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Subcommittee on Subsidiary Legislation to Regulate the Operation of Small Unmanned Aircraft

Background brief

Purpose

This paper provides background information on the following subsidiary legislation to regulate the operation of small unmanned aircraft ("SUA"), and summarizes the major views and concerns expressed by members of the Panel on Economic Development ("the Panel") during previous discussions:

- (a) Administrative Appeals Board Ordinance (Amendment of Schedule) Order 2021 (L.N. 115);
- (b) Small Unmanned Aircraft Order (L.N. 116);
- (c) Air Transport (Licensing of Air Services) (Amendment) Regulation 2021 (L.N. 117);
- (d) Air Navigation (Hong Kong) Order 1995 (Amendment) Order 2021 (L.N. 118); and
- (e) Civil Aviation (Insurance) (Amendment) Order 2021 (L.N. 119).

Background

2. SUA, commonly known as "drone", is defined as unmanned aircraft weighing 25 kg or less according to the International Civil Aviation Organization's general classification of unmanned aviation. With the advent of aviation technology in recent years, SUA are widely used in many parts of the world. In Hong Kong, SUA are used for recreation and STEM education as well as professional deployment such as powerline inspection, search and rescue operations and aerial photography. There are more than 80 000 drones in Hong Kong as suggested by the industry.

3. Under the existing legislative framework in Hong Kong, unmanned aircraft are classified as aircraft and are governed, as far as aviation safety is concerned, by the Air Navigation (Hong Kong) Order 1995 (Cap. 448C), which provides that a person must not recklessly or negligently cause or permit an aircraft to endanger any person or property. In addition, the Air Transport (Licensing of Air Services) Regulations (Cap. 448A) requires that a person using an aircraft for hire or reward, including unmanned aircraft, must apply for a permit granted by the Director-General of Civil Aviation ("the Director") before flight and must abide by the terms and conditions of the permit issued.

4. As the existing civil aviation legislation mainly aims at governing the operations of manned and larger civil aircraft and is not specifically designed for unmanned aircraft, the Administration considers it necessary to introduce a customized and self-contained legislative framework under the Civil Aviation Ordinance (Cap. 448) to regulate SUA, taking into account the recommendations of the consultancy study on the regulation of SUA commissioned by the Civil Aviation Department ("CAD") in March 2017 ("the consultation study"), views received from the subsequent three-month public consultation launched in April 2018 and practices in other major jurisdictions.

5. Under the new regulatory regime, SUA operations will be regulated under a risk-based approach. Based on the weight of the SUA and the operational risk level, SUA operations of different risk levels will be subject to the corresponding regulatory requirements. These requirements may include registration and labelling of SUA, registration of remote pilots, training and assessment, equipment, operating requirements and insurance. While SUA operations of 250 g or below are in general subject to operating requirements only, prior permission from CAD will be required for higher risk operations. An overview of the proposed new regulatory regime is set out in **Appendix I**.

The subsidiary legislation

6. L.N.115 to L.N.119 are made to regulate the operation of SUA and to provide for consequential amendments.

L.N. 116

7. L.N. 116 is a new order made by the Chief Executive ("CE") in Council under sections 2A and 12 of Cap. 448 to regulate the operation of SUA and to provide for the registration of SUA and remote pilots. The key provisions of L.N. 116 are summarized below:

- (a) Part 2 provides for, among others, the basic operating requirements and insurance requirements relating to the operation of different categories¹ of SUA, the additional requirements for flights within a restricted flying zone ("RFZ") and the carriage of dangerous goods, and various related offences (e.g. dangerous operation, causing or permitting SUA to endanger person or property, interfering with SUA and operating prohibited SUA for flights, each of which is punishable by a fine at level 6 (i.e. \$100,000) and imprisonment for two years);
- (b) Part 3 provides for, among others, the registration (and renewal thereof) of an unmanned aircraft as a registered SUA and of a person as a registered remote pilot, the assignment of rating (and renewal thereof) to a registered remote pilot, the approval of training courses and course providers, the authorization of assessors, and the application for permission for certain flight operations;
- (c) Part 4 provides for the appointment, duties and enforcement powers of authorized officers and related offences (e.g. failure to comply with a requirement made by an authorized officer, providing false or misleading information, and obstructing an authorized officer, each of which is punishable by a fine at level 6 (i.e. \$100,000) and imprisonment for two years);
- (d) Part 5 provides for, among others:
 - (i) the powers of the Director to issue safety directions and safety requirements documents (which are not subsidiary legislation), and the effect of such documents;
 - (ii) the review of and appeal against the Director's decisions (e.g. to refuse a person's application for registration of an SUA or as a registered remote pilot); and
 - (iii) other miscellaneous matters, including a defence of lawful authority or reasonable excuse for certain offences under L.N. 116, the Director's power to exempt an unmanned aircraft or a person from any or all provisions of L.N. 116, and the transitional arrangement for certain offences under L.N. 116 during the six-month period between 1 June 2022 and 30 November 2022; and

