

## **Strengthening the Fifth Generation Mobile (“5G”) Infrastructure by Ensuring Availability of Space in and Access to Specified New Buildings for Installation of Mobile Communications Facilities**

### About this Consultation Document

- This consultation document is issued by the Commerce and Economic Development Bureau (“CEDB”) to seek the views of relevant stakeholders on the Government’s proposal to strengthen the 5G infrastructure by requiring that appropriate space be made available in new buildings (as defined in paragraph 9 below) for installation of mobile communications facilities by mobile network operators.
  
- Views on the issues covered in this consultation document may be submitted to the CEDB on or before **27 March 2023** by any one of the following means:

By mail:     Division 8  
                  Commerce and Economic Development Bureau  
                  21/F, West Wing, Central Government Offices  
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                  Hong Kong

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By fax:       2351 2791

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- Any personal data collected in the submissions received will be used and may be transferred to other relevant bodies for the purpose of the consultation exercise and any other purpose(s) directly related thereto. Unless otherwise specified, the names and affiliations of the respondents may be posted on the website of the CEDB or referred to in other documents published by the Government for the purpose of the consultation exercise and any other purpose(s) directly related thereto. Respondents may make requests for access to or correction of any personal data contained in their respective submission(s) by contacting the CEDB (see paragraph 2 above).

## **I. Background**

### ***A. Current Situation and Challenges***

Mobile communications service is now a basic and essential utility that underpins the operation of an information society. The advent of the 5G technology has further stimulated the development of innovative commercial services and smart city applications. A good mobile communications infrastructure enabling the efficient deployment of advanced mobile communications like the 5G network is pivotal to the sustainable development of a smart economy.

2. 5G services were commercially launched in Hong Kong in April 2020. As of November 2022, the number of 5G users reached almost 4.4 million, representing about 60% of the population. The existing 5G network coverage in Hong Kong has surpassed 90% of the population, covering major locations in the urban areas and all 98 stations in the local Mass Transit Railway lines. According to the report of an international survey organisation released in June 2022<sup>1</sup>, Hong Kong ranked third in the world in terms of 5G network coverage.

3. The Government has implemented a series of measures to promote the development of 5G services in Hong Kong, including the timely release of new spectrum in various frequency bands to the market for 5G services since 2019/2020. To facilitate the 5G network rollout of the mobile network operators (“MNOs”), the Government has launched a pilot scheme to open up about 1,500 suitable Government venues for MNOs to install radio base stations under a streamlined approval procedure and at a nominal rent of \$1 per year. A subsidy scheme is also being implemented to encourage fixed network operators (“FNOs”) to extend fibre-based networks to remote villages located in the New Territories and on outlying islands, thereby providing the basic infrastructure to support the extension of mobile coverage to these areas.

4. Despite having a 5G network coverage that is amongst the best in the world, the mobile communications service coverage in some remote regions, new development areas and old districts in Hong Kong is still less than satisfactory as compared with the third generation and fourth generation mobile services. Most of the mobile communications facilities installed by the MNOs are located in densely populated urban areas and at sites of private buildings. There is a need to facilitate access by the MNOs to private buildings for installation of mobile communications facilities to provide a comprehensive 5G network coverage across the territory and on a localised level.

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<sup>1</sup> See the report released by Opensignal in June 2022 at :

<https://www.opensignal.com/2022/06/22/benchmarking-the-global-5g-experience-june-2022>

5. According to the existing regulatory framework under the Telecommunications Ordinance (Cap. 106) (“TO”), while FNOs are generally authorised by the Communications Authority (“CA”) to enter any land or seabed to place and maintain telecommunications lines without any payment of fee to the landowners, the grant of the CA’s authorisation to MNOs for access to private properties for radiocommunications installations is however subject to stringent criteria and the payment of a fee to the persons having a lawful interest in the land<sup>2</sup>. Accordingly, in almost all cases where mobile communications facilities are installed at private properties, the MNOs wishing to gain access to such private properties may do so only through commercial agreements with the respective landowners, which are subject to a fee. These commercial negotiations are often protracted. There are also cases where there is a lack of suitable floor space or ancillary facilities (e.g. cable duct, electricity supply) in buildings for mobile communications facilities installations, or where the landowners simply refuse to negotiate with the MNOs concerned. All these factors have hindered further mobile communications facilities installations and expansion of mobile communications service coverage.

