



## EXECUTIVE SUMMARY

### **The UK construction industry faces irreversible decline over the next decade unless industry leaders, market participants and the government take fundamental steps right now to change how the industry works.**

Kim Vernau, CEO, BLP Insurance highlighted these key points at an interactive discussion organised for industry peers on the uncertain future of the UK construction industry, due to its growing skills shortage. Guest speaker Mark Farmer, CEO of Cast Consultancy, led a call to action, discussing the need for the adoption of more pre-manufacture led construction, with a greater use of automation, leading to a changing skills mix for the future which embraces digital engineering.

## INTRODUCTION

The future of the construction industry has now reached a critical point. Almost ten times as many workers are leaving construction than are coming into the industry. As the workforce shrinks, the Brexit effect will also hit in the next few years, with migrant workers no longer taking up the slack. This all represents a gathering storm not just for construction but for the UK economy as a whole, to which construction contributes around 7 – 8% of GDP.

The solution to this gloomy picture not only lies in attracting people to the industry and providing them with the requisite skills; we also need to think about fundamentally changing the way in which we build. We need to see a shift in mind-set across the whole supply-chain towards the merits of pre-manufacturing and offsite construction in driving increased productivity. This doesn't mean abandoning traditional methods completely, but a manufacture-led approach will ultimately be central to the future success of the industry.

## CONSTRUCTION IN CONTEXT

The construction industry employs around 2.4 million people. ONS data and statistics suggest that in the next ten years we are going to lose in the order of 650-700,000 workers, purely through people retiring out of the industry. This is before taking into account those who might leave as a consequence of a downturn, which could see people rotating into other sectors, as well as those who might become unemployed. Contrastingly, on average we are only seeing between 15,000 to 20,000 people join the industry, in terms of core tradesmen. This suggests a scenario in about ten years' time of somewhere between 20% to 25% of the available construction workforce having left the sector. This is particularly acute when considered against the backdrop of the government's housing ambitions. Even then, targets of 200,000 new homes per year are somewhat modest, given the radical shortage of housing supply, especially when it comes to affordable housing.

The government also has ambitious infrastructure plans, including large programmes such as HS2, Hinckley Point and Crossrail 2. This will serve to remove construction capacity further. The big picture is one of increasing stress on the construction workforce, and one which

requires a change in approach quickly if we are going to have any chance of meeting future demand.

## OPPORTUNITIES FOR PROGRESS

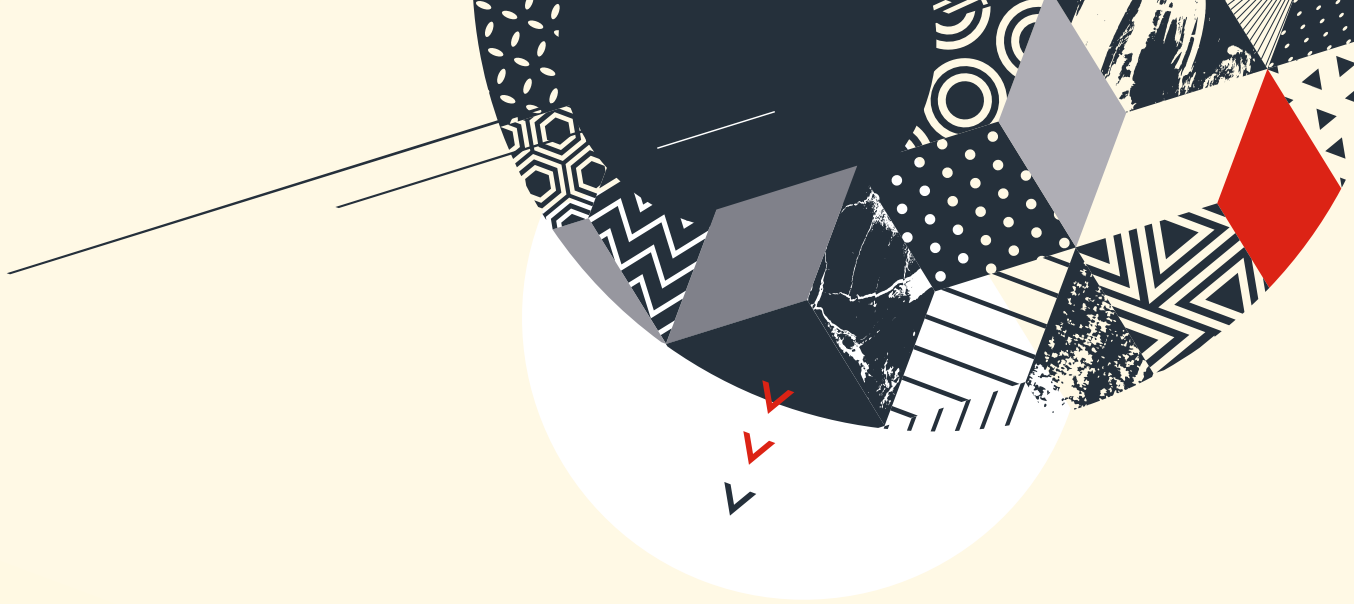
The most important challenges facing the construction industry are not those most often highlighted; namely construction costs, capacity, land and planning. Land is a finite resource, but with a more liberal planning regime we can increase land availability. Such decisions are purely policy choices resolvable by government agreeing to open up land for construction and development. Policy measures can also be taken to fix the planning system. However, capacity issues are structural and can only be resolved by generational change.

