

OFFSITE CONSTRUCTION: SOLVING THE NEEDS OF THE MANY WITH AS LITTLE AS POSSIBLE

As the population of Western conurbations grows, so does the appetite for affordable dwellings, with current housing stocks unable to quench augmented demand across the board.

Offsite construction and prefabrication of multi-purpose units for quick and efficient assembly, has emerged as one of the answers to slake the thirst for housing, yet it comes with its own set of challenges as well as advantages.

In the following interview, we speak with a design director for a real estate developer that is facing up to those challenges in Central London, one of the most densely populated cities in Europe.

SPEAKER KEY

TH Tim Haidar, Editor In Chief, Oil & Gas IQ

JW Russ Edwards, Design Director, Pocket Living

TH First of all, Russ, thank you so much for joining us today. Could you explain to us a little bit about what you do in your role?

RE I'm Design Director at Pocket Living. Pocket is a private developer of affordable housing, building compact

one bedroom apartments for first time buyers in good commuting areas around London, mainly zones 2, 3 and 4. My role covers the selection and briefing of our external consultant team and the management of the design quality of all of our homes and buildings.

TH How do you go about selecting the optimum offsite solution, what should you be bearing in mind?

RE Pocket has optimised a compact one bedroom apartment design which we sell to first time buyers at a discount of 20% to the market. Our developments tend to be small and medium-sized schemes built on urban infill sites, with consistent and repeated unit layouts. As Pocket's development model is based on a high degree of repetition, it lends itself very well to offsite construction techniques. However, to date the scale of our pipeline and our business has meant that we haven't been able to deliver the kind of cost and programme savings necessary to make it viable. That has changed recently, so we now have a significant pipeline and larger scale projects.

We have two appraisal levels. There's a strategic appraisal which relates to our affordable housing pipeline and our associated milestones for an eight year cycle. And then there's a project-specific appraisal. The selection of the most appropriate procurement and construction methods has to satisfy both of those appraisals. On top of that, all of our sites are in London, mostly in central zones, so

covers all of these criteria. Generally, offsite offers tangible advantages predominantly when we're looking at strategic targets. On a project-by-project basis we're probably paying a little bit of a capital uplift. We are covers all of these criteria. Generally, offsite offers there are also some obvious practical constraints which relate to site logistics, storage areas, access for the large tangible advantages predominantly when we're looking at strategic targets. On a project-by-project basis we're probably paying a little bit of a capital uplift. We are

making significant programme savings but because of our elements that you might expect from an offsite approach.

For each project we have to undertake an appraisal that funding model, the programme savings aren't a huge commercial issue for us.

But if we are able to deliver significantly more homes over the strategic period - this eight year period I referred to, then that's obviously a huge benefit for us, and for London's housing supply.

TH Now, one of the big things about any large construction process will be interface management, managing public and private stakeholder priorities being obviously quite high in that. How is that best done?

RE We're a private developer developing affordable housing. We are working with a long term loan from the GLA, so we need to satisfy them around our individual developments and our long-term development model. Our main concerns are typical private sector concerns: funding and mortgage lending being critical amongst them. We need to be very certain that whatever offsite techniques we engage with won't have a negative impact on our buyer's ability to get lending.

TH Has the mortgage side of things become more of a barrier recently?

RE Well our model is quite complex for lenders, principally because there is a restrictive covenant on our homes that ensures the properties are affordable in perpetuity. So, the lending context is already quite complex, and adding further complexities to that, around new or innovative construction methodologies could be a barrier.

Certainly the lenders are all keen that if we are pursuing a modular approach, that we have BOPAS (Buildoffsite Property Assurance Scheme) certification in place, equally NHBC (National House Building Council) approvals need to be demonstrable. So, a track record is certainly beneficial. As I say, we haven't come across any red lights, but there is a little bit more due diligence required with offsite.

TH One of the things with offsite construction is obviously going to be getting things from A to B. Are there any physical constraints of inner city development and if so what are the ways that you're finding to get around them?

RE Firstly, there's an exclusion zone in Central London for abnormal loads during the daytime (Metropolitan Police Abnormal Loads policy), which is an obstacle that we need to overcome for some sites. In very central sites an offsite approach requires a delivery regime that would necessitate night-time deliveries - which represents extra cost to us.

Beyond that, the physical constraints tend to vary between sites. Some of the common issues are that a lot of our sites are on existing local authority estates, so it's a domestic scale road network which has some challenges. Out of hours working isn't practical in those kind of environments given that they are existing residential communities.

Equally, there is often very little available in terms of storage areas, our sites tend to be very tight so we're talking about delivering so that elements or modules

can be incorporated in the works as they roll off the lorry.

Crane locations and crane sweep paths are also a huge issue with existing residents. Now the counterpoint to that from a local community perspective is that the speed of delivery and the dry, construction techniques associated with offsite are obviously hugely beneficial, so we can often have a conversation with both the local authority and the residents and sell the idea of an offsite approach as a positive rather than a negative.

TH What's your approach towards the interface management to ensure that communication between all of your stakeholders, public, private, contractors gets done in a best practice way?

RE Good communication and following best practise is always key for us. The strategies that we are using to safeguard delivery really relate to procurement strategy in simple terms.

Because of our funding structure we are currently using a single stage design and build procurement approach where a significant part of that design and build contract relates to an offsite supply chain that obviously restricts some of our options in terms of contractors that we can go to. However, this means that the contractors we can go to are comfortable working with either a large external offsite component or actually, more commonly, they have an in-house offsite capability.

So, we're tending to find that if we pursue an offsite construction approach we either tender to a contractor that has an established partnership with an offsite provider or a contractor that has its own offsite provision. Therefore, we basically have a single point of contact and the onus is on the contractor to complete the design which includes ensuring all the interfaces are fully coordinated and sound.

So, we innovate our design team to the contractor at a point that is early enough for all of that responsibility to be cleanly passed onto the contractor as their responsibility.

And because the current route that we're following for offsite is a modular approach the interfaces are actually reasonably straightforward. The majority of our projects are under four storeys so the modules that we are looking at certainly are self-supporting. There's a ground works interface, superstructure and fit-out interface and then an envelope and roof interface. So, because all of the design responsibility

for those interfaces rests with one party, we have a robust strategy.

TH The last question I wanted to ask is something more to do with the nature of the construction business. Do you think that any company is only as good as its last project?

RE Yes, certainly. You know, brand and reputation are big factors for us in our business. Currently, we don't have any competitors that are using the exact development model that we have pioneered in London but I think that's likely to change.

We see offsite as a complementary strategy for what we are trying to achieve, because one of the things that is attractive to us about offsite is the increased build quality that we can achieve through having most of the activity undertaken in the controlled environment of a factory.

So, it's certainly a big factor for us. Planning, in terms of reduced disruption onsite and a less intrusive and speedier construction process is also an obvious advantage. We're very optimistic that off-site construction will deliver advantages to our brand.

TH Russ, that's great. Thank you so much for your time today.

RE My pleasure, Tim, cheers.

Russ Edwards will be speaking in more detail on this topic at the Offsite Construction & Prefabrication Summit on 8-10 December 2015 in Manchester, UK.

Whether you're involved in commercial, residential or educational projects we believe we have a case study you will learn from. Highlights include GlaxoSmithKline, Lime Tree Primary, Believe in Better Sky Office, Lewisham 'Pop-Up Village' and Hope Street Student Accommodation projects.

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