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STATUTORY INSTRUMENTS

2024 No. 1290

RETAINED EU LAW REFORM

CIVIL AVIATION

The Aviation Safety (Amendment) Regulations 2024

Made - - - -	*5th December 2024*
Coming into force	
Regulations 1 and 22 to 28	*6th December 2024*
Remainder	*30th October 2025*

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The Secretary of State makes these Regulations in exercise of the powers conferred by Articles 17(1), 19(1), 23(1), 27(1), 31(1), 39(1), 62(14), 62(15) and 127(3) of Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation(**a**) and sections 12(1), 14(2), 14(3) and 14(4)(c) of the Retained EU Law (Revocation and Reform) Act 2023 ("the 2023 Act")(**b**).

The Secretary of State is a relevant national authority for the purposes of sections 12(1), 14(2) and (3) of the 2023 Act(**c**).

In accordance with paragraphs 2(1) to (3), 5(1) and 5(2) of Schedule 5 to the 2023 Act, a draft of this instrument has been laid before Parliament and approved by a resolution of each House of Parliament.

(**a**) EUR 2018/1139, amended by S.I. 2019/645 and 2022/63. There are other amendments not relevant to these Regulations.
(**b**) 2023 c. 28, to which there are amendments not relevant to these Regulations.
(**c**) The term "relevant national authority" is defined in section 21(1) of the Retained EU Law (Revocation and Reform) Act 2023.

PART 1

Introduction

Citation, commencement and extent

1.—(1) These Regulations may be cited as the Aviation Safety (Amendment) Regulations 2024.

(2) Regulations 1 and 22 to 28 come into force on the day after the day on which they were made.

(3) The remainder come into force on 30th October 2025.

(4) These Regulations extend to England and Wales, Scotland and Northern Ireland.

PART 2

Amendment, revocation and replacement of assimilated law and consequential amendments

CHAPTER 1

Amendment of Commission Regulation (EU) No 965/2012

Amendment of Commission Regulation (EU) No 965/2012

2. Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council(**a**) is amended in accordance with regulations 3 to 11.

Amendment of Article 5 of Commission Regulation (EU) No 965/2012

3. In Article 5 (air operations), in paragraph 2(a), after sub-paragraph (iv) insert—

"(v) operations with operational credit;".

Amendment of Annex 1 to Commission Regulation (EU) No 965/2012

4.—(1) Annex 1 (definitions) is amended as follows.

(2) After point (5) insert—

"(6) 'aerodrome operating minima' means the limits of usability of an aerodrome for:

(a) take-off, expressed in terms of RVR, or VIS, or both and also, if necessary, ceiling;

(b) landing in 2D instrument approach operations, expressed in terms of RVR, or VIS, or both and MDA or MDH, and, if necessary, ceiling; or

(c) landing in 3D instrument approach operations, expressed in terms of RVR, or VIS, or both, and DA or DH, as appropriate to the type or category, or both type and category, of the operation;".

(3) After point (8b) insert—

"(8c) 'alternate aerodrome' means an adequate aerodrome to which an aircraft may proceed when it becomes either impossible, or inadvisable, to proceed to, or land at, the aerodrome of intended landing:

(i) where the necessary services and facilities are available;

(ii) where aircraft performance requirements can be met; and

(**a**) EUR 2012/965, amended by S.I. 2019/645, 2020/116, 2021/614, 2021/1203 and 2022/1235.

(iii) which is operational at the expected time of use;".

(4) Omit point (11).

(5) After point (11) insert—

"(11a) 'basic fuel scheme' means a fuel scheme that:

(a) ensures a safe, effective and efficient operation of the aircraft; and

(b) is established from a large-scale analysis of safety and operational data gathered from industry based on previous performance and experience applying scientific principles;

(11b) 'basic fuel scheme with variations' means a basic fuel scheme that has been varied based on the analysis of safety and operational data from previous performance and experience of the industry, applying scientific principles;".

(6) Omit points (13) to (16).

(7) After point 18 insert—

"(18a) 'ceiling' means the height above the ground or water of the base of the lowest layer of cloud below 6000 m (20000 ft) covering more than half the sky;".

(8) For point (20) substitute—

"(20) 'circling' means the visual phase of a circling approach;

(20a) 'circling approach' means an extension of an IAP which provides for visual circling of the aerodrome prior to landing;".

(9) In point (26), after the second and third occurrence of "fuel" insert "or energy".

(10) In point (27), for the words from "to a point approximately" to the end, substitute—

":

(a) for a straight-in approach, to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre begins; or

(b) for a circling approach, until MDA or MDH or visual flight manoeuvre altitude or height is reached;".

(11) After point (27) insert—

"(27a) 'controlling RVR' means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by criteria of the State of the aerodrome;".

(12) After point (31) insert—

"(32) 'current fuel scheme' means the approved fuel or energy scheme that is being used at the time by the operator;".

(13) After point (35) insert—

"(35a) 'decision altitude (DA)' means a specified altitude in a 3D instrument approach operation at which a missed approach procedure must be initiated if the required visual reference to continue the approach has not been established;

(35b) 'decision height (DH)' means a specified height in a 3D instrument approach operation at which a missed approach procedure must be initiated if the required visual reference to continue the approach has not been established;".

(14) After point (38) insert—

"(38a) 'destination alternate aerodrome' means an alternate aerodrome at which an aircraft would be able to land if it becomes either impossible, or inadvisable, to land at the aerodrome of intended landing;".

(15) For point (46) substitute—

"(46) 'en route alternate (ERA) aerodrome' means an alternate aerodrome at which an aircraft would be able to land if a diversion becomes necessary while en route;".

(16) After point (46) insert—

"(46a) 'enhanced flight vision system (EFVS)' means an electronic means to provide the flight crew with a real-time sensor-derived, or enhanced display of, the external scene topography through the use of imaging sensors which is integrated with a flight guidance system and implemented on a head-up display or an equivalent display system;

(46b) 'EFVS operation' means an operation in which visibility conditions require an EFVS to be used instead of natural vision in order to perform an approach or landing, identify the required visual references, or conduct a roll-out;

(46c) 'EFVS 200 operation' means an operation with an operational credit in which visibility conditions require an EFVS to be used down to 200 ft above the FATO or runway threshold and after that point, natural vision is used and the RVR must not be less than 550 m;".

(17) For point (47) substitute—

"(47) 'enhanced vision system (EVS)' means an electronic means to provide the flight crew with a real-time image of the actual external scene topography through the use of imaging sensors;".

(18) After point (48a) insert—

"(48b) 'final approach segment (FAS)' means that segment of an IAP in which alignment and descent for landing are accomplished;".

(19) After point (49b) insert—

"(49ba) 'flight following' means the recording in real time of departure and arrival messages by operational personnel to ensure that a flight is operating and has arrived at the destination aerodrome or an alternate aerodrome;

(49bb) 'flight monitoring' means flight following where there is also:

(a) operational monitoring of flights by suitably qualified operational control personnel from departure throughout all phases of the flight;

(b) communication of all available, and relevant, safety information between the operational-control personnel on the ground and the flight crew; and

(c) critical assistance given to the flight crew in the event of an in-flight emergency, security issue, or at the request of the flight crew;".

(20) After point (50) insert—

"(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;

(50b) 'fuel en route alternate (FE ERA) aerodrome' means an ERA aerodrome that is required at the planning stage for use in the calculation of fuel or energy;".

(21) For point (51) substitute—

"(51) 'fuel scheme' means a scheme for the use of fuel or energy that is a basic fuel scheme, a basic fuel scheme with variations or an individual fuel scheme;".

(22) After point (52) insert—

"(52a) 'go around' means a transition from an approach operation to a stabilised climb and includes manoeuvres conducted at, or above, the MDA, MDH, DA or DH, or below the DA or DH (for balked landings);".

(23) For point (56) substitute—

"(56) 'head-up display landing system (HUDLS)' means the total airborne system (including the sensors, computers, power supplies, indications and controls) which provides heads-up guidance to enable the pilot to either manually control the flightpath of the aircraft or to monitor the auto-pilot during take-off (if applicable), approach and landing (and roll-out if applicable), or go around;".

(24) After point (69a) insert—

"(69aa) 'individual fuel scheme' means a basic fuel scheme that has been modified based on a comparative analysis of an operator's safety and operational data applied using scientific principles;".

(25) After point (69c) insert—

"(69d) 'instrument approach operation' means an approach and landing using instruments for navigation guidance based on an IAP and is either:

(a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; or

(b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance;

(69e) 'instrument approach procedure (IAP)' means a series of pre-determined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix or, where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and, after that, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply;".

(26) After point (72) insert—

"(72za) 'line check' means a check conducted by the operator and completed by the pilot, or the technical crew member, to demonstrate competence carrying out normal line operations described in the operations manual;".

(27) For points (74) and (75) substitute—

"(74) 'low-visibility operations (LVOs)' means approach or take-off operations on a runway with a RVR less than 550 m or with a DH less than 200 ft;

(75) 'low-visibility take-off (LVTO)' means a take-off with an RVR less than 550 m;".

(28) Omit point (76).

(29) After point (78a) insert—

"(78aa) 'minimum descent altitude (MDA)' means a specified altitude in a 2D instrument approach operation, or circling approach, below which descent must not be made without the required visual reference;

(78ab) 'minimum descent height (MDH)' means a specified height in a 2D instrument approach operation, or circling approach, below which descent must not be made without the required visual reference;".

(30) After point (78b) insert—

"(78c) 'multi-crew cooperation (MCC)' means the functioning of the flight crew as a team of cooperating members led by the pilot in command;".

(31) Omit point (83).

(32) After point (85) insert—

"(85a) 'obstacle clearance altitude (OCA)' means the lowest altitude above the elevation of the relevant runway threshold, or the aerodrome elevation, as applicable, used in establishing compliance with the appropriate obstacle clearance criteria;

(85b) 'obstacle clearance height (OCH)' means the lowest height, above the elevation of the relevant runway threshold, or the aerodrome elevation, as applicable, used in establishing compliance with the appropriate obstacle clearance criteria;".

(33) After point (91) insert—

"(91a) 'operational credit' means a credit for operations with an advanced aircraft enabling lower operating minima than would normally be established by the operator for a basic aircraft, based upon the performance of advanced aircraft systems utilising the available external infrastructure;

(91b) 'operator proficiency check' means a check conducted by the operator and completed by the pilot, or the technical crew member, to demonstrate competence in carrying out normal, abnormal and emergency procedures;".

(34) Omit point (92).

(35) After point (103a) insert—

"(103aa) 'required visual reference' means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a DH, the required visual reference is that specified for the particular procedure and operation;".

(36) After point (104) insert—

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

(37) After point (119) insert—

"(119a) 'take-off alternate aerodrome' means an alternate aerodrome at which an aircraft would be able to land shortly after take-off if it becomes necessary and where it is not possible to land at the departure aerodrome;".

(38) After point (120) insert—

"(120za) 'training to proficiency' means training designed to achieve end-state performance objectives, providing sufficient assurance to the operator that the trained individual is capable of consistently carrying out specific tasks safely and effectively;".

(39) After point (124) insert—

"(124a) 'visibility (VIS)' means visibility for aeronautical purposes, which is the greater of:

(a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognised when observed against a bright background; and

(b) the greatest distance at which lights in the vicinity of 1000 candelas can be seen and identified against an unlit background;".

(40) In point (125)—

(a) after the second occurrence of "approach" insert "operation by an IFR flight";

(b) for "is executed" substitute "operation is completed".

Amendment of Annex 2 to Commission Regulation (EU) No 965/2012

5.—(1) Annex 2 (authority requirements for air operations) is amended as follows.

(2) In Subpart OPS (air operations), for point ARO.OPS.225 (approval of operations to an isolated aerodrome) substitute—

"ARO.OPS.225

Approval of fuel schemes

(a) The CAA must approve the fuel scheme proposed by a CAT operator if the operator demonstrates compliance with all applicable requirements laid down in this Regulation in respect of fuel or energy for aeroplanes or helicopters involved in CAT.

(b) The approval referred to in point CAT.OP.MPA.182(d)(2) must include a list of the isolated aerodromes specified by the operator for each aircraft type to which the approval applies.".

(3) For the form in Appendix 2, substitute—

"Appendix II

OPERATIONS SPECIFICATIONS (subject to the approved conditions in the operations manual)				
CAA: contact details Telephone [1]: _____; Fax: _____; Email: _____				
AOC [2]:	Operator name [3]:		Date [4]:	Signature:
	t/a			
Operations specifications #:				
Aircraft model [5]: Registration marks [6]:				
Types of operations: Commercial air transport				
☐ Passengers	☐ Cargo		☐ Others [7]: _____	
Area of operation [8]:				
Special limitations [9]:				
Specific approvals:	Yes	No	Specification [10]	Remarks
Dangerous goods:	☐	☐		
Low-visibility operations				
Take-off	☐	☐	RVR [11]... m	
Approach and landing	☐	☐	CAT [12].... DA/H: ft, RVR:.. m	
Operational credits	☐	☐	CAT [13].....DA/H: ft, RVR:... m	
RVSM [14] ☐ N/A	☐	☐	☐	
ETOPS [15] ☐ N/A	☐	☐	☐ Maximum diversion time [16]: min.	
Complex navigation specifications for PBN operations [17]	☐	☐		[18]
Minimum navigation performance specification	☐	☐		
Operations of single-engined turbine aeroplane at night or in IMC (SET-IMC)	☐	☐	[19]	
Helicopter operations with the aid of night vision imaging systems	☐	☐		
Helicopter hoist operations	☐	☐		
Helicopter emergency medical service operations	☐	☐		
Helicopter offshore operations	☐	☐		
Cabin crew training [20]	☐	☐		
Issue of CC attestation [21]	☐	☐		
Use of type B EFB applications	☐	☐	[22]	
Continuing airworthiness	☐	☐	[23]	
Others [24]				

(1) Telephone contact details of the CAA, including the country code. Email to be provided if available.

(2) Insertion of associated air operator certificate (AOC) number.

(3) Insertion of the operator's registered name and the operator's trading name, if different. Insert 'T/A' before the trading name (for 'trading as').

(4) Issue date of the operations specifications (dd-mm-yyyy) and signature of the CAA representative.

(5) Insertion of ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232).

(6) Either the registration marks are listed either in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual. In case not all specific approvals apply to the aircraft model, the registration marks of the aircraft may be entered in the remark column to the related specific approval.

(7) Other type of transportation to be specified (e.g. emergency medical service).

(8) Listing of geographical area(s) of authorised operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).

(9) Listing of applicable special limitations (e.g. VFR only, Day only, etc.).

(10) List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).

(11) Insertion of approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.

(12) Insertion of applicable precision approach category: CAT II or CAT III. Insertion of minimum RVR in metres and DH in feet. One line is used per listed approach category.

(13) Insertion of applicable operational credit: SA CAT I, SA CAT II, EFVS, etc. Insertion of minimum RVR in metres and DH in feet. One line is used per listed operational credit.

(14) The Not Applicable (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.

(15) Extended range operations (ETOPS) currently applies only to two-engined aircraft. Therefore, the Not Applicable (N/A) box may be checked if the aircraft model has less or more than two engines.

(16) The threshold distance may also be listed (in NM), as well as the engine type.

(17) Performance-based navigation (PBN): one line is used for each complex PBN specific approval (e.g. RNP AR APCH), with appropriate limitations listed in the 'Specifications' or 'Remarks' columns, or in both. Procedure-specific approvals of specific RNP AR APCH procedures may be listed in the operations specifications or in the operations manual. In the latter case, the related operations specifications must have a reference to the related page in the operations manual.

(18) Specify if the specific approval is limited to certain runway ends or aerodromes, or both.

