million project has been underway to rebuild the leisure facility. As part of the building work, underfloor heating from **Giacomini** has been installed. When selecting the UFH, contractors for the project, Nigel Smith Plumbing and Mechanical Services Limited, chose Giacomini's new Spider system – making the leisure centre the first installation of the new system for Giacomini. The Spider system has been designed for projects requiring an underfloor heating system but where floor depth is limited due to room height restrictions. It has a patented geometry that enables the UFH system to be embed in to just 3cm of screed. The Giacomini Spider system is available in three configurations, and the Kenwick Leisure Centre uses the R979SY021 which has a 6mm layer of HD insulation glued to the underside of the panels. This helps to reduce downward heat losses, whilst keeping the floor build-up to a minimum. With adhesive bases, the Spider system is very easy to install and offers a flexible and practical cutting-edge radiant floor solution. For more information on Giacomini please visit the website.

01454 311012 www.giacomini.co.uk

Enq. 180





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Enq. 181

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Enq. 183

World class ComfoAir Q heat recovery unit



Zehnder Group UK is proud to announce that its new ComfoAir Q range of MVHR units – the most efficient heat recovery system on the market – has been awarded Passivhaus certification. This new generation of heat recovery units offers outstanding energy and noise performance as well as smart technology that helps improve the installation

process and accuracy on-site. The range provides up to 96 per cent heat recovery efficiency, making it the most energy-efficient unit on the market.

www.zehndercomfoairq.co.uk

Enq. 184

Extended Aqua range from Stelrad



One of the major trends in the radiator marketplace is the selection of standout radiators that make a statement in two vital rooms in the home – the kitchen and the bathroom. Not for most homeowners, the same radiators that are used in all the living and bedrooms, but a special radiator – a decorative or designer radiator – that adds to the ambience and

says something about the rooms in which they are installed. The range of options from Stelrad is stunning and combines quality manufacture, wide availability and exceptional pricing.

01709 578 950 www.stelrad.com

Enq. 185



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Enq. 186

Wilo-SiBoost Smart Helix EXCEL



The latest generation of pressure boosting systems from pump specialist **Wilo UK** can be specifically tailored to needs and equipped with two to four pumps. Wilo-SiBoost Smart Helix EXCEL is the perfect solution for secure water supply and needs-based pressure provision in residential buildings and applications. Its high efficiency and powerful performance

are unmatched on the market. Wilo-SiBoost is driven by controlled, high efficiency EC motors and meets all the volume flow requirements without resulting in oversupply or undersupply.

01283 523 000 www.wilo.co.uk

Enq. 187

New system offers the perfect partnership



The **A. Proctor Group**, has developed a system, which provides exceptional levels of performance in cavity wall solutions. The key drivers in both regulation, and targets on energy efficiency in buildings, have brought the design of airtight buildings to the forefront of the agenda. The use of Wraptite Tape installed in conjunction with insulation boards offers

the perfect partnership in cavity wall systems, and stops unnecessary air leakage. Wraptite Tape is not only an effective airtight barrier, but its high vapour permeability allows any water vapour to escape.

01250 872261 www.proctorgroup.com

Enq. 188

Further Awards success for Ancon



After a string of Awards successes, **Ancon's** innovative Teplo range of low thermal conductivity wall ties has done it again, with the news that the new Teplo-BF has been shortlisted in the 'Best Innovation in Insulation' category of the 2016 Build It Awards. The latest addition to the Teplo range, Teplo-BF, features the same ultra-low conductivity

basalt fibre body as the original bar-shaped TeploTie, with specially moulded safety ends which make the new tie easier and safer to use and significantly enhanced mortar bond.

