



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



GUIDELINES ON THE STATUTORY REQUIREMENTS FOR MODULAR INTEGRATED CONSTRUCTION PROJECTS



■ Disclaimer ■

This publication is prepared for general reference only. The publication may include (and is not limited to): (a) content prepared using information from various sources contributed by third parties, (b) information provided by third parties, and (c) links to third party information on internet websites. Whilst reasonable efforts have been made to ensure the accuracy of the publication, readers should make direct reference to the original sources of information and the legal requirements referred to by the publication or seek appropriate independent advice from professional advisors before taking action. Readers should not treat or rely on this publication as a substitute for professional advice. The publication is subject to change without notice.

No statement, representation or warranty (express or implied) is made as to the reliability, completeness, accuracy or fitness for any particular purpose of the publication. The Construction Industry Council shall not have any liability under the law of contract, tort or otherwise howsoever for any loss, expense, damage, or injury which may arise from or be incurred or suffered by any party relating to or in connection with any information in or any omission from the publication.

■ Table of Contents ■

Disclaimer	1
Preface	3
Abbreviations	4
1. Introduction	6
2. Types of Works/Permits	8
3. Buildings Department	12
3.1 Pre-submission Enquiry	13
3.2 Pre-acceptance for MiC System	13
3.3 Approval for Specific MiC Project	15
3.4 Quality Control and Supervision of MiC	15
4. Fire Services Department	16
4.1 Fire Service Installations	17
4.2 Design Submission and Approval	17
4.3 Quality Assurance	18
4.4 Acceptance Inspection	18
5. Water Supplies Department	19
5.1 General Submission Requirements	20
5.2 Specific Submission Requirements for MiC Projects	20
5.3 Off-site Supervision Requirements	21
5.4 Interim Inspection of Plumbing Installations to be Covered Up in MiC Factory	22
5.5 Final Inspection at Building Site in Hong Kong and Commissioning Requirements	22
6. Electrical and Mechanical Services Department	23
6.1 Fixed Electrical Installations	24
6.2 Safety of Household Electrical Products	25
6.3 Energy Efficiency of Products	25
6.4 Gas Installations	26
7. Transport Department	28
7.1 Project Planning Stage/Design Stage	29
7.2 Wide Load Permit	30
7.3 Procedures for Submitting a Wide Load Permit Application	30
7.4 Conditions of a Wide Load Permit	31
7.5 Module Delivery Stage	32
8. Environmental Protection Department	33
9. Customs and Excise Department	35
Bibliography	38
Appendix A - List of Contact Points of Relevant Government Departments (as at September 2019)	43
Appendix B - Workflow for Submission and Approval of Plans to Buildings Department and Additional Requirements for MiC	44
Appendix C - Workflow for Submission and Approval of Plans to Fire Services Department and Additional Requirements for MiC	45
Appendix D1 - Workflow for Submission and Approval of Plans to Water Supplies Department and Additional Requirements for MiC	46
Appendix D2 - Record form for Supervision of Plumbing Works Constructed at MiC Factory	47
Appendix E - Workflow for Submission and Approval of Plans to Electricity Supplier and Additional Requirements for MiC	48

■ Preface ■

The Construction Industry Council (CIC) is committed to seeking continuous improvement in all aspects of the construction industry in Hong Kong. To achieve this aim, the CIC forms Committees, Task Forces and other forums to review specific areas of work with the intention of producing Alerts, Reference Materials, Guidelines and Codes of Conduct to assist participants in the industry to strive for excellence.

The CIC appreciates that some improvements and practices can be implemented immediately whilst others may take more time for implementation. It is for this reason that four separate categories of publication have been adopted, the purposes of which are as follows:

Alerts	The Alerts are reminders in form of brief leaflets produced quickly to draw the immediate attention of relevant stakeholders to the need to follow some good practices or to implement some preventive measures in relation to the construction industry.
Reference Materials	The Reference Materials are standards or methodologies generally adopted and regarded by the industry as good practices. The CIC recommends the adoption of the Reference Materials by industry stakeholders where appropriate.
Guidelines	The Guidelines provide information and guidance on particular topics relevant to the construction industry. The CIC expects all industry stakeholders to adopt the recommendations set out in the Guidelines where applicable.
Code of Conduct	The Codes of Conduct set out the principles that all relevant industry participants should follow. Under the Construction Industry Council (Cap 587), the CIC is tasked to formulate codes of conduct and enforce such codes. The CIC may take necessary actions to ensure compliance with the codes.

If you have read this publication, we encourage you to share your feedback with us. Please take a moment to fill out the Feedback Form attached to this publication in order that we can further enhance it for the benefit of all concerned. With our joint efforts, we believe our construction industry will develop further and will continue to prosper for years to come.

■ Abbreviations ■

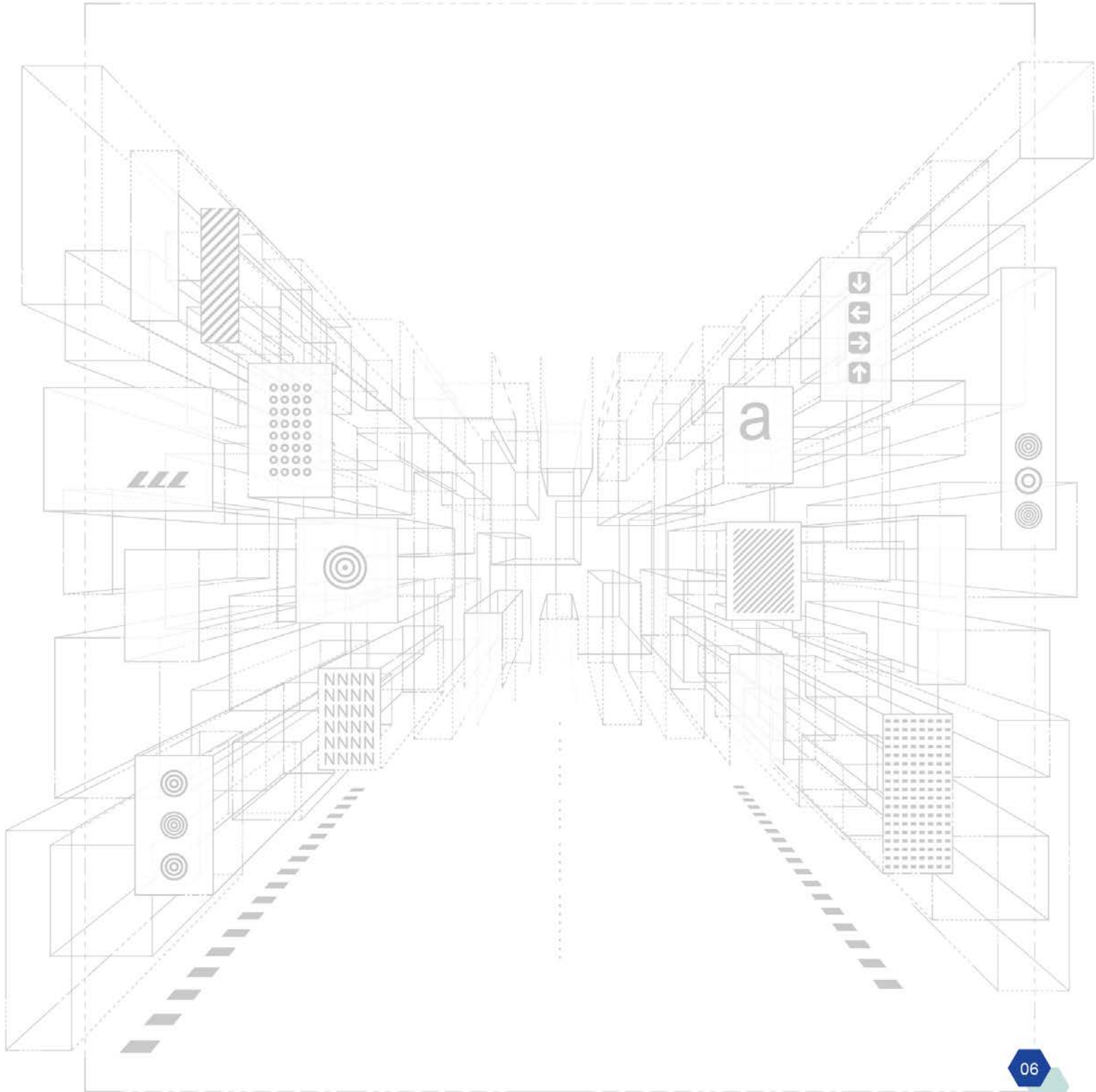
AP	Authorized Person
AS	Authorized Signatory
BA	Building Authority
BD	Buildings Department
C&ED	Customs and Excise Department
CFL	Compact Fluorescent Lamp
CNP	Construction Noise Permit
DGA	Domestic Gas Appliances
EMAN	Electronic System for Cargo Manifests
EMSD	Electrical and Mechanical Services Department
EPD	Environmental Protection Department
FRC	Fire Resisting Construction
FRR	Fire Resistance Rating
FSD	Fire Services Department
FSI	Fire Service Installations
GBP	General Building Plan
HKPF	Hong Kong Police Force
HyD	Highways Department
IPA	In-principle Acceptance
LBCP	Land Boundary Control Point
LP	Licensed Plumber
MiC	Modular Integrated Construction
MoE	Means of Escape
PCWA	Public Cargo Working Area
PME	Powered Mechanical Equipment
PNAP	Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers

QA	Quality Assurance
QC	Quality Control
REC	Registered Electrical Contractor
REW	Registered Electrical Worker
RFSIC	Registered Fire Service Installation Contractor
RGBC	Registered General Building Contractor
RGC	Registered Gas Contractor
RGI	Registered Gas Installer
RGSC	Registered Gas Supply Company
RMO	Road Management Office
ROCARS	Road Cargo System
RPW	Registered Plumbing Worker
RSC	Registered Specialist Contractor
RSE	Registered Structural Engineer
RW	Registered Worker
TD	Transport Department
TIA	Traffic Impact Assessment
TMLG	Traffic Management Liaison Group
TTM	Temporary Traffic Management
WLP	Wide Load Permit
WSD	Water Supplies Department



1

Introduction



1. INTRODUCTION

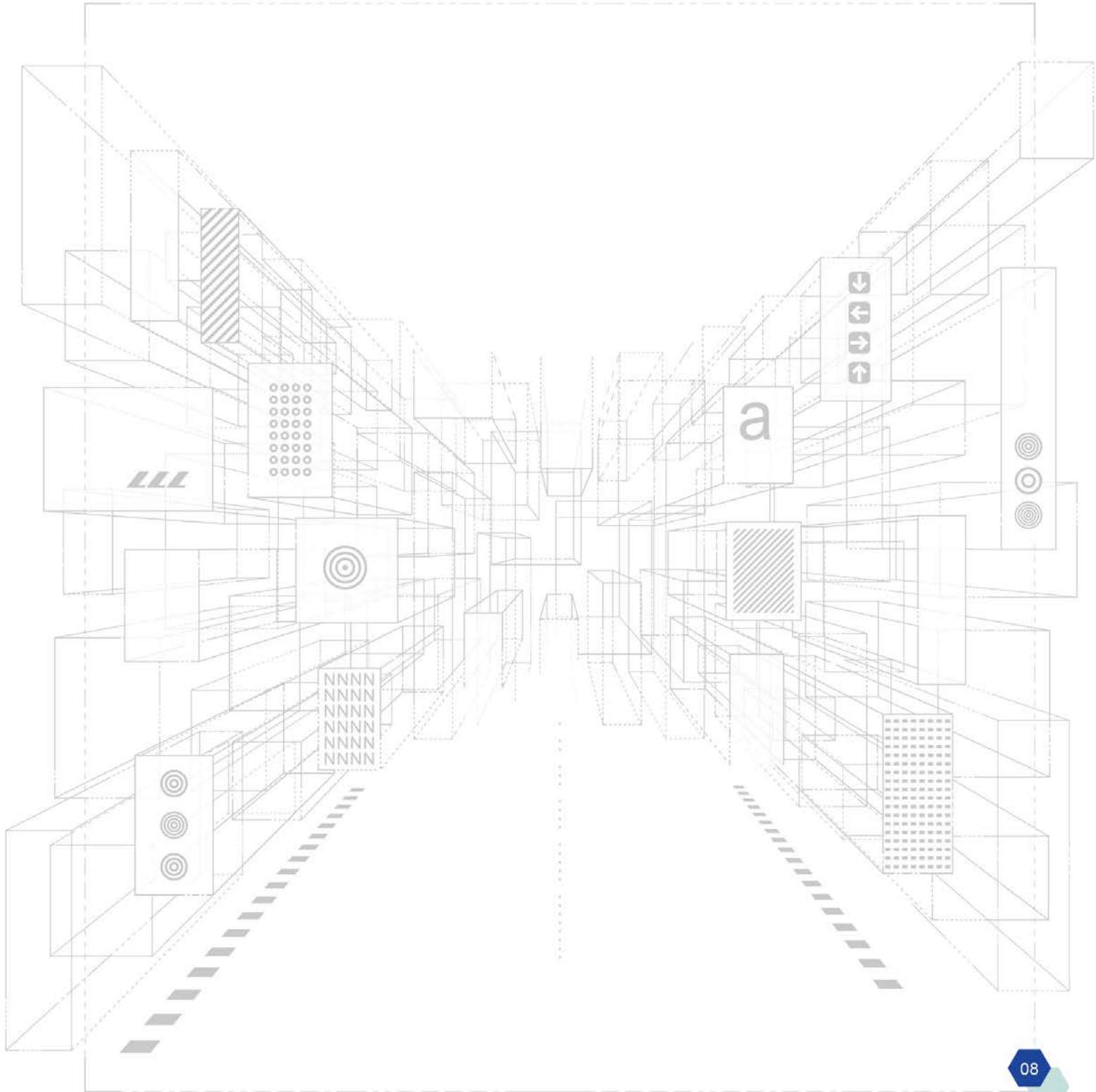
The use of Modular Integrated Construction (MiC) is a growing trend worldwide because of the benefits that MiC brings in terms of controlled engineering processes and enhanced construction safety, quality and productivity.

