

Unravelling the dark art of MMC

A new report from BRE looks at different modern methods of construction and how they compare to traditional build methods

There has been a concerted effort by the housing industry over the past decade to apply MMC to developments, with varying degrees of success.

Although the technologies have been around for some time, their application still seems to be surrounded more by myth than fact.

BRE and its partners thought it was time to unravel the dark art of MMC, by producing hard data for both conventional construction and MMC. A new BRE report details the results from a

pioneering housing demonstration project that was carried out in the Fenland district of Cambridgeshire.

The SmartLIFE Housing Demonstration project was conducted to find the best ways the UK can deliver a greater volume of sustainable, affordable and high quality homes in less time, using both traditional and innovative methods of construction.

The project involved a massive 140,000 hours of monitoring across three development sites in the towns of Chatteris and March. Issues such as build-speed,

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build-quality, the sustainability of the construction process, and the related costs of the resulting houses were assessed and recorded for each of the following construction methods: timber frame, light gauge steel frame, insulated concrete formwork and traditional brick and block construction.

The key findings have been that:

- Regardless of construction methods an average of 13% of man hours are lost on non-value-added activities on site – significant cost savings





- could be made with more efficient site processes.
- MMC systems can compete on cost with traditional build - the light gauge steel frame system used on the project proved to be the most cost effective followed closely by brick and block
 - All systems have benefits, and selection of the right method depends on each project's characteristics and requirements
 - All the systems used, including traditional brick and block construction, achieved a high level of sustainability, reaching Ecohomes 'Very Good'
 - The highest achieving system used on the project in terms of speed and cost - the light gauge steel frame system - was delivered through an already established partnership between the site contractor Inspace

and the manufacturer Fusion - this was seen as key to its success.

The project was delivered through SmartLIFE - a not-for-profit partnership between BRE and Cambridgeshire County Council - along with English Partnerships, the Housing Corporation, Fenland District Council, the Department for Communities and Local Government and the Home Group and a host of other partners

Oliver Novakovic, Director of Housing Futures at BRE, said: "Research in the field of construction methodology is so lacking that often it is difficult for developers or contractors to compare and select the right approach for their requirements - whether conventional 'brick and block' methods or Modern Methods of Construction. We now have such a robust body of knowledge that we can inform

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and enlighten our approach to future house building - once the current credit crisis abates."

Brian Smith, Deputy Chief Executive of Cambridgeshire County Council, said: "We are delighted that Cambridgeshire played a part in this project which I have no doubt will make a significant contribution to current knowledge on the way we build homes in the UK."

The new report SmartLIFE - Lessons Learned is published by IHS BRE Press as BRE Report BR500, and is available from www.ihsbrepress.com. It includes a CD Rom with a detailed technical report on the site measurements.