0114 275 5224 www.ancon.co.uk

Enq. 189

Lower lambda products hit the market



Kingspan Insulation has revolutionised rigid insulation with the launch of four new low lambda products for floor, wall and soffit applications; delivering premium thermal performance with a minimal construction thickness. Products in the Kingspan Kooltherm lower lambda range have a thermal conductivity of just 0.018 W/m.K across all board thicknesses,

the lowest for any rigid phenolic insulation board. The advanced composition of lower lambda products ensures builders now have even greater freedom to achieve spectacular designs.

01544 387 384 www.kingspaninsulation.co.uk

Enq. 190



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Enq. 191




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Enq. 192



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Enq. 194



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Enq. 195

A bridge too far



Andrew Orriss of SIG360 discusses how thermal bridging has impacted the thermal performance of some new build homes and how the industry has been working to mitigate that risk.

Home owners' expectations surrounding the thermal performance of their new build homes have greatly increased in recent years following the introduction of a string of stricter Building Regulations. While the majority of properties have met these expectations, some have experienced unexpected heat loss in the building's envelope, resulting in a performance gap.

A thermal bridge, also referred to as a 'cold bridge', is an area of a building's thermal envelope where heat is able to be conducted more easily than in neighbouring materials, typically occurring when gaps feature in the insulation.

Thermal bridging usually occurs in the reveals around windows and doors, the junctions between walls, floors and roofs and in poorly insulated structures that penetrate a building, such as concrete balconies. The cold areas created by a thermal bridge can, in extreme cases, produce internal condensation, potentially resulting in mould growth. Not only does this prove costly for a home owner to repair but, again in extreme cases, increases the risk of occupants developing health issues.

Although thermal bridges are more commonly found in older buildings, the Zero Carbon Hub (ZCH) – an organisation originally set up to deliver the Government's zero carbon homes

target – recently stated that 20-30 per cent of heat loss in new builds is caused by these design flaws, highlighting the importance of ensuring that care is taken during a building's design stages if overall energy usage is to be reduced.

While it is required under Approved Document Part L: Conservation of Fuel and Power for "the building fabric [to] be constructed so that there are no reasonably avoidable thermal bridges in the insulation layers caused by gaps within the various elements", poor workmanship, poor designs or inadequate knowledge of product installation has resulted in some builders failing to meet this standard.

For dwellings where the heat loss caused by thermal bridging is greater than outlined in building designs, it can result in the dwelling underperforming thermally, adding to the construction industry's increasing performance gap.

The heat loss caused by a thermal bridge can greatly affect a property's energy performance and its overall SAP rating. In order to conduct a SAP assessment, a dwelling's Y-values must be calculated which, along with U-values, determines the overall heat loss caused by thermal bridging.

A property's Y-value can be determined using the Psi (ψ) values, which calculate the heat loss through each individual junction.

Multiplying the Psi-value for a junction by its length provides the total junction heat loss.

In order to accurately predict the heat loss of a building, each junction needs to be calculated to establish the Y-value. By adding each junction heat loss, the end sum is then divided by the total heat loss surface area of a property, providing the Y-value and so the total thermal bridging loss.

With a standard dwelling typically having roughly 10 junctions, it can be a lengthy process. That said, it's vital the correct total heat loss is calculated to create an accurate SAP rating and to reduce the risk of a performance gap. It's worth noting that the default values for cold bridging in SAP are punitive and can have a significant adverse impact on the final calculation, and specialist advice should always be taken on this issue.

There has been substantial research into the performance gap over previous years, led by the ZCH. Along with helping the Government achieve its green initiatives, the Zero Carbon Hub also worked closely with the construction industry to improve overall building standards.

While the Hub's main research into the performance gap led to the creation of the Builder's Book, a diagram-led guide demonstrating how to deliver good practice and eliminate certain issues, the ZCH also created individual guides on more pressing issues – including thermal bridging.

Working with a range of industry experts such as the Federation of Master Builders, NHBC and the SIG360 Technical Centre, the Zero Carbon Hub created the in-depth Thermal Bridging Guide with detailed diagrams for a variety of scenarios where thermal bridging is prone to occurring.