6. In order to provide ubiquitous 5G network coverage with high-speed and high-capacity data transmission to meet the demand of various innovative applications, a large number of 5G mobile communications facilities will need to be installed at different height levels and locations, including roof-tops and other locations at intermediate / lower levels of buildings (e.g. flat roof or podium floor). We note that statutory and regulatory measures have been adopted, for example, in Singapore<sup>3</sup> to facilitate installation of mobile network equipment in buildings. With the growing importance of public mobile communications services to the daily life of people and economic development in the 5G era, there is a pressing need to enhance the access right by MNOs to enter any land which is a new building for placing their radiocommunications installations on par with that of FNOs under the TO through necessary legislative amendments and the corresponding changes to relevant planning and building guidelines / practice notes, etc.

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<sup>2</sup> The criteria are provided for in section 14(1A) and (1B) of the TO, which include, among others, that the radiocommunications installation is to be placed or maintained for the purpose of providing a radiocommunications service to a public place, that the CA is satisfied that the authorisation to be granted to the MNO concerned is in the public interest, that consideration has to be given by the CA as to: (i) whether an alternative location can be reasonably utilized for placing the radiocommunications installation to which the authorization, if granted, will relate; (ii) whether or not there are technical alternatives to the installation; (iii) whether or not the utilization of the land to which the authorization, if granted, will relate is critical for the supply of the service by the MNO seeking the authorization; and (iv) whether or not that land has available capacity to be so utilized having regard to the current and reasonable future needs of the occupants of that land; and (v) the costs, time, penalties and inconvenience to the MNO concerned and the public of the alternatives, if any, referred to in (ii) above, and that the CA has to give a reasonable opportunity to the persons having a lawful interest in the land concerned and to the MNO concerned to make representations and has to consider all representations made before it decides whether or not to grant the authorization. The requirement of payment of a fee is provided for in section 14(2)(ii) of the TO.

<sup>3</sup> The Code of Practice for Info-communication Facilities in Buildings (“COPIF”), issued by the Info-communications Media Development Authority of Singapore pursuant to the Telecommunications Act, requires building owners to make available a minimum amount of space specified in the COPIF to mobile telecommunication licensees on a rent-free basis for installation of mobile equipment.

## **B. Radiation Safety**

7. There is an established mechanism under the existing regulatory regime to ensure that the increasing number of mobile communications facilities to be installed in buildings will not pose radiation safety risk. MNOs are required to strictly comply with the non-ionising radiation limits set by the International Commission on Non-ionizing Radiation Protection to obtain approval from the CA for mobile communications facilities applications. Furthermore, the Office of the Communications Authority (“OFCA”) will conduct from time to time sample checks on the radiation levels of approved mobile communications facilities so as to safeguard public health. Upon request by members of the public, OFCA will conduct site inspections and measurements of radiation level, and will explain the measurement results. The CA will also consult the Department of Health and obtain its professional advice from time to time in order to keep abreast of the latest development of the radiation safety standards.

## **II. Proposal**

8. Against the above background, the Chief Executive announced in the 2022 Policy Address the Government’s plan to amend the legislation to ensure that appropriate space is made available in new buildings (as defined in paragraph 9 below) for installation of mobile communications facilities by relevant telecommunications operators. This proposal will be conducive to expanding 5G network coverage which is critical to Hong Kong’s development into a smart city. We would like to seek views and comments from relevant stakeholders on our proposal with broad details as set out in the ensuing paragraphs.

### **A. Proposed Space Requirements**

#### Scope

9. The proposal will apply to new buildings with general building plan (建築圖則) or major revision of such plan approved by the Building Authority on or after six months from the commencement date of the legislative amendments elaborated in paragraph 13 below (“New Buildings”)<sup>4</sup>. For other new buildings not in private ownership (e.g. government buildings), OFCA will follow up with relevant departments to ensure that similar spatial requirements can be enforced as soon as the *Code of Practice for the Provision of Access Facilities in Buildings for the Provision of Mobile Communications Services* (see paragraphs 14 to 15 below) is promulgated.

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<sup>4</sup> This arrangement is proposed with reference to paragraph 11 of *Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-84 on “Access Facilities for Telecommunications and Broadcasting Services”* (“Practice Note”) issued by the Buildings Department (<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP084.pdf>)

## Size of the Telecommunications and Broadcasting Equipment Room and Related Facilities

10. To implement the proposal, appropriate floor space shall be made available in New Buildings for the installation of mobile communication facilities by MNOs, save with exemption because of small size or being in a development comprising multiple buildings (see paragraph 11 below). The spatial requirements for installation of mobile communications facilities in New Buildings are proposed below:

- (a) Space in the **telecommunications and broadcasting equipment room**, with a minimum area of 10 to 20 square metres and a minimum clear height of 2.8 metres;
- (b) Space on the **rooftop** of the building, with a minimum area of 10 to 20 square metres; and
- (c) Where applicable, space on **an intermediate / lower level of a building** (e.g. flat roof or podium floor), with a minimum area of 10 to 20 square metres and a minimum clear height of 2.8 metres.

