

# Looking to the future:

**modern methods of construction  
and energy efficiency in social housing**



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## PREPARING YOU FOR THE FUTURE

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John Skivington,  
group director,  
LHC

## Bridging the gap

As another year draws to a close, it feels only right to spend some time reflecting on what the previous 12 months have brought the social housing sector.

For me, one of the biggest developments has been a growing appetite for change. When I speak to social landlords, I hear about a desire for innovation and a recognition that, if the sector is to meet the needs of those it serves, it must evolve its approach.

Perhaps that's why it feels to me as though modern methods of construction (MMC), so long talked about, may finally be reaching a tipping point. There's been progress, too, on the complicated and pressing issue of increasing energy efficiency in the sector. Value for money has, inevitably, been an important backdrop to considering both issues.

At LHC, we see this interest evidenced in our N7 and our NH2 frameworks for offsite construction. N7 is centred on energy efficiency, including everything from photovoltaic panels to air source heat pumps, and was our best performing framework in 2018/19. NH2, which launched this year, aims to deliver housing, apartments, multi-occupancy buildings using offsite systems. More will follow, including our new energy efficiency framework, N8, in April.

But ask social landlords about what is holding back further progress on innovation

and a common theme quickly emerges: lack of reliable information. Whether that's about how to mitigate perceived risks of offsite construction, how to address public misconceptions about modular homes, or how best to create more energy efficiency properties, the outcome is the same: a desire to move ahead but a nervousness stemming from lack of knowledge.

Throughout 2019, *Inside Housing* and LHC have been working together to bridge this information gap. Our work has included round tables and breakfast briefings, surveys of housing professionals, and articles offering expert insight into some of the complexities being faced.

This booklet brings all the content from the past year into one document. In so doing, we hope it provides a handy and thought-provoking guide to MMC, energy efficiency and securing value for money.

It is my view that making the most of the new technologies available to the sector - whether for MMC or energy efficiency - will depend on collaboration. We have been delighted to collaborate with *Inside Housing* on the work outlined in these pages, just as we are passionate about bringing buyers and suppliers together to create better social housing.

I hope you find this booklet informative, thought provoking and useful.

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# Building progress



**Harry Swales**  
of Homes

England looks back on 12 months of progress on modern methods of construction – and considers what comes next



It's been just over a year since Homes England's five-year strategic plan was published, in which we made several pledges about how we're going to achieve our mission of intervening in the housing market, getting homes built where they're most needed and improving affordability.

One pledge was to increase productivity in the construction sector – crucial to meeting the government's ambitious target of building 300,000 homes a year by the mid-2020s.

The construction industry is facing significant challenges, including years of low productivity growth and an increasing skills shortage. Based on current levels of new entrants to the construction sector, it's likely that there will be a 20% to 25% decline in the workforce in the next decade – but reaching the levels of new homes needed each year to address the housing shortfall will require a 40% increase in the current construction workforce.

That's clearly a significant problem when we're in the midst of a housing crisis – one that is going to take a profound collective response to change.

## Change is needed

The building industry cannot continue as it is without addressing these challenges if we are to deliver homes at the pace and quality the country needs, so the whole housing sector must embrace change – and technology – to find an answer.

At Homes England, we believe one solution to the productivity shortfall is modern methods of construction (MMC). MMC has the potential to be significantly more productive than traditional build-



**"Homes England's position is clear: we need to seriously shake up how we build homes in England"**

ing methods, as it greatly increases the pace of delivery. It brings volume manufacturing and technology-enabled processes to construction, enabling homes to be built more quickly, addressing labour and skills shortages and improving the quality, consistency and energy efficiency of new builds. This can mean real benefits for registered landlords, renters and homeowners.

Homes England's position is clear: we need to seriously shake up how we build homes in England. Our ambition is to



increase the capacity of offsite manufacturing to help us do this – we want to bring MMC into the mainstream. With that in mind, we're actively supporting MMC by using our land and investment capabilities to increase its uptake.

Our strategic partnerships with housing associations offer the flexibility to explore MMC as a way of delivering homes faster. To date, we've agreed 23 partnerships with 28 housing associations to significantly increase the delivery of affordable homes.

The funding certainty offered by these partnerships enables housing associations to be more ambitious about how they increase their supply of new homes, including using MMC. We're keen to see our strategic partners use their new funding flexibilities to provide long-term demand for an expanding offsite industry here in the UK.

The £4.5bn Home Building Fund provides finance to developers to increase the supply of new homes and encourages the use of MMC. The fund is currently

supporting the delivery of more than 2,600 homes built using MMC, with a further 9,500 in the pipeline.

Meanwhile, the £450m Local Authority Accelerated Construction programme – which provides grants to local authorities to speed up the construction of new homes – is supporting the delivery of more than 7,500 homes across approximately 20 local authority areas. These authorities will use MMC to get these homes built more quickly than traditional methods would have allowed.

**"It is important to continue building confidence in MMC across the sector"**

Unlocking public sector land for housing is crucial to achieving our ambitions, so we want to encourage other local authorities to see how we can work together to accelerate stalled sites.

In May this year, we used £30m of equity and debt funding from the Home Building Fund to complete a £90m deal with Japanese housebuilder and MMC expert Sekisui House and urban regeneration specialist Urban Splash. Our joint venture, HoUse, means a global leader with more than 50 years' experience of offsite construction will be entering the UK market for the first time.