The great work carried out by the Zero Carbon Hub however came to an end in March this year following the Government's decision to withdraw the organisation's funding. Unfortunately, the Government has either scrapped or elongated a number of its targets and initiatives, such as the Green Deal and the Energy Companies Obligation (ECO).

In addition, Prime Minister Theresa May made the decision to merge the Department for Energy and Climate Change (DECC) and the Department for Business Innovation and Skills (BIS), creating the Department for Business, Energy and Industrial Strategy (BEIS). By removing the focus on energy and combining its department with business and industry, the Government risks the further dilution of energy efficiency agendas.

This string of failures surrounding energy efficiency from the Government highlights its inability to recognise the importance of energy efficiency through the fabric of the building and the role they must play in highlighting this.



While the Government might have taken a back seat in its drive to improve energy efficiency, it's vital the construction industry, particularly housing developers and contractors, carry on the work of Zero Carbon Hub in the reduction and eventual elimination of the performance gap. Not only is this in the best interest of our customers, but reducing carbon emissions and the risk of fuel poverty should be on all of our agendas.

In light of this, there are simple steps that housebuilders can take to ensure a building performs as well as expected.

By prioritising a building's external envelope in the design and construction phase of a build,

referred to as a 'fabric first' approach, housebuilders can ensure their dwelling is not only well built and thermally efficient, but that the need for a dwelling's future occupants to use expensive renewable energy systems to make up for any unexpected heat loss, is removed.

By prioritising the energy efficiency of a building, the construction industry can continue the great work of the Zero Carbon Hub to eliminate common problems such as thermal bridging altogether, and continue its commitment to improve the performance of UK homes.

Andrew Orriss is head of business development at SIG360.

Enq. 196

SIG360 helps Gloucestershire homes stay out of the cold



A specialist offering by the SIG360 Technical Centre has helped a housing development overcome a thermal product shortage, without compromising on its energy performance. The team at SIG360, which offers energy efficiency guidance for new and retrofit projects, provided assistance to the six-property project, located in Woodford, Gloucestershire. Having been appointed by construction company Bath Design and Build, the SIG360 Technical Centre was tasked with finding a solution to replace the shortage of lightweight concrete blocks to the development, which consists of five new-build dwellings and one refurbishment project. Chosen for their lower thermal conductivity, the lightweight concrete blocks allow a building to achieve the U-Values required under Building Regulations without having to increase wall cavity width. To ensure the development would still achieve the same thermal performance, as well as meeting Approved Document Part L of the Building Regulations, SIG360 conducted U-Value and SAP calculations. Based on their results, SIG360 was able to specify the most appropriate products. SIG360 started working on the development in January 2016, with the project expected to be completed in January 2017.

0114 285 6300 www.sigplc.co.uk

Enq. 197

Heating bills halved and property value increased thanks to Bostik Climatherm

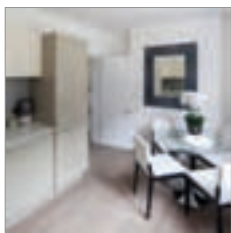


The installation of **Bostik's** Climatherm external wall insulation (EWI) system has helped homeowners in Ystradowen, South Wales, to halve their heating bills and increase the value of their property by £10,000 in less than two weeks. EWI specialists, Greener Installation Solutions Ltd, were approached by the owners of the three bedroom property, who were looking at ways of lowering their heating bills while improving the overall aesthetics of the house. Having used the system on a number of other EWI projects in the area, the company specified the Bostik Climatherm system with grey EPS insulation and an Ashton Cream Spar dash finish. The project was funded by The Energy Company Obligation (ECO), a government scheme that aims to deliver energy efficiency measures to domestic premises throughout Britain. Fully certified by the British Board of Agrement (BBA), the Climatherm system can be tailored to individual property requirements and comprises three key components – insulation, mesh reinforced base coat and finish. These can be selected from a range of products that all meet Bostik's strict performance requirements, allowing greater flexibility in both price and performance in comparison with other EWI systems.