MiC is an innovative construction method, whereby free-standing, high-quality, integrated modular components completed with finishes, fixtures and fittings are manufactured in an MiC factory. By transferring the on-site construction processes to a controlled factory environment, the impacts of adverse weather conditions, scarce labour resources and site constraints that often affect conventional on-site construction methods can be minimised. MiC also enhances construction safety, quality and productivity, and helps to reduce nuisances arising from on-site construction due to the reduced site works. It is known that MiC can be more cost-effective than the conventional on-site construction method and can reduce the overall project programme significantly.

The purpose of this document is to provide information on the statutory requirements imposed by the respective regulatory bodies in Hong Kong, namely the Buildings Department (BD), Fire Services Department (FSD), Water Supplies Department (WSD), Electrical and Mechanical Services Department (EMSD), Transport Department (TD), Environmental Protection Department (EPD) and Customs and Excise Department (C&ED), in respect of MiC projects. The aim is to produce a clear overall picture to the parties concerned to facilitate implementation of their projects.

2

Types of Works/ Permits



2. TYPES OF WORKS/PERMITS

MiC involves many different types of works, including the following:

- (a) building works;
- (b) ventilating systems;
- (c) Fire Service Installations (FSI) and equipment installation works;
- (d) plumbing works;
- (e) electrical installation works;
- (f) supply and installation of electrical products/appliances; and
- (g) gas installation works.

For the implementation of MiC projects, apart from MiC suppliers, building professionals such as Authorized Persons (AP) and Registered Structural Engineers (RSE) registered under the Buildings Ordinance (Cap 123) should be engaged to develop, plan, design and supervise the works, and Registered General Building Contractors (RGBC) and Registered Specialist Contractors (RSC) registered under the Buildings Ordinance (Cap 123) should be engaged to carry out each particular category of works.

The carrying out of the building works should satisfy the requirements under the Buildings Ordinance (Cap 123) and its subsidiary regulations which set out the structural and fire safety and health standards for the planning, design and construction of buildings. Codes of practice, design manuals and Practice Notes for AP, RSE and Registered Geotechnical Engineers (PNAPs) issued by BD provide guidelines to meet various performance requirements under the Buildings Ordinance (Cap 123), such as wind effects, dead and imposed loads, use of construction materials, provisions for means of escape (MoE) in case of fire, fire resisting construction (FRC), means of access for firefighting and rescue, and access and facilities for persons with a disability. Such publications are listed in the Bibliography and are available for download at the BD website (<https://www.bd.gov.hk/en/index.html>).

For unconventional designs not matching the Deemed-to-Comply provisions under the codes of practice, justifications have to be provided to demonstrate that the alternative design solutions have equivalent performance as the prescriptive standards (e.g. application of fire engineering according to the framework under the Code of Practice for Fire Safety in Buildings, 2011, for formulation of an alternative solution to comply with the fire safety objectives).

BD has also promulgated PNAP ADV-36 which sets out the guidelines to facilitate the industry in meeting the relevant standards and requirements under the Buildings Ordinance (Cap 123) in adopting MiC. Design considerations unique to MiC are given in PNAP ADV-36 for particular attention.

For ventilating systems incorporating the use of ducting or trunking which passes through any wall, floor or ceiling of the building in which the ventilating system is installed, from one compartment of such building to another, the completed works should meet the requirements given in the Building (Ventilating Systems) Regulations (Cap. 123J).

For FSI and equipment, the completed works should satisfy the requirements given in the Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing, and Maintenance of Installations and Equipment issued by FSD, pursuant to Regulation 10 of the Fire Service (Installations and Equipment) Regulations (Cap. 95B).

The plumbing installations should comply in all respects with the provisions of the Waterworks Ordinance (Cap. 102) and Waterworks Regulations (Cap. 102A) and all prevailing requirements given in the Technical Requirements for Plumbing Works in Buildings issued by WSD.

The fixed electrical installation works should satisfy the Code of Practice for the Electricity (Wiring) Regulations under the Electricity (Wiring) Regulations (Cap. 406E). The supply of electrical products and energy-using products should satisfy the Electrical Products (Safety) Regulation under the Electricity Ordinance (Cap. 406) and the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598) respectively. EMSD has also promulgated guidance notes which set out the guidelines to facilitate the industry in meeting the relevant requirements under the Electricity Ordinance (Cap. 406) and the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598) in adopting MiC.

The gas installation works should meet the requirements stipulated under the Gas Safety Ordinance (Cap. 51) and should satisfy the Codes of Practice in respect of approval of domestic gas appliances (DGA) and flexible tubing for low pressure applications, and installation of domestic gas water heaters where applicable, under the Gas Safety Ordinance (Cap. 51). EMSD has also promulgated guidance notes to provide guidelines on gas supply installations for use by industry.

The relevant guidance notes on fixed electrical installations, household electrical products, energy label prescribed products and gas supply installations can be accessed via the MiC webpage at the EMSD website (https://www.emsd.gov.hk/en/supporting_government_initiatives/mic/index.html).

The types of RGBC/RSC/Registered Workers (RW) needed for the works are given in the table below:

Type of Works	Type of RGBC/RSC/RW	Link
Building Works	RGBC registered under the Buildings Ordinance (Cap 123) (<i>Practice Note for Registered Contractors (PNRC) 38 issued by BD</i>)	https://www.bd.gov.hk/en/resources/online-tools/registers-search/registrationsearch.html
Ventilating systems	RSC(Ventilation Works) registered under the Buildings Ordinance (Cap 123) (<i>PNRC 38</i>)	
FSI and equipment installation works	Registered FSI contractor (RFSIC) ¹ registered with FSD	https://www.hkfsd.gov.hk/eng/source/FSIC_list_eng.pdf
Plumbing works	Licensed Plumber (LP) ² registered with WSD / Registered Plumbing Worker (RPW)	https://www.wsd.gov.hk/en/plumbing-engineering/licensed-plumbers/index.html
Electrical installation works	Registered Electrical Contractor (REC) / Registered Electrical Worker (REW) ³ registered with EMSD	REC https://www.emsd.gov.hk/en/electricity_safety/registers/registered_electrical_contractors/ REW https://www.emsd.gov.hk/en/electricity_safety/registers/registered_electrical_workers/
Gas installation works	Registered Gas Contractor (RGC)/ Registered Gas Installer (RGI) ⁴ registered with EMSD	RGC https://www.emsd.gov.hk/en/gas_safety/registers/ RGI https://www.emsd.gov.hk/en/gas_safety/registers/registered_gas_installers_search/

The types of permits that may need to be obtained in respect of MiC projects include a Wide Load Permit from TD, Construction Noise Permit from EPD and customs clearance from C&ED.

A list of the contact points of the respective Government departments is given in Appendix A.

¹ Registered FSI Contractors are contractors registered under the Fire Service (Installation Contractors) Regulations (Cap. 95A).

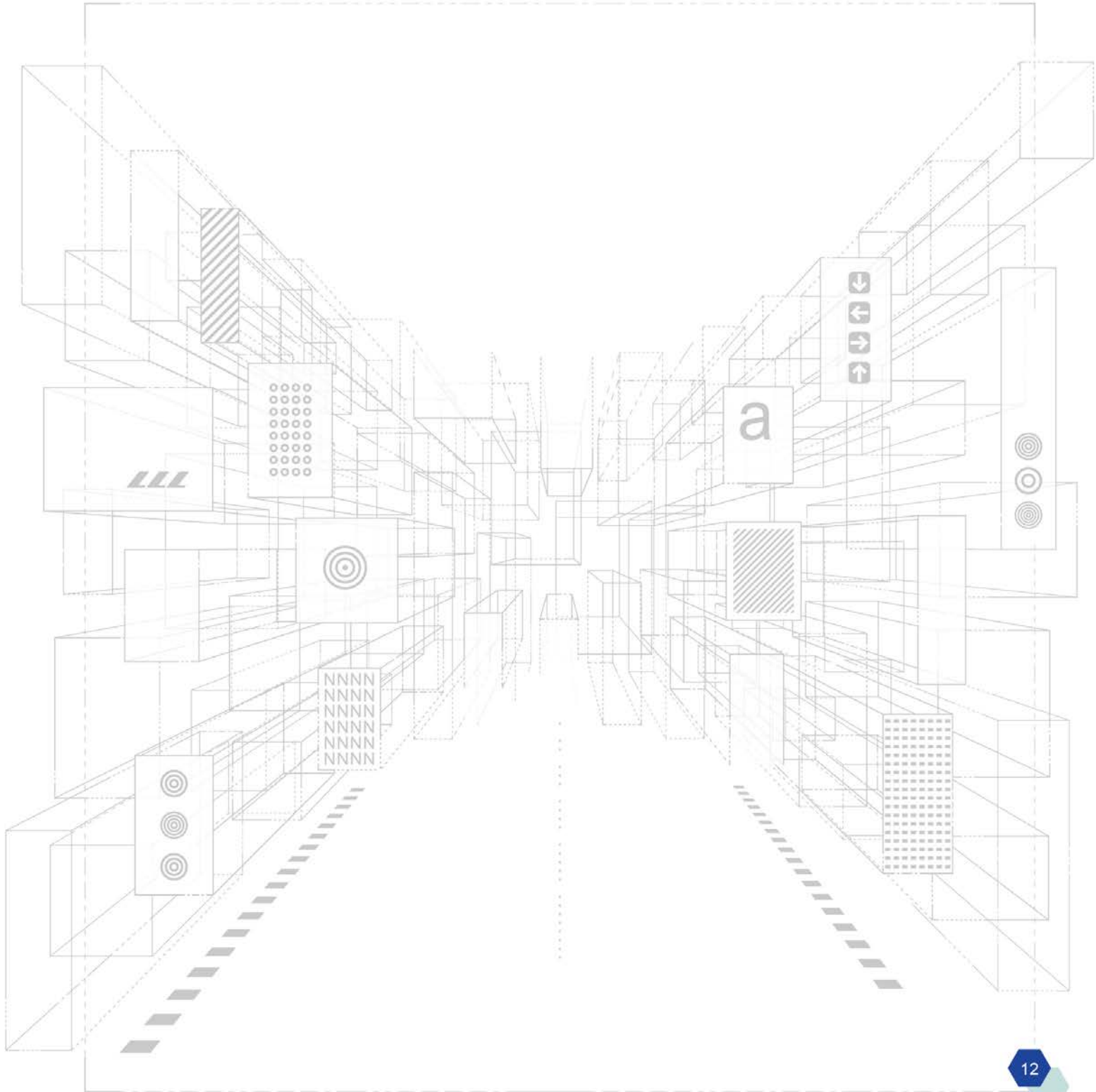
² Licensed Plumbers are persons licensed under the Waterworks Ordinance (Cap. 102) to construct, install, maintain, alter, repair or remove fire services or inside services.

³ Registered Electrical Contractors and Registered Electrical Workers are contractors and persons respectively registered under the Electricity (Registration) Regulations (Cap. 406D).

⁴ Registered Gas Contractors and Registered Gas Installers are contractors and persons respectively registered under the Gas Safety (Registration of Gas Installers and Gas Contractors) Regulations (Cap. 51D).

3

Buildings Department



3. BUILDINGS DEPARTMENT

3.1 Pre-submission Enquiry

The established pre-submission enquiry service of BD set out under PNAP ADM-19 allows an AP/RSE to settle the design principles involved at an early stage, before preparing detailed designs. BD may hold pre-submission conferences with the AP/RSE and, if necessary, invite representatives of the concerned Government departments, RGBC and MiC suppliers to discuss and examine the issues and principles involved. A determination will normally be given within 45 days.

3.2 Pre-acceptance for MiC System

To further facilitate the use of MiC in local private projects, BD has set up a pre-acceptance arrangement for granting in-principle acceptance (IPA) of individual MiC systems/components on specific performance. The pre-acceptance mechanism aims to resolve the non-site specific design and construction matters of an MiC system/component and provide a curtailed assessment on whether the design and materials used meet certain minimum standards for a particular aspect set out under the Buildings Ordinance (Cap 123). The application may cover a single module or a combination of various modules forming a typical floor and a building block, including the associated standard structural and connection details. Essential information which should be contained in the application is given in PNAP ADV-36. A determination will be given within 45 days.

An MiC system accepted by BD will be assigned a unique reference number which should be quoted in the formal plan submissions for a specific MiC project. General information about the accepted MiC systems/components can be found at the BD website (<https://www.bd.gov.hk/en/resources/codes-and-references/modular-integrated-construction/mic-acceptedList.html>). To cater for advancements in construction technology and possible revision to codes of practice, the IPA of any MiC system is subject to a validity period of a maximum of 5 years.

The IPA of the MiC systems may cover certain performance aspects set under the Buildings Ordinance (Cap 123), for example:

- (a) MoE provisions;
- (b) FRC provisions;
- (c) construction of external wall and cladding;
- (d) provisions of natural lighting and ventilation;
- (e) sanitary fitments and associated drainage works;
- (f) structural system and design loads;
- (g) provisions for structural performance of the modules (including material specifications and compliance standards, corrosion and fire protection of structural elements);
- (h) Quality Assurance Scheme and certification; and
- (i) fabrication, logistics, assembly and installation.

For the pre-accepted MiC systems, the checking is based on specific assumptions made by the applicants in respect of building height, cast in-situ structural elements, wind pressure, imposed loads, superimposed loads and facade loads, and cover:

- (a) vertical and lateral load transfer mechanism;
- (b) structural stability, including lateral stability;
- (c) robustness and structural integrity;
- (d) capacity of structural connections between modules, and between modules and cast in-situ structural elements;
- (e) design for temporary stages (lifting, storage, installation, etc.), including the design of lifting frames, if any;
- (f) durability and workmanship requirements;
- (g) fabrication and installation tolerance of modules;
- (h) movement joint between modules and in-situ parts to allow for thermal and shrinkage effects;
- (i) structural analysis;
- (j) overall stability;
- (k) adequacy of structural members and/or structural connections; and
- (l) lateral deflection.

The IPA will be granted subject to the following conditions, among others:

- (a) intended use, height and storey of the building adopting the MiC system;
- (b) provision of supplementary documentary proof of materials/components having the required Fire Resistance Rating (FRR) before actual production in the MiC factory;
- (c) provision of access points for inspection/maintenance/repair of building services and construction elements in accordance with the accepted plans; and
- (d) provision of a user manual to owners/occupants/users of the building adopting the MiC system, to include maintenance and building safety instructions for future fitting, decoration, alterations and additions to the MiC system.