More recently, we announced a £30m deal with leading offsite housing manufacturer Ilke Homes, which will significantly increase its production capacity. This investment also supports one of our strategic partners, Places for People, which has a joint venture with Ilke to deliver homes using MMC.

## Further and faster

But we know that while England's MMC industry is growing, there is still much more for us to do. Positive innovation, investment and change in the way MMC is used are emerging, but they're not enough to solve the housing crisis at its current rate – we need to go further and faster.

It is important to continue building confidence in MMC across the sector, which we know requires robust research into its benefits. So, we're conducting a pilot that involves monitoring several projects under our ownership over the coming years to evidence the benefits of MMC. It will also help us understand the impact on site logistics, construction pace, build quality, cost and energy efficiency.

Our hope is the findings will provide a critical mass of data we can share with the wider housing industry to inform decisions about emerging technologies.

We must continue to do things differently to create a digitally-enabled construction industry. In turn, we'd like to inspire other international and domestic players in the sector, to share our ambition and to build the homes the country needs.

None of us can do it alone, and we want to collaborate with ambitious partners across construction, design, development, finance and placemaking to transform our housebuilding industry. ■ Harry Swales is director of investments at Homes England



# Is the industry ready for offsite?

Leading housing professionals discuss offsite construction and the challenges in making the jump

**O**ffsite construction has rarely been out of the headlines in 2019. In May, in a dramatic move, Japan's biggest house builder and modular housing specialist, Sekisui House, announced it had struck a multimillion-pound deal with Homes England and British developer Urban Splash to build thousands of modular homes across the UK.

Just days later, *Inside Housing*, in association with LHC South West, brought together a high-level panel of industry experts in Bristol to discuss whether the housing sector is getting any closer to closing the offsite gap, what obstacles might remain in the way and how they might be overcome.

The issue of the upfront costs of offsite construction is often raised by chief executives and development directors, while manufacturers are often heard voicing their frustration at the housing sector's love of pilot projects, which limit economies of scale.

Some of the senior figures at the round table, however, feel the debate about modern methods of construction (MMC) has progressed in recent times.

The debate around MMC and offsite is less now about external perception, or whether it is a good thing in principle,

and more around the nitty-gritty of cost, time and quality, argues Mary Bennell, director at LHC South West.

"What often happens is an architect designs up a scheme and then it has to be all redesigned for making it production-ready. So you double the time at that front end. How do we reduce that? That is one of the gaps I think we need to close," she says.

For Stephen Lodge, executive director of growth and development at Yarlington Housing Group, there are still some fundamentals that need to be addressed up front.

"My view is that maybe the sector has gone about this in slightly the wrong way. We've looked at trying to embrace modern methods of construction - and you've mentioned the government agenda - but there hasn't really been that purchase; no one has said, 'Why are we doing it?'" he says.

For Mr Lodge, this 'why' question is inextricably linked to what he terms the "burning bridge" crises of skills and housing shortages. Could MMC be one answer?

Mr Lodge certainly thinks it is part of the equation. "There is a piece about collaboration and a piece about making sure the sector appreciates the need. It is no longer a nice-to-have," he explains.

At a basic level, the sector needs to be clearer what it means when it talks



**"I would like us to think about what we mean when we say MMC"**

**Stephen Baker, director of investment (homes), Alliance Homes**

about 'MMC' and what types of delivery work best, argues Stephen Baker, director of investment (homes) at Alliance Homes.

"I've had experience of delivering housing projects with MMC - blocks you stack together or pour concrete in, things like that - but that is not the same as building houses [offsite] in a factory. I would like us to think about what we mean when we say MMC," he states.

## Building offsite

This clarity needs to feed into the skills debate, he contends. "Are we going to train people to do different types of jointing on site? Or are we going to put

them in a factory? That is something we need to get right."

Phillippa Yeates, regional development manager at Stonewater, highlights that she had several sites where offsite construction was being considered but planning delays were an ongoing stumbling block.

"That is the critical issue with us: the timing, knowing when it is going on to the production line. We can work with local authorities sometimes to speed things up through the planning process, but the blockage for us is knowing when that is going to come through," she says.

Planning is also a focus for Alex Ryan, senior technical manager at Curo, but she says MMC is a potential solution.

"We get concertinaed in a planning process and we are looking at, if that happens, what opportunity have we got with MMC of speeding it up at the other side? The other opportunity we have identified is infill sites. What opportunity have we got in terms of offsite manufacture to utilise those sites as potential outlets for development?" she questions.

## LaunchPad

Oona Goldsworthy, chief executive at United Communities, highlights a modular housing project it has underway for young people and students in Bristol called LaunchPad. The development, partly inspired by similar schemes

**"It is looking at how we can use sites quickly"**

**Oona Goldsworthy, chief executive, United Communities**

in the Netherlands, was due to be completed in September.

"It is going to be incredibly tight," she concedes. "If we had waited - and sometimes I wish we had - for the formats and the intelligence to come forward about how these are done, I would probably have waited another two years."

She adds: "But we've approached it not so much from the skills crisis as the homeless crisis. If we wait for the conventional model to get through on a building project, where are these people going to go in the meantime?"

