The impact of modern methods of construction on skills requirements for housing: Research summary

The 2017 Housing White Paper set out the ambition to deliver 250,000 homes a year by 2022, which has been extended to 300,000 homes by the mid-2020s. Various research studies have indicated that modern methods of construction (MMC) require less on-site labour to assemble homes than brick and block construction methods and potentially require a smaller workforce with different skill sets from those currently being used., However, limited information is available on the impact of MMC on the overall workforce skills requirements.

The Ministry of Housing, Communities and Local Government (MHCLG) commissioned the Construction Industry Training Board (CITB) and Whole Life Consultants carry out research on the contribution that increased MMC uptake in home building could make to the workforce requirements for delivering new homes.

As there are a range of MMC types, the study focused on the changes to the workforce profile for panelised and volumetric off-site home building. It used the definition and categorisation of MMC developed by the MHCLG working group on MMC assurance, insurance and mortgages:

- Volumetric construction is the production of three-dimensional units in controlled factory conditions which are then assembled together on site
- Panelised construction is an approach where panel units are produced in a factory environment and come to the site 'flatpacked', typically a series of floor, wall, or roof panels, which are then assembled on-site to produce a three-dimensional structure.

Opinions from industry experts who are involved in the use of MMC for home building were used to quantify the impact on labour demand of constructing a typical house using MMC, and the results used to calculate the change in labour demand arising from different levels of uptake of MMC.

Five different MMC scenarios were considered, modelling a range including 25% and 50% of total output being MMC. Within these, the mix of MMC type was varied, including modelling an equal mix of volumetric and panelised, and scenarios weighted towards one or the other.

For home building to reach 300,000 by mid-2020s without increased levels of MMC-use (Baseline), a 40% increase in the home building workforce would be required, which represents an overall increase of 195,000 workers over the next seven years.

The research found that increasing uptake of MMC can reduce the additional workforce requirement, especially when there is increased adoption of volumetric MMC. Under this scenario, the total workforce reduced by around 5%, i.e. a reduction of around 22% in the number of additional workers needed.

At a more detailed level, the research found:

- There is no change in the professional and non-manual workforce between the baseline and each of the scenarios. This is a constant requirement across all, irrespective of the build type adopted.
- However, the scenarios do show an impact on the workforce estimates for skilled trades and manual workers required, and a shift between onsite and offsite.

- The baseline shows the skilled trade and manual workforce increasing by 106,000, all of which is assumed to be onsite.
- The scenarios modelling high levels of MMC (50% of output) indicate that 80,000 skilled trade and manual workers would be based offsite.

The research report is available [here]