Specification Today

Onwards for Offsite

Managing partner Simon Bayliss tells Ruth Slavid why HTA Design is a firm believer in modular construction

At present just two per cent of housing is prefabricated. When I ask Simon Bayliss, managing partner at HTA Design, what proportion he thinks it could reach, he says "I would plump for 50 per cent". And this is Bayliss being cautious. With the exception of some one-off houses, he believes that "everything mass produced or speculative could be modular". In other words, almost all housing.

Bayliss is certainly an enthusiast for modular housing. So much so that he has written a book on the subject with colleague Rory Bergin. Called 'The Modular Housing Handbook' and published by RIBA, it shows a range of fascinating projects by HTA and others, and also sets out the arguments for widespread adoption of the approach.

Although the book talks about the history of all types of manufactured housing, its main emphasis is on the volumetric approach — the creation of whole rooms that can be delivered on the back of trucks. It puts forward several strong arguments for their use, not least faster construction and improved environmental performance.

Getting to this point has taken Bayliss his entire 22 years in practice. He looks back to the Greenwich Millennium Village where, he says, "We were full of big ideas that the industry couldn't respond to. It has taken the industry 20 years". Over that period, HTA has worked with a number of companies but now co-operates closely with Vision Modular Systems on a range of projects, including the newly complete 101 George Street in Croydon.

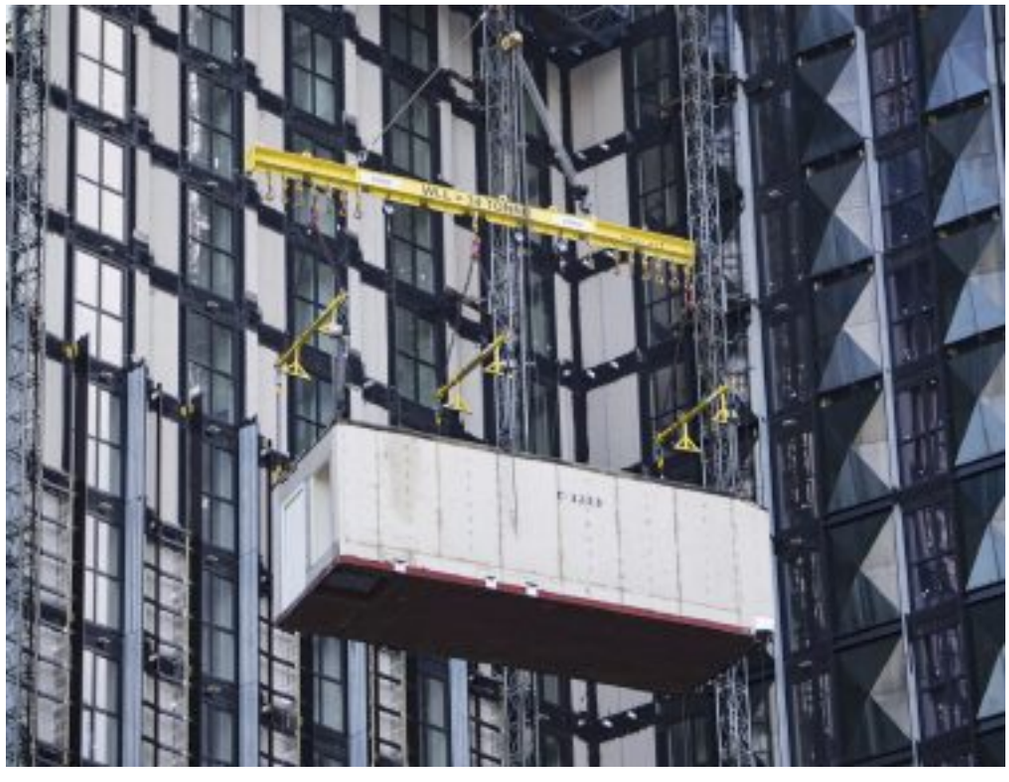
This comprises two towers, one 38 and the other 44 storeys, consisting exclusively of homes for rent. HTA describes itself, Bayliss says, as "designers in industry" — that is, part of the industrial process, not completely detached designers.

Now that industry is able to do this work properly, there are, he believes, many advantages. One — and it may be counter-intuitive for some — is architectural freedom. "If you take the constraints and benefits and work with them", Bayliss says, "you get quite a lot of architectural freedom. There is freedom in material specification and in quality of finishes".

Above
Greenwich Millennium Village, designed in 1998, was one of HTA's first attempts to use Modern Methods of Construction.

Right
'The Modular Housing Handbook' (RIBA Publishing, 240pp, £40).

Opposite
101 George Street under construction and exploded view of its modular apartments. The two towers comprise 1500 modules manufactured in Bedford and delivered to site replete with services, kitchens and bathrooms.



And, he says, by working in this way, the architect has no fear of being kicked off the project part way through. “Nobody would conceive of changing architects”. Instead, the practice is involved from a very early stage, right through to post-occupancy evaluation — and yes, that does happen.

It is no coincidence that many of the modular projects with which HTA is involved are build-to-rent, since this is where the big advantages are for developers. Modular construction is much faster — the units are made in a factory and then delivered and craned in. The upfront cost is higher, but clients also begin to receive income more rapidly, and this is the main driver when building for rent. It is one of the reasons that hotels were quick to embrace volumetric construction.

For example, HTA completed a student housing project of 550 flats at Wembley, north London, within a year. A similar project built by another practice using conventional construction took two and a half years, missing the rental income for two years.

But there are wider benefits than just to the pockets of developers. Environmentally there are several wins, and some of them are surprising. Despite the fact that the transport of the units themselves is inherently inefficient — trucks are carrying large volumes of air, rather than neatly stacked components — transport impact is actually reduced relative to conventional construction, says Bayliss. “On a building site”, he notes, “you have huge numbers of deliveries coming to and from the site”. Deliveries to the Vision Modular Systems factory near Bedford are, in contrast, well-organised. In addition, 75 per cent of the factory workers cycle to work, whereas construction workers — constantly changing their place of work — are likely to drive or, at best, use public transport.

Left, below
Each module at 101 George Street has a unique steel structural design tailored to its position in the building, allowing an efficient frame. It is clad in “jewel-like” glazed terracotta panels.