01785 272625 www.bostik-climatherm.co.uk

Enq. 198

Royal military academy given luxury finish



The former Royal Military Academy overlooking Woolwich Common finds a new place in history with its stunning restoration, featuring **Kingspan OPTIM-R Flooring System**. The Grade II* listed building is being lovingly renovated by Durkan. Durkan commented: "We chose the Kingspan OPTIM-R Flooring System to allow us to make the most of the

available space. The original beam and block flooring limited our ability to dig down. Installing the Kingspan OPTIM-R Flooring System allowed us to maintain existing threshold levels."

01544 387 384 www.kingspaninsulation.co.uk/optim-r Enq. 199

Making a Passivhaus a home



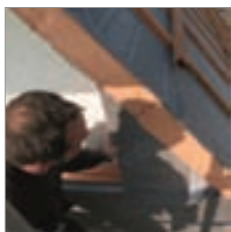
A Passivhaus home in South Manchester has achieved exceptional levels of airtightness through a combination of careful detailing and a high performance structure, provided by the **Kingspan TEK Building System**. After considerable research, Passivhaus designers, PHI Architects, selected the Kingspan TEK Building System to form the walls and

roof of the structure. The firm worked closely with highly experienced Kingspan TEK Delivery Partners, Point1 Building Systems, to achieve an extraordinarily energy efficient design.

01544 387 384 www.kingspantek.co.uk

Enq. 200

Klober launches over-rafter insulation board



Klober Permo[®] therm is a tongue and groove insulation board with integrated reflective underlay and self-adhesive edge tapes for sealing laps. Suitable for either new build or refurb work, it has LABC approval and is suitable for all pitches. Unlike square-edged boards Permo therm does not provide an air leakage path.

Installed over rafters it not only provides

added height within the roof space but removes underlay installation. Boards can be laid either from left or right with no ventilation of the batten/counter-batten cavity needed.

01332 813050 www.klober.co.uk

Enq. 202

Connekt Flushfit Sink



Abode's **Connekt Flushfit** – an ultra slim flush fit or inset sink range that delivers a sleek contemporary look to any chosen worktop. Both 1.0 and 1.5 bowl sinks are produced in premium 18/10 grade stainless steel. Connekt Flushfit can be fitted perfectly flush by inseting or alternatively fitted conventionally as an inset. Either option creates a minimal look

which is easy to keep clean. Both sinks come with the unique Abode Orbit waste and all plumbing pipework plus a pre-fitted seal strip around the underside edge. For more information, please visit the company website.

Enq. 203



Noise free housing for happy living

Good acoustics is one of the most important considerations for house builders and architects. This is because of high density living and, in particular, the popularity of sold floors. The problem is further exacerbated by the desire for large areas of glass and the absence of soft furnishings, such as curtains and carpets. The result of all this is that absorption of sound is difficult and reverberated sound can create an unpleasant environment. One increasingly popular solution is to line the ceilings with cost effective and high performance **Troldtekt** acoustic panels. Widely used throughout Europe, the panels instantly create an attractive surface, pleasant acoustics and a feeling of well-being throughout the house. The ceiling offers a flexible choice of design, including different colours, surface structures, edge profiles and suspension systems. The Troldtekt speaker is an acoustic panel with a specially developed flat unit, built in and concealed on the back of the panel. Danish manufactured Troldtekt acoustic panels are specified throughout the UK. Made with 100 per cent natural wood fibres, their benefits are high sound absorption, high durability, natural breathability, low cost life cycle performance and sustainability documented by Cradle to Cradle certification at silver level.

Enq. 201

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Enq. 204



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Enq. 205



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Enq. 206

BIM: the solution for brownfield

John McAuliffe says that BIM is becoming a necessity for long-term solutions when working on brownfield land, and explains why such technologies are crucial to the industry.

