

Order on flights with drones outside built-up areas¹

In pursuance of § 126 b (3) and (4), § 126 c (3-5), § 126 d (4) and (5), § 126 f (2), § 126 h, § 126 i (1) and § 149 (10) of the Danish Air Navigation Act, cf. Consolidation Order no. 1149 of 13 October 2017, and after negotiation with the Minister of Justice and the Minister of Defense, the following is stipulated on authority in pursuance of § 6 (1) and (3) of Order no. 453 of 11 May 2017 on the Danish Transport, Construction and Housing Authority's tasks and authorities, access to complain and publication of certain of the Danish Transport, Construction and Housing Authority's regulations:

Chapter 1

Scope and definitions

Scope

§ 1. This order stipulates provisions regulating flights with small drones outside built-up areas.

Definitions

§ 2. For the purposes of this order:

- 1) Accepted model aircraft organization shall mean an organization the purpose of which is to operate flights with model aircraft on an amateur basis in accordance with regulations approved by the Danish Transport, Construction and Housing Authority.
- 2) Autonomic operation shall mean a flight where the drone flies independently, in full or partly, without the possibility of intervention or action from the remote pilot.
- 3) BVLOS (Beyond Visual Line of Sight) shall mean outside the visual line of sight of the remote pilot.
- 4) Built-up area shall mean an area which is essentially used for habitation, commercial or recreational purposes, e.g. sports halls, summer cottage areas, inhabited camping sites and built-up industrial and harbor areas. Parks, beaches or other recreational areas situated within, integrated with or in immediate connection with built-up areas are also considered as built-up areas as such areas typically are situated at a short distance to crowded roads and buildings and are frequented by many people.
- 5) Drone shall mean an unmanned aircraft, i.e. an aircraft without a pilot on board. Drones are divided into the following types: 1) Fixed-wing and glider, II) Helicopter and Multirotor, III) Airship and Balloon, IV) Combined fixed-wing and rotor and V) Special class.
- 6) Drone license shall mean a license attained by the remote pilot in order to operate flights with small drones in built-up areas, cf. § 7 in Order on flights with drones in built-up areas (the City Drone Order).
- 7) Remote pilot shall mean a person who steers or starts a flight operation with drones.

¹ This Order contains certain provisions from Regulation (EC) No 785/2004 of the European Parliament and of the Council of 21 April 2004 on insurance requirements for air carriers and aircraft operators with later amendments, Official Journal 2004 No L 138, page 1. According to Article 288 of the Treaty on the Functioning of the European Union, a Regulation shall have general application in all member States. The reproduction of these provisions in this Order is thus exclusively justified in practical considerations and does not affect the immediate applicability of the Regulation in Denmark.

- 8) EVLOS (Extended Visual Line of Sight) shall mean outside the visual line of sight of the remote pilot, but within the visual line of sight of the observer.
- 9) First-person-view (FPV) flight shall mean a type of drone operation where the remote pilot navigates the drone by means of a camera on the drone.
- 10) Speed shall mean movement above the ground measured in km/h.
- 11) Column 3 company shall mean a company with very large stock of inflammable and explosive substances, toxic substances or substances that are dangerous for the environment.
- 12) Control station shall mean a device or system used to control or steer one or more drones.
- 13) Aeronautical obstacle shall mean any construction or part thereof constituting an obstacle for operating with drones.
- 14) Micro drone shall mean a drone with a takeoff weight below 250 g and with a speed that cannot exceed 50 km/h.
- 15) Military air base shall mean an aerodrome owned by the Danish Defense. Danish military air bases appear from MIL AIP (the Defense's Aeronautical Information Publication).
- 16) Small drone shall mean a drone with a maximum take-off mass not exceeding 25 kg.
- 17) Night flights shall mean flights operated in the space of time between sunset and sunrise.
- 18) Offshore installation shall mean an installation in the sea having contact with the seabed and stretching above the surface of the sea, including e.g. offshore drilling rigs, windmills and masts.
- 19) Emergency management operation with drones shall mean the emergency management's performance of tasks with drones used in connection with emergency management operation, including e.g. in connection with fire, search or surveillance of floods. The emergency management operations with drones can be performed by the public emergency management, companies and others who perform emergency management operations on behalf of the public emergency management.
- 20) Approved scenario shall mean approved guidelines for performing a specific type of drone operations in connection with the emergency management.
- 21) Large model aerodrome shall mean an area approved by the Danish Transport, Construction and Housing Authority or an accepted model aircraft organization to operations with model aircraft and with drones above 7 kg.
- 22) Visual range shall mean the distance where the remote pilot, under the existing conditions (e.g. visibility) at any time of the flight and without technical aids, can see the drone in a way that ensures that all necessary manoeuvres can be performed safely.
- 23) Special permission shall mean a permission to operate flights upon application. A special permission can be issued for one or more flights or be a general permission with a validity of a long duration according to specific guidelines.
- 24) Particular environmentally sensitive areas shall mean the areas appearing from the Danish Transport and Construction Agency's Regulations for Civil Aviation (BL) no. 7-15, 1 edition of 24 September 2012, Regulations on operations over particular environmentally sensitive areas in Denmark.
- 25) Spectator shall mean a person who has decided to attend an event in connection with operations with drones.
- 26) VLOS (Visual Line of Sight) shall mean within the visual range of the remote pilot.