"So it is looking at how we can use sites quickly. But, wow, we have learned a lot in that process."

## Participants

**David Aldwinckle,**  
Property director,  
Magna Housing

**Stephen Baker,**  
Director of investment  
(homes),  
Alliance Homes

**Mary Bennell,**  
Director,  
LHC South West

**Nathan Cronk,**  
Development director  
- delivery,  
LiveWest

**Oona Goldsworthy,**  
Chief executive,  
United Communities

**Martin Hilditch,**  
Editor,  
*Inside Housing*

**Stephen Lodge,**  
Executive director of  
growth and development,  
Yarlington Housing Group

**Alex Ryan,**  
Senior technical manager,  
Curo Group

**Tony Woods,**  
Group technical manager,  
LHC

**Phillippa Yeates,**  
Regional development  
manager,  
Stonewater



How the sector shifts up a gear, how it takes things up from cottage industry/pilot project level is a key issue for Tony Woods, group technical manager at LHC.

He also worries that, while house builder Barratt has set out ambitious plans to use MMC in the construction of 20% of its homes by next year, the social housing residential sector is now at risk of being left behind when it comes to finding solutions to current housebuilding problems.

"It is a bit like a tsunami: the public sector is standing on the beach watching fish flap up and down and the private house builders are already up in the hills moving away. So we have got to look at how we move forward quicker, at a quicker pace," Mr Woods emphasises.

"It's a bit of a chicken and egg scenario," agrees Nathan Cronk, development director - delivery at LiveWest. "We know we've got the growth coming; there is a pipeline. There is a problem where the companies coming to us are wanting to see stuff happening now and it is not going to be overnight. We need to look a couple of years into the future and start to build up from that point."

#### Stepping up the pace

Nevertheless, it is imperative for housing associations to be stepping up the pace, argues David Aldwinckle, property director at Magna Housing.

He says: "I think now is the time for us to bite the bullet and accept that too much of traditional build housing isn't up to scratch, for lots of reasons."

"I'm not suggesting that in the factory you can absolutely guarantee things won't get missed, but I just think it is much, much less likely because of the quality control you can have in a factory compared to a windy, wet field on a Friday afternoon."

What is also clear as the discussion develops is that, if MMC and offsite are ever to gain scalable traction, new thinking and processes will need to grow.

This involves everything from, as Mr Cronk suggests, looking at how to get modular units down narrow Cornish lanes, through managing new relationships with factories and new - or at least different - forms of contracts, to rethinking procurement.

And, as Ms Goldsworthy argues from her experience with LaunchPad, how you cost VAT.

"I was shocked about the lack of intel out there," Ms Goldsworthy states. "I went to what I thought were industry experts and everyone I could think of and, actually, I still couldn't find the answers to some of those questions. We have had to sort of make it up as we've gone along."

Mr Lodge agrees: "There are many, many reasons not to do it - it is a lot easier not to do it. What excites me about Homes England's partnership with Sekisui House is they are not a cottage industry. I think that's a significant



change because we are moving away from the cottage industry to 'international organisation, done lots of these'. I think we need to move into that manufacturing mindset."

As the discussion draws to a conclusion, the event's chair, Martin Hilditch, editor of *Inside Housing*, asks the panel to consider how any scaling up will be driven forward. "Who is going to drive it? Homes England?"

"For me, it has to be," states Mr Baker. "I would love it if we were all able to form

**"We need to look a couple of years into the future and start to build up from that point"**

**Nathan Cronk,**  
development director  
- delivery, LiveWest

big, regional consortia. I would like to hope that would be the case and we would support that. But that is very, very complicated because we do all have slightly different agendas."

But the housing sector can and should be doing more to drive things too, our panellists suggest.

"Early engagement is essential. Make sure whatever experiences we learn get written down and widely disseminated," says Mr Aldwinckle, with Ms Ryan agreeing that education is the key.



"We've definitely got the ambition to do it," states Ms Yeates. "Get your financial director behind it," adds Ms Goldsworthy.

"I think we will be looking at a success story," states Mr Lodge, adding: "If we don't do this, the delivery of housing is going to fall off the face of a cliff. If we're not going to deliver, we're not going to beat the housing crisis. We have no choice but to make it work."

"It is about confidence, isn't it?" adds Mr Cronk. "Until we've done it and it's working, people will always be sceptical.

At the minute it is all new and a big leap of faith. We've kissed a lot of frogs and only some of them have turned into princes. So I think it is about bringing new players into the market and it is about people investing and saying, 'Yes, show us your order book and we will deliver it for you.'"

"For me, it is about needing to collaborate," says Ms Bennell in conclusion. "We don't need to be precious. I'm LHC, but it is bigger than that. We need to collaborate across the sector

**"If we're not going to deliver, we're not going to beat the housing crisis"**

**Stephen Lodge,** executive  
director of growth and  
development, Yarlington  
Housing Group

and in the South West to really flush out the leaders in terms of the production and get those pipelines working. I think that's really important." ■

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# What could the future of housing look like?

