

**Memorandum for the Building Committee of
the Hong Kong Housing Authority**

QUALITY FOR HOUSING: PARTNERING FOR CHANGE

Modular Integrated Construction for Public Housing Developments

PURPOSE

This paper updates Members on the latest progress of Modular Integrated Construction (MiC) application for public housing developments.

BACKGROUND

2. In August 2018, we informed Members (vide Paper No. **BC 41/2018, QH 1/2018**) that we are conducting a viability study on whether it is appropriate to adopt MiC for public housing development projects.

3. In February 2019, we informed Members (vide Paper No. **BC 7/2019, QH 1/2019**) that we will identify a pilot MiC project and in parallel, we will adopt more off-site construction.

4. In line with the recommendations in paragraphs 2 and 3 above, we have embarked on a MiC mock-up and have identified a suitable MiC pilot project.

MiC MOCK-UP CONSTRUCTION

5. A two-storey MiC mock-up, with a total of eight modular-flat units subdivided into 22 modules (i.e. four modular-flat units subdivided into 11 modules per floor), will be fabricated in the Mainland China in mid-2020 to test out the HA's engineering design modules in the aspects of fabrication, installation and quality assurance, etc.. The mock-up is aimed to examine the buildability of the most critical connections of the MiC modules for all of HA modular flats. The mock-up construction is anticipated to be commenced by the end of March 2020, enabling timely incorporation of the findings into the statutory design submissions

and tender of the coming MiC pilot project. The key findings will be reported to BC in due course.

MiC PILOT PROJECT

6. A 12-storey domestic block comprising a total of 240 units in the “Public Housing Development at Tung Chung Area 99 (TC99)” project is selected for MiC pilot project which is scheduled for commencement in mid-2021 and completion in early-2024. The construction programme of TC99 matches with the MiC Mock-up programme such that the findings from the mock-up construction can be seamlessly incorporated into TC99. This pilot project site is located in a newly reclaimed land area with nearby barging point and adjacent vacant site which may provide more flexibility in working out logistic and potential temporary storage.

7. Besides, the 12-storey domestic block with a relatively shorter construction time will not fall onto the critical path of the whole development, thus not affecting the overall flat production programme in case teething problems emerge. This will enable us to have sufficient time to test out the various full scale implementation issues including delivery, storage and site installation logistic for substantial quantities and different combination of modules per floor, prefabrication statutory submissions, etc..

WAY FORWARD

8. HA is open and receptive to new initiatives as always to enhance quality, safety, productivity, speed, and environmental performance. We will conduct a full-scale cost-benefit analysis through the MiC pilot project to assess the suitability to apply MiC for public housing construction. The key findings will be reported to BC in due course. We will also continue to explore opportunities in increasing precast rate such as volumetric precast lift machine room at main roof and other innovative construction methods such as mobile devices and robotic applications for public housing developments so as to further improve productivity on site.

INFORMATION

9. This paper is issued for Members’ information.

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