3.3 Approval for Specific MiC Project

Similar to a project adopting conventional design and on-site construction, the AP and RSE of an MiC project are required to prepare and submit the General Building Plan (GBP) and other necessary plans (such as superstructure plan and drainage plan) to BD for approval in accordance with the principles and guidelines given in PNAP ADM-19. The plans will be handled under the centralised processing system as stipulated in PNAP ADM-2, through which all interested government departments will be consulted and their comments will be collated by BD. For a project adopting an MiC system with IPA granted by BD, the application for approval will be considered with due regard to the various performance aspects that have already been pre-accepted together with the conditions imposed. Re-assessment of the same aspects will not be made, unless it is proposed to use alternative design and materials/construction methods which deviate materially from the accepted system/component or testing criteria of the accepted test reports.

If the MiC system proposed is not on the pre-acceptance list, detailed design, analysis and supporting documents similar to those listed in Section 3.2 are required for assessment, in order to justify the performance and technical aspects of the MiC system. While pre-acceptance is not a pre-requisite for the approval of a GBP, any MiC details not yet available at the initial design stage may be submitted later for further assessment and should be accepted prior to factory production.

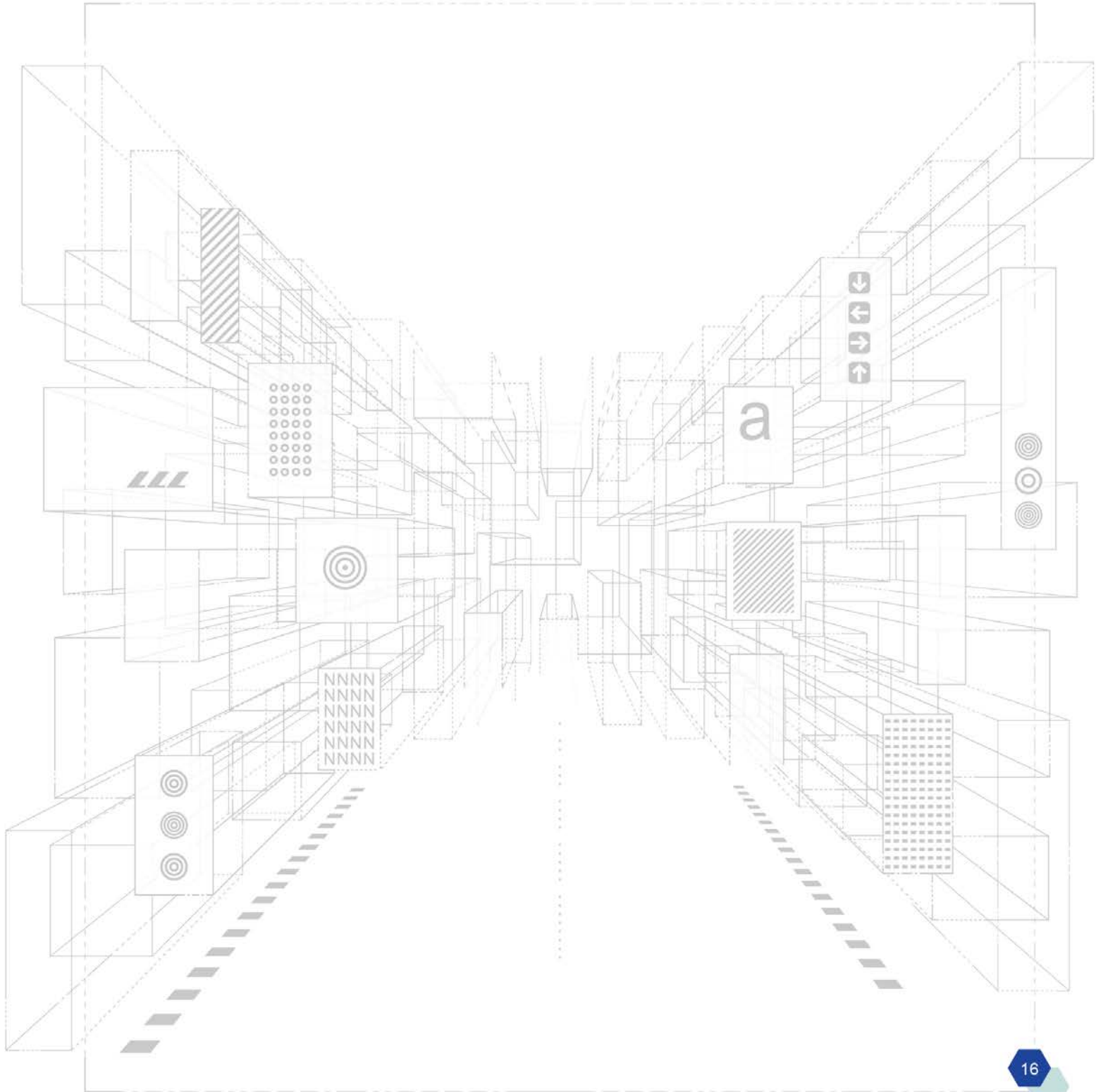
A workflow for submission and approval of plans for MiC projects is provided in Appendix B.

3.4 Quality Control and Supervision of MiC

Modules are to be fabricated by a factory with ISO 9000 or equivalent quality assurance certification. Upon approval of plans, requirements will be imposed under item 6 in Section 17(1) of the Buildings Ordinance (Cap 123) and regulation 10 of the Building (Administration) Regulations to: (i) specify the qualified supervision to be provided by the AP, RSE and RGBC for the fabrication, assembly, installation and examination of modules and pre-installed finishes; and (ii) require submissions of an MiC supervision plan and the MiC supplier's Quality Assurance Scheme at least 14 days before commencement of the production work in the factory. Detailed requirements on these aspects are given in PNAP ADV-36.

4

Fire Services Department



4. Fire Services Department

4.1 Fire Service Installations

The procedure in meeting the standards and requirements of Fire Service Installations (FSI) and Equipment is divided into two stages: Design Submission and Approval, and Acceptance Inspection (see FSD Circular Letter No. 1/2005, FSD Circular Letter No. 1/2015 and FSD Circular Letter No. 3/2019⁵). The procedure for submission of FSI plans at the Design Submission and Approval Stage and as-fitted layout plans at the Acceptance Inspection Stage for MiC projects follows that for conventional building projects, as shown in the workflow in Appendix C.

4.2 Design Submission and Approval

Under the centralised processing system as stated in PNAP ADM-2, BD will refer FSI plans to FSD for processing.

The design of the FSI should be based on the Code of Practice for Minimum FSI and Equipment and Inspection, Testing, and Maintenance of Installations and Equipment issued by FSD, pursuant to Regulation 10 of the Fire Service (Installations and Equipment) Regulations (Cap. 95B). An AP/Registered FSI Contractor (RFSIC) should be engaged to resolve issues not usually encountered in conventional on-site construction.

The AP should clearly indicate in the F.S. Notes of the GBP that the building is to be constructed using the MiC method and highlight in the corresponding covering letters that the MiC method will be adopted.

The following design considerations should be made during the design of FSI of MiC building projects:

- (a) provision of adequate access points, inspection pits or accessible recesses for covered up installations for inspection, testing and future maintenance;
- (b) use of flexible pipe jointing between modules, where required, for services connection;
- (c) use of cabling facilities for FSI between modules for on-site installations of power and control cables; and
- (d) use of FSI equipment and materials accompanied with product listing certificates/records/letters issued by the respective product certification bodies accepted/approved in accordance with FSD Circular Letter No. 1/2007.

If the plans are acceptable, FSD will issue a standard letter or a Fire Services Certificate (FS 161), and return one set of the endorsed plans to the AP/RFSIC. If the plans are acceptable subject to minor changes, the AP/RFSIC will be invited by FSD to make the necessary amendment. If the plans are not acceptable, FSD will retain one set of the plans and issue a letter to the AP/RFSIC notifying them of the adverse comments and to collect the remaining set of plans from FSD.

The processing time of FSI plans for approval is 20 working days.

⁵The documents can be downloaded from the FSD website using the following link: https://www.hkfsd.gov.hk/eng/fire_protection/notices/circular.html

4.3 Quality Assurance

It is the responsibility of the RFSIC to ensure that FSI are installed/constructed in compliance with the approved plans, relevant statutory requirements, and the Code of Practice for Minimum FSI and Equipment and Inspection, Testing, and Maintenance of Installations and Equipment. To ensure quality at the MiC factory, the RFSIC should:

- (a) conduct regular supervision in the fabrication process to ensure that the equipment and materials used in FSI are in full compliance with relevant statutory requirements; and
- (b) keep an inspection log book, including names and registration numbers (FSD/RC No.) of the RFSIC responsible for conducting the quality assurance supervision, and details of the inspection, auditing and testing of the off-site FSI works at the MiC factory, and provide the log book to FSD when required. Use of appropriate digital technologies will facilitate such work.

At the building site, after the modules are delivered to site and before the on-site assembling process, the RFSIC should check and inspect the FSI installed in the integrated modules, especially if there is concern over possible damage during transit and difficulty in replacing/repairing the installed FSI after assembly. The RFSIC is also advised to monitor the on-site assembling process to ensure proper fixing of the FSI elements.

4.4 Acceptance Inspection

After the FSI have been installed, the AP/RFSIC should submit the following documents and request FSD to carry out acceptance inspection of the FSI and equipment installed at the building as given in FSD Circular Letter No. 1/2015 and FSD Circular Letter No. 3/2019, following the same procedures used for conventional buildings:

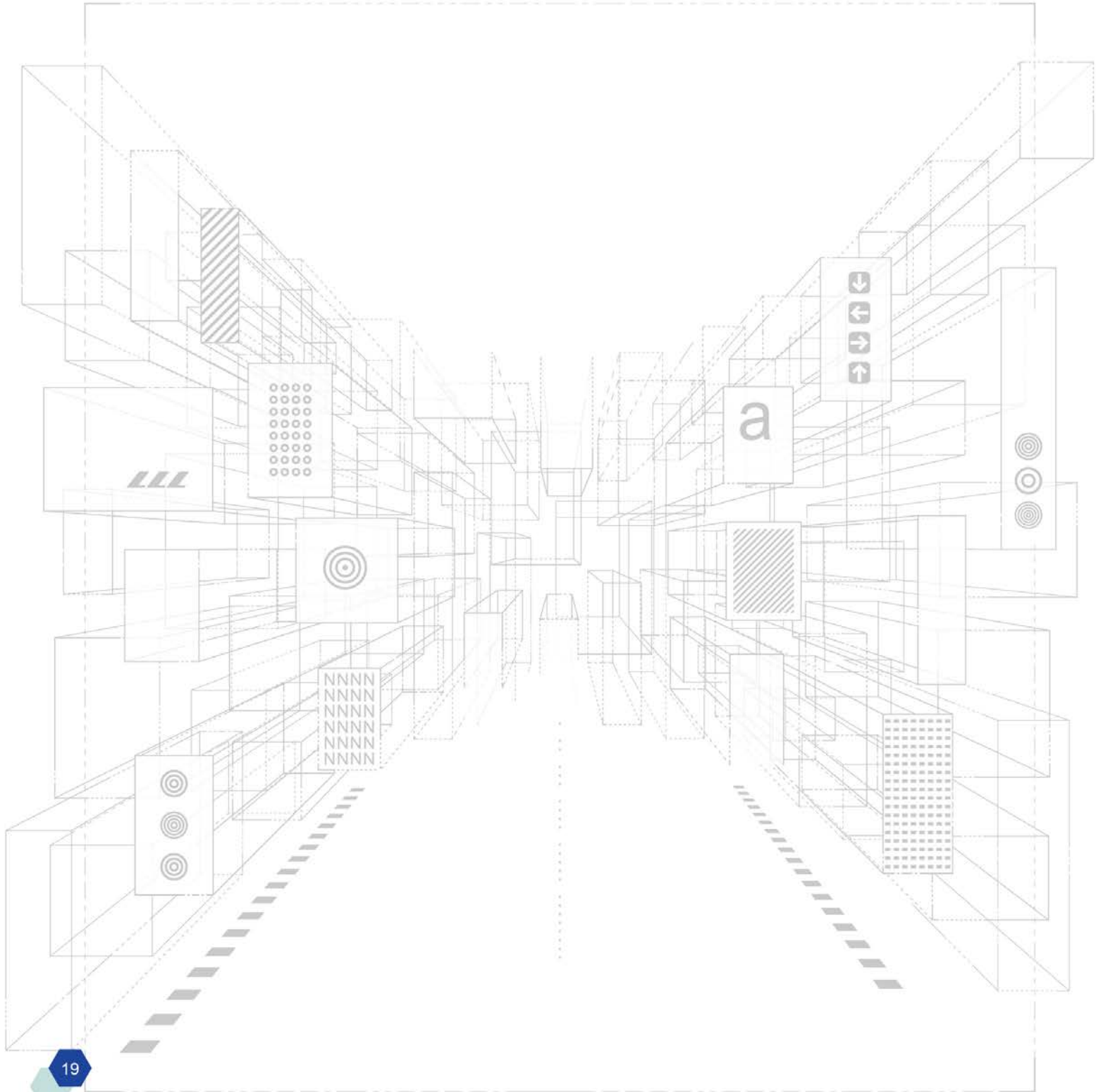
- (a) Application Form FSI/501 (Application for Inspection and Testing of Fire Service Installations and Equipment);
- (b) Form FSI/314 with two sets of as-fitted FSI layout plans;
- (c) a schedule of the submitted FSI layout plans;
- (d) testing and commissioning checklists as given in FSD Circular Letter No. 1/2015; and
- (e) a FSI equipment list.

Provision of digital records, including photographs and videos taken during inspection and testing, will facilitate the acceptance inspection by FSD.

FSD will arrange acceptance inspection within 15 working days after receipt of the application. FSD will issue Form FS 172 for non-government buildings, or an acceptance memo/letter for government buildings, after confirming that the installed FSI are in full compliance with the FS requirements.

