

1 April 2019

Moderna Homes (HK) Limited
Flat C, 8/F, King Palace Plaza,
No.55 King Yip Street,
Kwun Tong, Kowloon,
Hong Kong

Dear Sir/Madam,

Letter of In-principle Acceptance
(Acceptance Reference No.: MiC 2/2019)

This letter is issued to **Moderna Homes (HK) Limited** to confirm that the Modular Integrated Construction (MiC) system (Model No. **MH-GEN-2**) as submitted to the Buildings Department (BD) is acceptable in principle for use in private building projects in Hong Kong in respect of the performance aspects listed in Appendix I, subject to the following conditions:

- (i) The design and construction of any building project adopting the above MiC system shall comply with the provisions of the Buildings Ordinance (BO) and its subsidiary legislations;
 - (ii) The conditions as set out in Appendix II and Appendix III shall be complied with;
 - (iii) The modular units of the above MiC system shall be fabricated in the factories listed in Appendix IV with a valid ISO 9000 or equivalent quality assurance certification; and
 - (iv) This in-principle acceptance (IPA) is subject to a validity period expiring on 1 April 2024.
2. General information of the MiC System (Model No. MH-GEN-2) submitted by Moderna Homes (HK) Limited is available on BD's website.

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3. This IPA shall not be construed as an exemption from obtaining prior approval and consent from the Building Authority under the BO before commencement of building works.

4. This IPA does not give any warranties, explicit or implied, regarding their availability, efficacy, fitness for a particular purpose, title or non-infringement of copyright. The manufacturer/supplier/user must ensure that the above MiC system is safe for public use and complies with all relevant legislation and statutory requirements at all times.

Yours faithfully,



(AU YEUNG Hoi-pang)
Chief Officer/Technical Services
for Director of Buildings

c.c. LAI Kai-fan, Melvyn (Authorized Person)
c/o Leigh & Orange (Hong Kong) Ltd
801, Dorset House, TaiKoo Place,
979 King's Road, Hong Kong

LAI Kung-ching, Philip (Registered Structural Engineer)
c/o WSP Hong Kong Limited
7/F, One Kowloon,
1 Wang Yuen Street, Kowloon Bay, Hong Kong

BD/MiC/181001(S)

**Applicable Performance Aspects
for In-principle Acceptance Reference No. MiC 2/2019**

The in-principle acceptance covers the following performance aspects of MiC system (Model No. MH-GEN-2) of Moderna Homes (HK) Limited under the Buildings Ordinance (BO) and its subsidiary legislations:

- (a) Provisions of means of escape required under Part B of the Code of Practice for Fire Safety in Buildings 2011 (FS Code) and regulation 41(1) of Building (Planning) Regulations (B(P)R);
 - (b) Provisions for fire resisting construction required under Parts C and E of the FS Code and regulation 90 of Building (Construction) Regulations (B(C)R);
 - (c) Construction of external wall and cladding pursuant to regulations 38 and 39 of B(C)R;
 - (d) Height of storeys, provisions of natural lighting and ventilation required under regulations 24, 30 and 36 of B(P)R;
 - (e) Sanitary provisions and associated drainage works within the modular units pursuant to Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations;
 - (f) Structural performance for loads required under Code of Practice on Wind Effects in Hong Kong 2004, Code of Practice for Dead and Imposed Loads 2011 and Part III of B(C)R; and
 - (g) Provisions for structural performance required under Code of Practice for Structural Use of Steel 2011, Code of Practice for Structural Use of Concrete 2013, Code of Practice for Precast Concrete Construction 2016 and B(C)R.
2. For other performance aspects of the MiC system under the purview of the BO not listed above, compliance with the provisions of the BO and the subsidiary legislations shall be demonstrated when plans are submitted for approval under the BO.

**Acceptance Conditions (Building)
for In-principle Acceptance Reference No. MiC 2/2019**

The in-principle acceptance (IPA) of MiC system (Model No. MH-GEN-2) of Moderna Homes (HK) Limited is subject to the following conditions:

- (a) This IPA is confined to adopting the MiC system for residential-institution or hostel use as applied for;
- (b) The design and construction of the MiC system should follow the plans accepted by the Buildings Department (accepted plans) and tally with the testing criteria of the submitted test reports. If alternative designs, materials or construction methods different from that shown in the accepted plans are used, compliance with the relevant provisions under the Buildings Ordinance (BO) and the subsidiary legislations should be demonstrated when plans are submitted for approval under the BO;
- (c) Authorized Person of the development project adopting the MiC system (AP) should ensure valid test and/or assessment reports complying the requirements under Part E of the Code of Practice for Fire Safety in Buildings 2011 for the following would be available before the actual production in the prefabricated factory:
 - (i) Fire-rated doors (Fireban FD90) with intumescent and smoke seals for the exit of each MiC unit;
- (d) Applicant and AP should observe the requirements under Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-13 on submission of Schedule of Building Materials and Products and certifying the compliance with the relevant provisions of the BO upon completion of works;
- (e) Area of the pipe ducts of the modular units should be included in the compartmentation calculation of the adjoining in-situ part;
- (f) If this MiC system is adopted for hostel use, accessible rooms should be provided in the in-situ part or other types of MiC modular units of the building in accordance with Division 2 of Design Manual: Barrier Free Access 2008 unless exemption from or modification of regulation 72 of Building (Planning) Regulations is granted;