(19) Insertion of the particular airframe or engine combination. (20) Approval to conduct the training course and examination to be completed by applicants for a cabin crew attestation as specified in Annex V (Part-CC) to UK Regulation (EU) No 1178/2011. (21) Approval to issue cabin crew attestations as specified in Annex V (Part-CC) to UK Regulation (EU) No 1178/2011. (22) Insertion of the list of type B EFB applications together with the reference of the EFB hardware (for portable EFBs). This list is contained either in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual. (23) The name of the person or organisation responsible for ensuring that the continuing airworthiness of the aircraft is maintained and a reference to the regulation that requires the work, i.e. Subpart G of Annex I (Part-M) to UK Regulation (EU) No 1321/2014. (24) Other approvals or data may be entered here, using one line (or one multi-line block) per authorisation (e.g. short landing operations, steep approach operations, reduced required landing distance, helicopter operations to or from a public interest site, helicopter operations over a hostile environment located outside a congested area, helicopter operations without a safe forced landing capability, operations with increased bank angles, maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval).
CAA Form 139

”.

Amendment of Annex 3 to Commission Regulation (EU) No 965/2012

6.—(1) Annex 3 (organisation requirements for air operations (part-ORO)) is amended as follows.

(2) In Subpart FC (flight crew)—

(a) after point ORO.FC.100 (composition of flight crew) insert—

“ORO.FC.101 Specific flight crew requirements for helicopter operations

In addition to the requirements in ORO.FC.100, if a helicopter is operated as a multi-pilot operation within the meaning of Commission Regulation (EU) No 1178/2011(**a**) each pilot must either:

(1) have completed an MCC course as part of a multi-pilot type rating or hold a certificate of satisfactory completion of an MCC course in helicopters in accordance with FCL.510.H.ATPL(H) of Commission Regulation (EU) No 1178/2011; or

(2) have completed at least 500 hours of flight time as a pilot in multi-pilot operations.”;

(**a**) EUR 2011/1178, amended by S.I. 2019/645, 2020/1116, 2021/10, 2021/614, 2021/1203 and 2022/637.

(b) in point ORO.FC.105 (designation as pilot-in-command/commander), for points (c) and (d) substitute—

"(c) In the case of commercial operations of aeroplanes and helicopters, the pilot-in-command or commander, or the pilot to whom the conduct of the flight may be delegated, must have had initial familiarisation training on the route or area to be flown and aerodrome, facilities and procedures, and must maintain this knowledge by:

(1) operating at least once on the aerodrome within a 12 month period;

(2) operating at least once to the route or area within a 36 month period.

(d) In respect of point (c)(2), where a route or area is not operated upon for a 12 month period, the pilot-in-command or commander, or the pilot to whom the conduct of the flight may be delegated, must, in addition, undertake refresher training on the route or area.

(e) Notwithstanding points (c) and (d), in the case of operations under VFR by day with performance class B and C aeroplanes and helicopters, familiarisation training on the route and aerodromes may be replaced by area familiarisation training.".

(3) In point ORO.FC.140 (operation on more than one type or variant) omit point (b).

(4) After point ORO.FC.140 insert—

"ORO.FC.141 Compliance requirements for operation on more than one type or variant

In respect of compliance with the requirements mentioned in ORO.FC.140:

(a) the operator may define groups of single-engined helicopter types and an operator proficiency check on one type will be valid for all the other types within the group if both the following conditions are met:

(1) the group includes either only single-engine turbine helicopters operated under VFR or only single-engine piston helicopters operated under VFR;

(2) for CAT operations, at least two operator proficiency checks per type are conducted within a 3-year cycle;

(b) for specialised operations, elements of the aircraft or FSTD training and operator proficiency check that cover the relevant aspects associated with the specialised task and are not related to the type or group of types may be credited towards the other types or groups of types, based on a risk assessment performed by the operator;

(c) for operations on more than one helicopter type or variant that are used for conducting sufficiently similar operations, if line checks rotate between types or variants, each line check shall revalidate the line check for the other helicopter types or variants;

(d) appropriate procedures and any operational restrictions must be specified in the operations manual.".

(5) In point ORO.FC.145 (provision of training, checking and assessment), for points (c) to (e) substitute—

"(c) In the case of CAT operations, training and checking programmes, including syllabi and the use of the means to deliver the programme such as individual flight simulation training devices (FSTDs) and other training solutions, must be approved by the CAA.

(d) The FSTD used to meet the requirements of this Subpart must be qualified in accordance with Commission Regulation (EU) No 1178/2011 and it must replicate the aircraft used by the operator, as far as practicable. Differences between the FSTD and the aircraft shall be described and addressed through a briefing or training as appropriate.

(e) The operator must establish a system to adequately monitor changes to the FSTD and to ensure that those changes do not affect the adequacy of the training programmes.

(f) The operator must monitor the validity periods of each recurrent training and checking in this Subpart.

(g) The validity periods required in this Subpart shall be counted from the end of the month in which the recency, training or check in this Subpart was completed.".

(6) In point ORO.FC.146 (personnel providing training, checking and assessment)—

(a) in point (b)—

(i) after "checking" insert "and assessment";

(ii) after "checks" insert "and assessment"; and

(iii) after "No 1178/2011" insert "and where those personnel provide training or conduct checks or assessments in respect of specialised operations, they must be suitably qualified for the relevant operation";

(b) after point (d) insert—

"(e) Notwithstanding point (b), the aircraft or FSTD training and the operator proficiency check may be conducted by a suitably qualified commander holding either an FI, TRI or SFI certificate who is nominated by the operator for any of the following operations:

(1) CAT operations of helicopters meeting the criteria defined in point ORO.FC.005(b)(2);

(2) CAT operations of helicopters by day and over routes navigated by reference to visual landmarks, except those of complex motor-powered helicopters;

(3) CAT operations of performance class B aeroplanes that do not meet the criteria defined in point ORO.FC.005(b)(1).

(f) Notwithstanding point (b), the aircraft or FSTD training and the demonstration of competence or operator proficiency check may be conducted by a suitably qualified pilot in command or commander nominated by the operator for any of the following operations:

(1) specialised operations;

(2) CAT operations of aeroplanes meeting the criteria defined in point ORO.FC.005(b)(1).

(g) Notwithstanding point (b), the line check may be conducted by a suitably qualified commander nominated by the operator.

(h) The operator must inform the CAA about the persons nominated under points (e) to (g).".

(7) In point ORO.FC.200 (composition of flight crew), for points (d)(1) and (2) substitute—

"The minimum flight crew must be two pilots where it is:

(1) an operation of a helicopter with a MOPSC of more than 19;

(2) an operation under IFR of a helicopter with a MOPSC of more than 9.".

(8) For point ORO.FC.202 (single-pilot operations under IFR or at night) substitute—

"ORO.FC.202 Single-pilot operations under IFR or at night

In order to be able to fly under IFR at night with a minimum flight crew of one pilot the following must be complied with:

(a) the operator must include in the operations manual a pilot's conversion and recurrent training programme that include the additional requirements for a single-pilot operation. The pilot must have undertaken training on the operator's procedures, in particular regarding:

(1) engine management and emergency handling;

(2) use of normal, abnormal and emergency checklist;

(3) air traffic control communication;

(4) departure and approach procedures;

(5) autopilot management, if applicable;

(6) use of simplified in-flight documentation;

(7) single-pilot crew resource management;

(b) for aeroplane operations under IFR the pilot must have:

(1) a minimum of 50 hours flight time under IFR on the relevant type or class of aeroplane, of which 10 hours are as commander; and

(2) completed during the preceding 90 days on the relevant type or class of aeroplane:

(i) 5 IFR flights, including 3 instrument approaches, in a single-pilot role; or

(ii) an IFR instrument approach check;

(c) for aeroplane operations at night the pilot must have:

(1) a minimum of 15 hours flight time at night which may be included in the 50 hours flight time under IFR in (b)(1); and

(2) completed during the preceding 90 days on the relevant type or class of aeroplane:

(i) 3 take-offs and landings at night in the single-pilot role; or

(ii) a night take-off and landing check;

(d) for helicopter operations under IFR, the pilot must have:

(1) 25 hours total IFR flight experience in the relevant operating environment; and

(2) 25 hours flight experience as a single pilot on the specific type of helicopter, approved for single-pilot IFR, of which 10 hours may be flown under supervision, including 5 sectors of IFR line flying under supervision using the single-pilot procedures; and

(3) completed during the preceding 90 days:

(i) 5 IFR flights as a single pilot, including 3 instrument approaches, carried out on a helicopter approved for this purpose; or

(ii) an IFR instrument approach check as a single pilot on the relevant type of helicopter, flight training device or full flight simulator.".

(9) For point ORO.FC.220 (operator conversion training and checking) substitute—

"**ORO.FC.220 Operator conversion training and checking**

(a) CRM training must be integrated into the operator conversion training course.

(b) Once an operator conversion course has been commenced, the flight crew member must not be assigned to flying duties on another type or class of aircraft until the course is completed or terminated. Crew members operating only performance class B aeroplanes may be assigned to flights on other types of performance class B aeroplanes during conversion course to the extent necessary to maintain the operation. Crew members may be assigned to flights on single-engined helicopters, during an operator conversion course on a single-engined helicopter, provided that the training is unaffected.

(c) The amount of training required by the flight crew member for the operator's conversion course must be determined in accordance with the standards of qualification and experience specified in the operations manual, taking into account the flight crew member's previous training and experience.

(d) The flight crew member must complete:

(1) the operator proficiency check and the emergency and safety equipment training and checking before commencing line flying under supervision (LIFUS); and

(2) the line check upon completion of LIFUS. For performance class B aeroplanes, LIFUS may be performed on any aeroplane within the applicable class.

(e) In the case of aeroplanes, pilots that have been issued a type rating based on a zero flight-time training course must:

(1) commence LIFUS not later than 21 days after the completion of the skill test or after appropriate training provided by the operator. The content of that training must be described in the operations manual;

(2) complete 6 take-offs and landings in an FSTD not later than 21 days after the completion of the skill test under the supervision of a type rating instructor for aeroplanes (TRI(A)) occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012. If those take-offs and landings have not been performed within 21 days, the operator must provide refresher training, the content of which must be described in the operations manual;

(3) conduct the first 4 take-offs and landings of the LIFUS in the aeroplane under the supervision of a TRI(A) occupying the pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012(**a**).

(f) If operational circumstances, such as applying for a new AOC or adding a new aircraft type or class to the fleet, do not allow the operator to comply with the requirements in point (d), the operator may develop a specific conversion course, to be used temporarily for a limited number of pilots with the prior approval by the CAA.".

(10) For point ORO.FC.230 (recurrent training and checking) substitute—

"**ORO.FC.230 Recurrent training and checking**

(a) In respect of every aircraft on which they operate, each flight crew member must complete the recurrent training and checking relevant to the type or variant of aircraft, and the associated equipment for that aircraft.

(b) Operator proficiency check

(1) Each flight crew member must complete operator proficiency checks while acting as part of the normal crew complement.

(2) When the flight crew member is required to operate under IFR, the operator proficiency check must be conducted without external visual reference, until the DA or DH or MDA or MDH is reached.

(3) The operator proficiency check remains valid for 6 consecutive months except as provided for in point (4).

(4) For seasonal operations by performance class B aeroplanes under VFR by day an operator proficiency check remains valid for 8 consecutive months.

(5) The proficiency check must be undertaken before commencing CAT operations.

(c) Line check

Each flight crew member must complete a line check on the aircraft which remains valid for 12 calendar months.

(d) Emergency and safety equipment training and checking

Each flight crew member must complete recurrent training and checking on the location and use of all emergency and safety equipment carried on board the aircraft. This remains valid for 12 calendar months.

(e) CRM training

(1) CRM training elements must be integrated into all appropriate phases of the recurrent training.

(2) Each flight crew member must undergo specific modular CRM training. All major topics of CRM training must be covered by distributing modular training sessions as evenly as possible over each 3 year period.

(**a**) EUR 2012/748, amended by S.I. 2019/645, 2020/116, 2022/1235 and 2023/588.

(f) Each flight crew member must undergo ground training and flight training in an FSTD or an aircraft, or a combination of both, at least every 12 calendar months.".

(11) For point ORO.FC.235 (pilot qualification to operate in either pilot's seat) substitute—

"**ORO.FC.235 Pilot qualification to operate in either pilot's seat – aeroplanes**

(a) Where a commander of an aeroplane is required to:

(1) operate in either pilot seat and carry out co-pilot duties; or

(2) conduct training or checking duties,

the commander must complete additional training and checking (ADTC) to ensure that they are proficient in conducting relevant normal, abnormal and emergency procedures from either pilot seat.

(b) The ADTC may be conducted together with either the operator proficiency check prescribed in ORO.FC.230(b), or the EBT programme prescribed in ORO.FC.231.

(c) The ADTC must be specified in the operations manual and must include at least the following:

(1) an engine failure during take-off;

(2) a one-engine-inoperative approach and go around;

(3) a one-engine-inoperative landing.

(d) The ADTC is valid for 12 months except where undertaken via an EBT programme prescribed in ORO.FC.231, in which case the validity is determined in accordance with ORO.FC.232.

(e) When operating in the co-pilot's seat, the checks required by ORO.FC.230 or the assessment and training required by ORO.FC.231 for operating in the commander's seat must, in addition, be valid and current.

(f) The pilot relieving the commander must have demonstrated, concurrent with either of the requirements referred to in point (i), practice of drills and procedures that would not normally be the relieving pilot's responsibility. Where the differences between left and right handed seats are not significant, practice may be conducted in either seat.

(g) The pilot, other than the commander, occupying the commander's seat must demonstrate, concurrent with either of the requirements referred to in point (i), practice of drills and procedures which are the commander's responsibility acting as pilot monitoring. Where the differences between left and right handed seats are not significant, practice may be conducted in either seat.

(i) The requirements are the operator proficiency checks prescribed in ORO.FC.230(b) and the assessment and training required by ORO.FC.231.".

(12) After point ORO.FC.235 insert—

"**ORO.FC.236 Pilot qualification to operate in either pilot's seat – helicopters**

(a) A helicopter pilot whose duties require them to operate in either pilot's seat must complete ADTC to ensure that they are proficient in conducting the relevant normal, abnormal and emergency procedures from either seat.

(b) The ADTC is valid for 12 months.

(c) Current FIs or TRIs on the relevant helicopter type are deemed to have met the requirement in point (a) if they have undertaken a FI or TRI activity on that type and on the helicopter.".

(13) For point ORO.FC.240 (operation on more than one type or variant) substitute—

"**ORO.FC.240 operation on more than one type or variant**

(a) The procedures or operational restrictions for operation on more than one type or variant established in the operations manual and approved by the CAA must cover:

(1) the flight crew members' minimum experience level;

(2) the minimum experience level on one type or variant before beginning training for and operation of another type or variant;

(3) the process whereby flight crew qualified on one type or variant will be trained and qualified on another type or variant; and

(4) the applicable recent experience requirements for each type or variant.

(b) Point (a) does not apply to operations of performance class B aeroplanes if they are single-pilot classes of reciprocating engine aeroplanes operating under VFR by day.".

(14) In point ORO.FC.A.245 (alternative training and qualification programme)—

(a) for point (d) substitute—

"(d) In addition to the checks required by ORO.FC.230 and FCL.060 of Annex I (Part-FCL) to Regulation (EU) No 1178/2011, each flight crew member must complete a line orientated evaluation (LOE) conducted in an FSTD. An LOE is completed when the syllabus of the LOE is completed and that flight crew member has demonstrated an acceptable level of performance. The LOE is valid for 12 calendar months.";

(b) for points (e)(1) to (3) substitute—

"(1) Operator proficiency check to 12 calendar months;

(2) Line check to 24 calendar months;

(3) Emergency and safety equipment checking to 24 calendar months.";

(c) after point (e) insert—

"(f) Each flight crew must undergo specific modular CRM training. All major topics of CRM training must be covered by distributing modular training sessions as evenly as possible over each 3 year period.

(g) The ATQP programme must include 48 hours on an FTSD for each flight crew member distributed evenly over a 3 year programme. However, the operator may reduce the number of FSTD hours down to a minimum of 36 hours where the operator can demonstrate that the level of safety that is achieved is equivalent to that of the training and checking requirements substituted by the ATQP programme.".

