

29 December 2022

Goldwave Steel Structure Engineering Limited
Level 27, Tower 2, Enterprise Square Five,
38 Wang Chiu Road,
Kowloon Bay, HKSAR
(Attn: Mr. Lo Franky)

Dear Sir/Madam,

**Letter of In-principle Acceptance
(Acceptance Reference No.: MiC 23/2022)**

This letter is issued to **Goldwave Steel Structure Engineering Limited** to confirm that the Modular Integrated Construction (MiC) system (Model No. **GW-MiC-ST-001**) 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 9001 or equivalent quality assurance certification; and
- (iv) This in-principle acceptance (IPA) is subject to a validity period expiring on 29 December 2027.

General information of the MiC System (Model No. **GW-MiC-ST-001**) submitted by **Goldwave Steel Structure Engineering Limited** is available on BD's website.

/This ...

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 nor the granting of any exemption in gross floor area calculation.

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,



(CHAN Yuen-ming, Mary)
Chief Officer/Technical Services
for Director of Buildings

c.c. POON Pong Fai (Authorized Person)
c/o Zero One Studio
Flat E, 23/F, Block 9,
Fullview Garden,
18 Siu Sai Wan Road,
Hong Kong Island

Wong Yiu Wang, Andes (Registered Structural Engineer)
c/o Fugro (Hong Kong) Limited
10/F, Fugro House – KCC 2,
1 Kwai On Road,
Kwai Chung

BD/MiC/220303(S)

**Applicable Performance Aspects
for In-principle Acceptance Reference No. MiC 23/2022**

The in-principle acceptance covers the following performance aspects of MiC system (Model No. GW-MIC-ST-001) of Goldwave Steel Structure Engineering 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 section 35 of Building (Construction) Regulation (B(C)R);
- (c) Construction of external wall and cladding pursuant to sections 27 and 28 of B(C)R;
- (d) Height of storeys and 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 the Code of Practice on Wind Effects in Hong Kong 2019, the Code of Practice for Dead and Imposed Loads 2011 and Part 3 of B(C)R; and
- (g) Provisions for structural performance required under the Code of Practice for Structural Use of Steel 2011, the Code of Practice for Structural Use of Concrete 2013 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 23/2022**

The in-principle acceptance (IPA) of MiC system (Model No. GW-MiC-ST-001) of Goldwave Steel Structure Engineering Limited is subject to the following conditions:

- (a) This IPA is confined to adopting the MiC system for domestic use in a building not exceeding 4 storeys (maximum modular units of 4 storeys) 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 would be available before the actual production in the prefabricated factory;
- (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; and
- (e) 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.

- (f) 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 35A of Building (Planning) Regulations	To accept non-provision of gas aperture in the bathroom in domestic premises
Regulation 29(1) and 29(2) of Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations	To permit the provision of cleaning access to be other than cleaning eye
Regulation 44(4) of Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations	To permit protection of cast iron pipes to be other than asphaltic coating
Regulation 50(2) of Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations	To permit jointing of cast iron pipes to be other lead caulking

**Acceptance Conditions (Structural)
for In-principle Acceptance Reference No. MiC 23/2022**

The in-principle acceptance (IPA) of MiC system (Model No. GW-MiC-ST-001) of Goldwave Steel Structure Engineering 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 12.6 m;
 - (ii) Maximum modular units of 4 storeys;
 - (iii) Maximum design wind pressure of 2.02 kPa (unfactored);
 - (iv) Imposed loads, superimposed loads and assumed façade loads as shown on drawing no.: S/MiC/P01 and S/MiC/P02;
 - (v) Lateral stability is provided by the modular units only as shown on drawing no.: S/MiC/G01;
 - (vi) Fabrication and installation tolerances of modular units as shown on drawing no.: S/MiC/G01;
 - (vii) No modular units are stacked more than one-storey above the completed level of each zone as shown on drawing no.: S/MiC/S01.
- (c) Structural details of internal partition wall, external façade of modular units, metal roof at R/F and in-situ corridor slab and associated steel beams 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 23/2022 for MiC system (Model No. GW-MIC-ST-001) of Goldwave Steel Structure Engineering Limited are as follows:

Manufacturer: Goldwave Steel Structure Engineering Limited

<u>Prefabrication Factory</u>	<u>Address of Prefabrication Factory</u>	<u>Production</u>
Green Build Precast Concrete Company Limited	廣東省惠州市惠陽區永湖鎮老圍下村	Precast concrete slab
Goldwave Steel Structure Engineering (Jiangmen) Limited	Sanke, Meige Village, Shadui Town, Xinhui District, Jiangmen City (Segment Welding Workshop) Zip Code. 529100	Fabrication of modular units

Remarks:

- (a) *The above factories shall maintain a valid ISO 9001 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 Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) ADV-36; and*
 - (ii) *Frequency and extent of audit by in-house staff and independent parties required in Appendix B of PNAP ADV-36.*