

ACE Paper 13/2022 For advice by circulation

Proposed Amendments to Designated Areas in Noise Control (Construction Work Designated Areas) Notice (Cap. 400L), Noise Control (Air Compressors) Regulations (Cap. 400C) and Noise Control (Hand Held Percussive Breakers) Regulations (Cap. 400D)

PURPOSE

This paper consults Members on the proposed amendments to –

- I. the Designated Areas in Noise Control (Construction Work Designated Areas) Notice (Cap. 400L), and
- II. the Noise Control (Air Compressors) Regulations (Cap. 400C) and the Noise Control (Hand Held Percussive Breakers) Regulations (Cap. 400D).
- I. Proposed amendments to the Designated Areas in Noise Control (Construction Work Designated Areas) Notice (Cap. 400L)

BACKGROUND

- 2. Under the Noise Control Ordinance (Cap. 400)(the "Ordinance"), noise from construction works using any powered mechanical equipment between the hours of 7 p.m. and 7 a.m. or at any time on a general holiday ("the restricted hours"), is controlled through a Construction Noise Permit ("CNP") system. A CNP will be issued if the noise which will be generated complies with the requirements stipulated in relevant Technical Memorandum issued under the Ordinance. There are provisions for special cases to allow for essential construction works during the restricted hours in order to avoid serious interruption or disruption to road, rail or other utilities arising from the carrying out of construction activities in the day-time.
- 3. The Ordinance also provides for the Secretary for Environment and Ecology to establish an area as a designated area by notice published in the Gazette in order to reduce the impact of noisy construction activities in populated built-up areas on the nearby residents. In January 1996, the first set of designated areas

were established under the Ordinance with an aim to further control construction noise and protect residents during the restricted hours. The designated areas were subsequently amended in 2001 and 2009 taking account of the developments in Hong Kong over the years. The existing coverage of designated areas is marked in blue on the map at **Annex 1**, which has been in operation since January 2009.

4. Designated areas refer to built-up areas in the territory predominantly used for residential purpose. These areas are densely populated and more vulnerable to noise disturbance, and hence more stringent control¹ would apply. For the use of specified powered mechanical equipment², the noise limits³ would be 15dB(A) lower than those required in non-designated areas, while the carrying out of prescribed construction work ⁴ must adopt quiet working methods or be in connection with special cases mentioned in paragraph 2 above.

PROPOSED AMENDMENT

- 5. In view of the developments in Hong Kong since 2009, it is an appropriate time to review the coverage of the designated areas to include newly developed populated built-up areas, areas where development has been actively taking place and population intake is expected to commence in the near future, and other populated built-up areas in the territory not yet covered. Some areas adjoining the existing and proposed designated areas which form parts of the communities have also been identified for inclusion. Moreover, some major new development areas with population intake scheduled in stages will be marked as designated areas for implementation on a later specified date, for example, in Kai Tak Development and Anderson Road Development sites. On the other hand, some existing designated areas where the existing residential buildings will be removed and major new town development will be carried out, e.g. Kwu Tung North, will be excluded to reflect the changes in circumstances and to avoid placing unnecessary constraints on the The excluded areas will be timely reconsidered to be development projects. included as designated areas again having regard to the progress of the development works.
- 6. We propose that on the map at **Annex 1**, the locations marked in red be established as the new designated areas, the locations marked in violet be established as the new designated areas to be implemented on a later date having regard to the development time frame, and the location marked in yellow be the existing designated areas to be excluded. The amended designated areas are

¹ More stringent control in designated areas is imposed for the use of specified powered mechanical equipment, and the carrying out of prescribed construction work.

³ The noise limits are set out in the relevant Technical Memoranda issued under section 9(1) of the Ordinance, namely the Technical Memorandum on Noise from Construction Work other than Percussive Piling and the Technical Memorandum on Noise from Construction Work in Designated Areas.

² Specified powered mechanical equipment includes hand held breaker, bulldozer, hand held vibratory poker, dump truck and concrete lorry mixer.

⁴ Prescribed construction work refers to noisy activities such as hammering, erection or dismantling of formwork or scaffolding, and loading, unloading or handling of rubble, wooden boards, steel bars, wood or scaffolding material.

hatched or cross-hatched, and enclosed in bolded lines on the plans at **Annex 2**. The proposal will provide communities in the new designated areas with the same protection against construction noise during the restricted hours as those already in the existing designated areas.

CONSULTATION

7. We have consulted the relevant trades, including trade associations, public utility companies and railway operators, and professional bodies on the proposal, and they were generally supportive. We have received no objection from the general public on the proposal.

IMPLEMENTATION PROGRAMME

8. We aim to consult the Legislative Council Panel on Environmental Affairs on the proposed amendment to designated areas in November 2022. We target to table the amended Notice at the Legislative Council for negative vetting in Q2 of 2023, with a view to implementing the new designated areas on 1 September 2023, except some new designated areas in Kai Tak Development and Anderson Road Development which shall come into operation on 1 January 2027.

ENVIRONMNTAL IMPLICATIONS

- 9. The proposal will provide residents in the new designated areas with the same protection as those in the existing designated areas. It is estimated that more than 300,000 residents will benefit from the implementation of the proposal.
- II. Proposed amendments to the Noise Control (Air Compressors) Regulations (Cap. 400C) and the Noise Control (Hand Held Percussive Breakers) Regulations (Cap. 400D)

BACKGROUND

10. The Noise Control (Air Compressors) Regulations (Cap. 400C) and the Noise Control (Hand Held Percussive Breakers) Regulations (Cap. 400D) came into operation on 1 March 1992. From 1 June 1992, only the air compressors and the hand held percussive breakers complying with the prescribed noise emission standards shall be allowed to be imported, manufactured or supplied for use in Hong Kong. From 1 September 1992, in addition to compliance with the prescribed noise emission standard, every hand held percussive breaker shall be fitted with a noise emission label ("NEL") before its usage. For air compressors, similar requirement came into operation on 1 December 1992.

An application for NEL shall be made to the Noise Control Authority 11. ("Authority") and reference is made therein to, amongst others, a noise testing report certificated by a corporate member of the Institute of Acoustics of the United Kingdom and an European Economic Community (EEC) type-examination certificate granted by an approved body appointed by any European Community member state under the European Council Directives 84/533/EEC and 84/537/EEC in respect of the air compressor and the hand held percussive breaker respectively.