5

Water Supplies Department



5. WATER SUPPLIES DEPARTMENT

5.1 General Submission Requirements

The procedure for applying for water supply for MiC projects follows that for conventional building projects, except that some additional requirements as detailed in WSD Circular Letter No. 2/2019⁶ are imposed (summarised in the workflow in Appendix D1). Before applying formally for water supply, the applicant should check the lease condition of the development to confirm that the mains water supply would be available. The applicant can then write to WSD and indicate briefly the requirements for water supply, together with a block plan showing the exact locations.

If provision of water supply is found feasible, details of the requirements will be sent to the applicant for preparation of a plumbing proposal. The plumbing proposal should be submitted together with the completed application Form WWO 542 to WSD for approval, in accordance with the Waterworks Ordinance (Cap. 102) and Waterworks Regulations (Cap. 102A). If a licensed plumber (LP) has already been engaged at the design stage of the plumbing proposal, the list of pipes and fittings intended to be installed (through Form WWO 1149) should be submitted, together with the plumbing proposal and Form WWO 542.

5.2 Specific Submission Requirements for MiC Projects

The procedures stipulated in the following paragraphs are applicable only to MiC projects with plumbing installations to be constructed off-site in an MiC factory.

The applicant for water supply should provide the following, in addition to the submissions as required in the Guide to Application for Water Supply:

- (a) Section on Off-site Constructed Plumbing Installations. A section should be included in the plumbing proposal, to be submitted with Form WWO 542, clearly specifying the parts of the plumbing installations (plumbing works) to be constructed off-site in an MiC factory. The extent of these plumbing installations should also be clearly indicated in the Vertical Plumbing Line Diagram, and other documents of the plumbing proposal as appropriate.
- (b) Supervision Plan. The plan for supervision of the construction of the plumbing installations at the MiC factory should be submitted before commencement of the works for agreement by WSD. The supervision plan should include: (i) the name, proof of relevant qualification, supervision frequency and supervision period of the supervision personnel, and (ii) the name, address and contact details of the responsible contact person at the MiC factory. The details of the supervision plan should be determined based on the extent and complexity of the plumbing works. The frequency of off-site supervision by responsible personnel is given in Section 5.3.

Plumbing works should not commence until the plumbing proposal has been approved (Form WWO 46 Part III) in writing. Before proceeding with the works under the approved plumbing proposal, the LP is required to submit Form WWO 46 (Parts I and II) to apply for WSD's permission to commence works. Form WWO 1149 should also be submitted together with Form WWO 46, if such submission has not previously been made.

⁶The document can be downloaded from the WSD website using the following link:
<https://www.wsd.gov.hk/tc/plumbing-engineering/requirements-for-plumbing-installation/wsd-circular-letters/index.html>.

It is stated in the Waterworks Regulations (Cap. 102A) that “No pipe or fitting forming part of a fire service or inside service shall be used or covered up until it has been inspected and approved by the Water Authority”. If there are parts of plumbing installations which will be covered up in the MiC factory, such that the plumbing installations cannot subsequently be exposed for inspection and non-destructive tests upon delivery of the modules to the building site in Hong Kong, the following additional details should be submitted to WSD for information before commencement of the plumbing works in the MiC factory:

- (a) Shop Drawings. These drawings should show details of the plumbing installations in the modules that will be covered up in the MiC factory.
- (b) Production Schedule. A schedule for production of the modules, in particular the production schedule of the plumbing works and the corresponding inspection schedule for the plumbing works to be covered up in the modules at the MiC factory, should be provided for the WSD’s Inspection Agent to arrange for interim inspection of the plumbing installations before the concealed parts are covered up in the MiC factory.

In view of the requirements given in the Waterworks Regulations (Cap. 102A), the design should as far as practicable provide access points for inspection of pipes and fittings forming part of a fire service or inside service in the modules, to remove the need for inspection by WSD in an overseas factory prior to the covering up.

5.3 Off-site Supervision Requirements

The plumbing works should be carried out under the instruction and supervision of a LP⁷ and RPW⁸ at the MiC factory. The minimum supervision frequencies for LP and RPW are, respectively, weekly and continuously. The responsible LP should ensure that supervision is provided for the plumbing works in the MiC factory in accordance with the supervision plan agreed by WSD. Proper supervision records should be kept, including the date and time of inspection and supervision of the plumbing works conducted by the LP and RPW. The supervision records should be submitted to WSD for inspection when required and WSD will assign an agent to carry out audit checks of the supervision records at the MiC factory if considered necessary. A sample supervision record is given in Appendix D2 for reference. The responsible LP will be required to declare that plumbing works carried out in the MiC factory have been supervised according to the supervision plan.

Provision of digital supervision records, including photographs and videos taken during inspection and testing, will facilitate the acceptance inspection by WSD.

⁷ The responsible LP who submits Form WWO 46 for the plumbing works to be constructed in the MiC factory.

⁸ Definitions of a RPW are given in Part 1 of the Schedule of the Waterworks Ordinance (Cap.102).

5.4 Interim Inspection of Plumbing Installations to be Covered Up in MiC Factory

For plumbing installations to be covered up in the MiC factory, WSD will arrange an Inspection Agent to carry out interim inspection in the MiC factory before the concealed parts are covered up to ensure that they comply in all respects (including but not limited to the aspects of material and size of pipes and fittings as well as their jointing method) with the provisions of the Waterworks Ordinance (Cap. 102) and Waterworks Regulations (Cap. 102A) and the prevailing Technical Requirements for Plumbing Works in Buildings. The Inspection Agent will conduct inspections and carry out non-destructive tests to determine the lead content in the solder joints for the plumbing installations. The responsible LP or his/her representative should be present at all interim inspections such that any non-compliance identified during the inspections can be immediately communicated to the LP or his/her representative for rectification. If the plumbing installations to be covered up are in order, the Inspection Agent will advise the responsible LP or his/her representative on the spot.

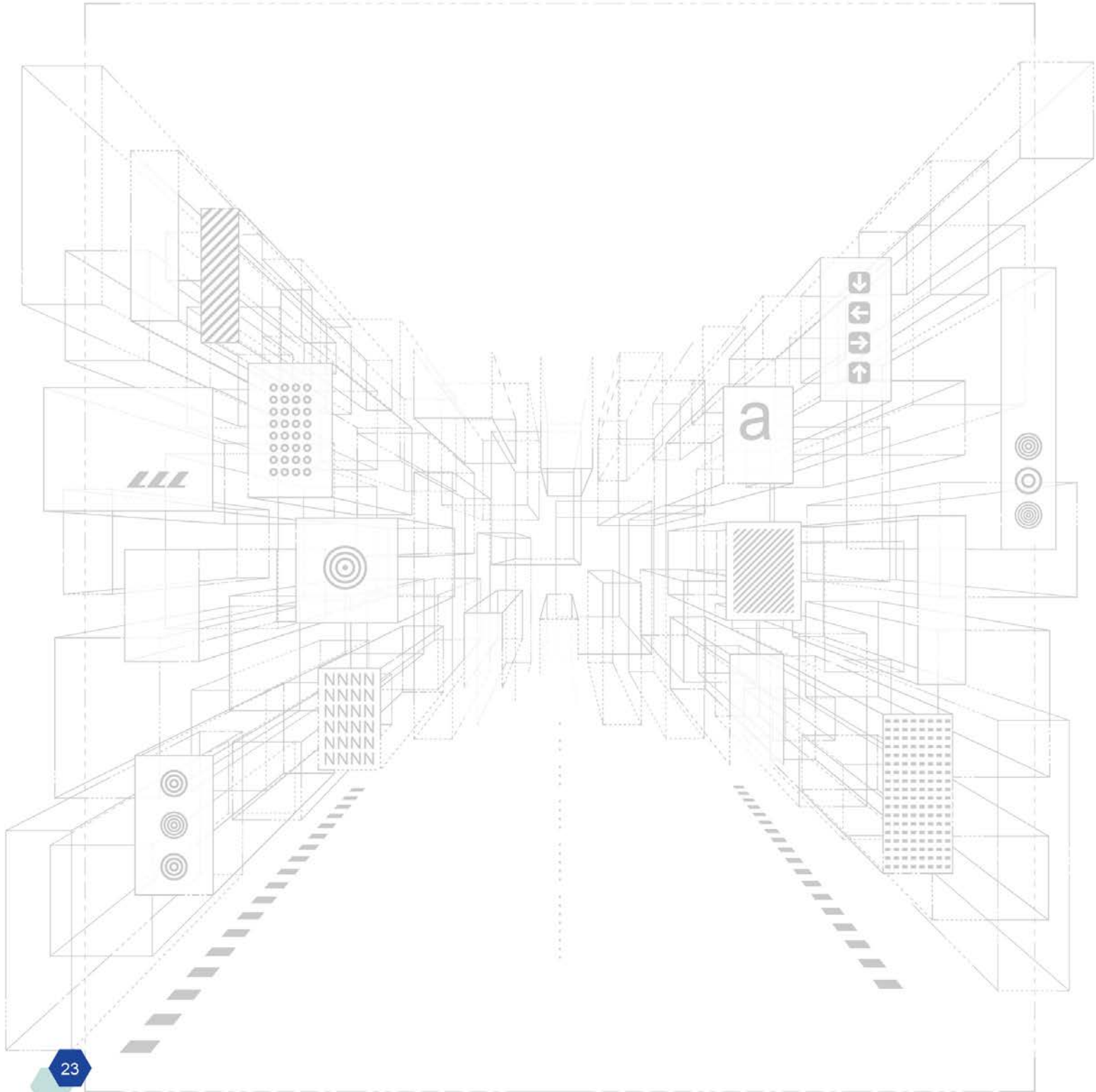
The responsible LP should coordinate and liaise with the WSD Inspection Agent regarding the exact inspection dates of the plumbing installations to be covered up in the MiC factory. If the inspection frequency so warrants, the responsible LP may be required to arrange a working place in the MiC factory for the Inspection Agent to station its resident staff for conducting interim inspections, and to adopt digital technologies for supervision and preparation of supervision records.

5.5 Final Inspection at Building Site in Hong Kong and Commissioning Requirements

Applicants for water supply of MiC projects should, like other plumbing projects, submit Form WWO 46 Part IV upon completion of plumbing works at the building site in Hong Kong. Upon receipt of Form WWO 46 Part IV, WSD will conduct final inspection of the completed plumbing installations at the building site. Approval of plumbing works of the MiC project will be granted by WSD subject to (i) satisfactory results of the final inspection by WSD at the building site, (ii) satisfactory results of the interim inspections by the WSD's Inspection Agent of the concealed parts of the plumbing works before they are covered up in the MiC factory (in which case no opening up of the concealed plumbing works for inspection will be required at the building site), and (iii) compliance with the commissioning requirements specified by WSD.

6

Electrical and Mechanical Services Department



6. ELECTRICAL AND MECHANICAL SERVICES DEPARTMENT

6.1 Fixed Electrical Installations

The procedure for provision of fixed electrical installations for MiC projects follows that for conventional new buildings.

The requirements imposed by EMSD under the Electricity Ordinance (Cap. 406) are that all electrical work should be carried out by a Registered Electrical Contractor (REC) and the REC should employ appropriate grades of Registered Electrical Workers (REWs) for the work. Electrical work refers to installation, commissioning, inspection, testing, maintenance, modification or repair of a low voltage or high voltage fixed electrical installation, and includes the supervision and certification of the work and the design of the installation. REC/REW should follow the technical requirements given in the Code of Practice for the Electricity (Wiring) Regulations⁹ to design, construct, install, inspect and test the fixed electrical installations. A fixed electrical installation refers to a low or high voltage electrical installation (e.g. distribution boards, wiring installations and lighting fittings, etc.) that is fixed to the premises, but it does not include any electrical equipment supplied with electricity after passing through a socket of the installation at which the supply can be disconnected without the use of a tool.

To apply for electricity supply, the AP/Consultant should submit directly to the electricity supplier relevant information about the proposed development, including a location plan of the project, proposed use of the project, floor plan, proposed transformer room (if required)/customer's switch room location, loading information, standard load estimation information, etc., as shown in the workflow in Appendix E. The electricity suppliers in Hong Kong are CLP Power Hong Kong Limited and The Hongkong Electric Company Limited. The electricity supplier will determine the proposed supply and inform the AP/Consultant about the requirements and arrangement for providing electricity supply, including transformer room layout requirements (if a transformer room is required) /requirements for the customer's switch room. The REC/REW will then submit a duly-signed electrical schematic wiring diagram. The applicant will return the necessary undertaking letters or other documents to the electricity supplier, as described in the requirements for provision of supply.

The applicant should submit an application form for each electrical installation to the electricity supplier and pay the required service charge and deposit (if applicable). Upon completion of the construction, the AP/Consultant/REC/REW should hand over the necessary facilities, including a new transformer room if required, to the electricity supplier. The electricity supplier will then carry out site work to provide electricity supply to the new building.

Upon completion of the installation of electrical work in the premises, and before the installation is energized for use, the responsible REC and REW should have the installation inspected, tested and certified using the Work Completion Certificate (Form WR1) to confirm that the requirements of the Electricity Ordinance (Cap. 406) have been met. The REC should submit the Work Completion Certificate (Form WR1) as proof of compliance with the Electricity Ordinance (Cap. 406) to the electricity supplier. Inspection of the electrical installation will be conducted by the electricity

⁹The document can be downloaded from the EMSD website using the following link:
https://www.emsd.gov.hk/en/electricity_safety/new_edition_cop_electricity_wiring_regulations/index.html.

supplier prior to connection of electricity supply to the installation. The Work Completion Certificate (Form WR1) should be supported with relevant test records, plan and other documents, and the documents should be kept for at least 5 years and produced for inspection by EMSD upon request. To effectively monitor the standard of electrical work, EMSD will carry out random inspection of electrical installations that are designed, installed or tested by the REC at the building site. Copies of relevant test records, plans and documents should be made available for checking by EMSD as required.

The Guidance Note on Fixed Electrical Installations with Modular Integrated Construction Method provides guidance on the requirements for the design, construction and installation of fixed electrical installations in MiC buildings/developments.