(15) In point ORO.FC.H.250 (commanders holding a CPL(H)), for point (a)(1) substitute—

"(1) when operating under IFR, they have completed a minimum of 700 hours total flight time on helicopters, which must include, 300 hours as a pilot-in-command and 100 hours under IFR of the total flight time on helicopters. Except that:

(i) up to 50 hours instrument time performed on an FFS(H) level B or FTD level 3 qualification or higher qualified for instrument training may be credited towards the 100 hours requirement; and

(ii) hours operating as co-pilot within an established multi-crew system prescribed in the operations manual may be substituted on the basis of 2 hours flight time as co-pilot for 1 hour flight time as pilot-in-command for the 300 hours requirement;".

(16) Before point ORO.FC.330 (recurrent training and checking – operator proficiency check) insert—

"ORO.FC.320 Operator conversion training and checking

The operator conversion course must include an operator proficiency check.

ORO.FC.325 Equipment and procedure checking

When standard operating procedures relating to a specialised operation require equipment and procedure training, a flight crew member must undergo an operator proficiency check on a suitable FSTD or aircraft.".

(17) In point ORO.FC.330 (recurrent training and checking – operator proficiency check)—

(a) for point (a) substitute—

"(a) Each flight crew member must complete recurrent training and operator proficiency checks. In the case of specialised operations, the recurrent training and checking must cover the relevant aspects associated with the specialised tasks described in the operations manual.";

(b) for point (c) substitute—

"(c) The validity period of the operator proficiency check must be 12 calendar months.".

Amendment of Annex 4 to Commission Regulation (EU) No 965/2012

7.—(1) Annex 4 (commercial air transport operations (part-CAT)) is amended as follows.

(2) In Subpart A (general requirements), in point CAT.GEN.MPA.100 (crew responsibilities)—

(a) for point (b)(5) substitute—

"(5) when undertaking duties for more than one operator:

(i) maintain their individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements;

(ii) provide each operator with the date needed to schedule activities in accordance with the applicable FTL requirements;

(iii) provide each operator with the data needed regarding operations on more than one type or variant.";

(b) for point (c)(5) substitute—

"(5) if the crew member knows or suspects that they are suffering from fatigue as referred to in Annex V, point 7.5 to Regulation (EU) No 1139/2018 or feels otherwise unfit, to the extent that the flight might be endangered.".

(3) In Subpart B (operating procedures), section 1 (motor-powered aircraft)—

(a) after point CAT.OP.MPA.100 (use of air traffic services) insert—

"CAT.OP.MPA.101 Altimeter check and settings

The operator must establish procedures for:

(a) altimeter setting and cross-checking before each departure;

(b) altimeter settings for all phases of flight, which must take into account the procedures established by the State of the aerodrome or the State of airspace if applicable.";

(b) omit point CAT.OP.MPA.106 (use of isolated aerodromes – aeroplanes);

(c) in point CAT.OP.MPA.110 (aerodrome operating minima)—

(i) in point (a)—

(aa) after "used" insert "in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations";

(bb) omit the second sentence;

(ii) omit point (b);

(iii) for point (c)(4) substitute—

"(4) any conditions or limitations stated in the aircraft flight manual;";

(iv) for point (c)(6) substitute—

"(6) the relevant operational experience of the operator;";

(v) for points (c)(8) and (9) substitute—

"(8) the adequacy and performance of the available visual and non-visual aids and infrastructure;

(9) the obstacles in the climb-out areas and necessary clearance margins;

(10) the IAP;

(11) the aerodrome characteristics and the available air navigation services;

(12) any minima that may be promulgated by the State of the aerodrome;

(13) the conditions prescribed in the operations specification including any specific approvals for low-visibility operations or operations with operational credits;

(14) any non-standard characteristics of the aerodrome, the IAP or the local environment.
";

(vi) in point (d), after "operations manual.", insert "That method and any changes to that method must be approved by the CAA.";

(d) for point CAT.OP.MPA.115 (approach flight technique – aeroplanes) substitute—

"**CAT.OP.MPA.115 Approach flight technique – aeroplanes**

(a) All aeroplane approach operations must be flown as stabilised approach operations unless otherwise approved by the CAA for a particular approach to a particular runway.

(b) The CDFA technique must be used for aeroplane operations using NPA procedures except where the CAA has approved another flight technique for a particular runway.";

(e) omit points CAT.OP.MPA.150 (fuel policy) and CAT.OP.MPA.151 (fuel policy – alleviations);

(f) in point CAT.OP.MPA.175 (flight preparation), in point (b)(7), after "fuel" add "or energy";

(g) after point CAT.OP.MPA.175 insert—

"**CAT.OP.MPA.177 Submission of the ATS flight plan**

(a) If an ATS flight plan is not submitted as it is not required by the rules of the air, adequate information must be deposited by the operator in order to permit alerting services to be activated if required.

(b) When operating from a site where it is impossible to submit an ATS flight plan, the ATS flight plan must be transmitted as soon as possible after take-off by the commander or the operator.";

(h) for points CAT.OP.MPA.180 (selection of aerodromes – aeroplanes) to CAT.OP.MPA.200 (refuelling/defueling with wide-cut fuel) substitute—

"**CAT.OP.MPA.180 Fuel Scheme – aeroplanes**

(a) The operator must establish, implement and maintain a fuel scheme for aeroplanes that:

(1) is appropriate for the type of operation performed;

(2) corresponds to the capability of the operator to support its implementation and is either a basic fuel scheme, or a scheme that provides a higher or equivalent level of safety to a basic fuel scheme, and is either a basic fuel scheme with variations or an individual fuel scheme.

(b) The fuel scheme must be contained in the operations manual and comprise:

(1) fuel or energy planning and in-flight replanning policy;

(2) an aerodrome selection policy;

(3) an in-flight fuel or energy management policy.

(c) The fuel scheme, and any change to it, must be approved by the CAA prior to implementation.

(d) Before an individual fuel scheme for aeroplanes is approved, the operator must:

(1) establish a baseline safety performance of its current fuel scheme;

(2) demonstrate that it has the capability to support the implementation of the proposed individual fuel scheme, including the capability to exercise adequate operational control and to ensure exchange of relevant safety information between the operational control personnel and the flight crew; and

(3) establish a safety risk assessment that demonstrates how an equivalent level of safety to that of the current fuel scheme is achieved.

CAT.OP.MPA.181 Fuel scheme – fuel or energy planning and in-flight replanning policy- aeroplanes

(a) An operator's fuel scheme for an aeroplane must:

(1) include a fuel planning and in-flight replanning policy ("the planning policy");

(2) ensure that the aeroplane carries sufficient usable fuel or energy to safely complete the planned flight with allowance for deviations from the planned operation;

(3) ensure that procedures are developed for the planning policy;

(4) ensure that the fuel or energy planning of the flight is based on:

(i) current aircraft specific data derived from fuel or energy consumption monitoring, or if that is not available;

(ii) data provided from the aeroplane manufacturer.

(b) The operator must ensure that the fuel planning of aeroplane flights takes into account the operating conditions under which the flight will be undertaken, specifically:

(1) the aircraft fuel or energy consumption;

(2) anticipated masses;

(3) anticipated weather conditions;

(4) the effects of deferred maintenance items or configuration deviations, or both;

(5) the expected departure and arrival routing and runways; and

(6) anticipated delays.

(c) The operator must ensure that the pre-flight calculations of the usable fuel or energy that is required for an aeroplane flight includes:

(1) taxi fuel or energy that is not less than the amount expected to be used prior to take-off;

(2) trip fuel or energy that must be the amount required to enable the aeroplane to fly from take-off, or from the point of in-flight replanning, to landing at the destination aerodrome;

(3) contingency fuel;

(4) destination alternate fuel or energy:

(i) when a flight is operated with at least one destination alternate aerodrome, it must be the amount of fuel or energy required to fly from the destination aerodrome to the destination alternate aerodrome; or

(ii) when a flight is operated with no destination alternate aerodrome, it must be the amount of fuel or energy required to hold at the destination aerodrome, while enabling the aeroplane to perform a safe landing and to allow for deviations from the planned operation; as a minimum, the amount must be 15 minutes of fuel or energy at holding speed 1500 ft (450 m) above the aerodrome elevation in standard conditions, calculated according to the estimated aeroplane mass on arrival at the destination aerodrome;

(5) final reserve fuel being the amount of fuel or energy that is calculated at holding speed at 1500 ft (450 m) above the aerodrome elevation in standard conditions calculated according to the estimated aeroplane mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required, and must not be less than:

(i) for aeroplanes with reciprocating engines, the fuel or energy needed to fly for 45 minutes;

(ii) for turbine-engine aeroplanes, the fuel or energy needed to fly for 30 minutes.

(6) additional fuel (where required by the type of operation) which must be the greater of the amount of fuel or energy to enable the aeroplane to land at a FE ERA aerodrome in the event of a FE ERA aerodrome critical scenario or an aircraft failure at the most critical point along the route that significantly increases the fuel or energy consumption. This additional fuel or energy is required only if the minimum amount of fuel or energy that is calculated according to points (c)(2) to (c)(5) is not sufficient for such an event;

(7) extra fuel or energy to take into account anticipated delays or specific operational constraints; and

(8) discretionary fuel or energy, if required by the commander.

(d) The operator must ensure that in-flight replanning procedures for calculating the usable fuel or energy that is required when an aeroplane flight proceeds along a route or to a destination aerodrome other than the ones originally planned includes points (c)(2) to (c)(7).

CAT.OP.MPA.182 – Fuel scheme – aerodrome selection policy – aeroplanes

In respect of aeroplanes:

(a) At the planning stage, the operator must ensure that once the flight has commenced, there is reasonable certainty that an aerodrome where a safe landing can be made will be available at the estimated time of use of that aerodrome.

(b) At the planning stage, to allow for a safe landing in case of an abnormal or emergency situation after take-off, the operator must select and specify in the operational flight plan a take-off alternate aerodrome if either:

(1) the weather conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation; or

(2) it would otherwise be impossible to return to the aerodrome of departure.

(c) The take-off alternate aerodrome must be located within a distance from the departure aerodrome that minimises the risk of exposure to potential abnormal or emergency situations. In choosing the take-off alternate aerodrome, the operator must, at least, consider the following:

(1) actual and forecast weather conditions;

(2) availability and quality of the aerodrome infrastructure;

(3) navigation and landing capabilities of the aircraft in abnormal or emergency conditions, taking into account the redundancy of critical systems; and

(4) specific approvals held.

(d) At the planning stage, for each IFR flight, the operator must select and specify in the operational and ATS flight plans one or more aerodromes so that two safe-landing options are available during normal operation when:

(1) reaching the destination aerodrome; or

(2) reaching the point of no return, to any available FE ERA aerodrome during isolated aerodrome operations; a flight to an isolated aerodrome must not be continued past the point of no return unless a current assessment of weather conditions, traffic and other operational conditions indicates that a safe landing can be made at the destination aerodrome at the estimated time of use. To use an isolated aerodrome as a destination aerodrome, the operator must have prior approval from the CAA.

(e) The operator must provide appropriate safety margins to flight planning to take into account a possible deterioration of the available forecast weather conditions at the estimated time of landing.

(f) For each IFR flight, the operator must ensure that sufficient means are available to navigate to, and land at, the destination aerodrome or at any destination alternate aerodrome in the event of loss of capability for the intended approach and landing operation.

CAT.OP.MPA.185 Fuel scheme – in-flight fuel management policy - aeroplanes

(a) The operator must establish procedures for in-flight fuel or energy management for aeroplanes that ensures:

(1) continual reanalysis and validation of the assumptions made during the planning stage (pre-flight or in-flight replanning, or both) and adjustment if necessary;

(2) that the amount of usable fuel or energy remaining on board is protected and not less than the fuel or energy that is required to proceed to an aerodrome where a safe-landing can be made; and

(3) relevant fuel or energy data for the purposes of points (1) to (2) is recorded.

(b) The aeroplane operator must have procedures in place to require the commander to obtain delay information from a reliable source when unforeseen circumstances may result in landing at the destination aerodrome with less than the final reserve of fuel or energy plus any fuel or energy required to proceed to an alternate aerodrome (should it be required) or to an isolated aerodrome.

(c) The aeroplane commander must advise air traffic control of a 'minimum fuel or energy state' by declaring "MINIMUM FUEL" when the commander has committed to land at a specific aerodrome and calculated that any change to the existing clearance to that aerodrome may result in landing with less than the planned final fuel or energy reserve.

(d) The aeroplane commander must declare to air traffic control a situation of 'fuel or energy emergency' by broadcasting "MAYDAY, MAYDAY, MAYDAY, FUEL" when the usable fuel or energy that is calculated to be available upon landing at the nearest aerodrome where a safe landing can be made is less than the planned final reserve fuel or energy.

CAT.OP.MPA.190 – Fuel Scheme – helicopters

(a) The operator must establish, implement and maintain a fuel scheme for helicopters that comprises:

(1) a fuel or energy planning and in-flight replanning policy; and

(2) an in-flight fuel or energy management policy.

(b) The fuel scheme must:

(1) be appropriate for the type of operation performed;

(2) correspond to the capability of the operator to support its implementation.

(c) The fuel scheme, and any change to it, must be approved by the CAA prior to implementation.

CAT.OP.MPA.191 – Fuel scheme – Fuel planning and in-flight replanning policy - helicopters

(a) As part of the fuel scheme for helicopters, the operator must establish a fuel or energy planning and in-flight replanning policy to ensure that the aircraft carries sufficient useable fuel or energy to safely complete the planned flight and allow for deviations from the planned operation.

(b) The operator must ensure that the fuel or energy planning of the helicopter flight, as a minimum, includes:

(1) procedures contained in the operations manual as well as:

(i) current aircraft specific data derived from fuel or energy consumption monitoring system, or if that is not available;

(ii) data provided from the helicopter manufacturer.

(2) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel or energy consumption data;

(ii) anticipated masses;

(iii) anticipated weather conditions;

(iv) the effects of deferred maintenance items or configuration deviations, or both;

(v) procedures and restrictions introduced by air navigation service providers.

(c) The operator must ensure that the pre-flight calculations of the usable fuel or energy that is required for a helicopter flight includes:

(1) taxi fuel or energy that must not be less than the amount expected to be used prior to take-off;

(2) trip fuel or energy that must be the amount required to enable the helicopter to fly from take-off, or from the point of in-flight replanning, to landing at the destination aerodrome;

(3) contingency fuel;

(4) destination alternate fuel or energy, if a destination alternate aerodrome is required;

(5) final reserve fuel or energy that must not be less than:

(i) if flying under VFR and navigating by day with reference to visual landmarks, 20 minutes of fuel or energy at best-range speed;

(ii) if flying under VFR and navigating other than by reference to visual landmarks, or at night, 30 minutes of fuel or energy at best-range speed;

(ii) if flying under IFR, 30 minutes of fuel or energy at holding speed at 1500 ft (450 m) above the aerodrome elevation in standard conditions, calculated according to the helicopter estimated mass on arrival at the destination alternate aerodrome or at the destination aerodrome when no destination alternate aerodrome is required;

(6) extra fuel or energy to take into account anticipated delays or specific operational constraints; and

(7) discretionary fuel or energy if required by the commander.

(d) The operator must ensure that if a helicopter flight has to proceed along a route or to a destination aerodrome other than the one originally planned, in-flight replanning procedures for calculating the required useable fuel or energy include:

(1) trip fuel or energy for the remainder of the flight;

(2) reserve fuel or energy consisting of:

(i) contingency fuel;

(ii) alternate fuel or energy if a destination alternate aerodrome is required;

(iii) final reserve fuel or energy; and

(iv) additional fuel or energy if required by the type of operation;

(3) extra fuel or energy to take into account anticipated delays or specific operational constraints; and

(4) discretionary fuel or energy if required by the commander.

(e) As an alternative to points (b) to (d), for helicopters with a maximum certified take-off mass of 3175kg or less, flying by day and over routes navigated by reference to visual landmarks, or for local helicopter operations, the fuel or energy policy must ensure that on completion of the flight, or series of flights, the final reserve fuel or energy is sufficient for:

(1) 30-minute flying time at best-range speed; or

(2) 20-minute flying time at best-range speed if operating within an area providing continuous and suitable operating sites.