**Clive Feeney**, director at LHC, and **Tracy Harrison**, chief executive of the Northern Housing Consortium, talk to *Inside Housing* about what registered providers need to consider if they are looking at building homes with modern methods of construction

**M**odern methods of construction (MMC) have been used since World War II. However, in recent years, government has placed increasing emphasis on MMC as a solution to increasing development at pace. Councils and housing associations have sometimes been hesitant about this suggestion and the government recognised this in the report *Building for Change*, which also introduces the role of ‘integrator’. In response, the London Housing Consortium (LHC) and the Northern Housing Consortium (NHC) have come together to launch Consortium Procurement, a ‘one-stop shop’ to help.

**What is your definition of MMC?**  
**Clive Feeney:** Modern methods of construction is a definition framework created by the government, containing seven categories of modern construction services. MMC gives social housing providers and their homebuilding partners a common language that will aid collaboration and further adoption of pre-manufacturing, site-based materials and process innovations.  
**Tracy Harrison:** There are a confusing range of build methods covered by the term but we use it to describe the use of factory-produced, pre-engineered building units or components.

**What are the advantages of MMC?**  
**CF:** The method can be as much as 30% quicker than traditional construction but it’s not just about speed of the build – there are many other advantages. Factory-built homes result in less waste, not just in the build process but once occupied, and there are reduced carbon emissions and improved health and safety. Not only that, but if homes are built quicker then rented out, revenue streams are accelerated.  
**TH:** Alongside speed of delivery, another major advantage of using MMC is the quality standard of homes that are built in factories, which is particularly relevant in the wake of the tragedy at Grenfell. With MMC, you can achieve an extremely high degree of quality control and assurance, plus the benefit of having the location of all the services logged in detail, giving confidence that any repairs and maintenance work that’s needed in the future can be done with precise information of where everything is located in the home.

**Why have social landlords been hesitant to find MMC partners?**  
**CF:** Many landlords aren’t knowledgeable about MMC so lack confidence in it. Modular builds have a poor reputation and many think that innovative design may be restricted and that this could lead to repetitive, bland housing schemes,



“With MMC, you can achieve a high degree of quality control and assurance”  
**Tracy Harrison, chief executive, NHC**

**Main image and right: The Cassillis Court project, in Dalrymple, East Ayrshire, an affordable housing development built using modern methods of construction**

and therefore upset the surrounding community.  
It’s also about having confidence in the materials used and perception of quality. I have experience of working in Scotland where the industry is different and this isn’t an issue – 85% of homes are made from timber components and contain elements of offsite manufacture.  
We need to be brave though and it’s an opportunity for the public sector to lead the way by collaborating to build in volume and to reduce risk. We need to be organised and be talking right from the beginning of the process. If there are early discussions between suppliers, contractors and architects about materials and design, then an innovative product can be developed and delivered.  
**TH:** Clive’s right that customer perception is often an issue that can lead social landlords to be reluctant, particularly because of negative associations with historic, post-war prefabricated builds – although it’s important to point out that many of the residents of these properties absolutely love them!

NHC has organised several tours for our members at factories such as Legal & General and Ilke Homes, as well as Home Group’s inspirational Innovation Village in Gateshead, and visitors on those tours have always been surprised and impressed by the high quality of the homes.  
But the main barrier members have expressed to NHC is the cost versus tradi-

tional build. Tackling this was one of the key drivers behind our partnership with LHC. We know that some of our members are interested in MMC but are only looking at a site of five new homes, for example, and this would make it prohibitive for them in terms of cost. To drive value with the manufacturers, you really need to achieve a visible ongoing pipeline of demand. So, what we are doing is bringing



“It’s an opportunity for the public sector to lead the way by collaborating to build in volume and reduce risk”  
**Clive Feeney, director, LHC**

## Biography

**Clive Feeney** is a director at LHC and has also worked for the Scottish Procurement Alliance since 2010. The not-for-profit central purchasing body was established in 1966 by six London boroughs but now has offices nationwide, and 700 public organisations use its frameworks.  
**Tracy Harrison** has worked for the Northern Housing Consortium for more than 13 years, and became chief executive this summer. NHC represents the views of housing organisations in the North, bringing them to the attention of policymakers.

members together to aggregate their volumes, and this will be when we will see the real cost benefit of MMC versus traditional build. We’ll also be able to offer a solution that works for those with significant new build plans and those who are developing on a more modest scale.  
Another very real concern members have raised is around the erosion of the traditional construction skills base. However, MMC presents an exciting opportunity to develop new skills in areas such as digital design and development and, of course, there will always be a need for ongoing repairs and maintenance of properties, meaning several of the core trade skills will still be required.

**How can their confidence in MMC be boosted?**  
**CF:** Again, if smaller housing associations group together with local authorities and other social landlords to pool demand, it can create a large-volume project. This will give visibility of the pipeline to manufacturers, who will be able to share this information with their supply chain and drive efficiencies throughout the whole process for the collective benefit of all stakeholders.  
**TH:** Seeing is believing! A big part of boosting confidence is factory and site tours. We are also organising events and round tables to give members a chance to share best practice and start to embrace the use of MMC. We’ve been working with industry professionals who have led on large MMC projects in the North, such as Paul Beardmore [formerly director of housing at Manchester City Council], who has written a discussion paper for NHC to help to share the learning that’s been gained.

