

# Modern methods of construction

Northern Housing Consortium online conference – Wednesday 24<sup>th</sup> March 2020

Tracy Harrison – chief executive, Northern Housing Consortium

Introduction to the NHC: member organisation; ‘voice of housing in the North’; NHC’s purpose, bringing members together to share ideas and represent their interests; procurement solutions.

Housing need in the North – Levelling up: if we are to achieve significant results then we need 50k houses per year; then 70k houses from 2027 to 2050. We need 20k affordable homes across the North per year – based just on current backlog. Even at current low rate affordable housing delivery in the North makes a significant contribution: 1 in 3 of Homes England’s plan now – we need to increase this momentum.

Why modular matters – productivity, job creation and quality are far too low. In order to succeed going forward the North needs to coordinate investment, innovation, supporting supply chains and taking advantage of technological and climate opportunities. We are lucky to have ambitious local authorities who are looking to develop this.

Challenges faced by social landlords – government policy currently diverts support to areas which are deemed least affordable. This disadvantages the North, which is deemed affordable. Builders are now expected to build at full market prices and use profits to fill affordable quota. Many social housing providers have been pioneering techniques in heating and construction methods.

Potential solutions – we need to look beyond business as usual. Volume housebuilders have met numbers. Opportunities must go beyond traditional markets. Government has encouraged SMEs into market, encouraging. MMC is extensive part of solution. Proactive approach from northern landlords to use MMC, helping them find solutions has been a key priority for NHC. Main barrier – cost. Finding a way to tackle this has been a key driver behind our partnership with LHC.

NHC/LHC collaboration – This allows consortium members access to LHC MMC construction frameworks. Members are keen to use these but realistically may only be looking to deliver 5 homes; in order to deliver we need to aggregate demand. We are starting to bring members together - this is where we will find cost benefit and offer solution for those with significant new build plans and those working on a much more modest scale.

Steering group – opportunity for members to collaborate and work on solutions to members needs, seek value on MMC outcomes, build better homes and enhance local communities and daily lives

John Skivington – group director, LHC

We are a not-for-profit procurement service. We have worked with NHC for well over 20 years and are excited to form Consortium Construction Procurement and working with social landlords to deliver homes in the North. We have been around for 50 years and have collaborated with social landlords since our inception in 1966, in the last housing boom. Our aim then was to work with councils to coordinate industrialised building programmes, aggregate demands and improve efficiency and put together procurement plans. This aspect of housing delivery isn’t new and was instrumental to high levels of housing delivery in 60s.

Now we are trying to achieve a 30% reduction in whole life costs, 50% reduction in time from inception to completion and 50% reduction in greenhouse gas output

Industrial strategy recommendations: clients should be adopting a presumption in favour of off-site construction.

LHC procurement consortium – we work with groups of social landlords, trying to understand needs, work with consultants, contractors and manufacturers and bring these two groups and their needs together.

FAC-1 Framework alliance contracts, facilitates collaboration between alliance members, allows clients to use when they need to. Two obligations: to identify aggregated framework programme; promote improved value. This is in-line with our three reduction aims.

Collaboration for new housing delivery – best method is through regional clusters. Groups of social landlords coming together with LHC's approved consultants, contractors and manufacturers within the framework. We have two frameworks established: Offsite project integrator and offsite housing manufacturing and construction. Housebuilding contractors, model used to aid transition from traditional methods to MMC.

MMC housing programmes – pipeline of 4600 homes. A lot of activity in Scotland, Dorset, Wales and a little in London and Birmingham. However, nothing in the North – this is what consortium procurement is about to change.

Paul – Tracy has explained the scale of the task. Main barrier is that MMC outweighs traditional builds on cost. Early cost issues were through manufacturers, spend a lot of time trying to work with manufacturers in seeking value but that is only one aspect. This is a whole process, it starts with a blank slate and a site, not the manufacturers. What we need to start with is actual design on any given site and trying to integrate that through a holistic process, with manufacturers laying a key role. The integrator role which has come from this is something which LHC and NHC have collaborated brilliantly on to kick start growth in MMC. It feels like we are on the cusp of something. I would make a plea to look at the entire cost, not just that to acquire and build the homes.