Exact spatial requirements will be finalised taking into account views collected from this consultation exercise.

## Small New Buildings and Property Development of Multiple Buildings

11. Taking into account that some New Buildings may be very small in terms of size and/or low in height, the Government will consider exempting those New Buildings not meeting a specified threshold in size and/or height or on a case by case basis from the requirements to reserve space and provide associated access facilities inside the buildings or on rooftops for mobile communications facilities. The Government will consider specifying the spatial requirements mentioned in paragraph 10 above at different scales with reference to New Buildings meeting different thresholds. For a new property development of multiple buildings, only a portion of the buildings will be subject to the spatial requirements. The exemption threshold for small New Buildings which will be waived from complying with the spatial requirements for the installation of mobile communications facilities will be finalised taking into account views collected through this consultation exercise.

## Exemption from Gross Floor Area

12. Pursuant to regulation 23(3)(b) of the Building (Planning) Regulations (Cap. 123F) (“B(P)R”), in determining the gross floor area (“GFA”) for the purposes of regulations 20, 21 and 22 of the B(P)R, the Building Authority may disregard any floor space that he is satisfied is constructed or intended to be used

solely for, inter alia, access facilities for telecommunications and broadcasting services. The Government proposes that the GFA of access facilities for mobile communications services in New Buildings be so disregarded under regulation 23(3)(b).

## ***B. Amendments to the Legislation and Administrative Guidelines***

### Amendments to the TO

13. It is proposed that section 14 of the TO be amended to the effect that MNOs may be authorised by the CA to enter New Buildings for placing, maintaining or inspecting (as the case may be) radiocommunications installations, without being subject to the criteria currently applicable to the authorisation to be granted by the CA under section 14(1A) of the TO, and the requirement to pay a fee to the persons having a lawful interest in the land under section 14(2)(ii) of the TO. In other words, MNOs may be authorised to access New Buildings for radiocommunications installations in a similar manner as that currently applicable to FNOs for access to land or seabed for placement and maintenance of telecommunications lines under section 14(1) of the TO.

### Administrative Amendments: Issue / Amendments of the Relevant Guidelines / Code of Practice / Practice Note

#### *By the CA*

14. Following the arrangements for the provision of other utilities in New Buildings and to supplement the proposed legislative amendments mentioned in paragraph 13 above, the CA will issue a *Code of Practice for the Provision of Access Facilities in Buildings for the Provision of Mobile Communications Services* (“Mobile CoP”) which is a voluntary guideline to be followed by developers. The Mobile CoP will set out the standard and minimum requirements to facilitate developers in the provision of the facilities in each of the New Buildings for the installations of mobile communications facilities by MNOs, including accommodation for MNOs’ radiocommunications equipment and other access facilities like ducts / risers / trunkings for carrying the cables, etc.

15. The Mobile CoP will also require MNOs to use the space efficiently and adopt mobile network sharing (including but not limited to antenna sharing) as far as practicable and technically feasible in order to minimise the number of antennae and size of equipment which need to be installed in New Buildings. MNOs are also required to ensure the matching of the aesthetic design of antennae and other outdoor installations with New Buildings with a view to minimising any negative visual impact arising from such installations.

16. Where necessary, the CA may also issue guidelines and/or information note to provide guidance and information to the incorporated owners and/or

building management offices to facilitate the installation works by all relevant MNOs and make available the space to the MNOs on a non-discriminatory basis.

*By Government Departments*

17. Along with the issue of the Mobile CoP by the CA, the Buildings Department will update the current Practice Note that it has issued pursuant to regulation 28A of the B(P)R to specify the design and associated requirements that will mirror those in the Mobile CoP for developers to provide access facilities in New Buildings for installation of mobile communications facilities by MNOs.

18. At present, installation of radiocommunications equipment by an MNO in a private residential or non-commercial building for provision of mobile communications services serving customers outside the building requires a waiver issued by the Lands Department (“LandsD”) since such installation of radiocommunications equipment is considered to be commercial in nature. To dovetail with the legislative amendments, for new leases to be granted, suitable clauses will be inserted to allow LandsD to permit and exempt such feature from the calculation of GFA together with appropriate conditions to be added to ensure that such space will be properly used. LandsD will also make appropriate provisions in new leases such that application for waiver on a case by case basis will no longer be required in the future.

### **III. Way Forward**

19. CEDB will examine the views collected carefully in finalising the proposed legislative amendments. We aim to introduce the relevant Amendment Bill into the Legislative Council within 2023.

**Commerce and Economic Development Bureau  
February 2023**