¹ Under section 3(2) of L.N. 116, an SUA is (a) a category A1 aircraft if its weight does not exceed 250 g at all times during a flight; (b) a category A2 aircraft if its weight exceeds 250 g but does not exceed 7 kg at all times during the flight; or (c) a category B aircraft if its weight exceeds 7 kg at any time during a flight.

- (e) the Schedule prescribes the fees payable for various applications under L.N. 116, all of which are at present set at \$0.²

L.N. 115

8. L.N. 115 is made by CE in Council under section 4 of the Administrative Appeals Board Ordinance (Cap. 442) to amend the Schedule to Cap. 442. The effect is that appeals may be made to the Administrative Appeals Board in respect of the Director's decisions made under section 61(3) of L.N. 116 upon review to confirm, vary or reverse the Director's decisions in relation to, among others, the registration of unmanned aircraft, registration and rating of remote pilots, approval of training courses and course providers, authorization of assessors, and permission for flight operations.

L.N. 117 to L.N. 119

9. L.N. 117 to L.N. 119 are made by CE in Council under sections 2A and 12 of Cap. 448. They make consequential amendments to Cap. 448A, Cap. 448C and the Civil Aviation (Insurance) Order (Cap. 448F) respectively to the effect that Cap. 448A, Cap. 448C and Cap. 448F do not apply to or in relation to an SUA.

Commencement

10. Except for section 12(2)(c) relating to mandatory insurance for operations of certain Category A2 SUA (which comes into operation on a day to be appointed by the Director by notice published in the Gazette), all other provisions of L.N. 116 come into operation on 1 June 2022. L.N. 115 and L.N. 117 to L.N. 119 also come into operation on 1 June 2022. A phased approach is adopted for the mandatory insurance requirement under L.N. 116. The Administration's plan is to conduct a review of the implementation of the first phase and readiness for commencement of the second phase (concerning certain Category A2 SUA) after L.N. 116 has commenced operation for a year.

Previous discussions

11. The Administration briefed the Panel on the progress of the consultancy study and the proposed new regulatory regime to regulate the operation of SUA at the meetings on 12 December 2017 and 24 June 2019.

² According to the Administration, to minimize the burden on users at the initial stage of the new regime so as to promote safe operation of SUA, no fees will be charged on such applications for the first three years from the implementation of the new regime.

Members in general supported stepping up the regulation of SUA to protect public safety. At the meeting on 12 December 2017, members passed a motion urging the Administration to conduct a comprehensive review and public consultation on the regulation of SUA. At the meeting on 24 June 2019, members examined the key areas of the proposed new regulatory regime. Major views and concerns expressed by members are summarized in the ensuing paragraphs.

Category B operations under the proposed new regulatory regime

12. Members were informed that under the proposed new regulatory regime, different categories of SUA operations would be subject to corresponding regulatory requirements based on risk levels. In gist, Category A1 operations would be subject to requirements on standard operating conditions, RFZs, and the requirement that a person should not recklessly or negligently cause or permit an SUA to endanger any person or property. Category A2 operations would be subject to additional requirements apart from the above, including registration and labelling, equipment and insurance requirements. Lastly, Category B operations would be subject to even more stringent requirements depending on individual cases, and prior permission would need to be sought from CAD before flight.