[Chris Pincher – Housing minister](#)

Any questions please direct them to the Ministers' office.

[Lucy Lovatt – senior strategy manager, Homes England](#)

Background in housing delivery and regeneration, now looking at ways of improving construction productivity. This is a key part of our strategy. We are going to set out how to see how MMC can play a role in that.

Homes England are taking steps to support sector in current environment. Established in 2017, governments housing accelerator on housing mission. Aim to intervene to ensure housing delivered in areas of greatest need, aim to create more resilient housing market. We are making big steps to support the market during coronavirus outbreak. We are seeking to best focus our efforts and will be fully operational at this time.

We need 300k net new homes per year by mid-2020s, currently at 240k. Some way to go. HE is a mission-based organisation. 6 objectives: unlock public and private land, range of investment products, improve construction productivity.

Construction productivity – industry is lagging behind the economy as a whole. Different contractors finding difficulty in recruiting trades onto site. They have all increased in recent years. We have an ageing construction workforce, and a significant proportion from outside UK. Brexit impacts of this, a lot of European nationals returning home. CV19 likely to exacerbate going forward. This tells us that the sector needs to find ways to build more high quality homes with fewer workers.

MMC improves this productivity. We are open to all MMC approaches which allow us to build with fewer labour hours without eroding quality.

MMC is also more sustainable, higher thermal efficiency, closing of performance gap between design and reality. Reduction of waste compared to traditional build. Reduced vehicular emissions due to fewer movements. Reduced embodied carbon. Demountable MMC solutions.

Production quality – factory environment safe and stable. Weather conditions do not have any effect. Provides skilled jobs, reducing gender divide.

MMC and design – do all MMC homes look the same? No. Urban splash have 300n configurations, new builds with custom build specs. Sekisui Homes employ 2.5k architects, Japan's 3<sup>rd</sup> largest.

What is the Homes England approach?

We have a number of tools at disposal. Home Building Fund, £4.5bn government finance used to support small and large builders to build and set out infrastructure. In the North it has support 11k MMC homes from £195bn.

Shared ownership and affordable home programme is key. There is £12bn deal in new budget, £4bn of grant funding and £135m has delivered 4k MMC homes.

Local Authority Accelerated Construction. Accelerate development of LA land. 13,400 homes to be delivered through this scheme. £38m allocated to northern councils.

HoUse Sekisui and Urban Splash house deal. New stand-alone, vertical integrated Programme.

Mandating MMC as part of larger land sales. When disposing of large sites, we legally oblige developers to use MMC as preferred method. Established an MMC pilot scheme on 8 sites at reduced return to monitor their development over 6 years to share techniques and findings with market.

We are supporting MMC delivery through strategic partnerships. We can use arrangements to push MMC delivery. The international market which have MMC as a standard solution – how can we replicate?

Progress to date 40 sites sold which legally require MMC. Numbers per year are rapidly ramping up.

Tim Oakley – consultant LHC

How not to deliver!

- Ineffective plans, consultants not brought in early enough.
- Engagement with consultants, or engaging with those unfamiliar with MMC
- Plan approval from those unfamiliar
- Tender, lump-sum, single-stage tenders. Expensive risk pricing.
- Receive tenders but due to poor process will be few and expensive. Cheapest will go back up again after offsite manufacturer has to redesign
- Replan because the plan doesn't adhere to your requirements

- Construct greed design changes, very cost
- Complete but don't engage with lessons learned.

OPI 1 Framework – MMC take-up has been slow due to poor collaboration. Can be used to manage deliver of non-residential. Single point of contact to implement for all aspects. Will draw from existing consultants' frameworks. Framework will service tenanted housing, SO, HTB and future models that LHC clients might develop.