PROPOSED AMENDMENTS

- We propose to tighten the prescribed noise emission standards for air compressors and hand held percussive breakers set out in the respective Schedule 1 to Cap. 400C and Cap. 400D. Making reference to overseas standards recognised internationally⁵, we propose to tighten the standards as set out in Annex 3 which will effectively reduce the sound power level by 2-3 dB(A) and consequently bring benefits to the local noise environment.
- 13. To ease the possible impact on the industry, it is intended that the new standards shall not apply to air compressors and hand held percussive breakers which have already been fitted with existing noise emission labels ("NEL"). In addition, we propose to allow a grace period of 12 months after gazettal of the amendments before the new standards come into operation.
- 14. Moreover, we propose to amend the respective regulation 8(2)(a) of Cap. 400C and Cap. 400D such that the certifying body of the noise testing report be amended from a corporate member of the Institute of Acoustics of the United Kingdom to a member of a local recognised institution including a corporate member of Hong Kong Institute of Acoustics (HKIOA), a professional member of Hong Kong Institute of Qualified Environmental Professionals Limited (HKIQEP), or a registered professional engineer in the building services, environmental or mechanical disciplines under the Engineers Registration Ordinance (Cap. 409). The proposed amendment shall allow competent professionals with local experience to conduct the relevant noise testing for certification purposes instead of relying on an overseas organisation.
- Furthermore, to enable the Authority to accept products with the same or 15. better quality which was tested under different systems in the world, we propose to amend the respective regulation 8(2)(b) of Cap. 400C and Cap. 400D such that for NEL application with an EEC type-examination certificate, if in the opinion of the Authority, the noise emitted by the air compressor or hand held percussive breaker complies with the standards which are as stringent as or more stringent than those

⁵ EPD has reviewed the existing noise emission control mechanism and standards of air compressors or hand held percussive breakers from Australia, Canada, China, European countries, Japan, Singapore, South Korea, EPD considers that the current set of standards from the European Commission is most suitable for Hong Kong as it is one of the most stringent standards internationally and at the same time widely adopted by many equipment manufacturers and suppliers.

prescribed under the respective regulations 5 and 7 of Cap. 400C and Cap. 400D, such product shall be deemed to conform to the standards prescribed under that regulation.

CONSULTATION

16. We have consulted the construction trade associations and professional bodies on the proposed amendments, and their views have been incorporated in the proposal. There was no strong view against the proposed amendments.