6.2 Safety of Household Electrical Products

Household electrical products supplied in MiC projects, e.g. television sets, refrigerators, electric water heaters, etc., are regulated by the Electrical Products (Safety) Regulation under the Electricity Ordinance (Cap. 406) if they are supplied in Hong Kong. Under the Regulation, the categories of persons that are regarded as suppliers are wide ranging, and include manufacturers, importers, wholesalers, retailers, etc., if such persons supply household electrical products in Hong Kong. Property developers may also be regarded as suppliers, as the Regulation also applies to the supply of household electrical products as part of or in connection with a disposition of any premises, if such a disposition, which includes a sale, lease, licence and permission to occupy, is the first disposition made prior to the first occupation of the premises.

Suppliers should ensure that the household electrical products comply with the applicable safety requirements of the Regulation, and the products should have been issued with valid certificates of safety compliance, as detailed in the Guidance Notes for the Electrical Products (Safety) Regulation¹⁰.

The Guidance Note on Household Electrical Products with Modular Integrated Construction Method provides guidance on the requirements for the supply of household electrical products at integrated modules in MiC projects.

6.3 Energy Efficiency of Products

The supply of prescribed products in MiC projects are regulated by the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598). Currently, the Ordinance covers eight types of prescribed products, namely room air conditioners, refrigerating appliances, compact fluorescent lamps (CFLs), washing machines, dehumidifiers, televisions, storage type electric water heaters and induction cookers. Under the Ordinance, a prescribed product supplied by an importer or Hong Kong manufacturer should be a listed model having a reference number assigned in the supplier's name by EMSD and bear an energy label that complies with the specified requirement. Any other supplier who is not an importer or Hong Kong manufacturer should ensure that prescribed products are listed models with a reference number and bear an appropriate energy label.

¹⁰ The documents can be downloaded from the EMSD website using the following link:
https://www.emsd.gov.hk/en/electricity_safety/publications/guidance_notes_guidelines/guidance_notes_for_the_electrical_products/.

A contractor may purchase prescribed products from Mainland/overseas supplier or manufacturer for installation at the integrated module. Irrespective of whether the product model is a listed model or a non-listed model under the Ordinance, the contractor who imports the integrated module with the prescribed product should be the importer of the product model. The importer should submit the product information, including an energy performance test report of the product model issued by an accredited testing laboratory, to EMSD for assignment of a reference number. Energy labels should also be attached or affixed to the products before being supplied in Hong Kong. The Guideline on Submission of Product Information¹¹ and Code of Practice on Energy Labelling of Products¹² provide practical guidance and technical details about the energy efficiency labelling of prescribed products. The target response time for submission of product information under the Mandatory Energy Efficiency Labelling Scheme is 17 working days.

Alternatively, the contractor may purchase prescribed products from a Hong Kong importer (i.e. the specified person to whom a reference number for the prescribed product under the Ordinance has been assigned) for installation at the integrated module. The prescribed product should be a listed product model, and bear an energy label.

A person other than a Hong Kong importer (e.g. project agent, integrated module owner, private developer, etc., depending on the contract arrangement) should not supply prescribed products unless the products are listed product models, which bear an energy label.

The Guidance Note on Supply of Energy Label Prescribed Products at Modular Integrated Construction (MiC) Projects provides guidance on the requirements in the supply of prescribed products at integrated modules in MiC projects.

Details of the energy efficiency labelling of products in Hong Kong can be found at the EMSD website from the following link: <https://www.emsd.gov.hk/energylabel>.

6.4 Gas Installations

The procedure for provision of gas installations for MiC projects follows that for conventional new buildings. The Gas Authority of EMSD is responsible for the enforcement of the Gas Safety Ordinance (Cap. 51) and acts as the Hong Kong regulator on gas safety.

The requirements imposed by EMSD under the Gas Safety Ordinance are that all gas installation works conducted in Hong Kong, including the installation, testing and commissioning of gas pipes/fittings/gas appliances in buildings, installation, testing and commissioning of gas pipes/fittings in the MiC modules, and assembling of pre-laid gas pipes/fittings in MiC modules, should be carried out by a Registered Gas Installer (RGI) of an appropriate class, who is a Registered Gas Contractor (RGC) or employed by a RGC. The installation works should comply with the Gas Safety Ordinance, and conform to the relevant Codes of Practices and guidance notes issued by the Gas Authority, and the operating procedures issued by the relevant Registered Gas Supply Company (RGSC).

¹¹ <https://www.emsd.gov.hk/energylabel/en/apply.html>.

¹² <https://www.emsd.gov.hk/energylabel/en/cop.html>.

In addition, all domestic gas appliances (DGA) supplied and installed for use in Hong Kong should be of the type approved by the Gas Authority, in accordance with the Gas Safety (Miscellaneous) Regulations (Cap. 51F) and Code of Practice GU05¹³. These include new gas appliances primarily designed for or intended to be used inside domestic premises (e.g. gas cookers, gas water heaters and clothes dryers). Approved DGA should bear a “GU” Mark. A list of the approved models can be found at the EMSD website from the following link: https://www.emsd.gov.hk/en/gas_safety/registers/.

The flexible gas tubing (either imported or manufactured) for use in Hong Kong for low-pressure applications (supply pressure not exceeding 7.5kPa) should also be approved by the Gas Authority, in accordance with the Gas Safety (Miscellaneous) Regulations (Cap. 51F) and Code of Practice GU01. Also, the installation requirements for domestic gas water heaters (up to 70 kW) are given in Code of Practice GU03.

An AP or contractor who intends to pre-install DGA in the MiC module for delivery and use in Hong Kong should engage an importer who has obtained the Gas Authority’s approval of that particular brand and model of DGA for importation under the “Approval Scheme for Domestic Gas Appliances” of EMSD. Alternatively, the AP or contractor may apply directly to the Gas Authority for approval to import any DGA under the Scheme.

The RGC should ensure that gas installation works, including the installation of gas pipes/fittings in the MiC modules, are properly carried out with safe and sound materials that conform to the Gas Safety Ordinance and Guidance Note on Gas Supply Installations. Where deemed necessary, the RGC should liaise with the AP/developer/RGSC for the establishment and implementation of a quality assurance mechanism of the gas installation works to ensure the quality of workmanship and tightness/integrity of the gas installations.

Prior to commissioning of the gas installations, the RGC should ensure that a soundness test and purging are satisfactorily completed.

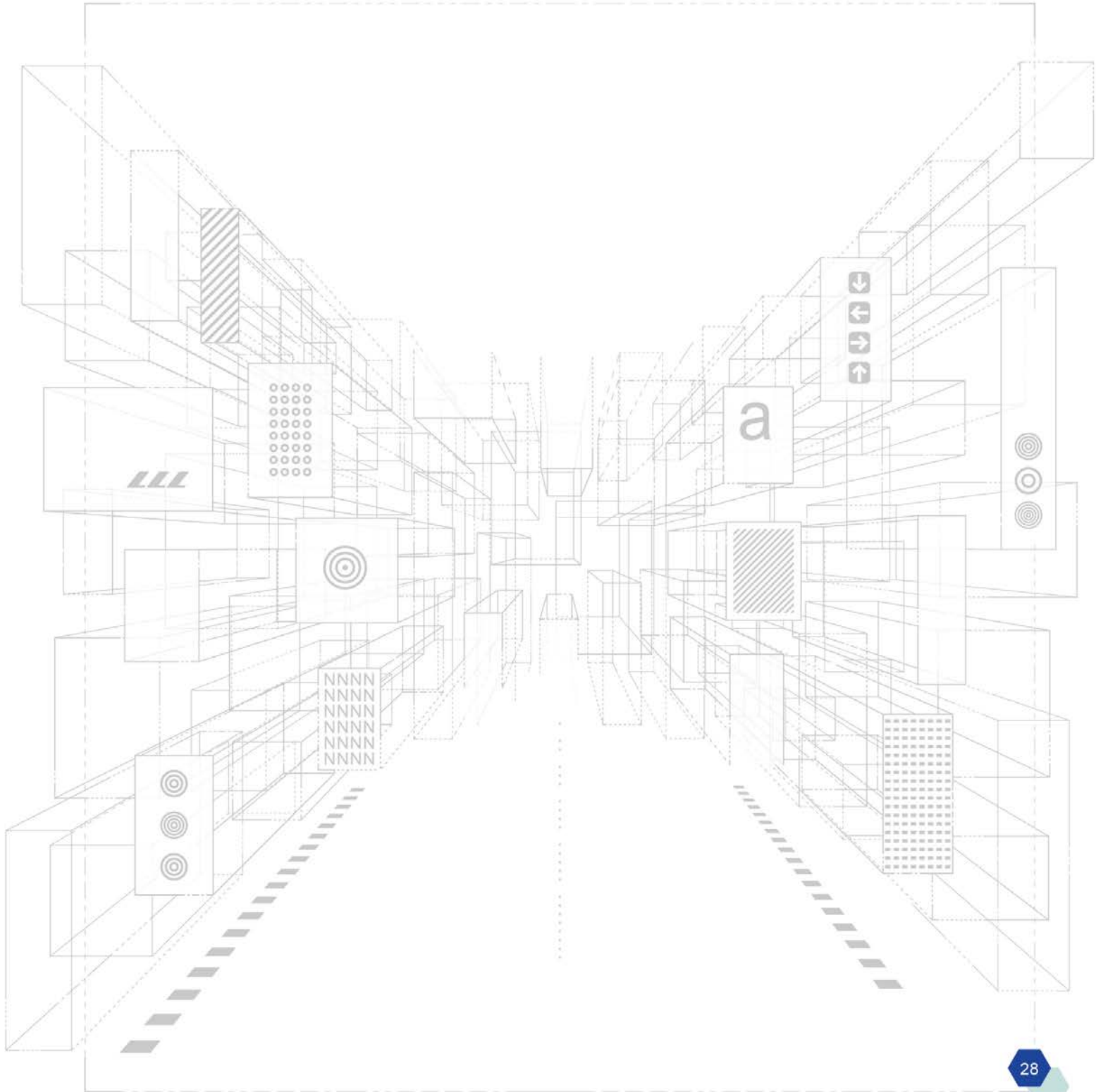
The RGSC will also check and ensure that the gas installations connected to their gas supply network are safe and sound for operation in a safe manner so that members of the public are not exposed to undue risks. The RGSC should ensure that the RGC has satisfactorily completed the soundness test and purging prior to commissioning of the gas installations.

The AP/Consultant should liaise directly with the relevant RGSC for gas supply.

¹³ The documents can be downloaded from the EMSD website using the following link: https://www.emsd.gov.hk/en/gas_safety/publications/codes_of_practice/.

7

Transport Department



7. Transport Department

7.1 Project Planning Stage/Design Stage

In MiC projects, modules are delivered to site for assembly and installation. Before a decision can be made on the use of MiC for a project, a feasibility study should be carried out at the early project planning stage/design stage to assess and establish whether there is any route for transporting the modules from the MiC factory to the project site, taking into account ports and marine unloading points for marine transport, road conditions and constraints for road transport, and the need for traffic impact assessments at different stages of the project, etc.

'Just-in-time delivery' of the modules to the project site is the best approach. However, if this is not feasible, the feasibility study should include identification of temporary parking space and/or storage locations for the modules. Early advice from experienced logistics companies and trailer drivers on the logistics of delivery should be sought.

During the project planning stage/design stage, assessment of the traffic impact on the proposed delivery routes should be carried out in consultation with the relevant Traffic Engineering Division/Regional Office of TD and the Road Management Office (RMO)/Hong Kong Police Force (HKPF).

To facilitate consideration by TD/HKPF, the following details should be provided:

- (a) delivery load, overhanging load dimensions, delivery vehicle (e.g. low flatbed trailers) details;
- (b) a swept path analysis demonstrating the maneuverability of the vehicle at critical junctions (using AutoTrack, AutoTurn, AutoPath, etc.);
- (c) Traffic Impact Assessment (TIA) taking into account the swept path analysis to assess the anticipated traffic implications when transporting the modules along the routes (Note: Reference can be made to the Guidelines on Traffic Impact Assessment & Day-time Ban Requirements for Road Works on Traffic Sensitive Routes produced by HyD (1995));
- (d) trial run, if required, to demonstrate there is no adverse impact on the prevailing traffic; and
- (e) Temporary Traffic Management (TTM) scheme and contingency plan at critical locations, if required (Note: See HyD (1955), in particular Annex 2 of Appendix 2, for advice on the conditions under which TTM is required).

In-principle approval of the proposed routes, and the conditions to be imposed on the use of the routes/vehicles, should be obtained. The approved routes and conditions should be included in the conditions of tender for reference by tenderers during the tendering process. This will give confirmation to the tenderers on the feasibility of adoption of MiC in the project, reduce risks and uncertainties to the project, and save cost and time.

7.2 Wide Load Permit

According to Regulation 55 of the Road Traffic (Traffic Control) Regulations (Cap. 374G), no driver shall drive on a road a vehicle that is so loaded that the load (a) extends sideways so that the total width of the load is in excess of 2.5 m; (b) rises to such a height in excess of 4.6 m or to such lesser height as may cause damage to any object or wires lawfully erected above the road; (c) in the case of a vehicle other than a trailer, extends forwards more than 1.5 m from the foremost part of the vehicle; or (d) extends backwards more than 1.4 m behind the rearmost part of the vehicle.

Road users will need to apply for a Wide Load Permit (WLP) from the TD's Licensing Office when they drive a vehicle with a load projecting to either side beyond the body of the vehicle. A vehicle may be driven loaded within the limits prescribed in the WLP issued under Regulation 54 of the Road Traffic (Registration and Licensing of Vehicles) Regulations (Cap. 374E).

The loading and transportation of MiC modules should comply with the Code of Practice for the Loading of Vehicles published by TD.

7.3 Procedures for Submitting a Wide Load Permit Application

An application form (TD 290) should be duly completed and submitted to any TD's Licensing Offices for the WLP application. The information and documents required for the application include the following:

(a) Particulars of Applicant

- (i) name of the registered owner of the vehicle under WLP application;
- (ii) identity document/Certificate of Incorporation of the registered owner;
- (iii) residential/company and correspondence address with acceptable proof of address issued not more than three months from the date of application (for a full list of acceptable proof of address, reference should be made to https://www.td.gov.hk/en/public_services/licences_and_permits/proof_of_address/index.html); and
- (iv) contact phone number.

