

**DEPLOYING MODULAR HOUSING IN THE UK: EXPLORING THE BENEFITS AND
RISKS FOR THE HOUSEBUILDING INDUSTRY**

**REPORT LAUNCH | ROUNDTABLE
WEDNESDAY 28 JULY 2021
MS TEAMS**

NOTE

Opening from the Chair

Professor Cam Middleton, University of Cambridge

- Cam welcomed the report as a very comprehensive analysis of the benefits and challenges to deploying modular construction and talked about the importance of the report within the context of the wider construction sector.
- He also talked about climate change, the underlying theme underpinning much of government policy at the moment, and how modular methods of construction can play a part in transforming the construction sector to improve the planet and quality of life.
- He introduced the Laing O'Rourke Centre for Construction Engineering and Technology as an example of how the construction sector and academia can work together to deliver evidence for policy making.

Introduction

David Cowans, Places for People

- David set out the purpose of Places for People and the thinking behind the report. He described the relationship between Places for People and the Cambridge Centre for Housing & Planning Research; such collaborations support and strengthen the interconnection between government, academia and the construction industry.
- David explained that this piece of research forms part of a wider suite of research reports that Places for People and the Cambridge Centre for Housing & Planning Research are working on, with the next report looking at custom and self-build housing.
- He also talked about the work that Places for People have done within the modular construction space and suggested the question for this discussion should be how we deliver modular homes at scale.

Key points and recommendations from the report

Dr Gemma Burgess, University of Cambridge

Gemma outlined the aim of the report, which considers the opportunities and challenges of making greater use of offsite or modular built homes to meet the UK's housing needs. The report identifies the numerous potential benefits of a shift to offsite housing construction, including the greater speed of onsite operations; higher fabrication quality; safer working conditions; improved material efficiency and reduced waste; less noise and disruption for residents and neighbours; lower labour requirements; and a reduced need for onsite reworking. The report also notes that building offsite, combined with increased use of Building Information Modelling (BIM), may also make it easier to provide the 'golden thread' of information needed for effective management and maintenance of housing.

The report also discusses a number of risks associated with offsite housing construction which, along with challenges, have led to a low uptake of these innovations in the housing sector. The cost of investment required to adopt modular housing development models is high, and this is a barrier to their uptake. Another key challenge inhibiting the shift to new business models in housing delivery is the absence of a demand pipeline large and stable enough to ensure the market absorption of new homes and maintain the financial viability of offsite housing factories.

One of the key constraints to the uptake of new technologies in the construction industry is a lack of evidence to confirm the benefits of the use of offsite and modular techniques. Lenders and insurers can be risk averse to financing developers and contractors applying innovative approaches to construction as they are seen as high risk when compared to traditional approaches typically used in the housing sector. Furthermore, as a result of lingering negative perceptions of post-war 'prefab' buildings, housing customers in the UK still have a strong cultural preference for traditionally built 'bricks and mortar' homes. Resistance to change, along with the lack of regulation governing the use of innovative technologies in construction, presents further challenges for the industry.

Gemma then highlighted some of the recommendations from the report, including:

- Increased financial commitments (e.g., grants, tax breaks and subsidies)
- Increased demand pipeline through the promotion of investment in the private rented sector or through utilising public land supply
- Greater housing provider collaboration in modular procurement
- A clear and coherent set of standards and regulations for the industry
- Retraining schemes and education programmes for offsite construction skills
- Support for recommendations of central government at the local level by incentivising modular methods in local planning policy
- Systematic data capture and evidence collection by housebuilders and developers around the use of modular and offsite methods of construction
- Development of a vision of how the uptake of modular methods, offsite manufacturing and modern methods of construction (MMC) can be part of the Covid-19 recovery, particularly in tackling regional inequalities and helping to address the levelling up agenda
- Increased customer engagement in the design process by housebuilders
- Standardisation of components (e.g., kit of parts to be used across the industry)

Discussion summary

The following key points were discussed:

- **Data collection:** The group discussed the challenges across the industry that exist with regard to data collection, specifically the challenges around what data is collected and its comparability/incomparability. The importance of ensuring collaboration across the sector to enhance data sharing was also discussed. The work being done on the London Data Charter was noted as an example of a good starting point and template for how this can be done.
- **Competition and collaboration:** The group discussed the challenges that exist regarding companies wanting to protect their ideas and innovative practices in order to maintain competition within the market. It was noted that the industry needs to work collaboratively on improving the delivery of MMC and to share innovation in order to deliver at scale and overcome this particular barrier.

Social and environmental benefits: It was noted that more needs to be done to promote the social and environmental benefits of the deployment of modular housing in order to help increase its delivery. The numerous benefits of MMC deployment, were noted as elements that are not currently entirely captured, including reduced levels of sound pollution for local residents during construction.

- **Increasing the size of the market:** Achieving the economies of scale that can enable efficient delivery was discussed as a key issue. The importance of collaborating in order to achieve a mass market for modular homes was also noted.
- **Cost:** One of the key constraints discussed was the cost and viability of the product itself, as well as the cost and availability of land. This is one of the main barriers that needs to be overcome in order to deliver economies of scale.
- **Skills shortages:** issues regarding the availability of quality labour were discussed, including how to attract trades into a factory-based workforce. There is also an issue regarding attracting younger people into the sector and the need for apprenticeship schemes.