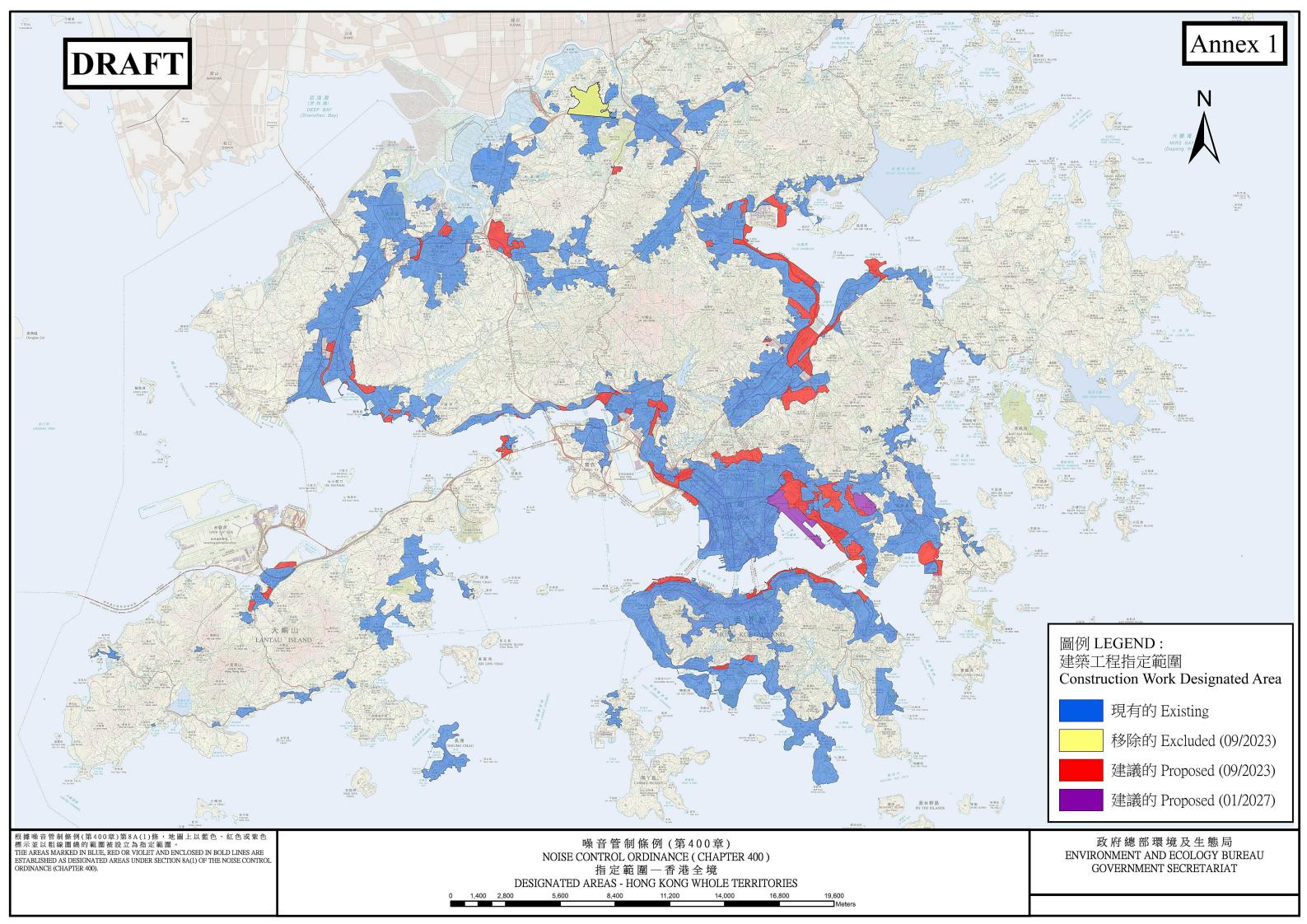
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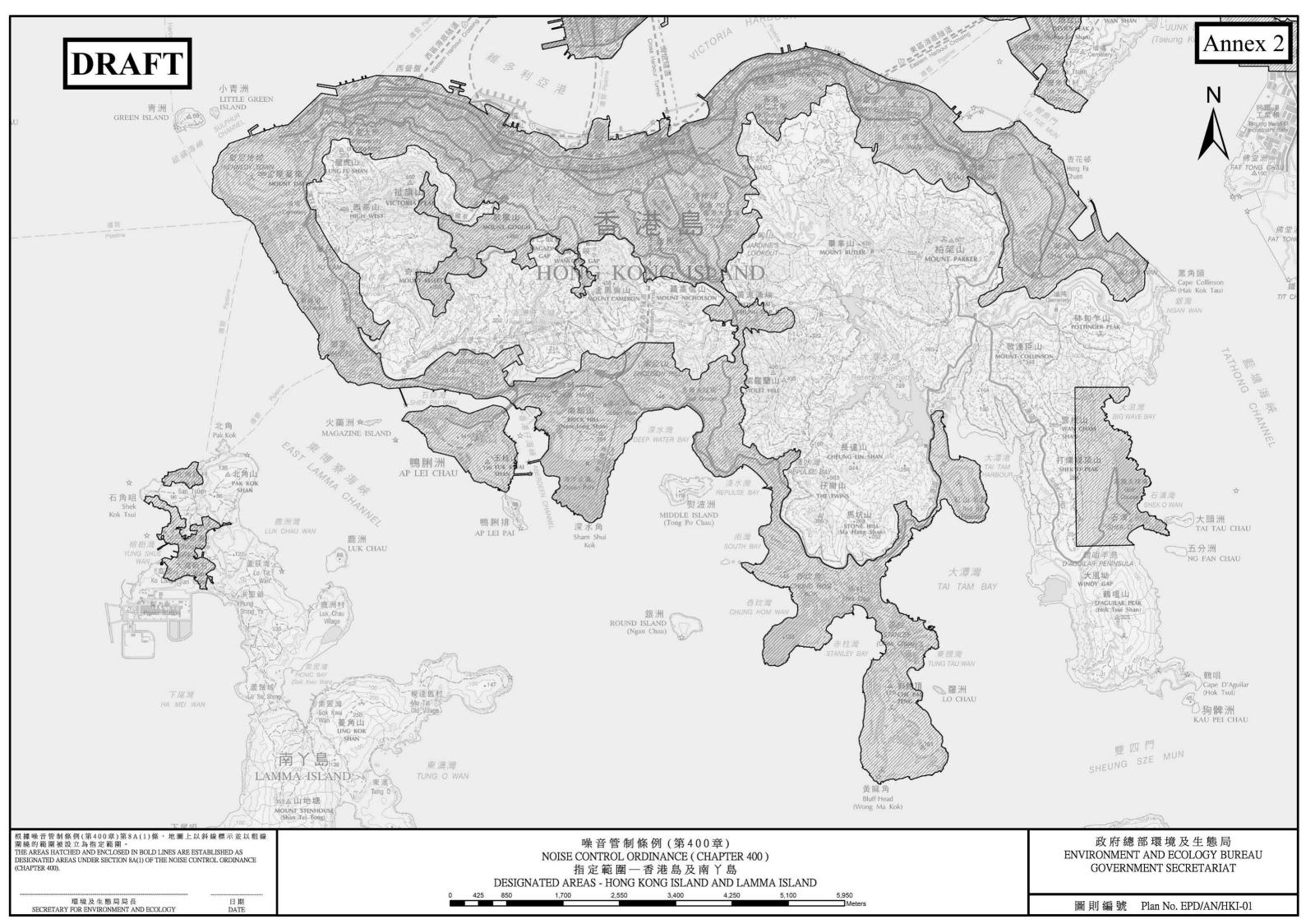
17. Upon consultation with the Advisory Council on the Environment pursuant to section 27(1) of the Ordinance, we will consult the Legislative Council Panel on Environmental Affairs in November 2022. We target to table the amended Regulations at the Legislative Council for negative vetting in Q2 of 2023, with a view to implementing the new standards in Q2 of 2024 which is 12 months after their date of gazettal.