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- (g) Access points for inspection and future maintenance and repair of building services and construction elements should be provided in accordance with the accepted plans;
- (h) User manual with maintenance and building safety instructions for future fitting, decoration, alterations and additions of the modules as submitted with the application for IPA should be provided to the owners/occupants/users of the building adopting this MiC system;
- (i) The IPA is subject to the grant of exemption/modification under section 42 of the BO for the following which would be favorably considered when relevant plans are submitted for approval under the BO:

BO/Building Regulations

Description

Regulation 36 of
Building (Planning) Regulations

To permit the omission / reduction
in standard of natural lighting and
ventilation in internal toilet

- (j) The IPA is subject to the grant of exemption/modification under section 42 of the BO for the following which could only be considered based on the individual merit of a development project when general building plans are submitted for approval under the BO:

BO/Building Regulations

Description

Regulation 35A of
Building (Planning) Regulations

To permit the omission of gas
aperture in internal bathroom

Regulation 45 of
Building (Planning) Regulations

To permit the non-provision of
kitchen to residential units

**Acceptance Conditions (Structural)
for In-principle Acceptance Reference No. MiC 2/2019**

The in-principle acceptance (IPA) of MiC system (Model No. MH-GEN-2) of Moderna Homes (HK) Limited is subject to the following conditions:

- (a) The design and construction of MiC system should follow the plans accepted by the Buildings Department (accepted plans) and tally with the testing criteria of the submitted test reports. If alternative designs, materials, proprietary products or construction methods different from that shown in the accepted plans are used, compliance with the relevant provisions under the Buildings Ordinance (BO) and the subsidiary legislations should be demonstrated when future plans are submitted for approval under the BO;
- (b) The MiC system is accepted based on the assumptions listed below. Overall stability, structural analysis, adequacy of structural member and/or structural connections, lateral deflection etc. should be checked when there are any deviations with future structural plans submitted for approval under the BO.
 - (i) Maximum building height from Ground Floor of 53.2m;
 - (ii) Maximum modular units of 15 storeys;
 - (iii) Maximum design wind pressure of 2.65kPa (unfactored);
 - (iv) Imposed loads, superimposed loads and assumed façade loads as shown on drawing nos.: S-3100 and S-3101. Imposed loads for vehicular traffic and parking are not considered;
 - (v) Lateral stability is provided by in-situ part with an assumed stiffness and the modular units are assumed not to resist lateral loads;
 - (vi) Fabrication and installation tolerances of modular units as shown on drawing no.: S-0100;
 - (vii) Capacity of structural connection of modular unit as shown on drawing no.: S-8500 & S-8700;
 - (viii) Movement joint between modular units and in-situ part for thermal and shrinkage effects as shown on drawing no.: S-8800; and

- (ix) No modular units are stacked more than one-storey above the completed level of each zone as shown on drawing no.: S-5000; and
- (c) Structural details of in-situ part, external façade of modular units and roof floor slabs are not included in this acceptance.

Manufacturer and Prefabrication Factory

Details of the accepted manufacturer and prefabrication factory for fabrication of the modular units under In-principle Acceptance reference no. MiC 2/2019 for MiC system (Model No. MH-GEN-2) of Moderna Homes (HK) Limited are as follows:

Manufacturer:	Moderna Homes (HK) Limited
Prefabrication Factory:	Zhang Jia Gang City Maristar Container Manufacturing Co., Ltd.
Address of Prefabrication Factory:	No. 8 Guo Tai Road, Zhangjiagang City, Jiangsu, China

Remarks:

- (a) *The above factory shall maintain a valid ISO 9000 or equivalent quality assurance certification at all times.*
- (b) *The following items in the Quality Assurance Scheme are for information only. Updated information should be submitted for future building projects with MiC.*
 - (i) *Frequency and extent of inspection by in-house staff and independent parties required in Appendix B of PNAP ADV-36;*
 - (ii) *Frequency and extent of audit by in-house staff and independent parties required in Appendix B of PNAP ADV-36; and*
 - (iii) *Measures for traceability of modular units from prefabrication factory to construction site.*