Brownfield land is fundamental to addressing the UK's housing crisis due to its frequent proximity to urban areas and the opportunity it offers to avoid building on greenfield sites. Planning reforms over the last two years have lifted some of the red tape from within the planning application process, improving the efficiency of approval to build on brownfield sites.

When working with brownfield sites, a developer's primary concern is most often the site's legacy contamination issues. Housebuilders should approach a remediation contractor from the outset, as early involvement ensures that time efficiencies are made and value engineering opportunities are taken. Understanding the end use of the land, and associated risks, allows a specialist to formulate a tailor-made approach, avoiding unnecessary processes that may incur additional costs with no supplementary benefits.

Remediation of brownfield land for the purpose of residential development demands a more comprehensive strategy than if the land is destined for industrial use. For housebuilders, planning laws dictate that the land is formally assessed in accordance with 'model procedures for the management of land contamination' (CLR 11). This states that a three-stage approach is required for a comprehensive site evaluation; a desk study, site characterisation and risk assessment. The desk study is a relatively quick and inexpensive way of determining a site's industrial past, whereas the site characterisation involves a more in-depth study of the site and ground conditions. Risk assessment is the third vital component, where the team determines the level of clean-up required based on the contaminants present. Early contractor involvement during these phases enables the process to be navigated quickly and efficiently.

Battersea Power Station and Nine Elms in central London are just the two of many high-profile brownfield sites being redeveloped for residential use in the UK. The importance of such projects is well recognised, however, the construction industry is now also realising the value of regenerating smaller brownfield sites in towns and cities nationwide. As awareness of these areas increases, so does work on developing innovative



new machinery to improve efficiency, cut costs and facilitate safer working conditions.

A combination of software and hardware is required to harness data collected in the initial stages of a project. Once collected, this data guides maintenance and refurbishment over a site's lifecycle. Building Information Modelling (BIM) is now vital for the detailed design of on-site models, which can then be used throughout the duration of an asset's lifecycle, from inception to decommissioning. An important aspect of BIM is the promotion of closer collaboration between on-site and off-site teams. This behaviour facilitates the secure transfer of data and limits loss due to human error.

Some companies are less keen to implement such technology due to high initial capital costs. However, such costs are a long-term investment, and one that is now mandatory on UK public sector projects due to efficiencies made. With fewer individuals on-site and less time reconciling lost data through inefficient transfer, significant savings can be made, which can then be passed on to clients.

A significant driver of innovation in remediation technology is health and safety. This is a priority on all construction projects, and advances in on-site technology are helping to improve standards across the board. Manufacturers have pioneered hardware which helps reduce the number of individuals required on-site, greatly reducing risk of harm and bringing a significant health and safety benefit. These often incorporate hydraulic systems into their hardware with no external wires or poles. Machines are then able to translate on-board data to operate under hydraulic control, through GPS and mobile sim card technologies. This allows the accurate identification of contaminants and execution of earthworks specifications from off-site locations.

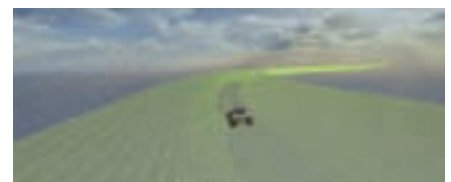
The environment is another major factor stimulating progress in remediation technology.

In addition to BIM and more tightly incorporated hardware, the advent of emission control on engines has promoted advancements in engine technology and fuel efficiency. This includes hybrid technology, which has been developed and rolled out by manufacturers. Plant hybrid technology is based on primitive systems in cars, using batteries to provide power on less demanding activities such as rotation on an excavator.