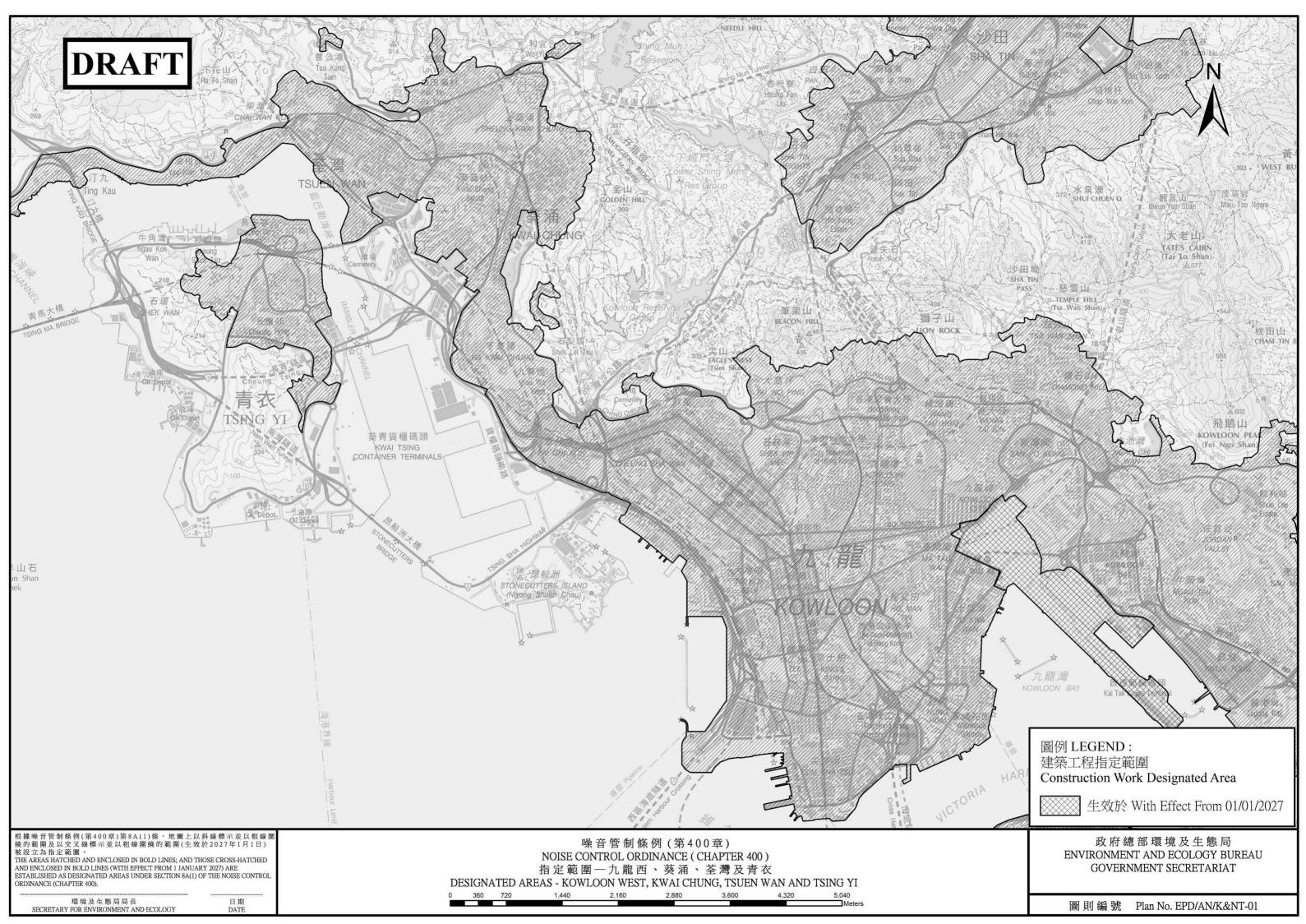
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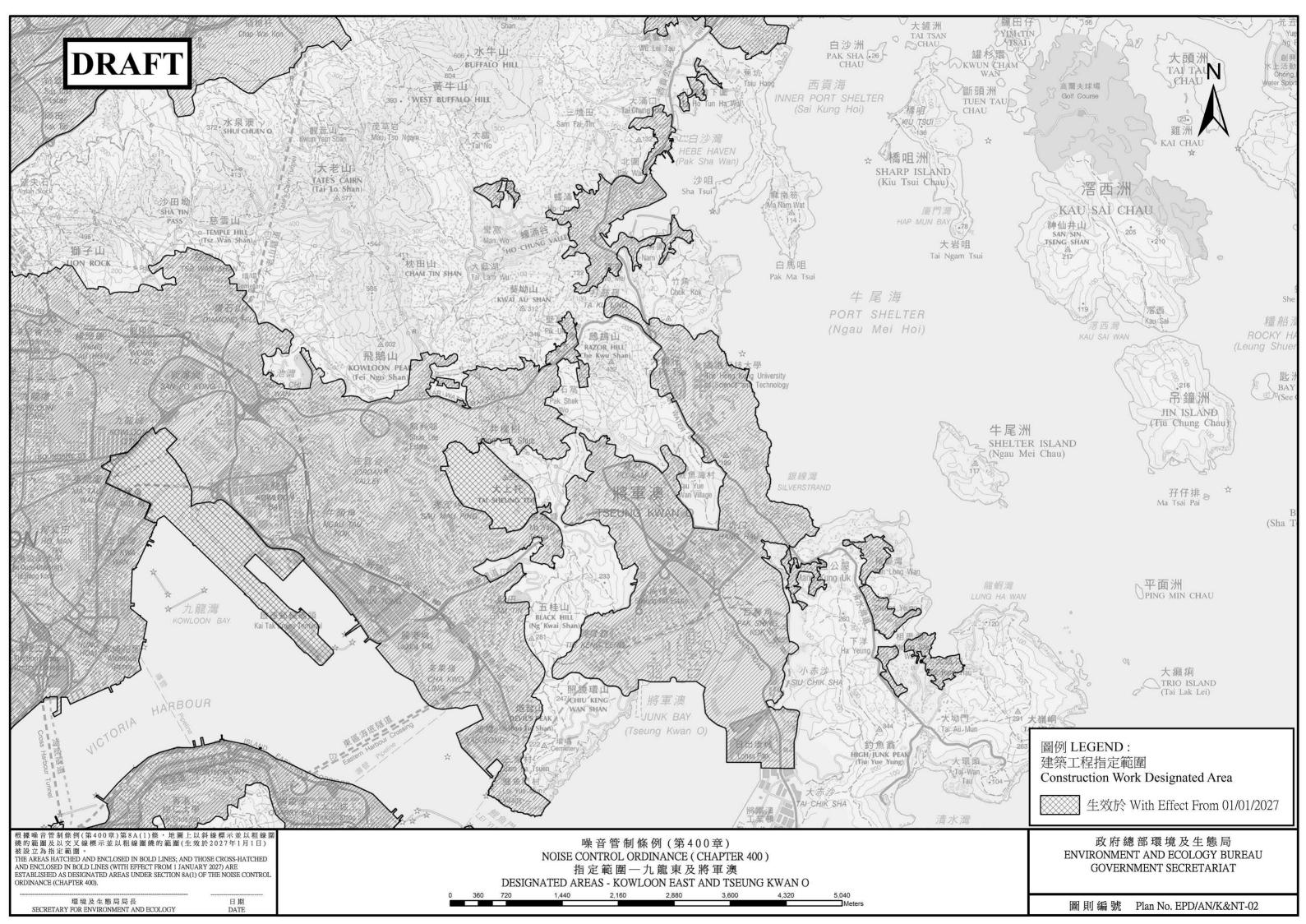
18. Members are invited to offer views on the above proposals in paragraphs 5-6 and 12-15.