13. Noting that prior permission would need to be sought from CAD on Category B operations, some members were concerned about the mechanism and criteria adopted by CAD in processing such applications. There were views that CAD should consider granting a blanket approval if the applicant had already attained specified level of competency, and that flexibility should be provided in the new regulatory regime to cater for different types of SUA operations such as drone racing, media reporting and SUA brought into Hong Kong by visitors.

14. The Administration explained that any SUA operations exceeding the standard operating conditions would be regarded as Category B operations and prior permission from CAD would be required. In processing the applications for Category B operations, CAD would give due consideration to various factors, for example, whether the applicant had undertaken appropriate training and would implement sufficient safety measures to mitigate the risk. Subject to the applicant's compliance with certain conditions, CAD might grant permission for the applicant to conduct certain operations for a specified period.

15. Noting that persons involved in Category B operations would be required to undertake training and assessment for flying SUA from a training organization approved by CAD, some members considered that more organizations should be allowed to provide related training courses to provide more choices to interested parties and facilitate the development of SUA in Hong

Kong. To allow experienced remote pilots who had already gone through similar training and assessment in other jurisdictions to operate SUA in Hong Kong, a member suggested CAD issue the Certificate of Competency to these persons subject to the provision of proof of competency. In this connection, the Administration was also requested to review thoroughly the relevant qualifications awarded by other civil aviation authorities based on the local situation and provide details of recognized qualifications awarded by other civil aviation authorities.

Insurance requirements

16. Whilst supporting the need for imposing insurance requirements under the proposed new regulatory regime, some members were concerned about the availability of relevant insurance products for SUA operation as well as the premium level. A member suggested that persons who had obtained global insurance coverage from non-local insurers should be exempted from taking out insurance again from local insurers authorized under the Insurance Ordinance (Cap. 41) for SUA operation in Hong Kong. There was a suggestion that the Administration should consider imposing insurance requirements on SUA products at the wholesale level so that all such products would already have a valid insurance coverage for third-party liability at the retail level.

17. The Administration took note of members' views and advised that the first and foremost issue at the moment was the availability of insurance products for SUA operations in Hong Kong. On this, the Administration had been working together with the Insurance Authority and the Hong Kong Federation of Insurers to encourage insurers to provide relevant insurance products with flexible choices of coverage and duration at an affordable price.

Restricted flying zones

18. Some members were concerned about the criteria and mechanism for designating RFZs. Since different government departments were involved in the formulation and enforcement of RFZs, members urged the Administration to enhance communication among bureaux/departments in enforcing the relevant laws. To facilitate public compliance, members opined that RFZs should be clearly delineated in the drone map published by CAD. There were also views that the Administration should set up temporary RFZs at venues of major events to safeguard public safety.

19. The Administration advised that under the new regulatory regime, the Director would be empowered to designate RFZs to restrict the flying of SUA by reasons of aviation safety, emergency/security and/or the intended gathering or movement of a large number of persons. For instance, flying of SUA should

not be allowed for airspace within or adjacent to aerodromes and heliports and associated flight paths so as to avoid affecting aircraft operations therefrom. In addition, restriction on flying SUA might be required for some public events like Formula E races which involved a large gathering of spectators. While CAD targeted to publish a map via the electronic portal to indicate the latest RFZs for reference by persons flying SUA, it would continue to discuss with Government bureaux/departments on the use of SUA in their venues.

20. Some members considered that discretion should be granted to allow the SUA of the media sector to enter certain RFZs to facilitate news coverage of large-scale public events. The Administration advised that to address the need of the media sector in using SUA which normally fell under Category B operations and to ensure public safety, CAD would consider granting a longer-term permission to relevant media organizations subject to their compliance with specified conditions. Certain RFZs might be opened to the media for news coverage, but some like those which might affect aircraft operations might not.

Law enforcement and privacy issues

21. Concerns were raised about the enforcement actions for the new regulatory regime and delineation of legal responsibilities between SUA owners and operators in case of non-compliance. Members also requested the Administration to set out in detail the operating requirements for different categories of SUA operations to facilitate SUA users, and consider installing suitable devices in SUA to record flying altitude, speed and location to facilitate law enforcement.