Chapter 2

General

§ 3. Flights with small drones outside built-up areas shall be operated in such a way that the lives and properties of other persons are not exposed to danger or other unnecessary inconvenience, and that special consideration is shown for wildlife and animal farming, cf. § 126 c of the Danish Air Navigation Act.

(2) Flights with drones, cf. (1), shall also be performed in accordance with the provisions in this Order and Chapter 9 a of the Danish Air Navigation Act on regulation of small drones.

(3) It shall be the responsibility of the remote pilot to ensure that the requirements in (1) and (2) are met.

(4) Remote pilots having attained a drone license in accordance with the City Drone Order may exercise the rights following the City Drone Order outside built-up areas with the following exceptions, however:

- 1) The flight altitude must not exceed 100 meters above terrain unless special permission has been obtained from the Danish Transport, Construction and Housing Authority, cf. § 9 (1).
- 2) The flight altitude may exceed 100 m without special permission after § 9 (1) when flights are operated closer than 25 m horizontal distance to an aeronautical obstacle that exceeds 100 meters. The aeronautical obstacle may not be overflown by more than 25 meters. If the aeronautical obstacle is situated closer than 6 km to a public, approved aerodrome or closer than 8 km to a military airbase, the aeronautical obstacle must not be overflown.

Chapter 3

Pre-flight

Registration and identification

§ 4. The owner of a drone other than a micro drone shall be registered with the Danish Transport and Construction Agency unless the flight is operated from an approved model aerodrome and its airspace. The Danish Transport, Construction and Housing Authority will assign a personal registration number to the owner of the drone. The personal registration number shall be put on the drone.

(2) A drone other than a micro drone shall be marked with the name and telephone number of the owner and the personal registration number assigned to the owner of the drone by the Danish Transport and Construction Agency, cf. (1).

Insurance

§ 5. Drones other than micro drones shall be covered by a valid third party liability insurance with an insurance amount of 0.75 million SDR, cf. Article 7 of Regulation (EC) No 785/2004 of the European Parliament and of the Council of 21 April 2014.

Drone certificate and age

§ 6. The remote pilot shall have a drone certificate issued by the Danish Transport, Construction and Housing Authority unless

- 1) the remote pilot holds a drone license, cf. § 2, no. 6,
- 2) the remote pilot is member of an accepted model aircraft organization, or
- 3) the drone is a micro drone.

(2) To obtain a drone certificate according to (1), the remote pilot shall have passed a test in the regulations for flights with drones outside built-up areas. The test may be found on droneregler.dk. The remote pilot shall have attained the age of 18.

(3) If the remote pilot is under the age of 15, the test mentioned in (2) shall be carried out and passed together with his/her guardian.

(4) If the remote pilot is under the age of 12, flights with drones other than micro drones shall be observed by a person of age.

§ 7. For flights with drones above 7 kg the remote pilot shall have attained the age of 16 unless the flight is operated from an approved large model aerodrome.

(2) Flights with drones using jet turbine engines as propeller shall be operated from an approved large model aerodrome.

Information on airspace

§ 8. The remote pilot shall obtain information on restrictions, if any, for the use of the airspace planned to be used on droneregler.dk.

Special permission for increased risk flights

§ 9. Flights connected with increased flight safety risks must not be operated without special permission from the Danish Transport, Construction and Housing Authority.