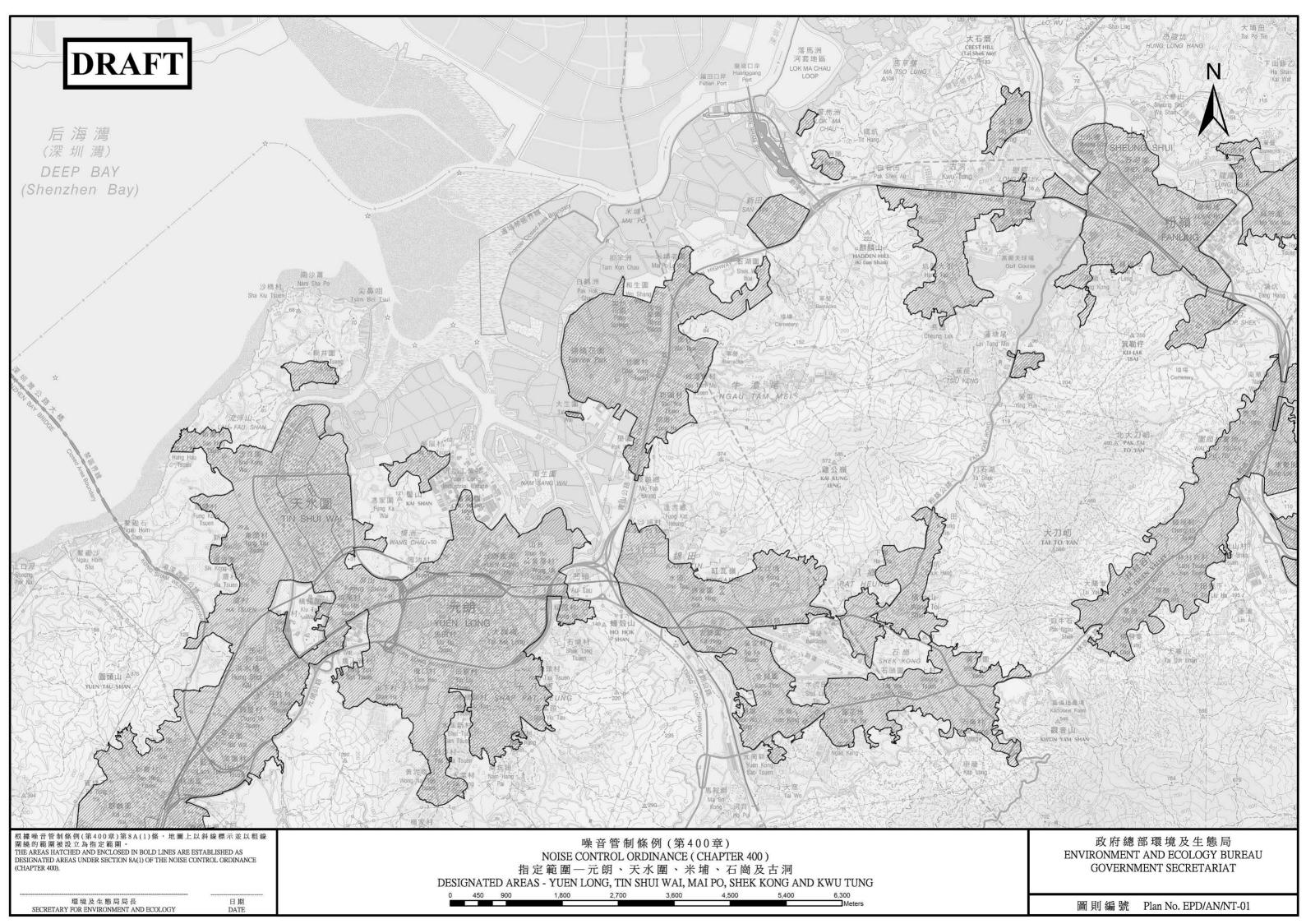
Environmental Protection Department October 2022