Tender procedure. Evaluated on PQQ capability.

### Panel session

Tracy Harrison – chief executive, Northern Housing Consortium

Paul Beardmore – Independent consultant

Jon Skivington – Group Director, LHC

Tim Oakley – Consultant, LHC

Lucy Lovatt – senior strategy manager, Homes England

### **What is the situation with regard to the cost on modular build?**

Jon Skivington - reduce whole life cost by 33%. Two aspect: economies of scale through efficiency and aggregation but also looking at whole-life when evaluating methodologies. At LHC e have unique position in looking at both trad and MMC. Typically, a traditional and MMC is 19% premium in capital costs. However over 10 years it's even and over 20 years a 10percent saving even without aggregation. Once aggregation and sale come in, we will be able to hit 33% target that the government has set.

### **Commitment to set-up round table after current crisis abates. Tracy, would this be something the NHC would be keen to support and et up with minister?**

Tracy Harrison - Absolutely, we will look to get that set-up as soon as possible. We would be interested in people's feedback on this format, whether people would like this meeting to be physical or virtual.

### **Discussion around warranties, expedited to cover MMC. Given Homes England expects big numbers is this something that Homes England have looked into?**

Lucy Lovatt – not something that's been addressed thus far. Warranties on the agenda. Not yet, but on the table.

John Skivington – Mark Farmer has worked with government on work group to provide definitions framework. Now there is a group dedicated to sorting warranties issue, including mortgage lenders and insurers. Aim is to develop national picture, definitive statement which will allow framework for warranties and accreditation going forward.

### **How does our framework tie in with Homes for the North modular group and work to aggregate demand?**

HFTH focussing on biggest providers. We will bring in smaller providers. Our members are looking at smaller schemes, on their own wouldn't stack up.

### **How much will digitalisation and BIM be adopted given 40% of output is from SMEs?**

Tim Oakley - Many SMEs are well versed in digitalisation and BIM environment. Part of what CAD is all about. Won't be a struggle.

Encouraging SME's to develop MMC. Not as interested in lifetime costs, more in immediate hit, will market accommodate this

John Skivington – Need to evaluate internal process. Through collaboration we want to get suppliers and clients working together. Must be led by clients, whole life costings must be taken into account.

Paul Beardmore - Traditional methods are going to get more expensive

John Skivington – Yes, much of this benefit over 30 years is due to inflationary costs of traditional builds, i.e. labour.

Paul Beardmore – is there paperwork to be shared?

John Skivington – yes case study in SW in Dorset cluster on our SWPA website. Led by Magna Housing as a client.

Tracy Harrison – CPC have a 'lessons learned' document which is intended to be circulated following this.

### **How does aggregation help smaller projects with affordability?**

Tim Oakley – Value is in volume. Whilst individual providers can't find that volume the use of FAC1 framework allows people to join in with aggregated scheme as long as standardisation is agreed.

John Skivington – whole idea of aggregation is that activity is being undertaken by individual landlords. This allows a larger order. Bulk quotation. Standardisation allows the product to be produced, with modules already constructed ahead of orders.

Paul Beardmore – we ran a programme 7 or 8 organisations with new build programmes to accumulate demand of 500 homes for example. These new programmes will allow people to get over many of the issues we faced.

### **Performance of different systems on 8 case sites?**

Lucy Lovatt - Final stages of procuring research partner. Working with developers on each site to organise, with different types of MMC on each site. We will manage different aspects of the build and its subsequent performance. People will move in with agreement that homes will be monitored.

### **What is the best approach to standardisation, pattern book, room sizes?**

Tim Oakley – Don't want to look like prefabs. Standardisation of room sizes. People are seemingly surprised that it 'looks like a real house', it is a real house.

Tracy Harrison – Thanks for everyone who has dialled in and to speakers. We hope people have felt the benefit of it.