(b) Particulars of Vehicle

- (i) registration mark, class, make, overall width and length of vehicle, where the vehicle under application must be a medium goods vehicle or a heavy goods vehicle, whether or not articulated with a trailer, with a total length not less than 9.1 m;
- (ii) registration document of the vehicle under WLP application; and
- (iii) a valid third party insurance certificate or cover note in respect of the vehicle in the name of the registered owner for the entire period of the permit being sought.

(c) Particulars of Operation

- (i) reason for application;
- (ii) projection of loads: front projection/ rear projection/ overall projection; beyond both sides/ total width of loads/total weight of loads/ total length of loads;
- (iii) delivery load, overhanging load dimensions, delivery vehicle (e.g. low flatbed trailers) details, delivery period and time schedule; and
- (iv) details of routes.

Upon receipt of the duly completed application form and all the required documents, the TD's Licensing Office will consult the Traffic Branch Headquarters/HKPF on the application. The respective Traffic Engineering and Transport Operations Divisions/ Regional Office of TD will also be invited to provide comments on the application with specific route(s).

The TD's Licensing Office will inform the applicant of the application result in writing within 25 working days upon receipt of the duly completed application with all required documents.

7.4 Conditions of a Wide Load Permit

Some or all of the following conditions may be imposed in the WLP:

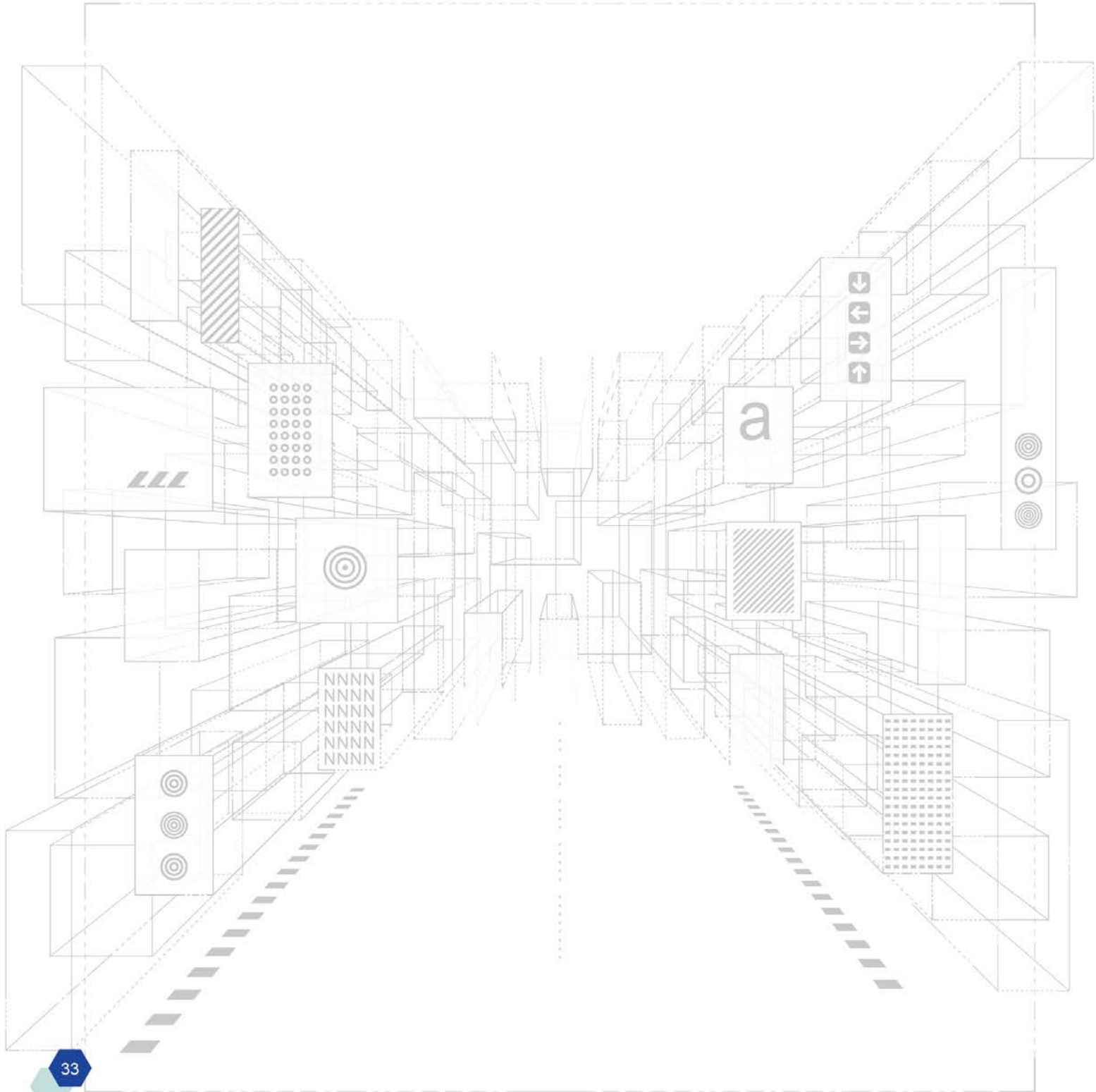
- (a)** The vehicle issued with the WLP should only be operated on the route specified in the permit, and used together with the specified trailers.
- (b)** The permit should be displayed on the front windscreen of the vehicle near the vehicle licence.
- (c)** The load should be properly fastened to the vehicle, with no portion of the load touching the road.
- (d)** A red flag of an area (>1 m²) should be displayed at the rear extremity of the load.
- (e)** During the hours of darkness and in poor visibility conditions, a white light showing ahead at each side of the front extremity of the load, and a red light showing to the rear at the rear extremity of the load should be used.
- (f)** In general, the approved operating hours are from 1000 hrs to 1600 hrs and 2000 hrs to 0700 hrs. For WLP issued for application with specific route(s) and/or vehicle with coded permits, the approved operating hours are from 0100 hrs to 0600 hrs. The permit validity is 12 months or the validity period of the third party risk insurance in respect of the vehicle or the validity period of the vehicle licence of the vehicle, whichever is shorter.
- (g)** Provision of escort vehicles to the front and rear of the load-carrying vehicle is usually required when the loads exceeds the width as stipulated in Regulation 55 of the Road Traffic (Traffic Control) Regulations. The condition imposed will depend on the road/route conditions and the justifications given in the application
- (h)** Permission should be obtained from the relevant management authority or owner of any areas or private roads prior to carrying the load through the areas or private roads, as the management authority or owner may restrict access of the vehicle, rendering the proposed route infeasible.
- (i)** The overall height of the vehicle (i.e. including the height of the module) needs to be considered if the route passes through overhead bridges or structures. Beneath some bridges, gantries and other structures, where the clearance provided may be less than the maximum permitted vehicle height of 4.6 m, regulatory and/or warning traffic signs are erected to inform drivers of the restriction/prohibition. Drivers transporting high loads should pay particular attention to such signs while driving on the road.
- (j)** Prior routing approval for the project must be sought from the respective RMO/HKPF and HyD to ensure that the deliveries will not cause any undue inconvenience to other road users nor damage to road pavements and underground utilities.

7.5 Module Delivery Stage

Depending on the routes taken, the degree of severity of impacts on the traffic and the transport and traffic management measures required, it may be necessary to set up a Traffic Management Liaison Group (TMLG) with representatives from TD, RMO/HKPF and HyD during the module delivery stage to consider and fine-tune the TTM measures.

8

Environmental Protection Department



8. Environmental Protection Department

Information on control of noise from construction site can be found at the EPD website from this link: https://www.epd.gov.hk/epd/noise_education/web/ENG_EPD_HTML/m3/ordinance_7.html. In general, there is no restriction on the noise generated by general construction activities (other than percussive piling) during day time between 7:00 am and 7:00 pm on weekdays. However, when unloading and installation of modules involving powered mechanical equipment (PME) are carried out between 7:00 pm and 7:00 am, or at any time on public holidays, including Sundays (i.e. restricted hours), a Construction Noise Permit (CNP) in accordance with Section 8 of the Noise Control Ordinance (Cap. 400) from the Noise Control Authority (the Authority) of the Environmental Protection Department (EPD) is required. Details of the application for a construction noise permit can be found at the EPD website from this link: https://www.epd.gov.hk/epd/english/application_for_licences/guidance/application_maincontent36.html.

Within Hong Kong, there are Designated Areas, under the Noise Control (Construction Work Designated Areas) Notice, within which hammering works are usually prohibited. These are densely-populated built up areas and their locations can be found at the EPD website from this link: https://www.epd.gov.hk/epd/english/environmentinhk/noise/help_corner/da.html.

The CNP will be processed and assessed in accordance with the Technical Memorandum on Noise from Construction Work other than Percussive Piling issued by EPD. Form EPD 74A(s) should be used for the application and the following items are needed: (i) a site plan showing the construction site and the Noise Sensitive Receivers (NSRs), (ii) a site plan of locations for carrying out the prescribed work (if the construction work is located within the designated areas), (iii) photographs of each item of PME used, and (iv) photocopies of noise emission labels of any air-compressor and/or hand-held percussive breaker used (if relevant).

Generally, the Authority will (i) identify the most affected NSR, (ii) determine the Area Sensitivity Rating for the area within which the NSR is located, and hence determine the relevant Acceptable Noise Level, (iii) calculate the Corrected Noise Level which will be generated by the construction work at the NSR, and (iv) compare the Corrected Noise Level with the Acceptable Noise Level. If the Corrected Noise Level is equal to or less than the Acceptable Noise Level, the CNP may be issued and may include such conditions as the Authority considers appropriate, e.g. the permissible items of PME which may be used on the construction site, hours during which the CNP is valid, the dates of commencement and expiry of the CNP, any noise levels which may not be exceeded at specified locations during specified times, and any special noise control measures that should be adopted.

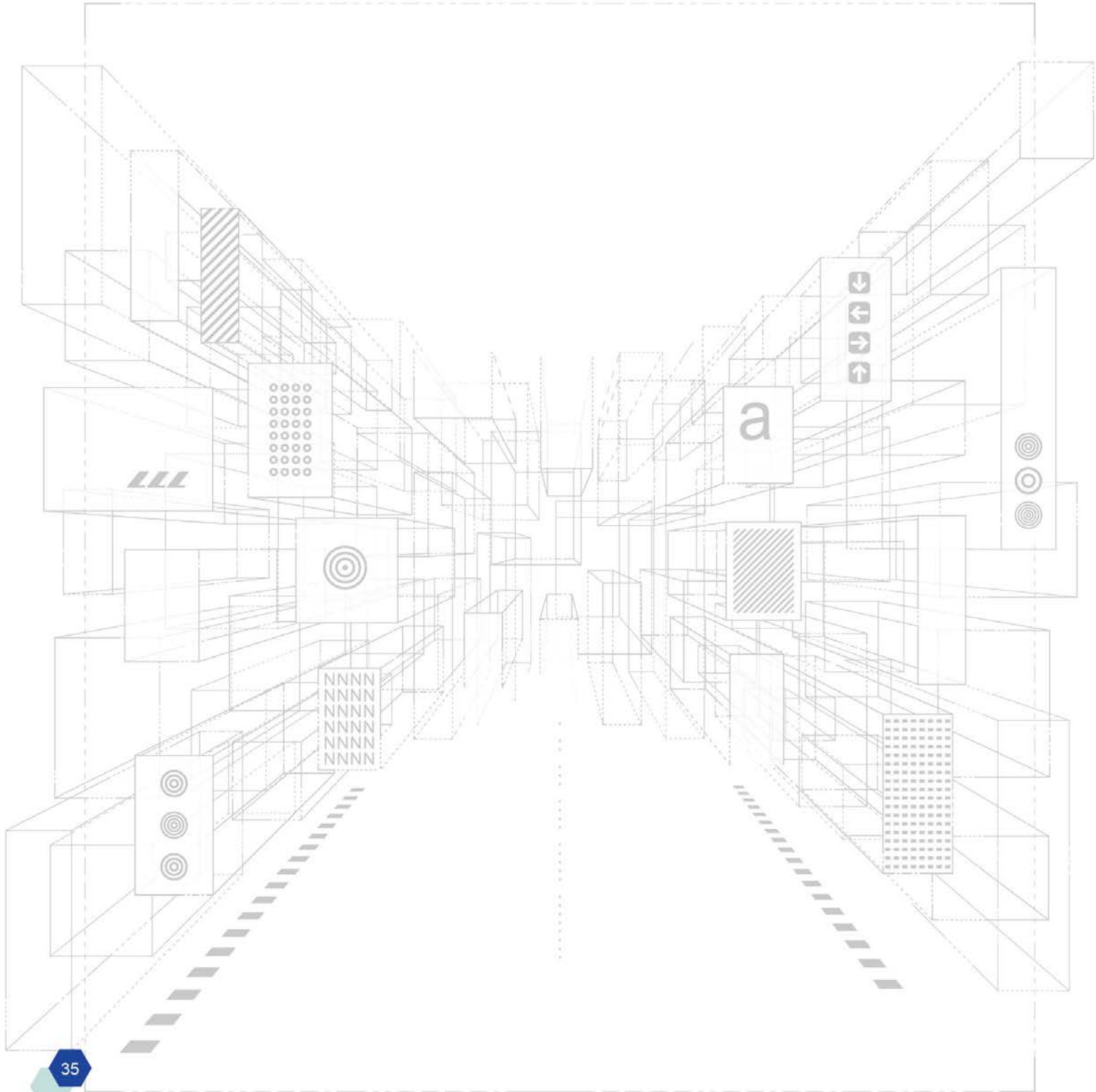
A CNP may be issued for an initial period of such duration as the Authority considers appropriate, and may be renewed before or after the date of expiry for such further period or periods and subject to such alterations or new conditions as the Authority considers appropriate.

If the Corrected Noise Level exceeds the Acceptable Noise Level, a CNP will not generally be issued.

CNP applicants will be notified of the results of the applications within 28 days. No appeal can be made in relation to the issue of a CNP for the purpose of carrying out construction work during the restricted hours.