In the next few years, automation will be a big focus for reducing the number of workers on-site. The first step will be improving the degree of control within hydraulics of machinery, allowing enhanced automation of rotation and travel of plant. Driverless equipment is currently being deployed on large quarry projects in Australia, and it is hoped that similar technology can be downsized to smaller projects in the UK. As well as improving health and safety standards, this kind of progress will cut costs dramatically, as fewer individuals are required on-site. Crucial steps also need to be taken to develop more sophisticated engine technology. This will help meet carbon emission targets and also facilitate huge savings on the cost of fuel, an efficiency that can be passed onto clients.

As the UK construction industry faces the challenges of the housing crisis, firms need to invest in plant and machinery that permits significant time and cost efficiencies. Without acknowledgement that high initial cash injections reap long term benefits, progress will be slow and we will struggle to maintain a competitive edge on our European counterparts.

John McAuliffe is director of McAuliffe Group UK



Enq. 207

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Enq. 208

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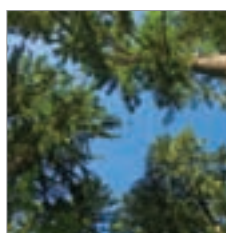


The **Charcon** range of more than 200 commercial hard landscaping products has been delivered to market BIM-enabled, almost a year ahead of the government's June 2016 deadline. With the largest and most varied BIM-enabled product offering in the commercial hard landscaping sector, Charcon has ensured that it is best placed to meet the needs of

those specifiers who have adopted the technology ahead of schedule. BIM documentation for these products can be easily downloaded from the Aggregate Industries website. For more information, please visit the company website.

Enq. 209

Koppers' technology helps preserve timber



Industrial wood preservative specialists, **Koppers**, has extended its revolutionary micronized copper treatment range, **MicroPro** – a leading wood preservative technology. Exhibiting a lighter colour, especially when compared to alternative copper based treated timber products, **MicroPro** allows contractors to build with a timber material that is more natural

looking in its appearance. Traditional methods of getting copper into timber involve dissolving the copper in a solvent, but Koppers' **MicroPro** technology is different; it does not use organic solvents. For more information contact the website.

Enq. 210

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Enq. 211



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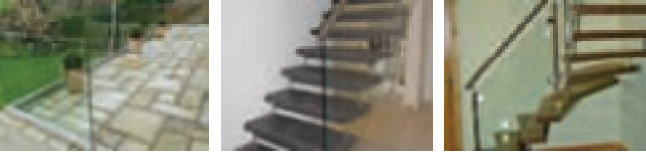
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Enq. 213



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Enq. 214

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Enq. 215



A trail of smoke

With a greater awareness of the dangers of fire on site, the updating of legislation and several high-profile incidents, Paul Henson of Ramtech Electronics predicts that this year will be seen as a turning point in the construction industry's approach to fire safety.

Each year there are hundreds of serious fires on construction sites that put the lives of workers and members of the public at risk. Due to the nature of construction sites and refurbishment projects, there will always be a greater risk of a fire. For example, activities such as welding, cutting and other hot works, combined with the presence of flammable materials, all increase the risk of fire compared to a completed building (which all have an integrated fire alarm anyway).

Anyone in doubt as to whether they need a fire alarm on a construction project should consider the fact that if people living and working in a completed building are protected 24/7 by a fire alarm system, those on construction sites should be entitled to the same level of safety, especially as the risk of fire is greater.

Choosing a system

There are a number of factors to consider when looking for an effective way to protect personnel and assets from fire on a construction site. A clear means of escape, compartmentalisation to protect workers as well as escape routes, plus managing the safe storage of hazardous materials are just some of the basics.

In addition, a correctly specified, legislatively compliant fire alarm system has the ability to make the greatest difference to saving lives. A technology-based approach is essential because construction and refurbishment projects are getting larger and more complex, which means, for example, having a safe means of escape can become more challenging to manage. Add to this the increased use of timber frame and high-rise buildings and you can see why more developers are choosing a technology-based approach for fire safety. There are two kinds of technology-based fire alarms that are used on construction sites: wired and wireless systems.