**What are the issues specific to Northern England?**  
**TH:** We need more of the right homes in the right places. We’ve got a big opportunity because of the supply of brownfield land available in the North, and we’re ►



Making MMC work	
How can we be sure that...	Steps to follow
...the product will have a 60-year design life?	<ul style="list-style-type: none"><li>● Consider using components that are standard across the construction industry, such as timber frame or light-gauge steel frame</li><li>● Consider using traditional external cladding and roofing systems</li><li>● Ensure that the finished build has third-party build warranty, such as from the National House Building Council</li><li>● For non-traditional elements look at third-party certification from the British Board of Agrément (BBA) or the Buildoffsite Property Assurance Scheme (BOPAS), for example</li></ul>
...residents are happy with the appearance and quality?	<ul style="list-style-type: none"><li>● Include residents in the design and layout process</li><li>● Invite residents to the factory to see their homes being built</li><li>● Communicate other benefits, such as improved energy performance and reduced bills</li></ul>
...the manufacturer is financially stable enough to meet our demands?	<ul style="list-style-type: none"><li>● Ask for a performance bond from the main contractor and warranties from others in the chain</li><li>● Consider vesting certificates for products that have been manufactured but not yet delivered</li><li>● Procure manufacturers on a partnering basis and ask for transparency on financial robustness</li><li>● Collaborate with other registered providers with similar needs</li></ul>
...we are getting value for money to remain competitive?	<ul style="list-style-type: none"><li>● Look at the long-term cost trajectories of existing traditional build against offsite techniques</li><li>● Evaluate the costs of the whole project from inception to end of life</li><li>● Consider potential cash-flow trade-off between earlier payments for the manufactured product and earlier receipts from quicker build times</li></ul>

fortunate that we have local authorities who are pro-development. However, the cost of bringing brownfield sites forward for development can be very high, often as a result of our industrial heritage and the associated land remediation costs, and our land values are often low, which presents a real conundrum.

Government policy directs support to areas of highest affordability pressure and in doing so leaves large parts of the country to deal with its own challenges. This national policy of geographically targeted support has an inadvertent impact in the North, which is deemed to be ‘affordable’. This is why funds such as the Affordable Homes Programme play such an important role in the North. NHC is

backing the expansion of the Affordable Homes Programme to ensure it continues to support the North’s housing ambitions. We think this is critical when one in three affordable home completions supported by Homes England occurs in the North, making a vital contribution to government’s overall housebuilding targets.

How can using a procurement company help MMC projects?

**TH:** We can help to de-risk the whole process. We have been jointly working on the procurement of an ‘offsite project integrator’ solution, which will be live in early 2020. The integrator’s role and expertise is in understanding the entire process of designing a site for

“Using an integrated framework means experts are engaged from the start”

Tracy Harrison, chief executive, NHC

Below: LHC has established a network of suppliers to work with social landlords such as Sidey, a doors and windows provider

modular building, using experience of modular manufacturing to optimise the site and building layouts to deliver the most cost-effective solution.

The integrator will bring together the member’s brief, an architect familiar with modular and the manufacturing process, and a developer who will manage the site and install the manufactured units. We envisage that the integrator can be the main contractor or can assign the single contract to its developer for a turnkey solution. The integrator framework will take away the uncertainty members may have by providing a complete end-to-end solution where the contracting party takes on any risk associated with the project.

**CF:** Using an integrated framework means pre-approved experts and professionals are engaged from the start. Initially, that might mean just making sure the right skills are in the right place at the right time but in the long term, it can mean that platform-based approaches can be met. I believe the key to MMC working is collaboration and not simply to solve the issue of building at volume but also to bring in landowners, planning and financiers before the process starts.

It’s a mistake to bring people in once the process has started. Everyone needs to be on board from the start for early pre-project discussions and the advantage of doing this through procuring through a pre-tendered framework is that a client can conduct a soft market test to ensure the MMC solution broadly meets their expectations. ■

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HELPING YOU TO BE MMC READY



# Modern matters

If modern methods of construction are the most effective way to build more homes, what are the possible challenges and risks, and how can they be mitigated? *Inside Housing* reports

Offsite construction has been touted as the potential answer to the housing crisis. As well as being the most effective way to speed up the delivery of the houses the government has pledged to build, many say it could deal with the skills shortage in the construction industry.

At the Housing 2019 conference and exhibition in Manchester in June, the then minister of state for housing Kit Malthouse reiterated his belief that modern methods of construction (MMC) are the best way to produce more homes with better audited standards of quality – and asked people to think differently.

At the same event, *Inside Housing* and LHC hosted a breakfast briefing to further discuss how adopting MMC could help local authorities and housing associations meet housing needs and explore the potential risks.

## Consider quality

Jon Sawyer, director of housing and residential growth at Manchester City Council, opens the session.

“In Manchester, we intend to build 32,000 new homes by 2025, 20 per cent of which will be affordable. There is also a longer-term project, Northern Gateway, to deliver 15,000 homes on a single site,” Mr Sawyer says. “We have some massive challenges ahead and only MMC will help us realise those aims.

“This sector needs to be clear that quality matters because better quality homes last longer. If you aim for quality, you’ll get value for money over many years and not just a saving on the day that the building arrives.

“If you look at the speed that it takes to get that building on site quicker, you can start to make an argument for why it

might cost a little more for that building now but the savings will be greater in the long term.”

