

Factory framework

John Skivington,
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Despite its chequered history, the offsite sector has come a long way. Social landlords are increasingly turning to the benefits now offered by this method of building to help tackle the housing supply shortage.

Factory-built panelised and volumetric units offer a cost-effective solution to housebuilding, particularly in urban areas where there is an increasing demand for more housing on pockets of brownfield land.

In addition, improved quality, reduced waste and efficient building techniques are helping to drive demand.

As a leading provider of technical procurement advice and procurement solutions, LHC has introduced the first nationally available procurement framework for offsite-built new homes to support this surge in interest.

Our Offsite Construction for New Homes Framework will help social landlords tap into the benefits of this housebuilding solution.

And, once the third and final workstream is introduced later this year, it will offer our social housing clients a complete turnkey solution.

At LHC, we believe offsite manufacturing techniques offer a possible solution for getting good quality, affordable new homes built more quickly – something we see as a priority for local authorities and housing associations.

This is the key driver for providing our clients with a framework that covers all of the elements they need.

Improved quality, reduced waste, efficient building techniques – resulting in less noise, dust and local disruption – and an energy-efficient end product are among the benefits.

In addition, it is quicker to build this way, so social landlords can get tenants into homes more quickly and start getting a faster return on rent payments.

Article written by:

LHC

The framework takes LHC back to its roots, when we were established 50 years ago to collaborate on 'industrialised building systems' to support the post-war housebuilding boom.

Today the market is buoyant again, as industry expert Dennis Seal explains (right). Investment and innovation, supported by tougher regulation, is paying dividends, leading to improvements in quality, efficiency, sustainability and compliance.

The framework has been divided into three workstreams. The first is for 'volumetric building systems' – factory-produced three-dimensional units that are transported to site and fixed together.

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The second is for 'panelised building systems' – factory-produced flat panel units that are taken to site and assembled there. These workstreams were launched last year.

The third workstream to be added to the framework will enable LHC to offer its housing association and local authority clients a turnkey solution for building new homes using offsite construction methods, taking the hassle away from buying elements of the supply chain.

With the growing interest from councils and housing associations to meet the challenges of building more homes, it is likely that offsite will be part of LHC's framework portfolio for years to come.

Out of site



Let's embrace the benefits of offsite, writes Buildoffsite's **Dennis Seal**

After years of scepticism, industry and government have finally come to realise that factory-based construction makes housebuilding more predictable, quick and efficient. Offsite is now being looked at as a serious solution to the current housebuilding crisis.

This slow change in attitudes has been backed up by firm political commitment. The Homes and Communities Agency (HCA) has said it would like to see a fifth of all homes built under the 2015/18 Affordable Homes Programme constructed using offsite methods. So far, so good. But I believe the benefits of offsite can allow us to be even more ambitious.

Why not use offsite construction to close the gap between the 125,000 homes that the traditional house builders can supply and government targets of 250,000 new homes? By doing that, between now and 2020, it could be possible to get the offsite industry producing up to 60,000 homes a year. It's an exciting prospect.

The housing crisis needs urgent, innovative solutions. Whatever your political perspective, all parties agree that there aren't nearly enough homes being built in the UK. Experts estimate that 250,000 new homes are required every year, yet last year only 141,000 homes were actually constructed.

When housing developments have to be completed within three-year grant funding cycles, traditional building is just too slow. Offsite construction offers so many solutions. It dramatically reduces the time spent actually building. Weather, delivery delays and all the other factors that can lead to completion being set back are all substantially reduced.

Yes, there are lead-in times needed for the design and production of components. But factory-based construction cuts the onsite time in half – making it possible to double the number of homes built by traditional methods in the same time period.



The availability of the materials, resources and skills needed to fuel traditional housebuilding has thresholds that are difficult to exceed. And there is no motivation to exceed these limitations. Many developers can maintain their profit margins effectively in the current market. So while there is a recognised need to increase offsite construction, how can it be done?

Different materials

The offsite industry uses more lightweight skills, as well as a mixture of UK-based and imported materials. We can develop the industry by bringing in materials from overseas suppliers who want to establish themselves in the UK. Although that helps, it's not the only answer.

Developing factory-based construction in the UK depends on upskilling existing workforces in the local geographical area it operates in. To do that, traditional and offsite construction industries have to

work together.

LHC's new procurement framework will speed up the whole offsite process. As one of the first such frameworks, this initiative means there is now a list of qualified offsite manufacturers and suppliers – and there will soon be a list of regional contractors, which housing associations, local authorities and any other publicly funded organisations can go to directly. They can also start working much quicker than they would by going down the traditional procurement route.

Some of our members are very interested in getting onto the LHC framework because it will offer them opportunities. Whether you're a contractor or manufacturer, pre-qualifying for a framework is valuable. This whole concept will reduce the amount of time and effort put into bidding for offsite contracts.

The industry has woken up to the potential of offsite and there are a number of exciting offsite developments. We are seeing more examples of small landlords clubbing together with larger social housing providers to make offsite cost-effective. The difference with LHC is that it's specialised and national. But LHC

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will also have to work with larger landlords to ensure that small organisations can access the benefits of offsite construction.

What we've seen historically with offsite is that the process starts – and that, for economic and political reasons, it comes to a standstill. But as demand grows, costs will come down. A new industry accreditation, the Build Offsite Property Assurance Scheme (BOPAS), is also providing buyers with the quality assurances they need.

All this has led to a recent continuous rise in the use of offsite construction methods. The stability of the affordable housing market and growth in Build to Rent and the private rented sector has also helped. Any building being constructed for rent needs to be built and delivered as quickly as possible to the highest quality, which lends itself to the use of offsite.

Less waste

Offsite not only saves time, but energy. By producing buildings in tightly controlled factory conditions, less resources are wasted. Offsite designers can better incorporate energy saving measures such as ground-source heat pumps and heat recovery ventilation. Enhanced design of components also allows for tighter control of energy consumption and greater insulation, leading to higher quality homes that reduce fuel poverty.

Offsite homes are also gaining a reputation for being aesthetically innovative, but without the enormous costs associated with quality design. Offsite developments such as the Commonwealth Games Athletes' Village in Glasgow (for more on this, see overleaf) are scooping awards for planning, environmental and architectural excellence.

House builders and developers also need to realise that they too can benefit from offsite. Many are currently using open-plan timber frames and modular construction to supplement the use of more traditional methods.

Social landlords see that there's a strong future in offsite construction and there is willingness to participate. Midlands-based Accord Group, which is on the LHC framework, now has its own offsite homes factory and construction company, LoCaL Homes. That may well be more commonplace in the future. Having control over delivery is vital to be able to respond to future grant regimes and programmes.

But it's not just about getting something out of it – it's also about putting something in. At Buildoffsite, we've got 120 members, from Cherwell Council to Legal & General. Their diversity is bringing different skills to the table and is helping us ensure that the great potential of offsite construction is finally realised. *Dennis Seal is on the executive group of Buildoffsite, a membership-based organisation set up to promote the use of offsite construction* ▶