9

Customs and Excise Department



9. Customs and Excise Department

According to the Import and Export Ordinance (Cap. 60), the person in charge of a vehicle/vessel, on entering or leaving Hong Kong, should furnish a manifest in respect of the cargo on board. Other than the cargo manifest, other documents that are required to facilitate customs clearance include an import/export licence or a removal permit (if required), and/or other supporting documents such as a bill of lading, airway bill, invoice, packing list, etc.

In addition, all persons importing or exporting any articles, other than exempted articles, are required to lodge accurate and complete import/export declarations within 14 days after the importation/exportation of the article. Information on the cargo clearance requirements and import and export declaration can be found at the C&ED website from these links: http://www.customs.gov.hk/en/cargo_clearance/index.html and http://www.customs.gov.hk/en/cargo_clearance/declaration/index.html. Details of the articles which are exempted from the import and export declaration requirements can be found from this link: https://www.elegislation.gov.hk/hk/cap60E?xid=ID_1438403523489_003.

Details of the customs clearance of cargo conveyed by goods vehicles/vessels by C&ED are described below:

- (a) Land. Five land boundary control points (LBCPs) for cross-boundary goods vehicles are currently in operation: Lok Ma Chau, Sha Tau Kok, Man Kam To, Shenzhen Bay and Hong Kong-Zhuhai-Macao Bridge Hong Kong Port. The new Liantang/Heung Yuen Wai Control Point is being constructed.

For cargo imported or exported by trucks through the LBCPs, C&ED has established a Road Cargo System (ROCARS) that enables registered shippers or their authorised agents to submit advance cargo information to C&ED by electronic means. Cross-boundary truck drivers can enjoy seamless customs clearance service when they convey road cargoes across LBCPs. They will be signalled by ROCARS whether their vehicles should be examined upon arrival at the fully automated customs clearance facilities at the LBCPs.

Drivers entering Hong Kong are not entitled to duty-free concessions for dutiable goods. In addition, drivers should comply with any requirement, direction or demand given or made by a member of C&ED, or instruction conveyed by a visual display unit installed at a customs clearance point. Otherwise, they may be prosecuted.

As part of the customs clearance requirements, cross-boundary goods vehicles are inspected at the LBCPs. C&ED adopts a risk management approach to identify and select cargoes/vehicles/ drivers/passengers for inspection at the LBCPs. Different inspection methods/equipment, including physical checks, vehicle searches, use of detector dogs, application of X-ray inspection systems and/or contraband detectors, etc., are used in the inspection process as and when necessary.

Where necessary, early liaison with C&ED to facilitate customs clearance of wide modules is recommended. The contact numbers of the respective LBCPs can be found at the C&ED website from this link: https://www.customs.gov.hk/en/contact_us/cargo_clearance/index.html.

The size of the cargo loaded on board a vehicle, among other information, is also governed by the requirements set by TD given in Section 7.

Notwithstanding the above, it is necessary to check the customs clearance procedures outside Hong Kong to ensure smooth delivery.

- (b)** Sea. For containerized cargoes conveyed by ocean-going vessels, C&ED will issue detention notices to shipping agents, container terminal operators, godown operators and consignees requiring their submission of cargo manifests for customs scrutiny. Apart from the conventional paper handling method, C&ED also encourages carriers to submit electronic manifests via the Electronic System for Cargo Manifests (EMAN) prior to the arrival of shipments.

For containerized cargoes conveyed by river trade vessels, C&ED may issue detention notices to the consignees of the cargoes, shipping agents, container terminal operators and godown operators requiring their cargoes to be removed to premises nominated by the consignees, owners or shipping agents for cargo examination.

For non-containerized sea cargoes, C&ED will deploy officers to conduct strike and search operations onboard the vessels or at the respective loading spots e.g. Public Cargo Working Areas (PCWAs) or buoys. The masters or agents of the vessels are required to furnish manifests in respect of the cargoes being imported or exported if they are requested to do so.

Bibliography

BD (2004). Code of Practice on Wind Effects in Hong Kong 2004

(<https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/windcode2004.pdf>).

BD (2008). Design Manual: Barrier Free Access 2008

(https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/BFA2008_e.pdf).

BD (2010). Code of Practice for Site Supervision 2009

(https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/SS2009_e.pdf).

BD (2011). Code of Practice for Dead and Imposed Loads 2011

(<https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/DIL2011e.pdf>).

BD (2011). Code of Practice for Structural Use of Steel 2011

(<https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/SUOS2011.pdf>).

BD (2011). PNAP ADM-2 - Centralized Processing of Building Plans

(<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/ADM/ADM002.pdf>).

BD (2011). PNAP APP-7 - Application for Registration as Authorized Persons, Registered Structural Engineers, Registered Geotechnical Engineers and Registered Inspectors

(<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP007.pdf>).

BD (2013). Code of Practice for Structural Use of Concrete 2013

(https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/CoP_SUC2013e.pdf).

BD (2013). PNAP APP-13 - Submission of Certificate of Completion of Building Works Application for Occupation Permit and Submission of Record Plans and Information

(<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP013.pdf>).

BD (2015). Code of Practice for Fire Safety in Buildings 2011. (October 2015 version)

(https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/fs2011/fs2011_full.pdf).

BD (2016). Code of Practice for Precast Concrete Construction 2016

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/cppcc2016e.pdf>.

BD (2016). PNAP ADM-19 - Building Approval Process

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/ADM/ADM019.pdf>.

BD (2016). PNAP APP-158 - Quality Supervision of Building Works

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP158.pdf>.

BD (2017). PNAP ADV-36 - Modular Integrated Construction

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/ADV/ADV036.pdf>.

BD (2018). PNRC 38. Registration of General Building Contractors and Specialist Contractors

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnrc/Pnrc38.pdf>.

BD (2019). PNAP APP-151 - Building Design to Foster a Quality and Sustainable Built Environment

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP151.pdf>.

BD (2019). PNAP APP-161 - Exemption of Gross Floor Area for Buildings adopting Modular Integrated Construction

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP161.pdf>.

BD, Lands Department and Planning Department (2019). Joint Practice Note No. 2 - Second Package of Incentives to Promote Green and Innovative Buildings

<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/joint/JPN02.pdf>.

C&ED (2006). Departmental Review 2005-2006

https://www.customs.gov.hk/filemanager/common/pdf/pdf_publications/dept_review05_06/htm_en/14_planning/subpage_01.htm.

EMSD (2002). Code of Practice GU05 - Approval of Domestic Gas Appliances

https://www.emsd.gov.hk/filemanager/en/content_286/gas_approval.pdf.

EMSD (2007). Guidance Notes for the Electrical Products (Safety) Regulation

https://www.emsd.gov.hk/en/electricity_safety/publications/guidance_notes_guidelines/guidance_notes_for_the_electrical_products/index.html.

EMSD (2009). Code of Practice GU01 - Approval of Flexible Gas Tubing for Low Pressure Applications

https://www.emsd.gov.hk/filemanager/en/content_286/gu01_cop_2009-revA.pdf.

EMSD (2014). Code of Practice GU 03 - Installation Requirements for Domestic Gas Water Heaters (Rated Heat Input up to 70 kW)

https://www.emsd.gov.hk/filemanager/en/content_286/gu03.pdf.

EMSD (2015). Code of Practice for the Electricity (Wiring) Regulations (2015 Edition).

https://www.emsd.gov.hk/filemanager/en/content_443/COP_E_2015.pdf.

EMSD (2016). Request for Information on Supply and Installation of Mobile X-ray Vehicle Scanning Systems for C&ED at various locations

https://www.emsd.gov.hk/filemanager/en/content_417/RFI_MXRVSS-Rplcmnt_N_LTHYW_BC.pdf.

EMSD (2018). Code of Practice on Energy Labelling of Products

[https://www.emsd.gov.hk/energylabel/en/doc/2018%20CoP%20\(English\).pdf](https://www.emsd.gov.hk/energylabel/en/doc/2018%20CoP%20(English).pdf).

EMSD (2018). Guideline on Submission of Product Information

[https://www.emsd.gov.hk/energylabel/en/doc/Guideline%20for%20Form%201\(EN\)%20\(201806\).pdf](https://www.emsd.gov.hk/energylabel/en/doc/Guideline%20for%20Form%201(EN)%20(201806).pdf).

EMSD (2019). Guidance Note on Fixed Electrical Installations with Modular Integrated Construction Method

http://www.emsd.gov.hk/filemanager/en/content_444/Guidance_Note_on_Fixed_Electrical_Installations_with_Integrated_Construction_method_ENG_Final_with_correction_no.2.pdf.

EMSD (2019). Guidance Note on Gas Supply Installations

https://www.emsd.gov.hk/filemanager/en/content_287/Guidance_Note_on_Gas_Supply_Installations_201906_ENG_Final.pdf.

EMSD (2019). Guidance Note on Household Electrical Products with Modular Integrated Construction Method

https://www.emsd.gov.hk/filemanager/en/content_444GN_HEP_Modular_Integrated_Construction_Method.pdf.

EMSD (2019). Guidance Note on Supply of Energy Label Prescribed Products at Modular Integrated Construction (MiC) Projects

[https://www.emsd.gov.hk/energylabel/en/doc/Guidance%20Note%20on%20Supply%20of%20Prescribed%20Products%20at%20MiC%20Projects_ENG\(201906\).pdf](https://www.emsd.gov.hk/energylabel/en/doc/Guidance%20Note%20on%20Supply%20of%20Prescribed%20Products%20at%20MiC%20Projects_ENG(201906).pdf).

EPD (1998). Technical Memorandum on Noise from Construction Work other than Percussive Piling

https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/noise/guide_ref/files/tm_nonpp.pdf.

FSD (2000). FSD Circular Letter No. 1/2000 - Flammability Standards for Polyurethane (PU) Foam Filled Mattresses and Upholstered Furniture in Licensed Premises and Public Areas

https://www.hkfsd.gov.hk/eng/source/circular/e01_2000.pdf.

FSD (2005). FSD Circular Letter No. 1/2005 - New Arrangement for Submission of Fire Service Installations Plans for New Developments

<https://www.hkfsd.gov.hk/eng/source/circular/01-2005-ENG.pdf>.

FSD (2007). FSD Circular Letter No. 1/2007 - Guidelines on New Arrangement on Product Approval of Fire Service Installations and Equipment

https://www.hkfsd.gov.hk/eng/source/circular/2007_01.pdf.

FSD (2012). Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment

<https://www.hkfsd.gov.hk/eng/source/safety/File2012.pdf>.

FSD (2015). FSD Circular Letter No. 1/2015 - Documents Required for Application for Compliance Inspection of Fire Service Installations and Equipment

https://www.hkfsd.gov.hk/eng/source/circular/2015_01_eng.pdf.

FSD (2019). FSD Circular Letter No. 1/2019 - Ventilation/Air-conditioning (V/AC) Control System

https://www.hkfsd.gov.hk/eng/source/circular/2019_01_eng_20190121_164638.pdf.

FSD (2019). FSD Circular Letter No. 3/2019 - Guidance Notes on Submission, Approval and Acceptance Inspection of Fire Service Installations and Equipment in Modular Integrated Construction Building Projects

https://www.hkfsd.gov.hk/eng/source/circular/2019_03_eng_20190327_160959.pdf.

HM Government (2006). The Building Regulations 2010 Fire safety: Approved Document B

<https://www.gov.uk/government/publications/fire-safety-approved-document-b>).

Hong Kong Port (2019). Hong Kong-Zhuhai-Macao Bridge Hong Kong Section

<https://www.hzmb.gov.hk/en/project/hkbcf.html>).

Hong Kong-Zhuhai-Macao Bridge Newsletter (2016). Newsletter Nov 2016.

<http://www.hzmb.hk/eng/doc/HZMB%20Newsletter%20Issue%2010.pdf>).

HyD (1995). Guidelines on Traffic Impact Assessment & Day-time Ban Requirements for Road Works on Traffic Sensitive Routes produced.

https://www.hyd.gov.hk/en/publications_and_publicity/publications/technical_document/guidance_notes/index.html).

TD (2019). Form TD 290 - Application for “Long Load” and “Wide Load” Permits

[https://www.td.gov.hk/filemanager/common/td290\(6.2019\)_eng.pdf](https://www.td.gov.hk/filemanager/common/td290(6.2019)_eng.pdf)).

TD (2019). Code of Practice for the Loading of Vehicles

https://www.td.gov.hk/filemanager/en/publication/cop_loading_of_vehicles_eng.pdf).

TD (2019). Road User's Code

(https://www.td.gov.hk/en/road_safety/road_users_code/index/chapter_6_for_professional_drivers/roads_/index.html).

WSD (2017). Form WWO 542 - Application for Water Supply/ Request for Work to be Carried out by the Water Authority

(<https://www.wsd.gov.hk/filemanager/en/share/pdf/wwo542e.pdf>).

WSD (2018). Guide to Application for Water Supply

(https://www.wsd.gov.hk/filemanager/en/content_1805/guide-to-application-for-water-supply-e.pdf).

WSD (2018). Technical Requirements for Plumbing Works in Buildings

(https://www.wsd.gov.hk/filemanager/en/content_1804/technical-requirements-for-plumbing-works-in-buildings-e.pdf).

WSD (2019). Form WWO 46 - Application for Constructing, Installing, Altering or Removing an Inside Service or Fire Service

(<https://www.wsd.gov.hk/filemanager/en/share/pdf/wwo46e.pdf>).

WSD (2019). Form WWO 1149 - List of Pipes and Fittings Intended to be Installed

(<https://www.wsd.gov.hk/filemanager/en/share/pdf/wwo1149e.pdf>).

WSD (2019). WSD Circular Letter No. 2/2019 - Procedures for Applications for Water Supply in New Building Projects adopting "Modular Integrated Construction" Method

(<https://www.wsd.gov.hk/filemanager/article/en/upload/480/cir0219.pdf>).