Manchester Council announced at the conference that it will be working with Galliford Try Partnerships and modular home manufacturer Ilke Homes on a new 75-home scheme on a cleared site in Newton Heath.

Mr Sawyer reveals: “It’s a project that will be documented by Channel 4 and George Clarke, watching us build the homes over the next year. It will also be a zero-carbon pilot. We’ve gone all in to make using MMC a success.”

## Increased quality control

Harry Swales, general manager – investment strategy at Homes England, agrees.

“While quality is about the design aesthetic and communities, it’s also the vigour with which we drive quality assurance through the process. Bringing a digital spine to the way we do things allows us to be more manufacturing-driven and maintain the homes in the longer term. It’s about harnessing digital tools to provide a transparent audit trail in a more controlled environment.”

Alan Yates OBE, deputy chief executive of Accord Housing Association, suggests it is not so much about looking at the risks that might be involved with MMC but also the risk of not adopting MMC. “For me, the reason for moving to MMC is increased build quality.”

Accord embraced the concept in 2011 by opening its own not-for-profit offsite manufacturing facility, Local Homes, to supply homes for its housing association. Last year, it opened a factory that can manufacture 1,000 homes a year.

Before doing this, Mr Yates visited factories in North America and they all advised him to “educate the client”. He

**From left to right: Jon Sawyer; Harry Swales; Inside Housing’s Emma Maier, who chaired the event; Alan Yates OBE; and John Skivington**

says there is a need to be clear with housing associations about what everyone wants to achieve with MMC.

## Environmental benefits

Mr Yates adds: “When we consider homes built by MMC, it is not just the initial cost that matters, but also an overall value. We must look at the long-term benefits of the reduced environmental impact of producing a home in this way and that it is reducing the amount of energy consumed, while it is inhabited.

“From an environmental perspective, it is not possible to continue building with concrete and bricks. There’s a real risk to building houses that aren’t zero-emissions compliant. Moving to MMC is a great opportunity for the construction industry to achieve this and to raise standards. If we have to retrofit the homes we’re build-

ing today in 10 or 15 years’ time to make them zero-carbon, we’ve failed.

“It’s vital to choose good, high-quality materials and other technologies can be added to that structure. MMC manufacturers are listening to customers, so if collectively as a sector we ask for better quality, improved environmental performance and warranties, that’s what we’ll get.”

## Next steps

Mr Yates concludes: “For local authorities and housing associations considering MMC, I urge you to visit a factory and to take board members and tenants. It will give confidence to everyone to see it. You have to be the leaders in the future of housing.”

John Skivington, group director at LHC, agrees that is important. “When

I’ve spoken to social landlords, they are looking at supply-side risks. They are anxious about whether the properties will last as long as traditional builds. They wonder if they will be able to retain their competitiveness in the market and whether it will affect their reputation with residents.

“The confidence in the product is the biggest risk. We need assurances and warranties, and as soon as we can show this, we’ll see greater confidence in MMC.

“The biggest challenge to moving forward is leadership. There has to be a strategic view of MMC from clients. The social sector is often the guinea pig, but it also has a better perspective of its asset development over 30 years.”

Taking a strategic view will help you to make a decision, Mr Skivington says.

**“From an environmental perspective, it is not possible to continue building with concrete and bricks”**

**Alan Yates OBE, deputy chief executive, Accord Housing Association**

“Ask yourself, ‘What does my housing stock need to be in 20 or 30 years’ time?’ It’s difficult to find an answer that is not MMC.

“When the Addison Act [the 1919 act that kick-started the large-scale delivery of council housing] was introduced, local authorities were thinking about how to offer homes and outdoor spaces for a better way of living.

“No one was thinking of doing the minimum so don’t do that now. We have to think big and move forward.” ■

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# The future for energy technology

The environment has risen up the political agenda this year. But is that affecting the housing sector’s plans?

This year will hardly go down in the annals of history as a year of certainty. Yet amid an array of confusion, one topic completed an inexorable rise in the public and political consciousness – climate change. In the year in which the UK parliament took to declaring a climate emergency, millions of children took to striking, and Extinction Rebellion controversially took to the London streets, where does social housing stand on energy efficiency?

To find out, *Inside Housing* and LHC have run a survey of professionals in the sector to gauge views. It is not the first time we have done so. Back in 2016, we organised a similar survey, which garnered responses from 196 people. This year, the same exercise attracted 409 respondents. That increased response rate alone suggests energy efficiency is an area that has become more relevant and pressing to more people working with social housing.

Yet dig into the results and the situation becomes more complicated. It is unclear whether interest is yet manifesting as consistent action. It is true that when asked about whether energy efficiency considerations affect organisational decisions on procurement, 38% say it does to a large extent. An additional 8% say it affects decisions to a very large extent.

What that means, however, is that 30% of respondents to this question say energy efficiency figures to a limited or very limited extent in decisions about

procuring products and services, and 24% say its influence is neutral.

For John Skivington, group director at LHC, those figures came as something of a surprise.

“The number of responses to the survey was great – there’s a lot of interest in energy efficiency,” he emphasises. “Despite lots of people being interested, they’re not factoring energy efficiency into decisions about procurement.”

