Draft ANNEX I to draft COMMISSION IMPLEMENTING REGULATION (EU) …/… amending Regulation (EU) No 965/2012, Regulation (EU) No 1178/2011, Implementing Regulation (EU) No 923/2012 and Implementing Regulation (EU) 2017/373 as regards the establishment of requirements for the operation of manned aircraft with a vertical take-off and landing capability

ANNEX I

Annex I 'Definitions' to Regulation (EU) No 965/2012 is amended as follows:

(1) The title of Annex I 'Definitions' is replaced by the following:

'Annex I — Definitions for terms used in Annexes II to IX';

(2) point (21) is replaced by the following:

'(21) "clearway" means a defined rectangular area on the ground or on water under the control of the appropriate authority, selected or prepared as a suitable area over which an aircraft may make a portion of its initial climb to a specified height;';

(3) point (26) is replaced by the following:

'(26) "contingency fuel/energy" means the fuel/energy required to compensate for unforeseen factors that could have an influence on the fuel/energy consumption to the destination aerodrome or vertiport;';

(4) point (31) is replaced by the following:

'(31) "critical phases of flight" means:

(a) in the case of helicopters, taxiing, hovering, take-off, final approach, missed approach, landing and any other phases of flight as determined by the pilot-in-command or the commander;

(b) in the case of VCA, ground taxiing with passengers for the purpose of flight or after landing, air taxiing, hovering, take-off, final approach, missed approach (go-around), landing and any other phase of flight as determined by the pilot-in-command;';

(5) point (39) is replaced by the following:

'(39) "distance DR" means the horizontal distance that the helicopter or the VCA has travelled from the end of the take-off distance available;';

(6) point (48) is replaced by the following:

'(48) "final approach and take-off area (FATO)" means a defined area for helicopter or VCA operations over which the final phase of the approach manoeuvre to hover or land is completed, and from which the take-off manoeuvre is commenced; in the case of helicopters operating in performance class 1 and VCA operating in the category Enhanced or equivalent, the defined area includes the rejected take-off area available;';

(7) point (50a) is replaced by the following:

‘(50a) “flight time” means:

(a) for aeroplanes, the total time from the moment an aeroplane first moves for the purpose of taking off until the moment the aeroplane finally comes to rest at the end of the flight;

(b) for helicopters, the total time between the moment a helicopter’s rotor blades start turning for the purpose of taking off until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped;

(c) for VCA, the total time between the moment the lift /thrust units are powered on for the purpose of taking off until the moment the aircraft finally comes to rest at the end of the flight and the lift/thrust units are powered off;’;

(8) point (53) is replaced by the following:

‘(53) “ground emergency service personnel” means any ground emergency service personnel, such as police officers, firefighters, etc., involved in helicopter emergency medical services (HEMSs) or in emergency medical services with VCA (VEMSs) and whose tasks are to any extent pertinent to the operation;’;

(9) in point (69), point (ii) of point (a) is replaced by the following:

‘(ii) the helicopter or VCA occupants cannot be adequately protected from the elements; or’;

(10) point (70) is replaced by the following:

‘(70) “landing decision point (LDP)” means:

(a) for helicopters, the point used to determine landing performance from which, an engine failure having been recognised at this point, the landing may be safely continued or a balked landing initiated;

(b) for VCA, the point used to determine landing performance from which the landing may be safely continued or a balked landing initiated, following a CFP;’;

(11) point (71) is replaced by the following:

‘(71) “landing distance available” means:

(a) for aeroplanes (LDAA), the length of the runway which is declared available by the State of the aerodrome and suitable for the ground run of an aeroplane landing;

(b) for helicopters (LDAH), the length of the FATO plus any additional area declared available by the State of the aerodrome and suitable for the helicopter to complete the landing manoeuvre from a defined height; and

(c) for VCA (LDAV), the length of the FATO plus any additional area declared available and suitable for the VCA to complete the landing manoeuvre from a defined height;’;

(12) the following point (71a) is inserted:

‘(71a) “landing distance required (LDR)” means:

(a) for helicopters (LDRH), the horizontal distance required to land and come to a full stop from a point of 15 m (50 ft) above the landing surface; and

(b) for VCA (LDRV), the horizontal distance required to land and come to a full stop from a point of 15 m (50 ft) above the landing surface;';

(13) point (78) is replaced by the following:

'(78) "medical passenger" means a medical person carried in a helicopter during a HEMS flight or in a VCA during a VEMS flight, including but not limited to doctors, nurses and paramedics;';

(14) in point (82), point (b) is replaced by the following:

'(b) the helicopter or the VCA occupants can be protected from the elements; and';

(15) point (96) is replaced by the following:

'(96) "pilot-in-command (PIC)" means the pilot designated as being in command and charged with the safe conduct of the flight; for the purpose of commercial air transport operations with aeroplanes and helicopters, the "pilot-in-command" shall be termed "commander";';

(16) point (102) is replaced by the following:

'(102) "rejected take-off distance available (RTODA)" means:

(a) for helicopters (RTODAH), the length of the final approach and take-off area declared available and suitable for helicopters operated in performance class 1 to complete a rejected take-off; or

(b) for VCA (RTODAV), the length of the final approach and take-off area declared available and suitable for VCA to complete a rejected take-off in accordance with the category (Enhanced or Basic) in which they are operated;';

(17) point (103) is replaced by the following:

'(103) "rejected take-off distance required (RTODR)" means:

(a) for helicopters (RTODRH), the horizontal distance required from the start of the take-off to the point where the helicopter comes to a full stop following an engine failure and rejection of the take-off at the take-off decision point;

(b) for VCA (RTODRV), the horizontal distance required from the start of the take-off to the point where the VCA comes to a full stop by completing a rejected take-off following a CFP being recognised at the take-off decision point';