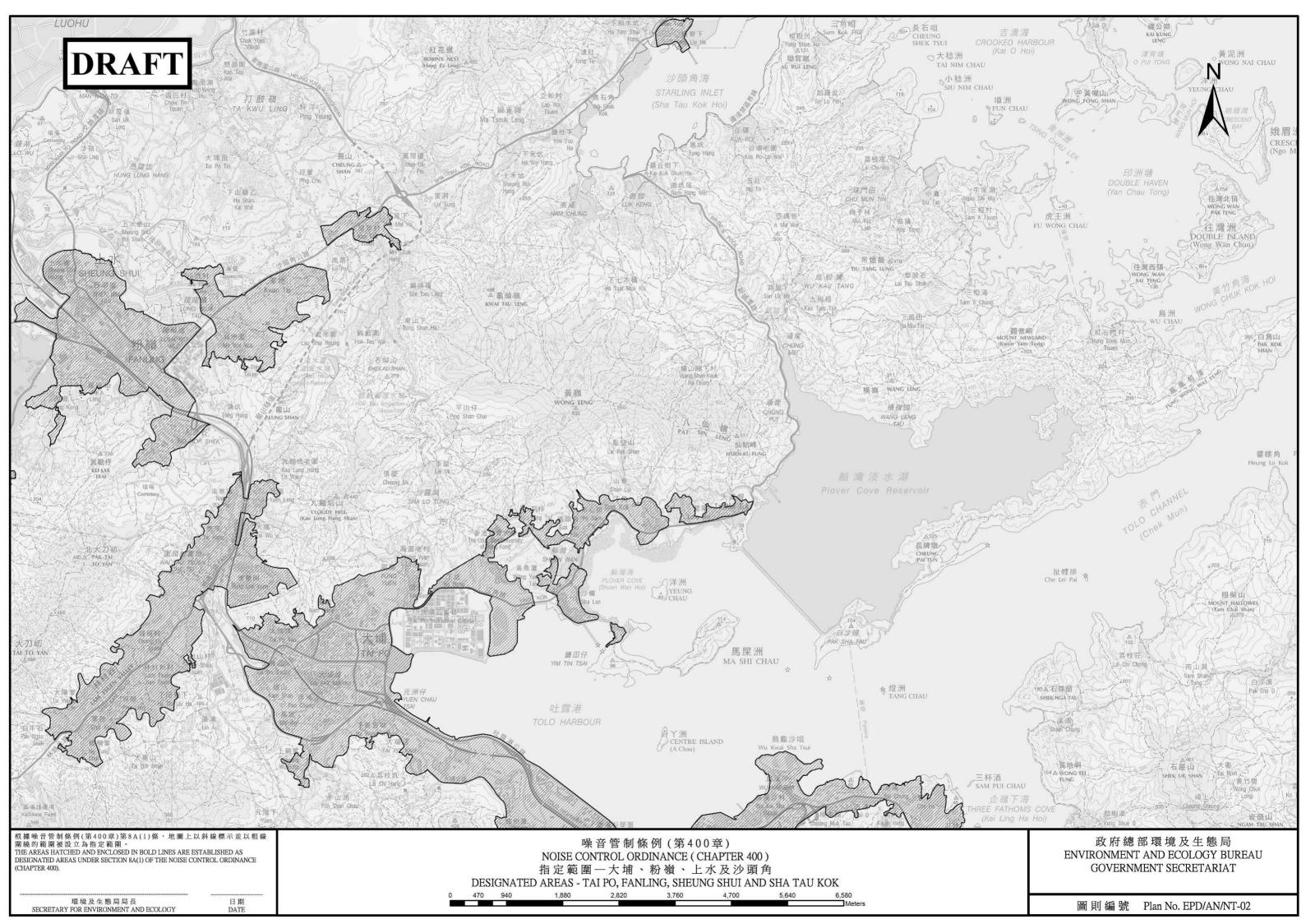


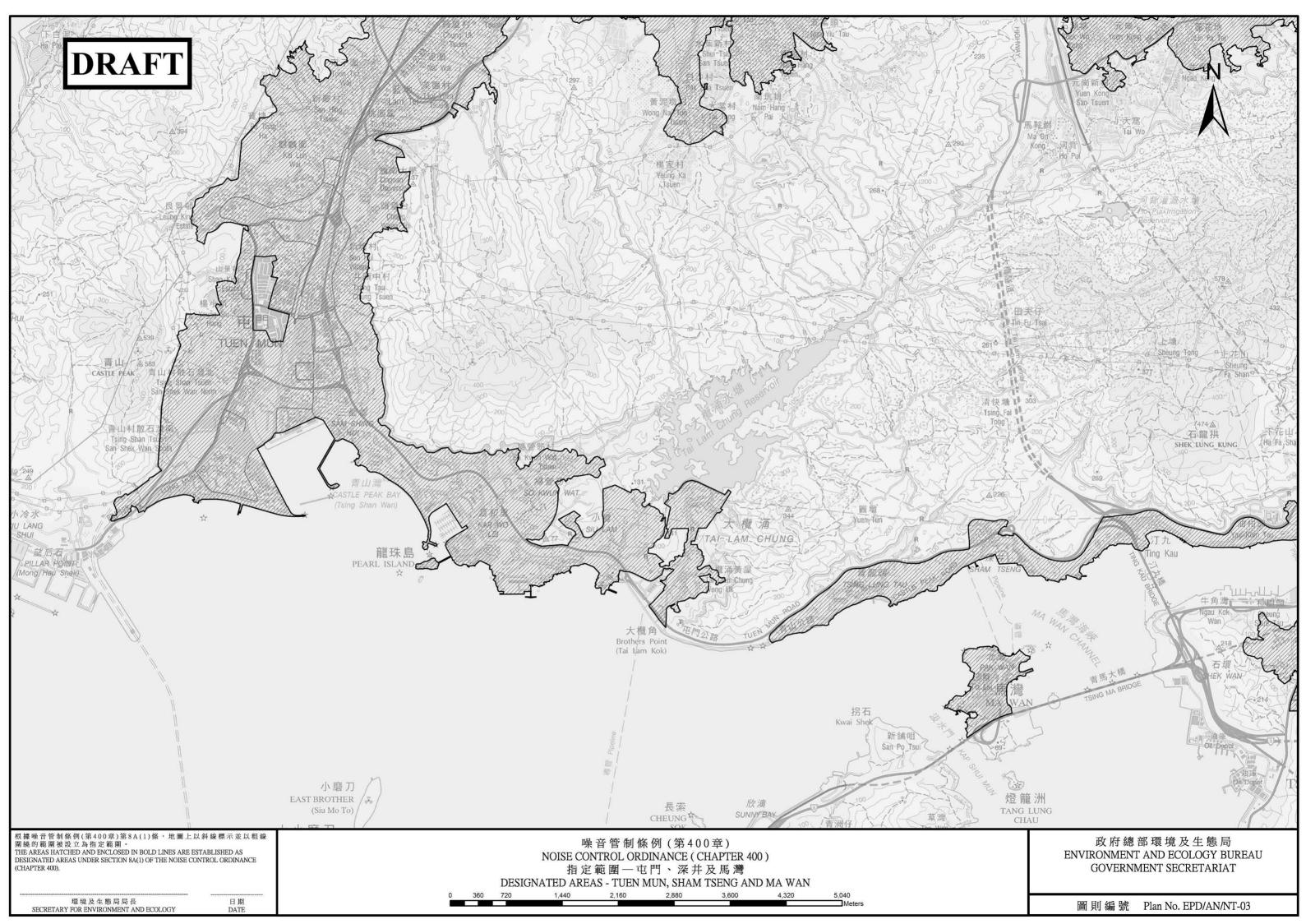


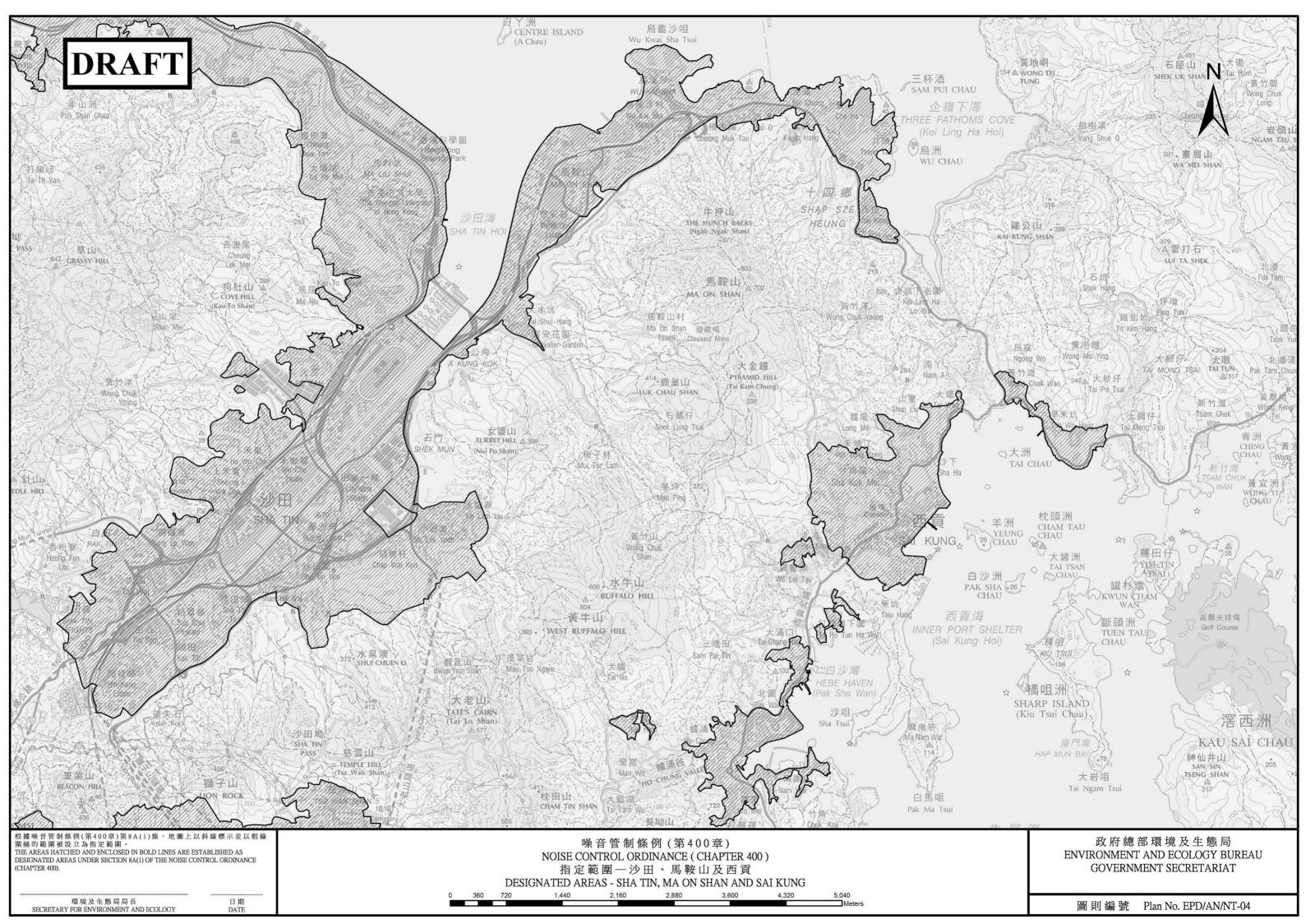


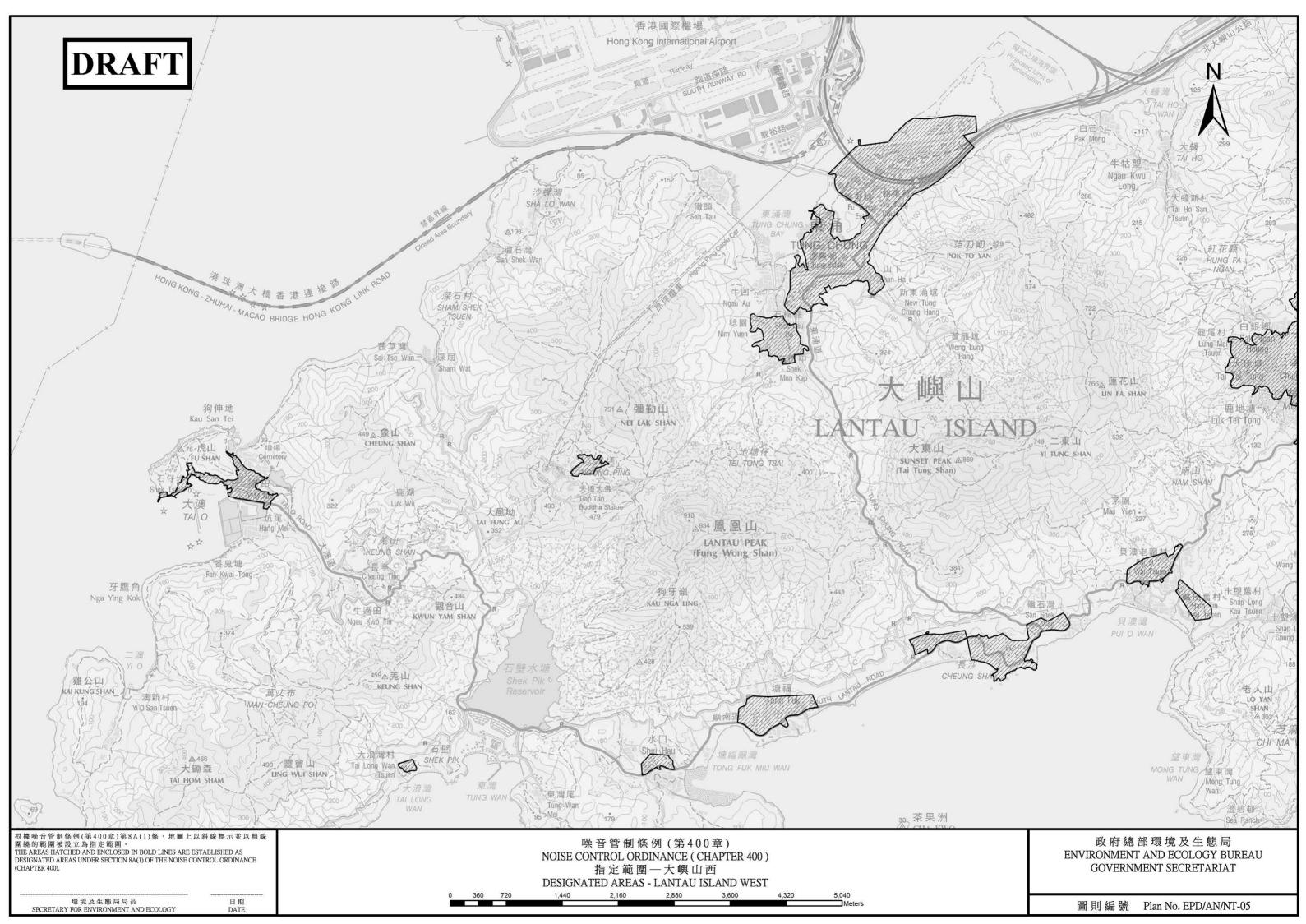


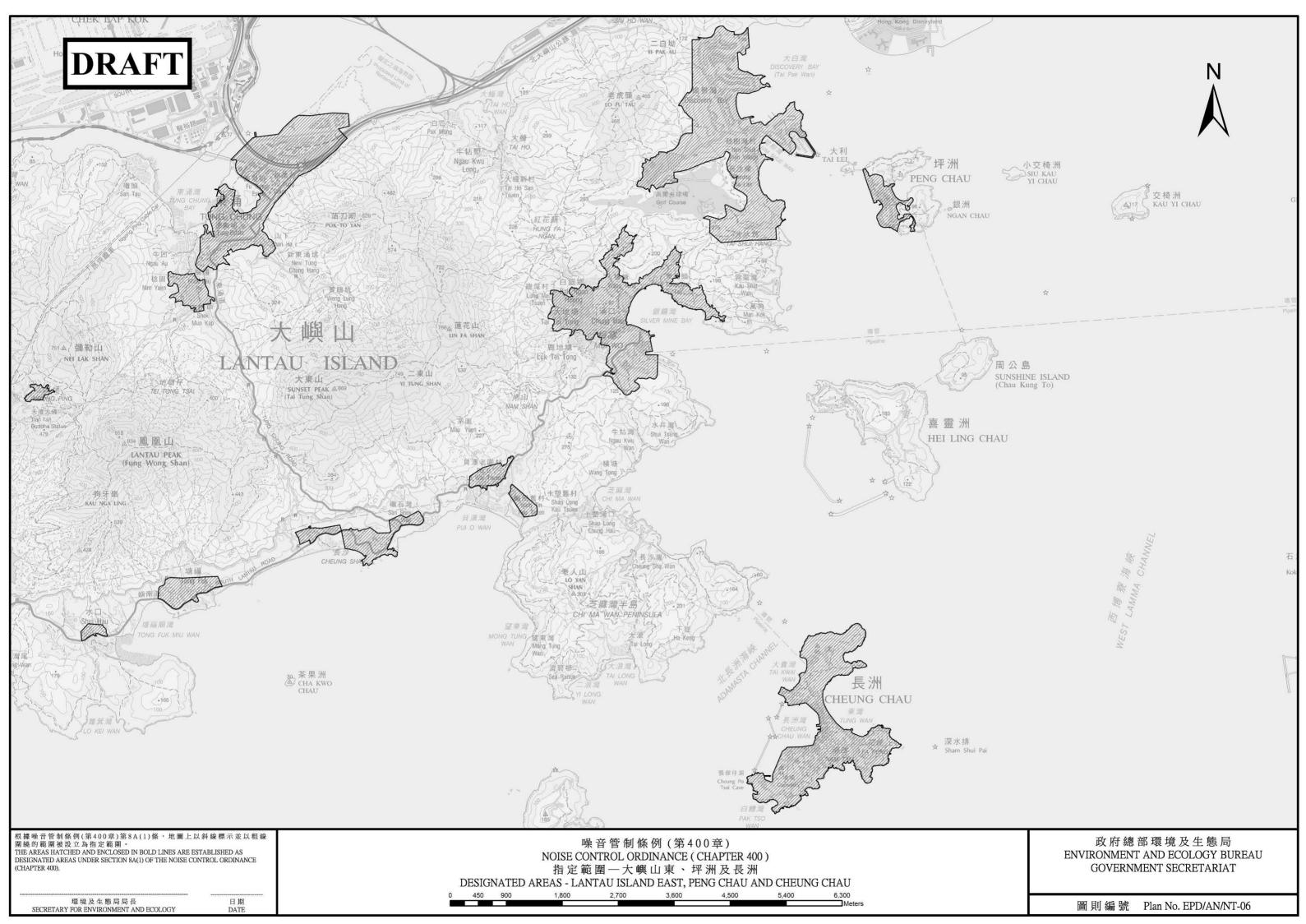












<u>Proposed amendment to the Prescribed Standards for Noise Emitted</u> by Air Compressors and Hand Held Percussive Breakers

(I) Air Compressors capable of supplying compressed air at 500 kPa or above

Existing Standards - Effective for air compressors with a noise emission label issued before the operational date of the new standards

Air Flow	Maximum Permissible Sound Power Level in dB(A)
Below or equal to 10 cubic metres per minute	100
Over 10 but below or equal to 30 cubic metres per minute	102
Above 30 cubic metres per minute	104

New Standards - Effective for air compressors with a noise emission labels issued on or after the operational date of the new standards.

Motor power of the Air Compressors	Maximum Permissible (Note 1)
P (in kW)	Sound Power Level in dB(A)
Below or equal to 15 kW	97 ^(Note 2)
Above 15 kW and below 350 kW	95 + 2 log P (Note 2)
Equal to or above 350 kW	102 (Note 3)