(2) Flights with increased flight safety risk are, among others:

- 1) Flights outside the visual range of the remote pilot (EVLOS/BVLOS).
- 2) Flight over persons or publicly announced arrangements where the safety distance of 50 meters to people is not observed, cf. § 113 (14).
- 3) Indoor flights in buildings with public access, or flights in connection with indoor arrangements where the need for protection is the same as for public access, including for example company parties.
- 4) Flights in heights above 100 meters above terrain.
- 5) Flights with more than one drone from same control station.
- 6) Autonomic flights.
- 7) Flights involving dropping from the drone.

Special requirements for night flights

§ 10. In connection with night flights the following requirement shall be met:

- 1) The drone shall be equipped with lights making it possible for the remote pilot to see the drone during flight, including how the drone is oriented in the air.
- 2) Take-off and landing area shall be sufficiently lighted for people in the area to be seen and the drone to be operated.

Chapter 4

During flight

Airspace surveillance

§ 11. The surrounding airspace shall constantly be surveilled by the remote pilot and the flight shall aborted immediately if a manned aircraft approaches.

Right of way

§ 12. A drone must not fly so close to other drones that there may be danger of collision and the provisions on right of way in (2) and (3) must be observed.

(2) A drone shall give way to the right regarded in relation to its heading to

- 1) drones approaching head-on or approximately so,
 - 2) drones converging at approximately the same level, and
 - 3) drones flying in front that are being overtaken.
- (3) A drone shall unconditionally give way regarded in relation to its heading to
- 1) manned aircraft,
 - 2) drones standing still in the air,
 - 3) drones that are landing or making the last part of approach to landing,
 - 4) drones at a lower level, and
 - 5) drones forced to land.

(4) (2) and (3), nos 2-5, may be deviated from if the involved remote pilots have arranged on this before flight.

Flight levels, distance requirements and permissions

§ 13. The flight level must not exceed 100 meters above terrain unless special permission has been obtained from the Danish Transport, Construction and Housing Authority in accordance with § 9 (1).

(2) During the entire flight the drone shall be within sight of the remote pilot. FPV flights may, however, be operated according to guidelines approved by the Danish Transport, Construction and Housing Authority.

(3) Flights with drones over residential properties and belonging areas bounded by fences, hedges, walls or the like must not take place without the permission of the owner or resident unless the flights takes place as part of the performance of work or activities which according to other legislation gives access to the property.

(4) The Danish Transport, Construction and Housing Authority may in special cases grant permission to fly with drones over the residential properties and belonging areas mentioned in (3).

(5) Flights with drones other than micro drones must not be operated closer than 50 meters horizontal distance to buildings used for habitation, trade, industry, recreational activities and animal farming unless prior consent has been obtained from the user or resident of the building in question.

(6) Unless prior permission has been obtained from the responsible infrastructure manager, flights with drones other than micro drones must not be operated closer than 150 meters horizontal distance to

- 1) railways,
- 2) public roads where the speed limit is 70 km/h or more, and
- 3) other public roads with traffic.

(7) The Danish Transport, Construction and Housing Authority may in special cases grant permission to fly with drones over the buildings, railways and roads mentioned in (5) and (6).

(8) Flights with drones must not be operated closer than 2 km horizontal distance from a helicopter emergency medical service aerodrome (HEMS). The helicopter emergency medical service aerodromes appear from droneluftrum.dk.

(9) Flights with drones must not be operated closer than 5 km horizontal distance from a runway at a public approved aerodrome and 8 km from a runway at a military airbase.

(10) Flights with drones must not be operated closer than 150 meters horizontal distance from the royal residences, embassies, column 3 companies, the Police's properties, the Danish Prison and Probation Service's institutions and military installations, unless prior consent has been obtained from the responsible authority or the manager of the property or area concerned.

(11) Flights with drones other than micro drones must not be operated closer than 50 meters from manned ships and boats unless prior permission has been obtained from the commander of the vessel. Further, flights with drones other than micro drones must not be operated closer than 50 meters from offshore-installations unless prior permission has been obtained from the owner.

(12) Flights with drones closer than 150 meters horizontal distance from places where accidents have happened and where the police and other emergency preparedness authorities are working, or flights against the special restrictions made by these authorities must not be operated.

(13) Flights with drones over particular environmentally sensitive areas at levels below 300 meters above terrain must only be operated in connection with the performance of necessary tasks in connection with supervision and maintenance etc. of installations, properties, forestry, agriculture, animal farming and the like unless permission has been obtained from the Danish Transport, Construction and Housing Authority.

(14) Flights with drones other than micro drones must not be operated closer than 50 meters horizontal distance to other persons unless these persons participate in or are spectators to the flight.