(18) point (104a) is replaced by the following:

'(104a) "safe landing" means, in the context of the fuel/energy policy or fuel/energy schemes, a landing at an adequate aerodrome or operating site or at an adequate vertiport or diversion location with no less than the final reserve fuel/energy remaining and in compliance with the applicable operational procedures and aerodrome operating minima;';

(19) point (111) is replaced by the following:

‘(111)“take-off decision point (TDP)” means:

(a) for helicopters, the point used to determine take-off performance from which, an engine failure having been recognised at this point, either a rejected take-off may be made or a take-off safely continued;

(b) for VCA, the first point defined by the combination of speed and height from which a continued take-off may be performed meeting the certified minimum performance (CMP) following a CFP and is the last point in the take-off path from which a rejected take-off is assured;’;

(20) point (113) is replaced by the following:

‘(113) “take-off distance available (TODA)” means:

(a) for helicopters (TODAH), the length of the final approach and take-off area plus, if provided, the length of the helicopter clearway declared available and suitable for the helicopter to complete the take-off;

(b) for VCA (TODAV), the length of the final approach and take-off area plus, if provided, the length of the clearway declared available and suitable for the VCA to complete the take-off;’;

(21) point (114) is replaced by the following:

‘(114) “take-off distance required (TODR)” means:

(a) for helicopters (TODRH), the horizontal distance required from the start of the take-off to the point at which the take-off safety speed (V_{TOSS}), the selected height and a positive climb gradient are achieved, following failure of the critical engine being recognised at the TDP, the remaining engines operating within approved operating limits;

(b) for VCA (TODRV), the horizontal distance required from the start of the take-off to the point at which the safe obstacle clearance and a positive climb gradient are achieved, following a critical failure for performance (CFP) recognised at the TDP;’;

(22) point (115) is replaced by the following:

‘(115) “take-off flight path” means:

(a) the vertical and horizontal path, with the critical engine inoperative, from a specified point in the take-off for aeroplanes to 1 500 ft above the surface, and for helicopters to 1 000 ft above the surface;

(b) for VCA, the vertical and horizontal path with a critical failure for performance (CFP), which extends from the take-off point to a point at which the VCA is at a height above the take-off elevation that is compatible with the en-route profile and not higher than 305 m (1000 ft);’;

(23) point (116) is replaced by the following:

‘(116) “take-off mass” means the mass including everything and everyone carried on board at the commencement of the take-off for helicopters or for VCA, and during take-off run for aeroplanes;’;

(24) point (118) is replaced by the following:

‘(118) “technical crew member” means a crew member in commercial air transport HEMS, VEMS, HHO or NVIS operations other than a flight or cabin crew member, assigned by the operator to duties in the aircraft or on the ground for the purpose of assisting the pilot during HEMS, VEMS, HHO or NVIS operations, which may require the operation of specialised on-board equipment;’;

(25) the following point (130) is added:

‘(130) “ground movement” means the movement of an aircraft on the movement area of an aerodrome or a vertiport with the aid of external equipment or accessory that is not powered by the aircraft;’;

(26) the following point (131) is added:

‘(131) “ground personnel” means the personnel other than flight crew members or technical crew members that are assigned to tasks related to the ground movement of the VCA or any other ground assistance provided to aircraft, and have received training in the relevant operational and safety procedures;’;

(27) the following point (132) is added:

‘(132) “category Enhanced” means a category for VCA certification and operation according to which the aircraft meets the requirements for continued safe flight and landing following a critical failure for performance (CFP);’;

(28) the following point (133) is added:

‘(133) “certified minimum performance (CMP)” means, in relation to VCA, the set of performance data obtained by considering the effect of single failures and combinations of failures that are not extremely improbable on nominal performance parameters;’;

(29) the following point (134) is added:

‘(134) “continued safe flight and landing (CSFL)” means, in relation to a VCA operated in the category Enhanced, that the aircraft is capable of continued controlled flight and landing at a vertiport, possibly using emergency procedures, without requiring exceptional piloting skills or strength;’;

(30) the following point (135) is added:

‘(135) “critical failure for performance (CFP)” means, in relation to VCA, a failure or a combination of failures that results in the maximum degradation for a given flight phase and performance parameter; the set of critical failures for performance is used to establish the certified minimum performance (CMP);’;

(31) the following point (136) is added:

‘(136) “limited overwater operation” means an operation with a VCA that is conducted for a limited flight time over water;’;

(32) the following point (137) is added:

‘(137) “VEMS technical crew member” means a technical crew member (TCM) that is assigned to a VEMS mission for the purpose of assisting the pilot during the flight operation and attending to any person in need of medical assistance;’;

(33) the following point (138) is added:

‘(138) “VEMS operating base” means a vertiport at which the VCA, its flight crew and VEMS crew members are on standby for VEMS operations;’;

(34) the following point (139) is added:

‘(139) “VEMS operating site” means an operating site selected by the pilot-in-command for VEMS operations, landings and take-offs;’;

(35) the following point (140) is added:

‘(140) “vertiport” means an area of land, water, or structure used or intended to be used for the landing and take-off of VCA, and for the movement of VCA;’;

(36) the following point (141) is added:

‘(141) “adequate vertiport” means a vertiport at which the VCA may be operated, taking account of the aircraft dimensions, weight, approach and departure paths, and which is provided with services and facilities necessary for the intended operation and is available at the expected time of use;’;

(37) the following point (142) is added:

‘(142) “VTOL take-off safety speed (V_{TOSS})” means the minimum speed at which climb shall be achieved with a CFP recognised at the TDP in the case of VCA operated in the category Enhanced;’;

(38) the following point (143) is added:

‘(143) “manned VCA” means a VCA piloted by at least one pilot on board;’.