The permissible sound power level shall be rounded up or down to the nearest integer number (less than 0.5, use lower number; greater than or equal to 0.5, use higher number)

Explanatory Note:

Note 1: EPD has reviewed the existing noise emission control mechanism and standards of air compressors from Australia, Canada, China, European countries, Japan, Singapore, South Korea, UK and USA. This set of standards is based on the existing European Commission standards which is considered to be the most suitable for Hong Kong as it is one of the most stringent standards internationally and at the same time widely adopted by many equipment manufacturers and suppliers.

Note 2: This is the current set of standards adopted by European Commission.

Note 3: The European Commission has not recommended a specific set of standards for air compressors with motor power equal to or above 350 kW. In fact, over 80% of air compressors in Hong Kong is below 350 kW. The standard for air compressors with motor power equal to or above 350 kW is set based on the best available equipment in the local market.

(II) Hand held percussive breakers

Existing Standards - Effective for hand held percussive breakers with a noise emission label issued before the operational date of the new standards.

Mass of the Breaker	Maximum Permissible Sound Power Level in dB(A)
Above 10 kg and below 20 kg	108
Equal to or above 20 kg and equal to or below 35 kg	111
Above 35 kg	114

New Standards - Effective for hand held percussive breakers with a noise emission labels issued on or after the operational date of the new standards.

Mass of the Breaker	Maximum Permissible (Note 4)
m (in kg)	Sound Power Level in dB(A)
Above 10 kg and equal to or below 15 kg	105
Above 15 kg and below 30 kg	92 + 11 log m
Equal to or above 30 kg	94 + 11 log m

The permissible sound power level shall be rounded up or down to the nearest integer number (less than 0.5, use lower number; greater than or equal to 0.5, use higher number)

Explanatory Note:

Note 4: EPD has reviewed the existing noise emission control mechanism and standards of hand held percussive breakers from Australia, Canada, China, European countries, Japan, Singapore, South Korea, UK and USA. This set of standards is based on the existing European Commission standards which is considered to be the most suitable for Hong Kong as it is one of the most stringent standards internationally and at the same time widely adopted by many equipment manufacturers and suppliers.