

1 Comment

Posted on March 28, 2016 by [lselondon](#)

# Innovative construction methods

Across London a few bold local authorities and charities have commissioned new housing built using innovative techniques such as modular prefabrication, where the units are stacked like Lego. These developments have an undeniable ‘gadgety’ appeal—but could they be a game changer? Could they overcome long-held negative attitudes to prefabrication, and provide cheaper, better housing—and faster?

As part of our project on Accelerating Housing Production in London, on 24 February LSE London hosted a roundtable to discuss the potential for ‘modern methods of construction’ in addressing the London housing crisis. The panel included architects, engineers and surveyors as well as civil servants and local government representatives.

What are these techniques exactly? Depending on the scheme, the building blocks may be large (entire dwellings) or small (precision-cut timber beams), and might be assembled using heavy machinery (cranes to lift pods in place) or manually by self-builders. But they also include modules which are increasingly being introduced into traditional methods, reducing build time and helping to overcome skills shortages.

What are the benefits of such techniques? The cost of high-volume methods is generally lower than traditional building techniques but perhaps more importantly the process is much faster. In one scheme currently underway in south London,

expected to arrive in May. Contrast this with the 18 months a typical new-build development takes. What is true is that the off-site manufacturing model requires more thought in advance, as it is impossible to tweak details onsite.

The smaller, bespoke methods also offer savings in cost and time, and (in the tradition of Walter Segal—see our film XXX) allow the end users themselves to design and construct their homes. The biggest issue appears to be the difficulties and costs of erection. In the past these techniques have only been possible on very straightforward (rectangular) sites which limited their use, especially on smaller urban brownfield sites. This problem has been addressed – but there is still little information about this element of costs.

Lower cost and faster construction (either using modern methods of construction exclusively or incorporating the approach into more traditional methods) will not necessarily feed through to house prices. For-profit developers will always sell at the market price, so reducing the cost of construction would benefit the developer or the landowner more than the final purchaser. And volume house builders generally produce new homes at the rate they can be sold without reducing prices – about 100 to 150 units/year on any one site. The most common use of these methods—but one which historically had a poor reputation—was by social housing providers when directly commissioning social rented housing. But developers and financiers are now exploring the possibility of building dwellings for the growing purpose-built PRS using these techniques.

In the owner-occupied market there is the issue of valuation and mortgages both for the initial purchaser and when that owner wishes to sell on, as many lenders are reluctant to lend against buildings constructed using non-traditional methods. Guarantees (NHSC, Premier, Bopas) have helped some purchasers and have potential to become more readily available.

Finally there is the issue of consumer attitudes. Many people have strong negative beliefs that prefabricated structures are second rate and poorly designed for the occupier (as opposed to the developer). These attitudes can only be overcome by 'seeing is believing'.

One area where these techniques do have clear potential, which is only now starting to be explored, is to provide temporary structures on land that will

located plots may sit empty. Some prefabrication techniques produce units that can in principle be dismantled and re-erected elsewhere (though this has yet to be demonstrated in practice), which offers exciting possibilities for ‘meantime’ uses of such land. Other techniques allow dwellings to be constructed above valuable existing uses like car parking.

Some of those attending expressed scepticism—if these techniques were so great, why is not everybody is jumping on the bandwagon? Others countered that knowledge was still patchy, and there was suspicion in some quarters—linked to the term ‘pre-fab’. All agreed that building techniques were only one element in the process: they are not enough on their own to change the game, but they do offer real potential. Demonstration projects play a crucial role; local councillors and the public generally can more readily accept something they have actually seen.

☰ Category: [Constructing Construction](#), [Events](#), [Recent News](#), [Themes](#), [Uncategorized](#), [Workshops](#)

← [Final report of the London Housing Commission](#)

[The effect of forthcoming housing policy changes on social-tenant employment and the London economy, Final report for LB Camden](#) →

## One Comment on “Innovative construction methods”

santhasabarish

[November 3, 2016](#)

Give me some innovative ideas in research topics

Reply



## Leave a Reply

Your email address will not be published.

Required fields are marked

### Comment

Name

\*

Email

\*

Website

Post Comment

Notify me of follow-up comments by email.

Notify me of new posts by email.

### Contact us:

Twitter - @LSE\_London

Facebook - LSELondonGeographies

YouTube - LSE London

Email - [london@lse.ac.uk](mailto:london@lse.ac.uk)