Young people see a world of opportunities available to them, often more attractive than traditionally skilled jobs. Digitalisation is a phenomenon that is fundamentally transforming the majority of sectors and the construction industry should not fear the benefits that can flow from technology. However, unless the opportunity to participate in digital methods and strategies is afforded to those starting out in the industry, they may well vote with their feet and select other career paths.

Dudley College is a pioneering venture on this point. Its Centre for Advanced Building Technologies looks likely to become one of the most advanced further education colleges in the UK for modern methods of construction. This isn't just about volumetric and pre-manufacture, it also includes different systems such as pre-casting that can be integrated with conventional construction techniques. The idea is that there are conventional trades alongside multi-skilled, digitally enabled jobs as well. BLP Insurance has been appointed as the local Technical Inspection provider on this new centre for excellence, which is being built trialling integrated project insurance.

## FOCUS ON PRODUCTIVITY

The housing crisis will simply not be resolved by saying that we're going to do more and more with less and less. Instead we need to think about higher productivity working in construction which ultimately comes down to the way we build. There is a limit to what you can do with traditional trades to overcome this productivity issue. By its very nature, site-based



construction has so many vagaries around delivery that it is difficult to control and predict the outcome.

This doesn't negate the need to continue to train bricklayers, carpenters and electricians and other tradesmen in traditional practices. It's about creating a manufacture-led approach to construction, where new methods mature alongside traditional construction industries.

There is no doubt that we produce some innovative and world class buildings in the UK, but there is a genuine need to harness this innovation beyond a single project into something that can be rolled out more widely. The reality is that there is no real incentive to collaborate for the greater good of the industry. The challenge is how we develop this insular R&D culture in the UK into something that completely reforms the way we deliver buildings that all industry participants can tap into.

### **CHALLENGING CHEAP STEREOTYPES**

In the past, there has been a perception issue related to the whole modular off-site agenda. Unhelpful stereotypes include the notion of pre-fabrication, which immediately conjures up negative imagery of 1950s post-war, poor quality buildings.

The reality is that the world has moved on considerably since then. New products are being released all the time and are evolving at a steady pace. The focus is now very much around high-tech manufacture and precision engineering. The technical solutions available are diverse; from steel-based systems, timber (cross laminated timber, in particular) and concrete based systems, or hybrids of all of these. Steps have already been taken to help overcome concerns raised around off-site techniques and modern methods of construction, through the launch of the Buildoffsite Property Assurance Scheme (BOPAS). The Scheme provides assurance to mortgage lenders, valuers, funders, landlords and homeowners that properties built from non-traditional forms of construction will be durable for at least 60 years without the need for disproportionate maintenance.

BOPAS, which was developed in partnership with BLP Insurance, the Royal Institution of Chartered

Surveyors (ROCS), Council of Mortgage Lenders (CML), and the Association of Building Societies, gives an independent assessment of quality and reassurance for investors, developers and owners.

### **SHIFT IN MOMENTUM**

The terms modern methods of construction (MMC) and build off-site are rapidly gaining increasing prominence among both national and construction trade journalists. Heightened political interest is no doubt making an impact. Construction has been increasingly creeping up the political agenda, viewed by Number 10 as a key issue to be addressed. To this end, the Autumn Statement included measures to support the industry and work is being done to understand the full scale of the challenge. A chief flag-waiver for the manufacture-led approach to construction can be seen in work being undertaken by Legal and General. In Yorkshire, the firm has opened the world's largest modular construction factory and it is anticipated to be operational by the second quarter of next year. The firm has publicly stated that it will manufacture better quality, more energy and time efficient, and lower cost housing construction to rival conventional methods. In this endeavour, it is bringing truly transformative change.

### **CONCLUSION**

There is an increasing recognition about the challenges facing the construction industry, and its far-reaching implications. However, the biggest hurdle is a behavioural one in terms of people's resistance to change. It's easy to follow the same methods and offer the same advice, but there is an incumbent duty now on all market participants to be innovative, progressive and to push the boundaries. There is a great chance to leave a legacy for the next generation, but if we don't collectively take responsibility we're all going to be picking up the pieces in ten years' time.

Mark Farmer is the founding director and CEO of the leading real estate and construction consultancy, Cast. He is committed to driving innovation in advanced pre-manufacturing techniques to improve residential delivery in the UK. Cast are heavily involved in leading this agenda in emerging residential sectors such as Build to Rent and Later Living.



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IMAGES FROM 10 NOVEMBER, 2016, AT BANK RESTAURANT, BIRMINGHAM



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BLP  
90 Fenchurch Street  
London  
EC3M 4ST  
United Kingdom

T: +44 (0) 20 7204 2424  
E: [rsvp@lunchwithblp.com](mailto:rsvp@lunchwithblp.com)  
W: [blpinsurance.com](http://blpinsurance.com)