Encouraging signs

However, those looking for encouragement that the climate emergency is or will imminently influence most social landlords can definitely find it elsewhere in the survey results. Ignoring ‘don’t knows’, a striking 90% of respondents say they expect their organisations’ spend on energy efficiency to rise in the coming year. That figure increases to 92% when the timeline is lengthened to the next two years and 93% when the horizon becomes the next five years.

These figures become more notable still when compared to those from 2016. That year, just more than 50% of respondents said they expected spend on energy efficiency to increase in the coming year.

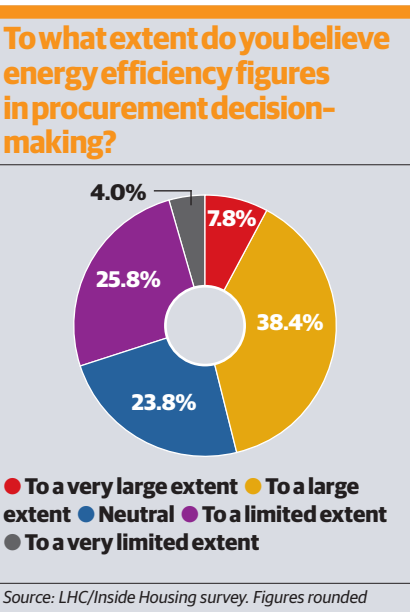
“This is really the standout response – that people say they will be spending more on energy efficiency,” reflects Mr Skivington. “I think there is this recognition that more has got to be done.”

And precisely what is the impetus behind that recognition? For most, the main driver for investment in energy efficiency is a desire to reduce bills and fuel



“I think there is this recognition that more has got to be done”

John Skivington, group director, LHC



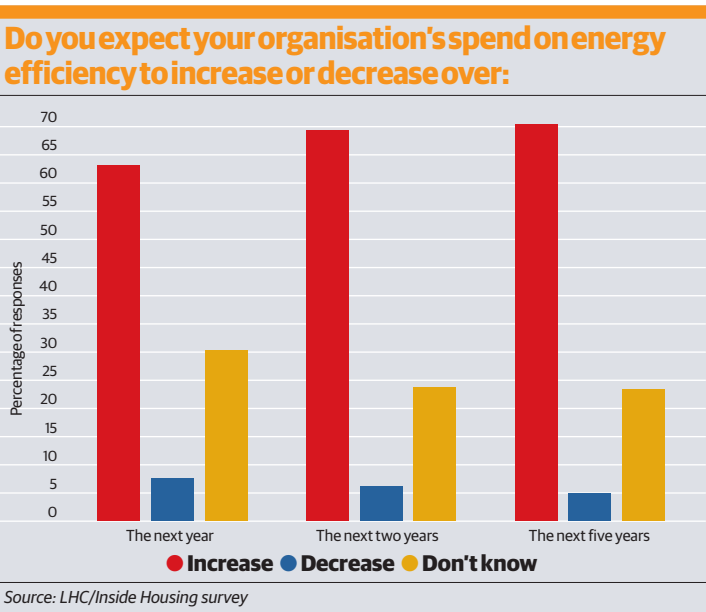
poverty among residents – it is named by 85% of respondents to this question. Meanwhile, two-thirds cite reducing carbon emissions as a driver, for its overall benefit to the environment.

Interestingly, meeting government targets is named by less than half as an important reason for focusing on this area. That may perhaps link to views on obstacles to progress.

When asked about the most significant barrier to wider installation of energy efficiency measures in homes, 37% speak of reduced government funding for schemes and 23% offer concerns about the lack of effective legislation enforcing standards in this realm.

One housing developer says: “Without positive legislation, of which there is little sign, not much will happen.”

A director in asset management at a housing association adds: “Policy and



legislation have to be clearer for organisations to have a focused strategy on tackling energy efficiency.”

This bears out what LHC’s Mr Skivington says he has seen in the sector: “We had a real excitement in the industry five or six years ago, with the RHI [Renewable Heat Incentive] and so on. And then all the grants were cut in England and Wales, so there’s been a real dip in the market – it’s been a bit down and pessimistic.”

Over the past year or two, though, he says he and his colleagues “have sensed a bit more optimism and a bit more focus”.

Certainly, our survey indicates that many social housing leaders are not waiting for further government funding, support or legislation before introducing energy-efficient technology. Some 41% say their organisation has invested in solar thermal, 39% mention solar photovoltaic with battery storage and 35% cite electric vehicle-charging infrastructure.

For Mr Skivington, those figures are encouraging and suggest that when organisations do have a policy to invest in energy efficiency, “they are using a range of new technologies already, not waiting for new technologies to come out”.

For some, however, the breadth of options available is at risk of holding back further progress.

“There is a lack of clear advice and guidance for the sector on the best approach to take,” contends one respondent working in asset management at a stock-holding local authority.

“More sharing of good practice across all aspects of energy efficiency in domestic properties would be useful,” adds another working in the same area and the same type of organisation.

Waiting to act

The perceived lack of established best practice perhaps increases worries about taking action. As one sustainability officer at a housing association puts it: “The conservative nature of the sector is a key barrier to faster roll-out of energy efficiency measures and caution has been increased by previous bad experiences.

“The gap between previous government legislation and funding, and the current situation, has also been a key barrier. Even as technology costs come down, the financial and regulatory case is still not as strong as it used to be and there is a sense the organisation is waiting for this to return before taking action.”