The latest update to JCOP (Joint Code of Practice), published towards the end of last year, has created a step change in safety on site by clarifying the need for an EN 54 compliant fire alarm system. Version 9 of Fire Prevention on Construction Sites, The Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation (JCOP) now contains the advice: 'Components of automatic fire detection and alarm systems should be marked as complying with EN 54' (paragraph 13.8). JCOP is not prescriptive on whether the system should be wired or wireless –

"Wired fire alarms have been used for a number of years, although they are losing favour because they require specialist trades such as electricians to set up"

although there are benefits to choosing the latter – just that it should comply with the relevant sections of EN 54 (this means each and every unit in the system has been independently tested, not just individual components).

EN54 is the harmonised standard relating to fire detection and fire alarm systems. It's an extensive standard with around 30 different sections, each of which relate to the standards, which must be met by a particular product function. For example, EN 54 part 3 deals specifically with standards for sounders and part 25 with those for radio links.

Wired vs wireless

Wired fire alarms have been used for a number of years, although they are losing favour because they require specialist trades such as electricians to set up. As sites progress, these trades are needed each time the units are repositioned,

“More developers are taking steps to implement effective fire plans. That involves the use of wireless fire alarm systems that are EN 54 compliant technology”

which can be frequent with modern methods of building.

Speaking of a large new built development in Manchester, which had become concerned with the cumbersome nature of wired systems, the site's Health & Safety manager said: “We have used wired systems until relatively recently, although we didn't find them practical. Trailing leads were an ongoing concern because they caused trip hazards and other safety issues around site.

“Another significant factor was that wired fire alarm systems prevented us closing up elements of the build. For instance, we would hardwire each section of a development for the fire alarm system and then when it was ready to be boarded out and plastered we would have to dismantle it, carry out the work, and then reinstall the wires. When you factor in that specialist electrical trades are needed to do this, you can see why it was causing us real issues.”

These kinds of practical concerns are often



cited for moving from a wired to a wireless fire alarm system. As the developer explained: “We've used both wired and wireless fire alarms and there's no comparison – wireless wins hands down, every time.

“Fire is an ever present danger on construction sites due to the presence of flammable materials, hot work practices, as well as worrying about incidents of arson when sites are unoccupied.

Because of this, more developers are taking steps to implement effective fire plans. That involves the use of wireless fire alarm systems that are EN 54 compliant technology, rather than relying on human intervention, which can be unreliable at best in an emergency.”

Paul Henson is construction director at Ramtech Electronics

Enq. 216

Urmec wins prestigious Fitzrovia project



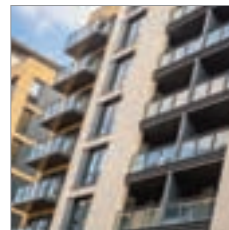
Urmec have secured the order to supply the latest IP door entry systems for a new development of luxury apartments at a £500 million mixed-use development near Oxford Street in London's West End. A key feature in the apartments is that residents will communicate with their visitors via Urmec's latest black MAX IP Android-powered touchscreen. The

system enables call-forwarding to mobile phones via Urmec's Call2U App when residents are away from home and even allows users to grant access from their remote location.

01376 556010 www.urmec.co.uk

Enq. 217

Extra slim cassette balconies by Sapphire



Bespoke balcony and balustrade solutions by **Sapphire** have a starring role at Suttons Wharf North, an award-winning development of over 180 high quality private homes in east London. Sapphire provided a full package including design, manufacture and install for inset and projecting balconies to apartments across three residential towers with views over

Regent's Canal. Cassettes for Suttons Wharf North were all custom-made by Sapphire using a slim cassette to match the project's narrow depth of floor slab. Once delivered to site the individual balcony units simply 'glide' on to pre-erected brackets.