(15) Flights with drones must not be operated closer than 5 meters from current-carrying overhead lines unless prior permission has been obtained from the responsible infrastructure manager.

Chapter 5

Special provisions for drones used in connection with emergency management

§ 14. The provisions in this Order may be deviated from in connection with emergency management flights if the flight is performed in pursuance of a standard scenario approved by the Danish Transport, Construction and Housing Authority, cf. (2). Approved standard scenarios are published on droneregler.dk and may be used by drone operators performing emergency management flights with drones.

(2) A new standard scenario shall be submitted to the Danish transport, Construction and Housing Authority for approval before the flight is initiated. A standard scenario shall contain

- 1) a description of the operation type,
- 2) guidelines describing how the drone operation will be performed,
- 3) a risk assessment, and

4) a description of the operational limitations in connection with the operation type in question.

(3) When using an already approved standard scenario, the drone operator shall declare to the Danish Transport, Construction and Housing Authority that the operator will use a specific standard scenario and that the conditions appearing from the standard scenario are met. If the drone operation constitutes a particularly high risk, the drone operator shall also be approved by the Danish Transport, Construction and Housing Authority. It appears from the standard scenario planned to be used whether the drone operator shall be approved by the Danish Transport, Construction and Housing Authority.

Chapter 6

Model flying aerodromes with airspace

§ 15. A model flying aerodrome shall be approved by an organization approved by the Danish Transport, Construction and Housing Authority. The purpose of this organizations all be to conduct flights with drones on an amateur basis and in accordance with a code of practice approved by the Danish Transport, Construction and Housing Authority. Further, flights with drones on a model flying aerodrome shall be operated in accordance with the provisions in this Order.

(2) Application for approval of a model flying aerodrome shall contain a map of the area and a description of the model flying aerodrome and its airspace.

(3) The model flying aerodrome shall have an airspace covering an area of at least 100 x 300 meters. The airspace may in special cases be smaller than 100 x 300 meters if approved by the organization mentioned in (1).

(4) The owner's permission to use the site as model flying aerodrome shall have been obtained. Further the owner of the area covered by the model flying aerodrome's airspace shall be notified of the activities.

(5) When flying with drones above 7 kg or with drones using jet turbine engines as drive, the model flying aerodrome shall be approved as large model flying aerodrome by the organization mentioned in (1). The large model flying aerodrome shall have an airspace of at least 200 x 400 meters. The airspace may in special cases be smaller than 200 x 400 meters if approved by the organization mentioned in (1).

Chapter 7

Exemption

§ 16. The Danish Transport, Construction and Housing Authority may in special cases grant exemption from the provisions in this Order when it is deemed compatible with the considerations on which the provisions in question are based, including international provisions in the area.

Chapter 8

Access to complain

§ 17. Complaints of the decisions taken by the Danish Transport, Construction and Housing Authority under this Order cannot be made to the Minister for Transport, Building and Housing or other administrative authority, cf. Order on the Danish Transport, Construction and Housing Authority's tasks and authorities, access to complain and publication of certain of the Danish Transport, Construction and Housing Authority's regulations, cf. however (2).

(2) Decisions taken by other public authorities under this Order and § 15 in this Order may be complained of to the Danish Transport, Construction and Housing Authority, cf. Order on the Danish Transport, Construction and Housing Authority's tasks and authorities, access to complain and publication of certain of the Danish Transport, Construction and Housing Authority's regulations

Chapter 9

Punishment and implementation

Punishment

§ 18. Violation of the provisions in §§ 3, 4 and 5, § 6 (1) and (4), §§ 7 and 8, § 9 (1), §§ 10 and 11, § 12 (1)-(3), § 13 (1)-(3), (5)-(6) and (8)-(15), § 14 (1) and (3) and § 15 (1), (4) and (5) is punishable with fine, unless more severe punishment is deserved according to § 149 (17) of the Danish Air Navigation Act.

§ 19. Criminal liability may be imposed on companies etc. (legal persons) under the rules of Chapter 5 of the Danish Criminal Code, cf. § 149 (14) of the Danish Air Navigation Act.

Implementation

§ 20. This Order shall come into force on 1 January 2018.

(2) Order no. 788 of 14 June 2017 on drone operations outside built-up areas is repealed.

§ 21. This Order shall not be applicable for the Faroe Islands and Greenland.

Danish Transport, Construction and Housing Authority, 24 November 2017

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/ Michael Dela