(f) Where a HEMS mission is conducted under VFR within a local and defined geographical area, the fuel planning policy may, as an alternative to points (c) and (d) be in accordance with SPA.HEMS.150.

CAT.OP.MPA.192 – Selection of aerodromes and operating sites – helicopters

(a) For helicopter flights under instrument meteorological conditions (IMC), the operator must select a take-off alternate aerodrome within one-hour flying time at normal cruising speed if it is not possible to return to the site of departure for weather reasons.

(b) At the planning stage, for each helicopter IFR flight, the operator must select and specify in the operational and ATS flight plans one or more aerodromes or operating sites so that two safe landing options are available during normal operation, except as provided under point SPA.HOFO.120(b).

(c) The operator must apply appropriate safety margins to flight planning for helicopters to take into account a possible deterioration of the available forecast weather conditions at the estimated time of landing.

(d) For each helicopter IFR flight, the operator must ensure that sufficient means are available to navigate to, and land at, the destination aerodrome or at any destination alternate aerodrome in the event of a loss of capability for the intended approach and landing operation.

CAT.OP.MPA.195 – Fuel scheme – in-flight management policy – helicopters

(a) The operator must establish procedures to ensure that in-flight fuel or energy checks and fuel or energy management are performed in accordance with the helicopter's fuel scheme.

(b) The helicopter commander must monitor the amount of useable fuel or energy remaining on board to ensure that it is protected and not less than the fuel or energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(c) The helicopter commander must advise air traffic control of a 'minimum fuel or energy state' by declaring "MINIMUM FUEL" when the commander has committed to land at a specific aerodrome and calculated that any change to the existing clearance to that aerodrome may result in landing with less than the planned final fuel or energy reserve.

(d) The helicopter commander must declare a situation of 'fuel or energy emergency' by broadcasting "MAYDAY, MAYDAY, MAYDAY, FUEL" when the useable fuel or energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel or energy.

CAT.OP.MPA.200 – Special refuelling or defueling of the aircraft

(a) Special refuelling or defueling may only be conducted if the operator has:

(1) performed a risk assessment;

(2) developed procedures;

(3) established and implemented a training programme for personnel involved in such operations.

(b) The CAA must approve, before implementation, all special refuelling or defueling procedures for aeroplanes and special refuelling procedures with rotors turning for helicopters.

(c) In this point:

(1) "special refuelling" means:

(i) refuelling with an engine running or rotors turning;

(ii) refuelling with passengers embarking, on board or disembarking;

(iii) refuelling with wide-cut fuel;

(2) “special defueling” means:

(ii) defueling with passengers embarking, on board or disembarking;

(iii) defueling with wide-cut fuel.”;

(i) in point CAT.OP.MPA.245 (meteorological conditions – all aircraft), for point (c) substitute—

“(c) On VFR flights the commander must only commence the flight when the appropriate weather reports, or forecasts, or both, indicate that the meteorological conditions along the part of the route to be flown under VFR will, at the appropriate time, be at, or above, the VFR limits.”;

(j) in point CAT.OP.MPA.246 (meteorological conditions – aeroplanes), for point (b) substitute—

“(b) point of no return when using the isolated aerodrome procedure,”;

(k) in point CAT.OP.MPA.247 (meteorological conditions – helicopters), in point (a), after “cloud” omit “ceiling”;

(l) in point CAT.OP.MPA.260 (fuel and oil supply), after “fuel” insert “or energy”;

(m) in point CAT.OP.MPA.265 (take-off conditions), for point (b) substitute—

“(b) the selected aerodrome operating minima are consistent with the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.”;

(n) omit points CAT.OP.MPA.280 (in-flight fuel management – aeroplanes) and CAT.OP.MPA.281 (in-flight fuel management - helicopters);

(o) for point CAT.OP.MPA.300 (approach and landing conditions) substitute—

“CAT.OP.MPA.300 Approach and landing conditions – aeroplanes and helicopters

Before commencing an approach to land, the commander must be satisfied that:

(a) the weather conditions at the aerodrome or operating site and the condition of the runway or FATO intended to be used will not prevent a safe approach, landing or go-around, taking into consideration the performance information in the operations manual; and

(b) the selected aerodrome operating minima are consistent with:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.”;

(p) for CAT.OP.MPA.305 (commencement and continuation of approach) substitute—

“**CAT.OP.MPA.305 Commencement and continuation of approach**

(a) For aeroplanes, if the reported VIS or controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS where DH or MDH is more than 1000 ft above the aerodrome elevation.

(b) For helicopters, if the reported RVR is less than 550 m and the controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS where the DH or the MDH is more than 1000 ft above the aerodrome elevation.

(c) If the required visual reference is not established, then a missed approach must be executed at, or before, the DA or DH or the MDA or MDH.

(d) If the required visual reference is not maintained after DA or DH or MDA or MDH, then a go-around must be executed promptly.

(e) Notwithstanding point (a), in the case where no RVR is reported, and the reported VIS is less than the applicable minimum, but the converted weather visibility is equal or greater than the applicable minimum, the instrument approach can be continued to the DA or DH or MDA or MDH.";

(q) in point CAT.OP.MPA.310 (operating procedures – threshold crossing height – aeroplanes), for "precision approaches" substitute "3D instrument approach operations";

(r) after point CAT.OP.MPA.311 (reporting on runway braking action) insert—

"**CAT.OP.MPA.312 EFVS operations**

(a) When conducting EFVS operations, an operator must ensure:

(1) the aircraft is certified for the intended operations;

(2) only runways, FATOs and IAPs suitable for EFVS operations are used;

(3) the flight crew members are competent to conduct the intended operation, and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation is established;

(4) operating procedures are established;

(5) any relevant information is documented in the minimum equipment list;

(6) any relevant information is documented in the maintenance programme;

(7) safety assessments are carried out and performance indicators are established to monitor the level of safety of the operation;

(8) the aerodrome operating minima take into account the capability of the system used.

(b) The operator must not conduct EFVS 200 operations when conducting LVOs.

(c) Notwithstanding point (a)(1), the operator may use EVS meeting the minimum criteria to conduct EFVS 200 operations, provided that this is approved by the CAA.".

(4) In Subpart C (aircraft performance and operating limitations)—

(a) in point CAT.POL.A.215 (en-route – one-engine-inoperative (OEI)), in point (c)(3), for "CAT.OP.MPA.150" substitute "CAT.OP.MPA.181";

(b) in point CAT.POL.A.220 (en-route – aeroplanes with three or more engines, two engines inoperative), in point (f), after "fuel" insert "or energy";

(c) in point CAT.POL.A.230 (landing – dry runways)—

(i) in point (e)—

(aa) for "shall either" substitute "must be capable of";

(bb) for each occurrence of "land" substitute "landing";

(cc) in point (1), after "air;" insert "and";

(ii) in points (f)(1) and (f)(2), for "(d)" substitute "(e)";

(d) in point CAT.POL.A.235 (landing – wet and contaminated runways)—

(i) in point (e)—

(aa) for "shall either" substitute "must be capable of";

(bb) for each occurrence of "land" substitute "landing";

(cc) in point (1), after "air," insert "and";

(ii) in points (h)(1) and (h)(2), for "(d)" substitute "(e)";

(e) in point CAT.POL.A.415 (en-route - OIE), in point (e) for "CAT.OP.MPA.150" substitute "CAT.OP.MPA.181";

(f) in point CAT.OP.POL.A.420 (en-route - aeroplanes with three or more engines, two engines inoperative), in point (d) after "fuel" insert "or energy".

(5) In Subpart D (instruments, data, equipment), in point CAT.IDE.A.195 (data link recording), in point (e)—

(a) before "recorder" insert "data link";

(b) for "(d) and (e)" substitute "(f) and (g)".

Amendment of Annex 5 to Commission Regulation (EU) No 965/2012

8.—(1) Annex 5 (specific approvals - part-SPA) is amended as follows.

(2) In Subpart B (performance-based navigation (PBN) operations), in point SPA.PBN.105 (PBN operational approval), in point (f) after "APCH" insert "or RNP 0.3 helicopter".

(3) In Subpart E (low visibility operations (LVOs))—

(a) in point SPA.LVO.100 (low visibility operations) for points (a) to (f) substitute—

"(a) take-off operations with visibility conditions of less than 400 m RVR;

(b) instrument approach operations in low-visibility conditions; and

(c) operations with operational credits, except for EFVS 200 operations, for which a specific approval is not required.";

(b) for points SPA.LVO.105 (LVO approval) and SPA.LVO.110 (general operating requirements) substitute—

"SPA.LVO.105 Specific approval criteria

To obtain a specific approval as required by SPA.LVO.100, the operator must demonstrate that:

(a) for low-visibility approach operations, LVTO operations in an RVR less than 125 m, and operations with operational credits, the aircraft has been certified for the intended operations;

(b) the flight crew members are competent to conduct the intended operation and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation has been established in accordance with SPA.LVO.120;

(c) operating procedures for the intended operations have been established;

(d) any relevant changes to the minimum equipment list have been made;

(e) any relevant changes to the maintenance programme have been made;

(f) procedures have been established to ensure the suitability of aerodromes, including instrument flight procedures, for the intended operations, in accordance with SPA.LVO.110; and

(g) for the intended operations, a safety assessment has been carried out, and performance indicators have been established to monitor the level of safety.

SPA.LVO.110 Aerodrome-related requirements, including instrument flight procedures

The operator must ensure that only aerodromes and instrument flight procedures that are suitable for the intended operations are used for LVOs and operations with operational credits.";

(c) omit point SPA.LVO.115 (aerodrome related requirements);

(d) for point SPA.LVO.120 (flight crew training and qualifications) substitute—

"**SPA.LVO.120 Flight crew competence**

(a) For all types of LVOs and operations with operational credits for which an approval has been granted, the operator must ensure that each flight crew member successfully completes training and checking which:

(1) includes initial and recurrent training and checking;

(2) includes normal, abnormal and emergency procedures;

(3) is tailored to the type of technologies used in the intended operations; and

(4) takes into account the human factor risks associated with the intended operations.

(b) The operator must ensure that the flight crew remains competent to conduct the intended operations.

(c) The operator must keep records of the training and qualifications for the flight crew members.

(d) The training and checking must be conducted by appropriately qualified personnel which in the case of flight and flight simulation training and checking requires the personnel providing the training to be qualified in accordance with Annex I (Part-FCL) of Commission Regulation (EU) No. 1178/2011.".

(4) In Subpart H (helicopter operations with night vision imaging systems), in point SPA.NVIS.120 (NVIS operating minima), in point (a) omit "VFR".

(5) In Subpart J (helicopter emergency medical service operations)—

(a) in point SPA.HEMS.120 (HEMS operating minima), in point (b), in the first sentence, before "ceiling" omit "cloud";

(b) for point SPA.HEMS.150 (fuel supply) substitute—

"SPA.HEMS.150 Fuel planning policy - alleviation

Where a HEMS mission is conducted under VFR within a local and defined geographical area the fuel or energy policy must ensure that on completion of the mission, the final reserve of fuel or energy is sufficient for:

(a) 30 minutes flying time at best-range speed; or

(b) 20 minutes flying time at best-range speed by day when operating within an area providing continuous and suitable operating sites.";

(c) omit point SPA.HEMS.155 (refuelling with passengers embarking, on-board or disembarking).

(6) In Subpart K (helicopter offshore operations)—

(a) in point SPA.HOFO.120 (selection of aerodromes and operating sites), in point (a)—

(i) for "CAT.OP.MPA.181" substitute "CAT.OP.MPA.192";

(ii) for "land aerodrome if either:" substitute "land destination aerodrome provided that sufficient operational contingency is in place to secure a safe return from offshore.";

(iii) omit points (1) and (2);

(b) for point SPA.HOFO.125 (airborne radar approaches (ARAs) to offshore locations – CAT operations) substitute—

"**SPA.HOFO.125 Offshore standard approach procedures (OSAPs)**

(a) An operator must establish procedures to ensure that no offshore standard approach procedures (OSAPs) are followed unless:

(1) the helicopter is capable of providing navigation and real-time obstacle environment information for obstacle clearance; and

(2) either:

(i) the MDH is determined from a radio altimeter or a device that provides equivalent performance, or

(ii) MDA is applied and it includes an adequate margin.

(b) If the operator follows OSAPs to rigs or vessels in transit, the flight must be conducted in multi-pilot operations.

(c) The decision range must provide adequate obstacle clearance in the missed approach from any destination for which an OSAP is planned.

(d) The approach must only be continued beyond decision range or below the MDA or MDH when visual reference to the destination has been established.

(e) For single-pilot operations, appropriate increments must be added to the MDA or MDH and decision range.

(f) When an OSAP is followed to a non-moving offshore location (such as a fixed installation or moored vessel) and a reliable GNSS position of the location is available in the navigation system, the GNSS or area navigation system must be used to enhance the safety of the OSAP.

(g) The operator must include OSAPs in its initial and recurrent training and checking programmes.".

(7) In Subpart L (single-engined turbine aeroplane operations at night etc.), in point SPA.SET-IMC.110 (equipment requirements for SET-IMC operations), in point (l), after "fuel" insert "or energy".

Amendment of Annex 6 to Commission Regulation (EU) No 965/2012

9.—(1) Annex 6 (non-commercial air operations with complex motor-powered aircraft (part-NCC)) is amended as follows.

(2) In Subpart B (operational procedures)—

(a) after point NCC.OP.100 (use of aerodromes and operating sites) insert—

"NCC.OP.101 Altimeter check and settings

The operator must establish procedures for:

(a) altimeter checking before each departure.

(b) altimeter settings for all phases of flight, which must take into account the procedures established by the State of the aerodrome or the State of the airspace if applicable.";

(b) in point NCC.OP.105 (specification of isolated aerodromes – aeroplanes)—

(i) after "fuel" insert "or energy planning and in-flight replanning";

(ii) for "shall" substitute "must not";

(iii) for "if" substitute "unless";

(iv) for "adequate" substitute "weather-permissible";

(c) for point NCC.OP.110 (aerodrome operating minima – general) substitute—

"**NCC.OP.110 Aerodrome operating minima – general**

(a) The operator must establish aerodrome operating minima for each departure aerodrome, destination aerodrome, or alternate aerodrome that is planned to be used in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.

(b) The method used to establish aerodrome operating minima must take the following elements into account:

(1) the type, performance and handling characteristics of the aircraft;

(2) the equipment available on the aircraft for the purpose of navigation, acquisition of visual references and the control of the flight path during take-off, approach, landing and missed approach;

(3) any conditions or limitations in the aircraft flight manual;

(4) the dimensions and characteristics of the runways or FATOs that may be selected for use;

(5) the adequacy and performance of the available visual and non-visual aids and infrastructure;

(6) the OCA or OCH for the IAP;

(7) the obstacles in the climb-out areas and necessary clearance margins;

(8) any non-standard characteristics of the aerodrome, the IAP or the local environment;

(9) the composition of the flight crew, their competence and experience;

(10) the IAP;

(11) the aerodrome characteristics and the available air navigation services, if any;

(12) any minima promulgated by the State of the aerodrome where available;

(13) the conditions prescribed in any specific approvals for LVOs or operations with operational credits;

(14) the relevant operational experience of the operator.

(c) The operator must specify a method of determining aerodrome operating minima in the operations manual.";

(d) omit point NCC.OP.111 (aerodrome operating minima – NPA, APV, CAT I operations);

(e) in point NCC.OP.112 (aerodrome operating minima – circling operations with aeroplanes), in point (b)—

(i) in point (2), for "2" substitute "1";

(ii) omit point (3);

(f) for points NCC.OP.130 (fuel and oil supply – aeroplanes) and NCC.OP.131 (fuel and oil supply – helicopters) substitute—

"**NCC.OP.130 Fuel Scheme – aeroplanes and helicopters**

(a) The operator must establish, implement and maintain a fuel scheme for aircraft that comprises:

(1) a fuel or energy planning and in-flight replanning policy;

(2) an in-flight fuel or energy management policy;

(b) The fuel scheme must:

(1) be appropriate for the type of operation performed; and

(2) correspond to the capability of the operator to support its implementation.