22. The Administration advised that in determining the responsible parties of an incident, the authority would look into the facts of the case, such as whether the person flying SUA had duly followed the operation procedures and whether the SUA had been registered. With the enactment of the new SUA legislation encompassing the registration and labelling requirements, it would help enhance traceability of the SUA owners and persons flying SUA and in turn assist other Government bureaux/departments or regulatory authorities to enforce requirements under their respective purview.

23. On members' concern about the privacy issues arising from the use of SUA fitted with cameras, members were informed that privacy matters related to the use of SUA in Hong Kong were under the regulation of the Personal Data (Privacy) Ordinance (Cap. 486), which was enforced by the Office of the Privacy Commissioner for Personal Data ("PCPD"). PCPD had issued the "Guidance on CCTV Surveillance and Use of Drones" which offered advice on the use of SUA from the perspective of protection of personal data privacy. With the introduction of the new SUA legislation, the traceability of SUA owners and

persons flying SUA would be enhanced which would contribute to enforcement of Cap. 486. CAD would include the privacy awareness information that the person flying SUA had to go through during the registration process.

Latest development

24. At the House Committee meeting on 23 July 2021, Members agreed to form a subcommittee to study the subsidiary legislation to regulate SUA operation.

Relevant papers

25. A list of the relevant papers available on the Legislative Council website (<http://www.legco.gov.hk>) is in **Appendix II**.

Council Business Division 4
Legislative Council Secretariat
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**Overview of the Proposed
Small Unmanned Aircraft (“SUA”) Regulatory Requirements**

Category of Operation	Category A1	Category A2	Category B
Criteria	SUA weight ≤ 250 g (Within Cat A1 operating requirements)	SUA weight > 250 g to ≤ 7 kg (Within Cat A2 operating requirements)	(i) SUA weight ≤ 7 kg but <u>exceeding</u> the respective Cat A1/A2 operating requirements; (ii) SUA weight > 7 kg to ≤ 25 kg; (iii) operations involving carriage of dangerous goods; <u>or</u> (iv) operations in restricted flying zone
Registration and Labelling Requirements for SUA			
Registration and labelling of SUA	×	✓	✓
Minimum age of SUA responsible person ⁽¹⁾	×	18	18
Registration of Remote Pilots			
Registration of remote pilots	×	✓	✓
Minimum age of remote pilot	×	14	14
Training and Assessment Requirements			
Training and assessment of remote pilots	×	×	✓
Equipment Requirements			
Basic (flight log and geo-awareness)	×	✓	✓
Operating Requirements			
Operating requirements	✓ (Cat A1 operating requirements)	✓ (Cat A2 operating requirements)	✓ (Same as Cat A2 operations unless with permission)
Permission from CAD prior to operations	N/A	N/A	✓
Insurance Requirements			
SUA insurance for third-party liability (bodily injury and/or death)	×	✓ ⁽²⁾	✓
Minimum coverage	×	HKD \$5 million	HKD \$10 million

Note: (1) Responsible person refers to the registrant of a SUA. Upon successful registration of a SUA, the registrant will be named as the responsible person of the SUA.

(2) Mandatory insurance requirement for Category A2 Operations will commence on a later date to be specified by the Director-General of Civil Aviation by notice published in the Gazette.

Operating Requirements for SUA Operations

Key Operating Requirements	Category A1 Operations	Category A2 Operations		Category B Operations
Time of operations	Daylight only			Same as A2 operations unless with permission
Maintain full-time visual line of sight	✓	✓		
Maximum flying altitude [Above Ground Level (AGL)]	30 m (approximately 100 ft)	90 m (approximately 300 ft)		
Minimum lateral separation from uninvolved people / structures / vehicles / vessels	10 m	10 m	30 m	
Maximum speed	20 km/hr	20 km/hr	50 km/hr	
Maximum distance from remote pilot	50 m	500 m		
Maximum number of SUA to be operated at the same time	1	1		
Nothing to be dropped from SUA	Unless with permission			

Source: Annex F of Legislative Council Brief (File Ref: THB(T)CR 59/951/08)

List of relevant papers

Issued by	Meeting date/ Issue date	Paper
Panel on Economic Development	12 December 2017	Administration's paper Motion Minutes Administration's response to follow-up action Administration's response to motion
	24 June 2019	Administration's paper Minutes