They conclude: “Despite this, I hope current activism and discussions will help to spur more proactivity.”

It is a hope that will be shared by many others. ■

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# Meeting the value for money challenge

**Graham Collie**, technical support manager at the Scottish Procurement Alliance, discusses how collaboration and innovation could help the sector deliver excellent quality at reduced cost

**What are the main challenges facing the Scottish housing sector when it comes to delivering value for money?**

There are three main issues. First, the ongoing skills shortage means labour costs across the country are escalating. This has been compounded by the uncertainty surrounding Brexit. Bricklayers in particular are in high demand and can practically name their price.

Second, there are tight deadlines. The Scottish government’s ambitious target of delivering 50,000 affordable homes by 2021 - 35,000 of them for social rent - is one we are all striving to meet. In some cases, if there are not spades in the ground by a certain date then grant can be lost.

This, along with internal targets, means organisations are rushing projects. Many contractors are provided with designs late and, to keep the project on target, are expected to cost the project unreasonably quickly. But this leaves them unable to fully evaluate the requirements and inflated tenders are the result.

Finally, efficiency within the sector is still not where it needs to be. Scotland has at least made a start on factory-based offsite construction but much more could be done.

**How might individual housing associations begin to drive better value?**

Collaboration is key. Many smaller registered social landlords and councils have lost expertise through reduction in grants, the financial crash, budget cuts and retirements. There is often a reliance on external consultants. But teaming up with another association or council can increase expertise and purchasing power and drive economies of scale.

An example of this sort of set-up is the partnership between Ochil View Housing Association - of which I am a board member - and Kingdom Housing Association. Kingdom acts as a development lead for Ochil View, managing the full project life-cycle in return for a reasonable fee.

Combining this approach with procurement through our Scottish Procurement Alliance (SPA) frameworks really does help. We now have 90 partners throughout Scotland so the purchasing power with us together is huge.

**What bigger shifts need to happen in the Scottish housing sector if value for money is to be consistently achieved?**

We need innovation within the sector from the contractor side and the client side. All public procurement contracts should be at BIM Level 2 but many are not. Using virtual reality software with BIM - or Building Information Modelling - practices allows deeper collaboration by showing a 3D model of the building.

It means contractors can accurately cost the project as the software will instantly produce reliable bills of quantities. If the design changes, all drawings and bills are automatically updated.

We also need a change of thinking at government level. In December 2018, the Scottish government published the *Construction Procurement Handbook*, which relaxes Quick Quote requirements. But we fear going back to this approach will result in the old ‘approved list’ scenario, which stifles SMEs and discourages innovation. And it is clear that we need innovation, including offsite construction. Many companies in Scotland are now capable of this through various timber methods. It is possible to have the structural walls of a

**Biography**



Graham Collie is technical support manager at the Scottish

Procurement Alliance (SPA). He is a qualified quantity surveyor working towards MRICS, and during his career has worked within local authorities, housing associations and private contractors. The SPA is backed by LHC, one of the UK’s leading and most respected procurement organisations.

**“The possible impact of offsite on value for money in the Scottish housing sector is colossal”**

house fitted out in a factory with the windows, doors, and external and roof cladding pre-installed. This vastly increases the quality of the product, as it is fitted in a warm, dry environment.

Some companies can even supply apartments or a whole house that is craned into place, fully fitted out and ready for connection to services. All of these innovations will drive value for money if we focus on them.

**Are there examples of Scottish projects or organisations that are already making progress on embracing innovation and so delivering improved value for money?**

A recently completed project in Weirston Road, Kilwinning, is a great example. This was one of the first projects procured through our offsite construction NH1 framework. CCG constructed the site

using its own panellised timber frame system. The 64-property development, which was for Cunninghame Housing Association, was windproof and watertight in 115 days.

Another good example is a project that the Construction Scotland Innovation Centre recently supported in Queen Street in Alva, with Link Group. The aim was to prove that a gold standard project could be completed offsite with a 20% reduction in site time. It easily achieved 50%.

The possible impact of offsite on value for money in the Scottish housing sector is colossal. Automation from machinery means minimal waste as well as efficiency gains. Meanwhile, the reduction of site time means a reduction in preliminaries - which occur on every construction contract and can vary from 10-20% -

and therefore in the cost associated with these. The social landlord is then able to move tenants in quicker, start the return on their investment earlier and benefit from a higher-quality product.

**What is the most important step housing sector leaders in Scotland can take to ensure value for money in the sector?**

I’ve mentioned it many times but it bears repeating: collaborate. The only way the sector will improve is by working better with one another. Share your resources to ensure that your communities will thrive, and you will be rewarded with better value for money as a bonus.

Collaborate with us, too. Our free-to-access framework service thrives on achieving best value for the Scottish housing sector. We currently have 90 members, consisting of housing

**“Share your resources to ensure that your communities will thrive, and you will be rewarded”**

associations and local authorities. Any organisation that is partly or fully funded by public funds is eligible to use us. We are driven by our sector and would love nothing more than for all involved to influence our offering.

Through this approach with our housing frameworks, we have now delivered 3,500 homes in Scotland - 10% of the government’s 2021 target for social rent housing. It’s something we’re immensely proud of and we hope you’ll join us to deliver even more. ■

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# **Looking to the future:**

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