NCC.OP.131 Fuel scheme – fuel or energy planning and in-flight replanning policy – aeroplanes and helicopters

(a) Fuel or energy planning and in-flight replanning policy must ensure that the aircraft carries a sufficient amount of usable fuel or energy to safely complete the planned flight and to allow for deviations from the planned operation.

(b) The operator must ensure that the fuel or energy planning of flights is based upon at least the following:

(1) procedures contained in the operations manual;

(2) current aircraft specific data derived from a fuel or energy monitoring system or if that is not available, data provided by the aircraft manufacturer; and

(3) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel or energy consumption;

(ii) anticipated masses;

(iii) anticipated weather conditions;

(iv) the effect of deferred maintenance items or configuration deviations, or both;

(v) anticipated delays.

(c) For aeroplanes, the operator must ensure that the pre-flight calculation of the usable fuel or energy that is required for a flight includes:

(1) taxi fuel or energy that is not less than the amount expected to be used prior to take-off;

(2) trip fuel or energy that must be the amount of fuel or energy that is required to enable the aeroplane to fly from take-off, or from the point of in-flight replanning, to landing at the destination aerodrome;

(3) contingency fuel;

(4) destination alternate fuel or energy:

(i) when a flight is operated with at least one destination alternate aerodrome, it must be the amount of fuel or energy required to fly from the destination aerodrome to the destination alternate aerodrome; or

(ii) when a flight is operated with no destination alternate aerodrome, it must be the amount of fuel or energy required to hold at the destination aerodrome to compensate for the lack of a destination alternate aerodrome;

(5) final reserve fuel or energy being the amount of fuel or energy that is calculated at holding speed at 1500 ft (450 m) above the aerodrome elevation in standard conditions calculated according to the estimated aircraft mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required, and must not be less than:

(i) for aeroplanes with reciprocating engines on VFR flight by night and IFR flights, the fuel or energy to fly for 45 minutes;

(ii) for aeroplanes with reciprocating engines on VFR flights by day, the fuel or energy to fly for 30 minutes;

(iii) for turbine-engined aeroplanes, the fuel or energy to fly for 30 minutes;

(6) additional fuel or energy, if required by the type of operation, which must be the amount of fuel or energy to enable the aeroplane to perform a safe landing at an FE ERA aerodrome (FE ERA aerodrome critical scenario) in the event of an engine failure or loss of pressurisation, whichever requires the greater amount of fuel or energy based on the assumption that such a failure occurs at the most critical point along the route; this additional fuel or energy is required only if the minimum amount of fuel or energy that is calculated according to points (c)(2) to (c)(5) is not sufficient for such an event;

(7) extra fuel or energy to take into account anticipated delays or specific operational constraints; and

(8) discretionary fuel or energy, if required by the commander.

(d) For helicopters, the operator must ensure that the pre-flight calculation of the usable fuel or energy that is required for a flight includes:

(1) fuel or energy to fly to the aerodrome or operating site of intended landing;

(2) if a destination alternate aerodrome is required, destination alternate fuel or energy which is the amount of fuel or energy that is required to execute a missed approach at the aerodrome or operating site of intended landing and afterwards to fly to the specified destination alternate aerodrome, approach and land; and

(3) final reserve fuel or energy which must not be less than:

(i) for flights under VFR, fuel or energy to fly for at least 20 minutes at best-range speed; or

(ii) for IFR flights, fuel or energy to fly for at least 30 minutes at holding speed at 450 m (1500 ft) above the aerodrome or operating site of intended landing or destination alternate in standard temperature conditions.

(e) The operator must ensure that if a flight has to proceed to a destination aerodrome other than the one originally planned, in-flight replanning procedures for calculating the required usable fuel or energy are available and comply with points (c)(2) to (c)(7) for aeroplanes, and point (d) for helicopters.

(f) The pilot-in-command must not commence a flight or continue a flight in the event of in-flight replanning unless satisfied that the aircraft carries at least the planned amount of usable fuel or energy and oil to safely complete the flight.";

(g) after point NCC.OP.145 (flight preparation) insert—

"NCC.OP. 147 Destination alternate aerodromes planning minima - aeroplanes

The operator must not select an aerodrome as a destination alternate aerodrome for an aeroplane unless the latest available weather information indicates that the criteria in points (a), (b) or (c) will be met during either the period from an hour before the estimated time of arrival ("ETA") to an hour after the ETA or the period from the actual time of departure to an hour after the ETA whichever is the shorter.

(a) for an alternate aerodrome with an available instrument approach operation with DH less than 250 ft:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least the higher of 1500 m and 800 m above the instrument approach operation RVR or VIS minima.

(b) for an alternate aerodrome with an instrument approach operation with DH or MDH of 250 ft or more:

(1) a ceiling of at least 400 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least 3000 m.

(c) for an alternate aerodrome without an IAP:

(1) a ceiling of at least the higher of 2000 ft and the minimum safe IFR height; and

(2) a visibility of at least 5000 m.

NCC.OP. 148 Destination alternate aerodromes planning minima – helicopters

The operator must not select an aerodrome as a destination alternate aerodrome for a helicopter unless the latest available weather information indicates that the criteria in points (a) or (b) will be met during either the period from an hour before the ETA to an hour after the ETA or the period from actual time of departure to an hour after the ETA whichever is the shorter.

(a) for an alternate aerodrome with an IAP:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP; and

(2) a visibility of at least 1500 m by day or 3000 m by night.

(b) for an alternate aerodrome without an IAP:

(1) a ceiling of at least 2000 ft or the minimum safe IFR height, whichever is the greater; and

(2) a visibility of at least 1500 m by day or 3000 m by night.";

(h) in point NCC.OP.151 (destination alternate aerodrome - aeroplanes), in point (b), for "isolated" substitute "designated an isolated aerodrome";

(i) in point NCC.OP.155 (refuelling with passengers embarking, on board or disembarking), in point (b), after "fuel" insert "or energy";

(j) after point NCC.OP.155 insert—

"**NCC.OP.157 Refuelling with engine or rotors turning - helicopters**

(a) Refuelling of helicopters with an engine running or rotors turning must only be conducted:

(1) when no passenger is embarking or disembarking;

(2) if the operator of the aerodrome or operating site allows such operations;

(3) in accordance with any specific procedures and limitations in the aircraft flight manual;

(4) with JET A or JET A-1 fuel types; and

(5) in the presence of appropriate rescue and firefighting facilities or equipment.

(b) The helicopter operator must:

(i) establish appropriate procedures to be followed by all involved personnel, such as crew members and ground operations personnel;

(ii) assess the risk associated with refuelling a helicopter with either engine running or engine running and rotors turning;

(iii) train its crew members and ensure that the involved ground operations personnel are appropriately trained;

(iv) ensure that the helicopter refuelling procedure with engine or rotors turning or both is specified in the operations manual and approved by the CAA before implementation. Any change to that procedure must have prior CAA approval.";

(k) for point NCC.OP.195 (take-off conditions) substitute—

"NCC.OP.195 Take off conditions - aeroplanes and helicopters

Before commencing take-off of an aircraft, the pilot-in-command must be satisfied that:

(a) the weather conditions at the aerodrome or the operating site, together with the condition of the runway or FATO intended to be used, will not prevent a safe take-off and departure; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) the flight crew qualifications.";

(l) in point NCC.OP.205 (in-flight fuel management)—

(i) in point (a) after each occurrence of "fuel" insert "or energy";

(ii) for point (b) substitute—

"(b) The pilot-in-command must monitor the amount of useable fuel or energy remaining on board to ensure that it is protected and not less than the fuel or energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(c) The pilot-in-command must advise air traffic control of a 'minimum fuel or energy' state by declaring "MINIMUM FUEL" when the pilot-in-command has:

(1) committed to land at a specific aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site or other traffic delays, may result in landing with less than the planned final reserve fuel or energy.

(d) The pilot-in-command must declare a situation of 'fuel or energy emergency' by broadcasting 'MAYDAY, MAYDAY, MAYDAY fuel' when the useable fuel or energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve of fuel or energy.";

(m) for point NCC.OP.225 (approach and landing conditions - aeroplanes) substitute—

"NCC.OP.225 Approach and landing conditions – aeroplanes and helicopters

Before commencing an approach to land of an aircraft, the pilot-in-command must be satisfied that:

(a) the weather conditions at the aerodrome or the operating site and the condition of the runway or FATO intended to be used will not prevent a safe approach, landing or go-around taking into consideration the performance information contained in the operations manual; and

(b) the selected aerodrome operating minima are consistent with:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) the flight crew qualifications.";

(n) omit point NCC.OP.226 (approach and landing conditions – helicopters);

(o) for point NCC.OP.230 (commencement and continuation of approach) substitute—

"NCC.OP.230 Commencement and continuation of approach

The pilot-in-command must ensure that:

(a) for aeroplanes, if the reported VIS, or controlling RVR, for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS where the DH or the MDH is more than 1000 ft above the aerodrome elevation;

(b) for helicopters, if the reported RVR is less than 550 m and the controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS where the DH or the MDH is more than 1000 ft above the aerodrome elevation.

For all aircraft:

(c) If the required visual reference is not established, a missed approach must be executed at, or before, the DA or DH or the MDA or MDH.

(d) If the required visual reference is not maintained after DA or DH or MDA or MDH, a go-around must be executed promptly.

(e) Notwithstanding point (a), in the case where no RVR is reported, and the reported VIS is less than the applicable minimum, but the converted meteorological visibility is equal to, or greater than, the applicable minimum then the instrument approach can be continued to the DA or DH or MDA or MDH.

(f) Notwithstanding points (a) and (b), if there is no intention to land, the instrument approach may be continued to the DA or DH or MDA or MDH. A missed approach must be executed at or before the DA or DH or MDA or MDH.";

(p) after point NCC.OP.230 (commencement and continuation of approach) insert—

"**NCC.OP.235 EFVS 200 operations**

(a) When conducting EFVS 200 operations with operational credits and without a specific approval, an operator must ensure:

(1) the aircraft is certified for the intended operation;

(2) only runways, FATOs and IAPs suitable for EFVS operations are used;

(3) the flight crew members are competent to conduct the intended operation, and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation is established;

(4) operating procedures are established;

(5) any relevant information is documented in the minimum equipment list;

(6) any relevant information is documented in the maintenance programme;

(7) safety assessments are carried out and performance indicators are established to monitor the level of safety of the operation;

(8) the aerodrome operating minima take into account the capability of the system used.

(b) The operator must not conduct EFVS 200 operations when conducting LVOs.

(c) Notwithstanding point (a)(1), the operator may use EVS meeting the minimum criteria to conduct EFVS 200 operations, provided that this is approved by the CAA.";

(3) In Subpart C (aircraft performance and operating limitations), in point NCC.POL.110 (mass and balance data and documentation), in points (a)(6) to (7) and (a)(9) after "fuel" insert "or energy".

Amendment of Annex 7 to Commission Regulation (EU) No 965/2012

10.—(1) Annex 7 (non-commercial air operations with other-than complex motor-powered aircraft – part-NCO) is amended as follows.

(2) In Subpart B (operational procedures)—

(a) after point NCO.OP.100 (use of aerodromes and operating sites) insert—

"NCO.OP.101 Altimeter check and settings

The pilot-in-command must:

(a) check the proper operation of the altimeter before each departure;

(b) use appropriate altimeter settings for all phases of flight, taking into account any procedure prescribed by the State of the aerodrome or the State of the airspace, if applicable.";

(b) omit point NCO.OP.105 (specification of isolated aerodromes – aeroplanes);

(c) in point NCO.OP.110 (aerodrome operating minima – aeroplanes and helicopters)—

(i) for point (a) substitute—

"(a) For IFR flights, the pilot-in-command must establish aerodrome operating minima for each planned departure aerodrome, destination aerodrome or alternate aerodrome in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.";

(ii) for points (b)(6) to (b)(9) substitute—

"(6) any conditions or limitations stated in the aircraft flight manual;

(7) the obstacles in the climb-out areas and clearance margins;

(8) the OCA or OCH in the IAP if established;

(9) the IAP, if established;

(10) the aerodrome characteristics and the type of air navigation service available;

(11) any minima promulgated by the State of the aerodrome, where available; and

(12) the conditions prescribed in any specific approvals for LVOs or operations with operational credits.";

(d) for point NCO.OP.111 (aerodrome operating minima – NPA, APV, CAT1 operations) substitute—

"**NCO.OP.111 Aerodrome operating minima – 2D and 3D approach operations**

(a) The DH to be used for a 3D approach operation or 2D approach operation flown with the CDFA technique must not be lower than the highest of:

(1) the OCH for the category of aircraft;

(2) the published approach procedure DH or MDH, where applicable;

(3) the system minimum specified in Table 1; or

(4) the minimum DH specified in the aircraft flight manual or equivalent.

(b) The MDH for a 2D approach operation flown without the CDFA technique must not be lower than the highest of:

(1) the OCH for the category of aircraft;

(2) the published approach procedure MDH, where applicable;

(3) the system minimum specified in Table 1; or

(4) the minimum MDH specified in the aircraft flight manual, if stated.

Table 1

System Minima

Facility	*Lowest DH or MDH (ft)*
ILS/MLS/GLS	200
GNSS/SBAS (LPV)	200
Precision approach radar (PAR)	200
GNSS/SBAS (LP)	250
GNSS (LNAV)	250
GNSS/Baro-VNAV (LNAV/VNAV)	250
Helicopter point-in-space approach	250
LOC with or without DME	250
SRA (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300
SRA (terminating at 2 NM or more)	350
VOR	300
VOR/DME	250
NDB	350
NDB/DME	300
VDF	350;"

(e) in point NCO.OP.112 (aerodrome operating minima – circling operations with aeroplanes), in point (b)—

(i) in point (2), for "2" substitute "1";

(ii) omit point (3);

(f) for point NCO.OP.125 (fuel and oil supply – aeroplanes) substitute—

"NCO.OP.125 – Fuel, energy and oil supply -aeroplanes or helicopters

The pilot-in-command of an aircraft must:

(a) ensure that the aircraft carries a sufficient quantity of fuel or energy and oil, taking into account the weather conditions, any element affecting the performance of the aircraft, any delays that are expected in flight and any contingencies that may reasonably be expected to affect the flight;

(b) plan a quantity of fuel or energy to be protected as final reserve fuel or energy to ensure a safe landing, taking into account points (1) and (2), in that priority order, to determine the quantity of the final reserve fuel or energy:

(1) the severity of the hazard to persons or property that could result from an emergency landing after fuel or energy starvation;

(2) the likelihood of unexpected circumstances resulting in the final reserve fuel or energy may no longer be protected;

(c) commence a flight only if the aircraft carries sufficient fuel or energy and oil:

(1) when no destination alternate aerodrome is required, to fly to the aerodrome or operating site of intended landing, plus the final reserve fuel or energy; or

(2) when a destination alternate aerodrome is required, to fly to the aerodrome or operating site of intended landing, and afterwards, to an alternate aerodrome, plus the final reserve fuel or energy.";

(g) omit point NCO.OP.126 (fuel and oil supply – helicopters);

(h) for point NCO.OP.140 (destination alternate aerodromes – aeroplanes) to point NCO.OP.142 (destination alternate aerodromes – instrument approach operations) substitute—

"NCO.OP.140 Destination alternate aerodromes – aeroplanes

For IFR flights, the pilot-in-command of an aeroplane must specify at least one destination alternate aerodrome in the flight plan, unless the latest available weather information for the destination, for the period from an hour before the ETA to an hour after the ETA or the period from the actual time of departure to an hour after the ETA, whichever is the shorter, indicates that there will be a ceiling of at least 1000 ft above the DH or MDH for an IAP and a visibility of at least 5000 metres.