Appendix A - List of Contact Points of Relevant Government Departments (as at September 2019)

Department	Post	Division/Section	Telephone
Buildings Department	TS/Building	Corporate Services Division/Technical Services Section/ Technical Services Unit (Building)	38423453
Buildings Department	TS/Structural	Corporate Services Division/Technical Services Section/ Technical Services Unit (Structure)	23983107
Customs & Excise Department		General Enquiry Hotline	28157711
Electrical and Mechanical Services Department	E/Energy Efficiency A4/3	Electricity and Energy Efficiency Branch/ Energy Efficiency Division A/Energy Efficiency Sub-division A4	37576163
Electrical and Mechanical Services Department	SEME/Consumer Installations	Electricity and Energy Efficiency Branch/Electricity Legislation Division/Consumer Installations Sub-division	28083650
Electrical and Mechanical Services Department	SE/Gas Standards A3	Gas & General Legislation Branch/ Gas Standards Division A/Gas Standards A3 Sub-division	28083871/ 28083657
Electrical and Mechanical Services Department	EME/Nuclear & Utility Safety/4	Electricity and Energy Efficiency Branch/Electricity Legislation Division/Nuclear & Utility Safety Sub-division	28083692
Environmental Protection Department	SEPO(Regional Assessment)6	Environmental Assessment Division/Regional Assessment Group/Noise Management & Control Section (6)	24119605
Fire Services Department	Assistant Divisional Officer (Policy)3	Policy Division/ Licensing and Certification Command	27331543
Transport Department	EO/Licensing (HK)	Licensing Unit/Hong Kong Licensing Office/ VALID and Licensing Division/Licensing Section	28042630
Transport Department	SE/Road Safety 2	Technical Services Branch/Road Safety and Standards Division/ Road Safety 2 Section	22942533
Water Supplies Department	SE/Technical Support 2	Supply and Distribution (NT) Branch/Technical Support Division/ Technical Support Unit	28294449

Appendix B - Workflow For Submission and Approval of Plans to Buildings Department and Additional Requirements for MiC

Project Stage

Submission and Approval of Plans

Additional Requirements for MiC

Submission and Approval of Plans before Commencement of Module Production

AP/RSE
Submit GBP, superstructure plans, etc., to BD for approval.

BD
(a) Process GBP, superstructure plans, etc.
(b) Provide decision within 60 days.

AP/RSE
Prepare submissions in compliance with the requirements under the BO and its subsidiary regulations with reference to the relevant in-principle acceptance granted by BD if applicable.

AP/RSE/RGBC
(a) Submit Quality Assurance Scheme and MiC Supervision Plan in accordance with the imposed approval conditions at least 14 days before commencement of the production work in the MiC factory.
(b) Notify BD in writing if opting for alternative on-site audit check.

Module Production at MiC Factory

AP/RSE/Quality Control Supervisory Team
(a) Conduct regular supervision (AP and RSE-monthly and T3*-weekly).
(b) Supervise module production in respect of fire resisting construction, drainage works, structures, etc.
(c) Keep records of production, inspection, auditing and testing of modules (T3*) in a log book, with a copy kept at building site office for BD inspection when required.

Authorized Signatory of RGBC / Quality Control Co-ordination Team
(a) Conduct regular supervision (AS-monthly, T3*-weekly and T1*-continuous).
(b) Supervise module production.
(c) Keep records of production, inspection, auditing and testing of modules (T3*/T1*) in a log book, with a copy kept at building site office for BD inspection when required.

Construction at Building Site

AP/RSE
Apply for consent to commence superstructure works.

BD
(a) Process consent application.
(b) Provide decision within 28 days.

AP/RSE/RGBC
(a) Notify BD not less than 7 days before commencement of site works.
(b) Supervise site installation works.
(c) Submit a copy of the AP, RSE and RGBC's audit reports on the MiC factory.
(d) Submit structural material certificates/test reports in accordance with the imposed approval conditions.

AP/RSE
If opting for alternative on-site audit check:
(a) Submit on-site audit report on the quality of the MiC elements delivered to the building site.
(b) Submit HOKLAS-endorsed certificates for concrete/tensile strength testing within 60 days of the delivery of the modular units.

Compliance Certification

AP/RSE/RGBC
(a) Certify completion of building works in accordance with the BO and its subsidiary regulations and the approved plans.
(b) Submit record plans and schedule of building materials and products in accordance with PNAP APP-13.

BD
(a) Process occupation permit application.
(b) Provide decision within 14 days.

*T3/T1 refers to Grade T3/T1 Technically Competent Person equivalent as stipulated in the Code of Practice for Site Supervision

Note: Reference should be made to PNAP ADV-36 - Modular Integrated Construction.

Appendix C - Workflow For Submission and Approval of Plans to Fire Services Department and Additional Requirements for MiC

Project Stage

Submission and Approval of Plans

Additional Requirements for MiC

Submission and Approval of Plans before Commencement of Module Production

AP/RFSIC
Submit application (Form FSI/314) together with two sets of FSI plans, and a copy of Fire Service Notes in the relevant approved building plans (and highlighting in the covering letter that MiC will be used) to BD for referral to FSD for approval.

FSD
(a) Process FSI plans.
(b) Provide decision within 20 working days.
(c) Issue standard letter or a Fire Service Certificate (FS 161), if approved, and return one set of the endorsed plans to AP/RFSIC.

AP/RFSIC
(a) Provide adequate access points, inspection pits or accessible recesses for covered-up installations for inspection, testing and future maintenance.
(b) Design flexible pipe jointing between modules, where required, for services connection.
(c) Consider cabling facilities for FSI between modules for on-site installations of power and control cables.
(d) Use FSI equipment and materials accompanied with product listing certificates/records/letters issued by the respective product certification bodies accepted/approved in accordance with FSD Circular Letter No. 1/2007.

AP/RFSIC
(a) Submit design of pressurization of staircase, ventilation/air conditioning control system and smoke extraction, if applicable.

Module Production at MiC Factory

RFSIC
(a) Conduct regular supervision in the module production process to ensure that the equipment and materials used in FSI are in full compliance with the relevant statutory requirements.
(b) Keep an inspection log book, including names and registration numbers (FSD/RC No.) of the RFSIC responsible for conducting the quality assurance supervision, and details of the inspection, auditing and testing of the off-site FSI works at the MiC factory, and provide the log book to FSD when required.

Construction at Building Site

RFSIC is advised to
(a) Check and inspect the FSI installed in the integrated modules, after they are delivered to site and before the on-site assembling process, especially if there is concern over possible damage during transit and difficulty in replacing/repairing the installed FSI after assembly.
(b) Monitor the on-site construction works to ensure proper fixing of the FSI elements.

Compliance Certification

AP/RFSIC
Submit application (Form FSI/501) to FSD for acceptance inspection, including Form FSI/314, and 2 sets of as-fitted FSI layout plans, a schedule of the submitted FSI layout plans, testing and commissioning checklists, and a FSIs equipment list.

FSD
(a) Carry out acceptance inspection within 15 working days after receipt of the application.
(b) Issue Form FS 172 for non-government buildings, or acceptance memo/letter for government buildings after confirming that the installed FSI are in full compliance with the FS requirements.
(c) Inspect the ventilation system to certify compliance, where applicable.

Note: Reference should be made to FSD Circular Letter No. 3/2019 - Guidance Notes on Submission, Approval and Acceptance Inspection of Fire Service Installations and Equipment in Modular Integrated Construction Building Projects.

Appendix D1 - Workflow for Submission and Approval of Plans to Water Supplies Department and Additional Requirements for MiC

Project Stage

Submission and Approval of Plans

Additional Requirements for MiC

Submission and Approval of Plans before Commencement of Module Production

Applicant/Consultant
Submit application (Form WWO 542) together with a plumbing proposal to WSD for approval.

WSD
Issue approval letter for Form WWO 542 and demand note.

AP, LP and Applicant
Submit Form WWO46 Parts I & II to WSD to seek permission for commencement of plumbing works at building site.

AP/Consultant
Submit the following:
(i) a section clearly specifying the part of the plumbing installations to be constructed in the MiC factory; and a Vertical Plumbing Line Diagram and/or other documents as appropriate showing the extent of the plumbing installations; and
(ii) a supervision plan of the construction of the plumbing installations at the MiC factory for agreement by WSD.

AP/Consultant
Submit the following if there are parts of plumbing installations to be covered up in the MiC factory, in such a manner that they cannot be exposed for inspection and non-destructive tests at the building site:
(i) shop drawings showing details of the plumbing installations in the modules that will be covered up in the MiC factory; and
(ii) production schedule of the modules, in particular the production schedule of the plumbing works and the corresponding inspection schedule for the plumbing works to be covered up in the modules in the MiC factory.

Module Production at MiC Factory

WSD
Issue Form WWO46 Part III to grant permission for commencement of plumbing works at building site.

LP, RPW, MiC Supplier
(a) Implement the supervision plan as agreed by WSD.
(b) Keep supervision records and produce to WSD for inspection when required.
(c) Declare (by LP) on the supervision records any supervision carried out in the MiC factory.
(d) Coordinate and liaise (by LP) with the WSD's Inspection Agent regarding the exact inspection dates of the plumbing installations to the covered up at the MiC factory.

WSD's Inspection Agent
Carry out interim inspection of the concealed parts of the plumbing installations at the MiC factory before they are covered up, to ensure compliance with WWO/WWR.

LP or His/Her Representative
Be present at all interim inspections carried out by the WSD's Inspection Agent.

Construction at Building Site

LP
Submit Form WWO 46 Part IV upon completion of whole plumbing works of the MiC project for final inspection.

WSD
Carry out final inspection for completed plumbing works.

Compliance Certification

WSD
Inform LP to provide water supply on site and issue Form WWO 46 Part V to LP and applicant.

WSD
Grant approval of the completed works (issuance of Form WWO 46 Part V(a)) subject to:
(i) satisfactory results of the final inspection by WSD at the building site;
(ii) satisfactory results of the interim inspections by the WSD's Inspection Agent of the concealed parts of the plumbing works before they are covered up in the MiC factory; and
(iii) compliance with the commissioning requirements specified by WSD.

Note: Reference should be made to the Guide to Application for Water Supply and WSD Circular Letter No. 2/2019 - Procedures for Applications for Water Supply in New Building Projects adopting "Modular Integrated Construction" Method.

Appendix D2 - Record Form for Supervision of Plumbing Works Constructed at MiC Factory

Project Name:				
Address of MiC factory:				
WSD Reference No. (CCID/ASN):				
Period of supervision of construction at MiC factory:	/	/	to	/ /

A. Registered Plumbing Workers (RPW) Supervision Record:

Name of RPW	Registration no.	Date	Start Time	End Time

Signature(s) of RPW

Date

B. Licensed Plumbers (LP) Supervision and Inspection Record:

Name of responsible LP: _____ LP No. _____

Date	Start Time	End Time	Start Time	End Time

I, _____, declare that plumbing works carried out in the MiC factory mentioned above during DD/MM/YY to DD/MM/YY have been supervised according to the supervision plan accepted by the Water Authority under the CCID/ASN No. mentioned above. The supervision and inspection are carried out at the date and time as detailed in this record form.

Signature of LP

Date

Appendix E - Workflow For Submission and Approval of Plans to Electricity Supplier and Additional Requirements for MiC

Project Stage

Submission and Approval of Plans

Additional Requirements for MiC

Submission and Approval of Plans before Commencement of Module Production

AP/Consultant
Submit details of proposed project with a location plan of the project, proposed use of the project, floor plan, proposed transformer room layout (if provided), loading information, standard load estimation information, etc., to the Electricity Supplier for determination of the proposed arrangement and requirements for providing supply to the new building.

Electricity Supplier
Inform the AP/Consultant about the requirements for providing supply, including the transformer layout requirements if erection of a new transformer room is required, after determining the supply arrangement for the new building.

REC/REW
Submit duly-signed electrical schematic wiring diagram.

Applicant
Return the necessary undertaking letters or other document as described in the requirements of supply provision to the Electricity Supplier, if required.

Applicant
Submit formal application form for each electrical installation to the Electricity Supplier and pay required service charge and deposit (if applicable).

Module Production at MiC Factory

REC/REW
Carry out insulation resistance (megger) test and other tests as stipulated in the Code of Practice for the Electricity (Wiring) Regulations issued by EMSD on wiring works for pre-wired circuits off site.
(Note: A Megger test is a method of testing using an insulation tester resistance meter to verify the condition of an electrical insulation.)

Construction at Building Site

AP/Consultant
Construct and hand-over the necessary facilities, including new transformer room if required, to the Electricity Supplier.

Electricity Supplier
Carry out site work to provide electricity supply to the new building.

Compliance Certification

REC/REW
After completion of the electrical installation, issue a Work Completion Certificate (Form WR1) and arrange installation inspection with the Electricity Supplier.

Electricity Supplier
Install meters and connect the supply to the public supply installation and flats, after satisfactory installation inspection.

Feedback Form

Guidelines on the Statutory Requirements for Modular Integrated Construction Projects (September 2019)

Thank you for reading this publication. To help us improve our future versions, we would appreciate your suggestions/ feedback on the publication.

(Please put a "✓" in the appropriate box)

1. As a whole, I feel that this publication is:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Informative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comprehensive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Practical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does this publication enable you to understand more about the Statutory Requirements for the Modular Integrated Construction Projects?	Yes		No		No Comment
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
3. Have you made reference to this publication in your work?	Quite Often		Sometimes		Never
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
4. To what extent have you incorporated the recommendations of this publication in your work?	Most		Some		None
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
5. Overall, how would you rate this publication?	Excellent	Very Good	Satisfactory	Fair	Poor
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Other comments and suggestions (please specify and use separate sheets if necessary).					

Personal Particulars (optional):*

Name : Mr. / Mrs./ Ms./ Dr./ Prof./ Ir / Sr ^ _____

Company : _____

Tel : _____

Address : _____

E-mail : _____

* The personal data collected will be used only for this survey. Your data will be kept confidential and dealt with only by the Construction Industry Council.

^ Circle the appropriate option.

Please send this feedback form to :

MiC Department, Industry Development Division, CIC

Email : mic@cic.hk

Address : 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Hong Kong

Fax : (852) 2100 9090



■ Notes ■

Enquiries

Enquiries on these guidelines may be made to the CIC Secretariat:

CIC Headquarters

38/F, COS Centre
56 Tsun Yip Street,
Kwun Tong, Kowloon

Tel : (852) 2100 9000

Fax : (852) 2100 9090

Email : enquiry@cic.hk

Website : www.cic.hk