Enq. 218

Aico launches new multi-sensor



Aico has launched the new Multi-Sensor Fire Alarm. The Multi-Sensor Ei2110e contains two sensor types, optical and heat. Between them they are capable of detecting all fire types, providing a total fire response. The Multi-Sensor fire alarm uses these dual sensors to constantly monitor smoke and heat levels, sending and receiving information via its

intelligent detection software. This sensor information alters the alarm's sensitivity and trigger points, automatically providing the best response to all fire types and reduces potential false alarms.

The Ei2110e can be sited anywhere in a home.

Enq. 219

Felmoor Park receives premium protection



The Scandinavian log cabins and lodges at the picturesque Felmoor Park in Northumberland have been given a striking new finish thanks to **Remmers**. Remmers HK Stain was selected to provide not only effective weather protection but protection against blue stain, rot and insects. HK Stain is a “2 in 1” product which eliminates the need for

an additional wood preservative primer and is perfect for both soft and hardwoods. The product penetrates deeply into the wood whilst leaving it fully breathable and as it doesn't flake or peel.

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Enq. 220

Future proof your home...

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Naturally versatile, strong and durable, wood is the perfect choice for exterior use. It's recyclable and sustainable and can be used for decking, fencing, roofing and cladding, where it will also provide an extra layer of insulation. Silva Timber's cladding products will enhance the character of your home while the Sansin range of finishes ensures that the exterior and interior timber stays looking like new and lasts for many decades to come.

When it comes to wood protection, one question is asked more than any other – how long will it last? It's difficult to answer this question, as there are so many factors to take into consideration. The design and orientation of the building, wood species, preparation taken, how translucent the finish is, exposure to sunlight and moisture among other variables, will all influence the life of the finish.

The timber industry is saturated with different finishing products. More commonly used are high build oil and water based finishes which have a greater viscosity and sit on the top of the wood creating a protective layer. Whilst it may give the appearance desired both of these finishes over time are likely to crack, split and flake and will essentially trap moisture in the wood which will cause the wood to rot.

The Sansin range of finishes from Silva Timber are a low build, highly penetrating water-bourne alkyd based finish which offers the best of oil based and water based finishes whilst containing no VOC's and is environmentally friendly. It works by using water to carry modified natural oils and resins deep into the wood's cell structure. The water then evaporates allowing the finish to bond directly with the wood substrate enabling the wood to breath whilst forming

Choose the right product to keep your timber cladding in top condition



a tough, durable barrier that won't crack, peel or blister. If the timber is well maintained it will grow old gracefully and will not go grey.

Finishes using water bourne technology harness the power of Nano technology to create finishes and colours like you've never seen before in wood protection. By atomizing high quality pigments into Nano-particles, the pigments can be combined with the protective oils and resins on a molecular level. Once applied to the timber they penetrate deeply, pulling the pigmentation down into the wood to provide a long lasting, vibrant and uniform colour.

When deciding on a stain it's important to understand the characteristics of the timber species it is being applied to. The effect of the stain will vary depending on texture, grain, colour and porosity so we'd recommend checking the colours on samples of the timber being used.

There are various staining options; natural and translucent tones, which let the beauty of the wood shine through or saturated to ultra saturated tones that provide a more solid colour appearance to the timber.

The key to an excellent finish is preparation; always ensure that the timber is clean and dry, for woods that contain knots and tannins use a primer (check the finish you are using – some finishes contain a priming agent), sand the timber thoroughly. Sanding the timber thoroughly removes mill glaze and creates an even surface allowing the stain/finish to penetrate the wood, providing an even, consistent and long-lasting finish. Studies have proven sanding can extend the life of a finish by up to three times compared to an unsanded surface. Following the preparation stages, finish/stain application is the most rewarding part of the protection process. Water-bourne alkyds can be applied in a variety of ways; brushing, dipping, hand or automated spraying (low pressure or airless). It is recommended to always flood the surface to the point of saturation (approximately five-six wet mil). If using a spray application remember to back brush following the grain pattern to ensure consistent penetration.

Enq. 221



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