NCO.OP.141 Destination alternate aerodromes – helicopters

For IFR flights, the pilot-in-command of a helicopter must specify at least one destination alternate aerodrome in the flight plan, unless the latest available weather information, for the period from an hour before the ETA to an hour after the ETA or the period from the actual time of departure to an hour after the ETA, whichever is the shorter, indicates that there will be a ceiling of at least 1000 ft above the DH or MDH for an IAP and a visibility of at least 3000 metres.

NCO.OP.142 Destination alternate aerodrome – instrument approach operations

The pilot-in-command of an aircraft must only select an aerodrome as a destination alternate aerodrome if either:

(a) an IAP that does not rely on GNSS is available either at the destination aerodrome or at a destination alternate aerodrome; or

(b) all of the following conditions are met:

(1) the onboard GNSS equipment is SBAS capable;

(2) the destination aerodrome, any destination alternate aerodrome, and the route between them are within SBAS service area;

(3) ABAS is predicted to be available in the event of the unexpected unavailability of SBAS;

(4) an IAP is selected (either at destination or destination alternate aerodrome) that does not rely on the availability of SBAS;

(5) an appropriate contingency action allows the flight to be completed safely in the event of the unavailability of GNSS.";

(i) after point NCO.OP.142 insert—

"NCO.OP.143 Destination alternate aerodromes planning minima - aeroplanes

An aerodrome must not be specified as a destination alternate aerodrome for an aeroplane unless the latest available weather information indicates, for the period from an hour before until an hour after the ETA or the period from the actual time of departure to an hour after the ETA, whichever is the shorter, that:

(a) for an alternate aerodrome with an available instrument approach operation with DH less than 250 ft, there will be:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP, and

(2) a visibility of at least 1500 m; or

(b) for an alternate aerodrome with an instrument approach operation with DH or MDH 250 ft or more, there will be:

(1) a ceiling of at least 400 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least 3000m; or

(c) for an alternate aerodrome without an IAP, there will be:

(1) a ceiling of at least the higher of 2000 ft and the minimum safe IFR height; and

(2) a visibility of at least 5000 m.

NCO.OP.144 Destination alternate aerodromes planning minima - helicopters

An aerodrome must not be specified as a destination alternate aerodrome for a helicopter unless the available weather information indicates, for the period from 1 hour before until 1 hour after the ETA, or for the period from the actual time of departure to 1 hour after the ETA, whichever is the shorter, that:

(a) for an alternate aerodrome with an available IAP, there is:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP; and

(2) a visibility of at least 1500 m by day or 3000 m by night; or

(b) for an alternate aerodrome without an IAP:

(1) a ceiling of at least the higher of 2000 ft and the minimum safe IFR height; and

(2) a visibility of at least 1500 m by day or 3000 m by night.";

(j) in point NCO.OP.145 (refuelling with passengers embarking, on board or disembarking), in point (b) after "fuel" insert "or energy";

(k) after point NCO.OP.145, insert—

"NCO.OP.147 Refuelling with engine or rotors turning - helicopters

Refuelling a helicopter with engine running or rotors turning must only be conducted where all the following conditions are met:

(a) it is not practical to shut down or restart the engine;

(b) it is conducted in accordance with any specific procedures and limitations in the aircraft flight manual (AFM);

(c) only JET A or JET A-1 fuel types are being used;

(d) no passengers or task specialists are on board, embarking or disembarking;

(e) the operator of the aerodrome or operating site allows such operations;

(f) appropriate rescue and firefighting facilities or equipment are present; and

(g) it is conducted in accordance with a checklist that must contain:

(1) normal and contingency procedures;

(2) the required equipment;

(3) any limitations;

(4) responsibilities and duties of the pilot-in-command and, if applicable, crew members and task specialists.";

(l) in point NCO.OP.175 (take-off conditions – aeroplanes and helicopters), for point (b) substitute—

"(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.";

(m) for point NCO.OP.185 (in flight fuel management) substitute—

"**NCO.OP.185 In-flight fuel management**

(a) The pilot-in-command must monitor the amount of useable fuel or energy remaining on board to ensure that it is protected and not less than the fuel or energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(b) The pilot-in-command of a controlled flight must advise air traffic control of a 'minimum fuel or energy' state by declaring "MINIMUM FUEL" when the pilot-in-command has:

(1) committed to land at a specific aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel or energy.

(c) The pilot-in-command of a controlled flight must declare a situation of 'fuel or energy emergency' by broadcasting 'MAYDAY, MAYDAY, MAYDAY FUEL' when the usable fuel or energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel or energy.";

(n) for point NCO.OP.205 (approach and landing conditions – aeroplanes) substitute—

"NCO.OP.205 Approach and landing conditions – aeroplanes and helicopters

Before commencing an approach to land, the pilot-in-command of an aircraft must be satisfied that:

(a) according to the information available, the weather conditions at the aerodrome or the operating site and the condition of the runway intended to be used will not prevent a safe approach, landing or missed approach; and

(b) the selected aerodrome operating minima take into consideration:

(1) the operative ground equipment;

(2) the operative aircraft system;

(3) the aircraft performance;

(4) flight crew qualifications.";

(o) omit point NCO.OP.206 (approach and landing conditions – helicopters);

(p) for point NCO.OP.210 (commencement and continuation of approach – aeroplanes and helicopters) substitute—

"**NCO.OP.210 Commencement and continuation of approach – aeroplanes and helicopters**

(a) If the controlling RVR for the runway to be used for landing an aircraft is less than 550 m (or any lower value established in accordance with an approval under SPA.LVO) then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS if the DH or MDH is more than 1000 ft above the aerodrome elevation.

(b) If the required visual reference for an aircraft is not established, a missed approach must be executed at, or before, the DA or DH or the MDA or MDH.

(c) If the required visual reference for an aircraft is not maintained after DA or DH or MDA or MDH, a go-around must be executed promptly.".

(3) In Subpart E (specific requirements), omit points NCO.SPEC.135 (fuel and oil supply - aeroplanes) and NCO.SPEC.140 (fuel and oil supply - helicopters).

Amendment of Annex 8 to Commission Regulation (EU) No 965/2012

11.—(1) Annex 8 (specialised operations – part-SPO) is amended as follows.

(2) In Subpart B (operational procedures)—

(a) after point SPO.OP.100 (use of aerodromes and operating sites) insert—

"SPO.OP.101 Altimeter check and settings

The operator must establish procedures for:

(a) altimeter checking before each departure;

(b) altimeter settings for all phases of flight which must take into account the procedures established by the State of the aerodrome or the State of the airspace if applicable.";

(b) in point SPO.OP.105 (specification of isolated aerodromes – aeroplanes), after "fuel" insert "or energy";

(c) for point SPO.OP.110 (aerodrome operating minima – aeroplanes and helicopters) substitute—

"**SPO.OP.110 Aerodrome operating minima – aeroplanes and helicopters**

(a) The operator of an aircraft must establish aerodrome operating minima for each departure aerodrome, destination aerodrome, or alternate aerodrome that is planned to be used in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.

(b) The method used to establish the aerodrome operating minima must take the following elements into account:

(1) the type, performance and handling characteristics of the aircraft;

(2) the equipment available on the aircraft for the purpose of navigation, acquisition of visual references or control of the flight path during take-off, approach, landing and missed approach;

(3) any conditions or limitations in the aircraft flight manual;

(4) the dimensions and characteristics of the runways or FATOs that may be selected for use;

(5) the adequacy and performance of the available visual and non-visual aids and infrastructure;

(6) the OCA or OCH for the IAP;

(7) the obstacles in the climb-out areas and necessary clearance margins;

(8) any non-standard characteristics of the aerodrome, the IAP or the local environment;

(9) the composition of the flight crew, their competence and experience;

(10) the IAP;

(11) the aerodrome characteristics and the available air navigation services;

(12) any minima promulgated by the State of the aerodrome;

(13) the conditions prescribed in any specific approvals for LVOs or operations with operational credits;

(14) the relevant operational experience of the operator.

(c) The operator must specify a method of determining aerodrome operating minima for aircraft in the operations manual.";

(d) omit point SPO.OP.111 (aerodrome operating minima – NPA, APV, CAT I operations);

(e) in point SPO.OP.112 (aerodrome operating minima – circling operations with aeroplanes), in point (b)—

(i) in point (2), for "2" substitute "1";

(ii) omit point (3);

(f) for points SPO.OP.130 (fuel and oil supply - aeroplanes) and SPO.OP.131 (fuel and oil supply - helicopter) substitute—

"**SPO.OP.130 – Fuel scheme - aeroplanes and helicopters**

(a) The operator must establish, implement and maintain a fuel scheme for aircraft that comprises:

(1) a fuel or energy planning and in-flight replanning policy; and

(2) an in-flight fuel or energy management policy.

(b) The fuel scheme must:

(1) be appropriate to the type of operation performed; and

(2) correspond to the capability of the operator to support its implementation.

SPO.OP.131 – Fuel scheme – fuel or energy planning and in flight replanning policy - aeroplanes and helicopters

(a) As part of the fuel scheme, the operator must establish a fuel or energy planning and in-flight replanning policy to ensure that the aircraft carries a sufficient amount of usable fuel or energy to safely complete the planned flight and to allow for deviations from the planned operation.

(b) The operator must ensure that the fuel or energy planning of flights is based upon at least the following elements:

(1) procedures contained in the operation manual as well as:

(i) current aircraft specific data derived from a fuel or energy consumption monitoring system or, if not available;

(ii) data provided by the aircraft manufacturer; and

(2) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel or energy consumption data;

(ii) anticipated masses;

(iii) anticipated weather conditions;

(iv) the effects of deferred maintenance items, or configuration deviations, or both; and

(v) anticipated delays.

(c) For aeroplanes, the operator must ensure that the pre-flight calculation of the usable fuel or energy that is required for a flight includes:

(1) taxi fuel or energy that is not less than the amount expected to be used prior to take-off;

(2) trip fuel or energy that must be the amount of fuel or energy that is required to enable the aeroplane to fly from take-off, or from the point of in-flight replanning, to landing at the destination aerodrome;

(3) contingency fuel;

(4) destination alternate fuel or energy:

(i) when a flight is operated with at least one destination alternate aerodrome, it must be the amount of fuel or energy required to fly from the destination aerodrome to the destination alternate aerodrome; or

(ii) when a flight is operated with no destination alternate aerodrome, it must be the amount of fuel or energy required to hold at the destination aerodrome to compensate for the lack of a destination alternate aerodrome;

(5) final reserve fuel or energy that must be protected to ensure a safe landing; the operator must take into account points (i) and (ii), in that priority order, to determine the quantity of the final reserve of fuel or energy:

(i) the severity of the hazard to persons or property that may result from an emergency landing after fuel or energy starvation;

(ii) the likelihood of unexpected circumstances that the final reserve or fuel or energy may no longer be protected;

(6) additional fuel or energy, if required by the type of operation, which must be the amount of fuel or energy to enable the aeroplane to perform a safe landing at a FE ERA aerodrome (FE ERA aerodrome critical scenario) in the event of an engine failure or loss of pressurisation, whichever requires the greater amount of fuel or energy, based on the assumption that such a failure occurs at the most critical point along the route; this additional fuel or energy is required only if the minimum amount of fuel or energy that is calculated according to points (c)(2) to (c)(5) is not sufficient for such an event;

(7) extra fuel or energy to take into account anticipated delays or specific operational constraints; and

(8) discretionary fuel or energy, if required by the pilot-in-command.

(d) For helicopters, the operator must ensure that pre-flight calculation of the usable fuel or energy that is required for a flight includes:

(1) fuel or energy to fly to the aerodrome or operating site of intended landing;

(2) if a destination alternate aerodrome is required, destination alternate fuel or energy, which is the amount of fuel or energy that is required to execute a missed approach at the aerodrome or operating site of intended landing and afterwards, to fly to the specified destination alternate aerodrome, approach and land; and

(3) final reserve fuel or energy which must be protected to ensure a safe landing; the operator must take into account points (i) and (ii), in that priority order, to determine the quantity of the final reserve fuel or energy;

(i) the severity of the hazard to persons or property that may result from an emergency landing after fuel or energy starvation;

(ii) the likelihood of unexpected circumstances such that the final reserve of fuel or energy may no longer be protected;

(4) extra fuel or energy to take into account anticipated delays or specific operational constraints; and

(5) discretionary fuel or energy, if required by the pilot-in-command.

(e) The operator must ensure that if a flight has to proceed to a destination aerodrome other than the one originally planned, in-flight replanning procedures for calculating the required usable fuel or energy are available and comply with points (c)(2) to (c)(7) for aeroplanes, and point (d) for helicopters.

(f) The pilot-in-command must only commence a flight or continue in the event of in-flight replanning, when satisfied that the aircraft carries at least the planned amount of usable fuel or energy and oil to safely complete the flight.";

(g) after point SPO.OP.140 (flight preparation) insert—

"SPO.OP.143 Destination alternate aerodrome planning minima – aeroplanes

An aerodrome must not be specified as a destination alternate aerodrome for an aeroplane unless the latest available weather information indicates, for the period from an hour before the ETA to an hour after the ETA, or for the period from actual time of departure to an hour after the ETA, whichever is the shorter that:

(a) for an alternate aerodrome with an instrument approach operation with DH less than 250 ft, there will be:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least the higher of 1500 m or 800 m above the instrument approach operation RVR or VIS minima; or

(b) for an alternate aerodrome with an instrument approach operation with DH or MDH 250 ft or more, there will be:

(1) a ceiling of at least 400 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least 3000 m; or

(c) for an alternate aerodrome without an IAP, there will be:

(1) a ceiling of at least the higher of 2000 ft and the minimum safe IFR height; and

(2) a visibility of at least 5000 m.

SPO.OP.144 Destination alternate aerodrome planning minima - helicopters

The operator must not select an aerodrome as a destination alternate aerodrome for a helicopter unless the available weather information indicates, for the period from 1 hour before the ETA until 1 hour after the ETA, or for the period from the actual time of departure to 1 hour after the ETA, whichever is the shorter, that:

(a) for an alternate aerodrome without an IAP, there is:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP; and

(2) a visibility of at least 1500 m by day, or 3000 m by night; or

(b) for an alternate aerodrome without an IAP, there is:

(1) a ceiling of at least 2000 ft or the minimum safe IFR height, whichever is greater; and

(2) a visibility of at least 1500 m by day or 3000 m by night.";

(h) in point SPO.OP.150 (destination alternate aerodromes – aeroplanes), in point (b), for "isolated" substitute "designated as an isolated aerodrome";

(i) in point SPO.OP.155 (refuelling with persons embarking, on board or disembarking), in point (b), after "fuel" insert "or energy";

(j) after point SPO.OP.155, insert—

"**SPO.OP.157 Refuelling with engine or rotors turning – helicopter**

(a) Refuelling of a helicopter with engine running or rotors turning must only be conducted:

(1) with no task specialists embarking or disembarking;

(2) if the operator of the aerodrome or operating site allows such operations;

(3) in accordance with any specific procedures and limitations in the aircraft flight manual.

(4) with JET A or JET A-1 fuel types; and

(5) in the presence of appropriate rescue and firefighting facilities or equipment.

(b) The operator must:

(i) establish appropriate procedures to be followed by all involved personnel, such as crew members, task specialists, and ground operations personnel;

(ii) assess the risks associated with refuelling a helicopter with engine running or engine running and rotors turning;

(iii) ensure that its crew members, ground operations personnel, as well as any task specialist involved in the procedures, are appropriately trained;

(iv) ensure that the helicopter refuelling procedures with engine, or rotors turning, or both, is specified in the operations manual.";

(k) in point SPO.OP.180 (take-off conditions – aeroplanes and helicopters), for point (b) substitute—

"(b) the selected aerodrome operating minima are consistent with the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.";

(l) for point SPO.OP.190 (in-flight fuel management) substitute—

"**SPO.OP.190 Fuel scheme – in-flight fuel management policy**

(a) The operator of complex motor-powered aircraft must establish procedures to ensure that in-flight fuel or energy checks and fuel or energy management are performed.

(b) The pilot-in-command must monitor the amount of useable fuel or energy remaining on board to ensure that it is protected and not less than the fuel or energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(c) The pilot-in-command must advise air traffic control of a 'minimum fuel or energy' state by declaring 'MINIMUM FUEL' when the pilot-in-command has:

(1) committed to land at a specific aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less that the planned final reserve fuel or energy.

(d) The pilot-in-command must declare a situation of 'fuel or energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the useable fuel or energy estimated to be available on landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve of fuel or energy.";

(m) for point SPO.OP.210 (approach and landing conditions – aeroplanes) substitute—

"SPO.OP.210 Approach and landing conditions – aeroplanes and helicopters

Before commencing an approach operation, the pilot-in-command of the aircraft must be satisfied that:

(a) the weather conditions at the aerodrome or the operating site and the condition of the runway or FATO intended to be used will not prevent a safe approach, landing or go-

around, considering the performance information contained in the operations manual; and

(b) the selected aerodrome operating minima are consistent with:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.";

(n) omit point SPO.OP.211 (approach and landing conditions – helicopters);

(o) for point SPO.OP.215 (commencement and continuation of approach – aeroplanes and helicopters) substitute—

"**SPO.OP.215 Commencement and continuation of approach – aeroplanes and helicopters**

(a) For aeroplanes, if the reported VIS or controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS where the DH or MDH is more than 1000 ft above the aerodrome elevation.

(b) For helicopters, if the reported RVR is less than 550 m and the controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation must not be continued:

(1) below 1000 ft above the aerodrome elevation; or

(2) into the FAS where the DH or MDH is more than 1000 ft above the aerodrome elevation.

For all aircraft:

(c) If the required visual reference is not established, a missed approach must be executed at, or before, the DA or DH or the MDA or MDH.

(d) If the required visual reference is not maintained after the DA or DH or MDA or DH, a go-around must be executed promptly.

(e) Notwithstanding point (a), in the case where no RVR is reported, and the reported VIS is less than the applicable minimum, but the converted weather visibility is equal or greater than the applicable minimum, the instrument approach can be continued to the DA or DH or MDA or MDH.

(f) Notwithstanding points (a) and (b), if there is no intention to land, the instrument approach may be continued to the DA or DH or MDA or DH. A missed approach must be executed at or before the DA or DH or the MDA or DH.";

(p) after point SPO.OP.230 (standard operating procedures) insert—

"**SPO.OP.235 EFVS 200 operations**

(a) When conducting EFVS 200 operations with operational credits and without a specific approval, an operator must ensure:

(1) the aircraft is certified for the intended operation;

(2) only runways, FATOs and IAPs suitable for EFVS operations are used;

(3) the flight crew are competent to conduct the intended operation and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation is established;

(4) operating procedures are established;

(5) any relevant information is documented in the minimum equipment list;

(6) any relevant information is documented in the maintenance programme;

(7) safety assessments are carried out and performance indicators are established to monitor the level of safety of the operation;

(8) the aerodrome operating minima take into account the capability of the system used.

(b) The operator must not conduct EFVS 200 operations when conducting LVOs.

(c) Notwithstanding point (a)(1), the operator may use EVS meeting the minimum criteria to conduct EFVS 200 operations, provided that this is approved by the CAA.".

(3) In Subpart C (aircraft performance and operating limitations)—

(a) in point SPO.POL.110 (mass and balance system etc.), in points (a) and (c), after each occurrence of "fuel" insert "or energy";

(b) in point SPO.POL.115 (mass and balance data and documentation etc.), in point (a) after each occurrence of "fuel" insert "or energy".

(4) In Subpart D (instruments, data and equipment), in section 2 (helicopters), in point SPO.IDE.H.146 (lightweight flight recorder), in point (a)(1), after "they are" insert "not".

CHAPTER 2

Amendment of the Air Navigation Order 2016

Amendment of Schedule 13 to the Air Navigation Order 2016

12.—(1) Schedule 13 (penalties) to the Air Navigation Order 2016(**a**) is amended as follows.

(2) In Part 1 (provisions referred to in article 265(5)), in Chapter 5, for the entry in the first column "CAT.OP.MPA.305(b)" substitute "CAT.OP.MPA.305(a) and (b)".

(3) In Part 2 (provisions referred to in article 265(6))—

(a) in Chapter 8—

(i) omit the entry for "NCC.OP.111";

(ii) in the entry for NCC.OP.130, in the second column, for "Fuel and oil supply - aeroplanes" substitute "Fuel scheme – aeroplanes and helicopters";

(iii) in the entry for NCC.OP.131, in the second column, for "Fuel and oil supply - helicopters" substitute "Fuel scheme - fuel or energy planning and in-flight replanning policy - aeroplanes and helicopters";

(b) in Chapter 9—

(i) omit the entries for—

(aa) "NCO.OP.126";

(bb) "NCO.SPEC.135";

(cc) "NCO.SPEC.140";

(ii) in the entry for NCO.OP.111, in the second column, for "NPA, APV, CAT1 operations" substitute "2D and 3D approach operations";

(iii) in the entry for NCO.OP.125, in the second column, for "Fuel and oil supply - aeroplanes" substitute "Fuel, energy and oil supply - aeroplanes or helicopters";

(iv) in the entry for NCO.OP.142, in the second column, for "procedure relying on GNSS" substitute "operations";

(c) in Chapter 10—

(i) omit the entry for "SPO.OP.111";

(ii) in the entry for SPO.OP.130, in the second column, for "Fuel and oil supply - aeroplanes" substitute "Fuel scheme - aeroplanes and helicopters";

(**a**) S.I. 2016/765, amended by S.I. 2017/1112, 2018/1160, 2019/261, 2019/645, 2019/1098, 2020/1555 and 2021/879.

(iii) in the entry for SPO.OP.131, in the second column, for "Fuel and oil supply - helicopters" substitute "Fuel scheme - fuel or energy planning policy and in-flight replanning policy - aeroplanes and helicopters";

(d) in Chapter 11—

(i) in the entry for ORO.FC.105, in the first column, for "d" substitute "e";

(ii) in the entry for ORO.FC.235, in the second column, after "seat" insert " - aeroplanes";

(iii) after the entry for ORO.FC.235, in the first column, insert "ORO.FC.236" and in the second column insert "Pilot qualification to operate in either pilot's seat - helicopters";

(iv) in the entry for ORO.FC.240, in the first column omit "(other than (c))".

CHAPTER 3

Amendment of Commission Regulation (EU) No 1178/2011

Amendment of Commission Regulation (EU) No 1178/2011

13. Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council is amended in accordance with regulations 14 to 17.

Insertion of Articles 4c and 4d in Commission Regulation (EU) No 1178/2011

14. After Article 4b (upset prevention and recovery training) insert—

"Article 4c

Transitional measures for single-engine instrument rating privileges for helicopters

1. Helicopter instrument ratings (IR(H)) for multi-engine helicopters issued in accordance with Annex I (Part-FCL) to this Regulation prior to 30 October 2026 are to be treated as an IR(H) for both single-engine and multi-engine helicopters.

2. The holder of an IR(H) for single-engine helicopters must meet the requirements of point FCL.630.H of Annex I prior to being issued with an IR(H) for multi-engine helicopters.

3. The helicopter pilot licence of an individual issued with an IR(H) for multi-engine helicopters in accordance with Annex I (Part-FCL) prior to 30 October 2026 is to be endorsed with an IR(H) for both single-engine and multi-engine helicopters when it is next updated or renewed.

4. Applicants who commenced training for an IR(H) for either single-engine or multi-engine helicopters immediately prior to 30 October 2026 may complete that training and must be issued with an IR(H) The IR(H) of applicants who complete training for single-engine helicopters is to be restricted to single-engine helicopter privileges only.

Article 4d

Transitional measures for training, testing and checking related to multi-pilot operations in single-pilot helicopters

1. The CAA may, before 30 October 2026, issue specific privileges for conducting multi-pilot operation training, skill tests and proficiency checks in single-pilot helicopters to instructors or examiners who meet the following conditions, as applicable:

(a) the applicant holds either of the following certificates:

(i) an instructor certificate issued in accordance with Annex I (Part-FCL) to this Regulation which includes privileges to instruct in the relevant type of helicopter; or

(ii) an examiner certificate issued in accordance with Annex I (Part-FCL) to this Regulation which includes privileges to examine in the relevant type of helicopter;

(b) the applicant has completed an MCC training course meeting the minimum requirements set out in point FCL.735.H of Part-FCL; and

(c) the applicant has experience in multi-pilot operation in helicopters at a level that is considered appropriate by the CAA.

2. The privileges issued in accordance with paragraph 1 are valid until 30 October 2026. In order to revalidate the privileges applicants must:

(a) for instructor privileges meet the experience requirements for instructor privileges related to multi-operation in single-pilot helicopters as set out in Part-FCL;

(b) for examiner privileges meet the experience requirements for examiner and instructor privileges related to multi-operation in single-pilot helicopters as set out in Part-FCL.".

Amendment of Article 10a of Commission Regulation (EU) No 1178/2011

15. In Article 10a (pilot training organisations), after paragraph 5 insert—

"6. Pilot training organisations that provide training for the IR(H) must adapt their training programme to be compliant with Annex I by 30 October 2025.".

Amendment of Annex 1 to Commission Regulation (EU) No 1178/2011

16.—(1) Annex 1 (part-FCL) is amended as follows.

(2) In point FCL.010 (definitions)—

(a) for the definition of 'Multi-pilot operation' substitute—

"'Multi-pilot operation' means an operation requiring at least two pilots using multi- crew cooperation in either a multi-pilot or a single-pilot aircraft.";

(b) for the definition of 'Multi-pilot aircraft' substitute—

"'Multi-pilot aircraft':

for aeroplanes means aeroplanes certified for operation with a minimum crew of at least two pilots;

for helicopters, airships and powered-lift aircraft means an aircraft which is certified for operation by at least two pilots or which is required to be operated with at least two pilots in accordance with Regulation (EU) No 965/2012.";

(c) for the definition of 'Single-pilot aircraft' substitute—

"'Single-pilot aircraft':

for aeroplanes means an aircraft certified for operation by one pilot;

for helicopters, airships and powered-lift aircraft means an aircraft which is certified for operation by one pilot and which is not required to be operated with at least two pilots in accordance with Regulation (EU) No 965/2012.";

(d) after the definition of 'Cruise relief co-pilot' insert—

"'Decision height' ('DH') means a specified height in a 3D instrument approach operation at which a missed approach procedure must be initiated if the required visual reference to continue the approach has not been established.";

(e) after the definition of 'Helicopter' insert—

"'Instrument approach operation' means an approach and landing using instruments for navigation guidance based on an IAP and is either:

(a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; or

(b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

'Instrument approach procedure (IAP)' means a series of pre-determined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix or, where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and, after that, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply.";

(f) after the definition of 'Mixed EBT Programme' insert—

"'Multi-engine centreline thrust aeroplane' means a type of aircraft which typically has two engines mounted on the fuselage in a push/pull configuration.";

(g) after the definition of 'Renewal' insert—

"'Required visual reference' means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a DH, the required visual reference is that specified for the particular procedure and operation;".

(3) In point FCL.510.H (ATPL(H) -prerequisites, experience and crediting)—

(a) for point (a) substitute—

"(a) hold a CPL(H);

(aa) have received instruction in MCC in accordance with point FCL.735.H;";

(b) after point (d) insert—

"(e) The instruction requirement at point (aa) may as an alternative be met by ATPL(H) applicants:

(1) demonstrating compliance with point FCL.720.H(a)(2)(ii); and

(2) receiving training at an ATO and successfully completing a training course which meets the requirements set out at point FCL.735.H.".

(4) For point FCL.605.IR (privileges)substitute—

"FCL.605.IR Privileges

(a) Holders of an IR may fly aircraft under IFR, including PBN operations, with a minimum decision height of:

(1) no less than 60m (200ft);

(2) less than 60m (200ft) provided that they are authorised to do so in accordance with Annex V (PART-SPA) to Regulation (EU) No 965/2012.

(b) Holders of an IR must exercise their privileges in accordance with the conditions set out in Appendix 8 to this Annex.

(c) To exercise privileges as PIC under IFR in multi-pilot operation helicopters, holders of an IR(H) must have at least 70 hours of instrument time, of which up to 30 hours may be instrument ground time.".

(5) In point FCL.620 IR (Skill Test)—

(a) in point (a) substitute "Annex" for "Part";

(b) omit points (b) and (c).

(6) After the heading "Section 2 - Specific requirements for the aeroplane category" which follows point FCL.620 IR (Skill Test) insert—

"FCL.620.A IR(A) (Skill Test)

(a) A multi-engine IR(A) skill test must be taken in a multi-engine aeroplane.

(b) A single-engine IR(A) skill test must be taken in a single-engine aeroplane.

(c) A multi-engine centreline thrust aeroplane is considered a single-engine aeroplane for the purposes of this point.

(d) Applicants who have completed a skill test for a multi-engine IR(A) in a single-pilot multi-engine aeroplane for which a class rating is required are to be issued with a single-engine IR(A) for the single-engine aeroplane class or type ratings that they hold. ".

(7) For point FCL.630.H (IR(H)) - extension of privileges from single-engine to multi-engine helicopters) substitute—

"FCL.630.H IR(H) - extension of privileges from single-engine to multi-engine helicopters

Unless specified otherwise in the operational suitability data established in accordance with Annex I (Part 21) to Regulation (EU) No 748/2012 holders of an IR(H) who wish to extend their IR(H) privileges to further helicopter types must complete:

(a) a relevant type rating training course; and

(b) 2 hours of flight training at an ATO in the relevant type by sole reference to instruments according to IFR. This training may be carried out in an FFS or an FTD which appropriately represents the relevant type for IFR operation.".

(8) After heading "Section 4 - Specific requirements for the airship category" insert—

"FCL.620.As IR(As) - Skill Test

For a multi-engine IR(As) the skill test must be taken in a multi-engine airship.

For a single-engine IR(As) the skill test must be taken in a single-engine airship.".

(9) In point FCL.725 (requirements for the issue of class and type ratings), for point (d) substitute—

"(d) Single-pilot and multi-pilot operation

(1) A pilot who holds a type rating for an aircraft type with single-pilot or multi-pilot operation privileges is to be treated as having fulfilled the theoretical requirements when applying to add the other form of operation for the same aircraft type.

(2) Such a pilot must complete the additional flight training required for the other form of operation in the relevant aircraft type in accordance with Appendix 9 to this Annex unless specified in operational suitability data established in accordance with Annex I (Part 21) of Regulation (EU) No 748/2012. This training must be completed at either:

(i) an ATO; or

(ii) an organisation to which Annex III (Part-ORO) to Regulation 965/2012 applies which is entitled to provide such training on the basis of either an approval or, in the case of single-pilot helicopters, a declaration.

(3) The form of operation must be entered in the pilot's licence unless the privilege relates to single-pilot helicopters.

(4) In the case of single-pilot helicopters the following requirements apply:

(i) where a pilot completed a skill test or a proficiency check for a non-complex single-pilot type rating in multi-pilot operations only, their licence must be endorsed with a restriction to a multi-pilot operation type rating. This endorsement may be removed when the applicant completes a proficiency check that includes the necessary elements for single-pilot operation as specified in Appendix 9 to this Annex.

(ii) in all other cases the form of operation must not be entered in the licence and the pilot is entitled to exercise the privileges of the type rating:

(A) in single-pilot operation provided that the skill test or proficiency check was either:

(1) completed in single-pilot operation; or

(2) completed in multi-pilot operation and contained additional elements for single-pilot operation as specified in Appendix 9 to this Annex.

(B) in multi-pilot operation under the following conditions:

(1) the pilot meets the requirements of point FCL.720.H(a)(2);

(2) the privileges are exercised in accordance with Annex III (Part-ORO) to Regulation (EU) No 965/2012 only; and

(3) the skill test or proficiency check was completed in multi-pilot operation.".

(10) In point FCL.720.H (experience requirements and prerequisites for the issue of type ratings - helicopters)—

(a) in the introductory words, for "Part-21" substitute "Annex I (Part 21) to Regulation (EU) No 748/2012,";

(b) in point (a)—

(i) for the introductory words, substitute—

"Multi-pilot helicopters. An applicant for a type rating for a multi-pilot helicopter type must meet the following requirements before starting the type rating training course:";

(ii) for point (2)(ii) substitute—

"(ii) have completed at least 500 hours of flight time as a pilot in multi-pilot operations in any aircraft category;";

(iii) omit point (2)(iii);

(c) in point (b), for the introductory words, substitute—

"A graduate from an ATP(H)/IR, ATP(H), CPL(H)/IR or CPL/(H) integrated course who has not met the requirement set out in point (a)(1) may undertake the type rating training course for a multi-pilot helicopter type rating. On completion of that course the graduate must be issued with a type rating with privileges limiting the exercise of functions to that of a co-pilot only. The limitation must be removed once the pilot has complied with all of the following:";

(d) in point (c), for the introductory words, substitute—

"Multi-engine helicopters. An applicant for a first type rating for a multi-engine helicopter must:".

(11) In point FCL.905.TRI (TRI - privileges and conditions), in point (a)(5)—

(a) for point (ii) substitute—

"(ii) MCC training provided that the individual has completed 350 hours of flight time as a pilot in multi-pilot operations in any aircraft category;";

(b) omit point (iii).

(12) Point FCL.910.TRI (TRI - restricted privileges) is amended as follows.

(a) for point (c)(2) substitute—

"(2) In order to extend the privileges of a TRI(H) to multi-pilot operations in the same type of single-pilot helicopters the licence holder must have:

(i) at least 350 hours of flight time as a pilot in multi-pilot operations in any aircraft category; or

(ii) at least 100 hours of flight time as a pilot in multi-pilot operations of the specific type within the last 2 years.".

(b) after point (c)(2) insert—

"(3) Before the privileges of a TRI(H) are extended from single-pilot helicopters to multi-pilot helicopters the holder must meet the requirements of point FCL.915.TRI(d)(3).".

(13) In point FCL.915.TRI (TRI- prerequisites), for point (d) substitute—

"(d) for TRI(H):

(1) for a TRI(H) certificate for single-pilot single-engine helicopters either:

(i) have completed 250 hours as a helicopter pilot or

(ii) hold a FI(H) certificate.

(2) for a TRI(H) certificate for single-pilot multi-engine helicopters either:

(i) have completed 500 hours as a helicopter pilot including 100 hours as PIC in single-pilot multi-engine helicopters or

(ii) hold an FI(H) certificate and have completed 100 hours of flight time as a multi-engine helicopter pilot.

(3) for a TRI(H) certificate for multi-pilot helicopters:

(i) have completed 1000 hours of flight time as a helicopter pilot; and

(ii) have completed 350 hours in multi-pilot operations in any aircraft category or 100 hours of flight time as a pilot in multi-pilot operations in the type for which the TRI(H) certificate is sought.

(4) holders of an FI(H) certificate must be fully credited towards the requirements of (1) and (2) in the relevant single-pilot helicopter;".

(14) In point FCL.915.IRI (IRI - prerequisites), for point (b)(3) substitute—

"(3) when seeking privileges to provide training in multi-engine helicopters meet the requirements of points FCL.910.TRI(c)(1) and FCL.915.TRI(d)(2);".

(15) In point FCL.905.SFI (SFI - privileges and conditions), for point (d)(2) substitute—

"(2) MCC training provided that they have at least 350 hours as a pilot in multi-pilot operations in any aircraft category.".

(16) In point FCL.915.SFI (SFI - prerequisites)—

(a) for point (e)(2) substitute—

"(2) in the case of multi-pilot helicopters at least 1000 hours of flying experience as a helicopter pilot including at least 350 hours in multi-pilot operations in any aircraft category;";

(b) after point (e)(4) insert—

"(5) in the case of single-pilot helicopters in multi-pilot operations completed at least 350 hours in multi-pilot operations in any aircraft category.".

(17) In point FCL.915.MCCI (MCCI - prerequisites), in point (b)—

(a) in point (1), after "multi-pilot operations" insert "of which at least 350 hours is in the appropriate aircraft category;";

(b) in point (2)—

(i) for "multi-crew operations" substitute "multi-pilot operations";

(ii) for "in multi-pilot helicopters" substitute "is in helicopters".

(18) In point FCL.1005.TRE (TRE - privileges and conditions), in point (b)(2) omit ", or for the extension of the IR(H) from single-engine helicopters to multi-engine helicopters,".

(19) In point FCL.1010.TRE (TRE - prerequisites), for point (b)(6) substitute—

"(6) Before the privileges of a TRE(H) are extended from single-pilot operations to multi-pilot operations on the same type of helicopter the holder must have either:

(i) at least 100 hours in multi-pilot operations on this type; or

(ii) at least 350 hours in multi-pilot operations in any aircraft category.".

(20) In point FCL.1010.SFE (SFE - prerequisites), in point (b) (SFE(H)), for points (3) and (4) substitute—

"(3) in the case of multi-pilot helicopters have at least 1000 hours of flight time as multi-pilot helicopter pilots;

(4) in the case of single-pilot helicopters in multi-pilot operations have completed at least 350 hours in multi-pilot operations in any aircraft category;

(5) for the initial issue of an SFE certificate have completed at least 50 hours of synthetic flight instruction as a TRI(H) or an SFI(H) on the applicable type.".

Amendment of Appendices to Annex 1 of Commission Regulation (EU) No 1178/2011

17.—(1) In Appendix 3 (training courses for the issue of a CPL and an ATPL), in point I (CPL/IR integrated course - helicopters), in point 9, for "IFR-certificated multi-engine helicopter" substitute "IFR-certificated helicopter".

(2) In Appendix 6 (modular training courses for the IR), in point B (IR(H) – Modular Flying Training Course)—

(a) in point 7—

(i) for "A single-engine IR(H) course" substitute "An IR(H) course";

(ii) for "50 hours" substitute "55 hours";

(iii) in point (b) for "35 hours" substitute "40 hours";

(b) omit point 8.

(3) In Appendix 8 (cross-crediting of the IR part of a class or type rating proficiency check), for point B (helicopters) substitute—

"B. Helicopters

Credits are granted only if holders are revalidating or renewing IR privileges for single-pilot helicopters as appropriate.

If a skill test or a proficiency check, including IR, is performed and the holders have a valid:	**Credit is valid towards the IR part in a proficiency check for:**
Multi-pilot helicopter (MPH) type rating	Single-pilot helicopter (SPH) of the same type including privileges for single-pilot operations[(1)]
Single-pilot helicopter (SPH) type rating in multi-pilot operations	Privileges for single-pilot operations in the same type[(1)]

[(1)] Provided that within the preceding 12 months at least three IFR departures and approaches exercising PBN privileges, including one RNP APCH approach (which may be a Point in Space (PinS) approach), have been performed on a single-pilot helicopter in single-pilot operations.".

(4) In Appendix 9 (training, skill test and proficiency check for MPL, ATPL, type and class ratings, and proficiency check for IRs)—

(a) in point A (general), in point 15, for "aeroplane" substitute "aircraft";

(b) in point B (specific requirements for the aeroplane category)—

(i) in point 2 omit from "Section 6 is not part of the ATPL or MPL skill test" until the end of the point;

(ii) in point 6(j)—

(aa) at the bottom of Section 5 of the table omit "General remarks: Special requirements for the extension of a type rating for instrument approaches down to a decision height of less than 200ft (60m) i.e. CAT II/III operations.";

(bb) omit Section 6 of the table (including the note at the end);

(c) in point C (specific requirements for the helicopter category), after point 12 insert—

"*SINGLE-PILOT HELICOPTERS*

13. Applicants for the issue, revalidation or renewal of a single-pilot helicopter type rating must:

(a) if privileges for single-pilot operation are sought, complete the skill test or proficiency check in single-pilot operation;

(b) if privileges for multi-pilot operation are sought, complete the skill test or proficiency check in multi-pilot operation;

(c) if privileges for both single-pilot and multi-pilot privileges are sought, complete the skill test or proficiency check in multi-pilot operation and, additionally, the following manoeuvres and procedures in single-pilot operation:

(1) for single-engine helicopters: 2.1 take-off and 2.6 and 2.6.1 autorotative descent and autorotative landing;

(2) for multi-engine helicopters: 2.1 take-off and 2.4 and 2.4.1 engine failures shortly before and shortly after reaching TDP;

(3) for IR privileges, in addition to point (1) and (2), as applicable, one approach of Section 5, unless the criteria of Appendix 8 to this Annex are met;

(d) in order to remove a restriction to multi-pilot operation from a non-complex single-pilot helicopter type rating, complete a proficiency check that includes the manoeuvres and procedures referred to in point (c)(1) or (c)(2) as applicable.";

(d) in point D (specific requirements for the powered-lift aircraft category)—

(i) in point 6 omit points (a) and (b);

(ii) in point 8 omit Section 6 of the table;

(e) in point E (specific requirements for the airship category)—

(i) in point 6 omit points (a) and (b);

(ii) in point 8 omit Section 6 of the table.

CHAPTER 4

Amendment of Commission Regulation (EU) No 139/2014

Amendment of Commission Regulation (EU) No 139/2014

18. Commission Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council(**a**) is amended in accordance with regulations 19 to 21.

Amendment of Annex 1 to Commission Regulation (EU) No 139/2014

19.—(1) Annex 1 (definitions for terms used in Annexes 2 to 4) is amended as follows.

(2) After point (15) insert—

"(15za) 'ceiling' means the height above the ground or water of the base of the lowest layer of cloud below 6000m (20000ft) covering more than half the sky;".

(3) After point (17a) insert—

"(17b) 'decision height' (DH) means a specified height in a 3D instrument approach operation at which a missed approach procedure must be initiated if the required visual reference to continue the approach has not been established;".

(**a**) EUR 2014/139, as amended by S.I. 2019/645 and 2021/1203.

(4) After point (21) insert—

"(21a) 'instrument approach operation' means an approach and landing using instruments for navigation guidance based on an IAP and is either:

(a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; or

(b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance;

(21b) 'instrument approach procedure (IAP)' means a series of pre-determined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix or, where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and, after that, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply;".

(5) In point (22)—

(a) in point (1), after "type A instrument approach operation" insert "at a visibility not less than 1000m";

(b) in point (2), after "type B CAT I instrument approach operation" insert "with a DH not lower than 60m (200ft) and either at a visibility not less than 800m or at an RVR of not less than 550m(**a**)";

(c) in point (3), after "type B CAT II instrument approach operation" insert "with a DH lower than 60m (200ft) but not lower than 30m (100ft) and an RVR of not less than 300m";

(d) in point (4), in the second column for the entry for "precision approach runway, category III" substitute—

"a runway served by visual aids and at least one non-visual aid intended for landing operations following a type B CAT III instrument approach operation with:

(a) a DH lower than 30m (100ft);

(b) no DH and an RVR of less than 300m; or

(c) no runway visual range limitations;".

(6) For point (25) substitute—

"(25) 'low visibility procedures' (LVP) means procedures applied at an aerodrome for the purpose of ensuring safety during low-visibility operations;".

(7) For point (26) substitute—

"(26) 'low visibility take-off' (LVTO) means a take-off operation with an RVR less than 550m;".

(8) Omit point (27).

(9) Omit point (35).

(10) After point (37) insert—

"(37a) 'required visual reference' means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a DH, the required visual reference is that specified for the particular procedure and operation;".

(11) In point (47b)3.—

(a) for the entry in the first column "Category IIIA (CAT IIIA)" substitute "Category III (CAT III)";

(b) for the entry in the second column substitute—

(**a**) By convention in aviation operations altitude is measured in imperial units (feet) and distance is measured in metric units (metres).

"(a) a DH lower than 30m (100ft);

(b) no DH and an RVR of less than 300m; or

(c) no runway visual range limitations;".

(12) Omit point (47b)4.

(13) Omit point (47b)5.

Amendment of Annex 3 to Commission Regulation (EU) No 139/2014

20. In Annex 3, in point ADR.OR.C.005 (aerodrome operator responsibilities), after point (d) insert—

"(e) The aerodrome operator, in order to ensure the safe operation of aircraft at the aerodrome, must provide and maintain, directly or through arrangements with third parties, visual and non-visual aids, meteorological equipment and any other equipment, appropriate to the type of operations conducted at the aerodrome.".

Amendment of Annex 4 to Commission Regulation (EU) No 139/2014

21. In Annex 4, for point ADR.OPS.B.045 (low visibility operations) substitute—

"**ADR.OPS.B.045 Low visibility operations**

(a) Points (b) to (e) apply where an aerodrome is used for any of the following operations:

(1) an LVTO;

(2) approach and landing operations with visibility conditions less than a 550m RVR or a DH less than 200ft (60m).

(b) The aerodrome operator must:

(1) provide the aerodrome with appropriate equipment and facilities; and

(2) establish and implement the appropriate LVP.

(c) The LVP are to:

(1) co-ordinate the movement of aircraft and vehicles on the movement area;

(2) restrict or prohibit activities on the movement area;

(3) include criteria for their preparation, initiation and termination. The criteria must be based on RVR and ceiling.

(d) The aerodrome operator must:

(1) establish and implement the LVP in co-operation with the air traffic services provider;

(2) inform the aeronautical information services provider and air traffic services provider, as appropriate, of any changes to the status of aerodrome equipment and facilities that have an impact on low visibility operations;

(3) provide information on LVP to the aeronautical information services provider for publication in the AIP.

(e) The CAA must approve LVP, including changes to existing procedures, prior to their implementation.".

PART 3

Corrections

CHAPTER 1

Amendment of Commission Regulation (EU) No 748/2012

Amendment of Commission Regulation (EU) No 748/2012

22. Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations is amended in accordance with regulations 23 to 24.

Amendment of Annex 1 to Commission Regulation (EU) No 748/2012

23.—(1) Annex 1 (part-21 certification of aircraft and related products, etc.) is amended as follows.

(2) In Section A (technical requirements)—

(a) in Subpart A (general provisions), in point 21.A.3A (failures, malfunctions and defects), for the heading substitute "Reporting system";

(b) in Subpart G (production organisation approval), in point 21.A.145 (approval requirements), for the heading substitute "Resources";

(c) in Subpart J (design organisation approval), in point 21.A.243 (data), for the heading and point (a) substitute—

"**21.A.243 Design handbook and flight test operations manual**

(a) As part of the design management system, the design organisation must provide the CAA with a handbook that describes, directly or by cross reference:

(1) the organisation and its relevant policies, processes and procedures;

(2) the type of design work and the categories of products, parts and appliances for which the design organisation holds a design organisation approval, as identified in the terms of approval issued under point 21.A.251 (terms of approval);

(3) where relevant, the interfaces with and the control of its partners or subcontractors.

(aa) If flight tests are to be conducted, a flight test operations manual that defines the organisation's policies and procedures in relation to flight tests must also be provided to the CAA. The flight test operations manual must include:

(1) a description of the organisation's processes for flight tests, including any involvement by a flight test organisation in the permit to fly issuance process;

(2) crewing policy, including composition, competency, currency and flight time limitations, in accordance with Appendix XII (categories of flight tests and associated flight test crew qualifications), where applicable;

(3) procedures for the carriage of persons other than crew members and for flight test training, when applicable;

(4) a policy for risk and safety management and associated methodologies;

(5) procedures to identify the instruments and equipment that must be carried on board the aircraft;

(6) a list of documents that need to be produced for flight tests.".

(3) In Section B (procedures for the CAA)—

(a) in Subpart E (supplemental type certificates), omit point 21.B.115 (means of compliance);

(b) in Subpart F (production without production organisation approval), in point 21.B.215 (means of compliance), in point (a), after "Regulation (EU) 2018/1139" insert "and this Regulation";

(c) in Subpart G (production organisation approval), after point 21.B.260 (record keeping) insert—

"**21.B.265 Means of compliance**

(a) AMC may be used to establish compliance with Regulation (EU) 2018/1139 and this Regulation.

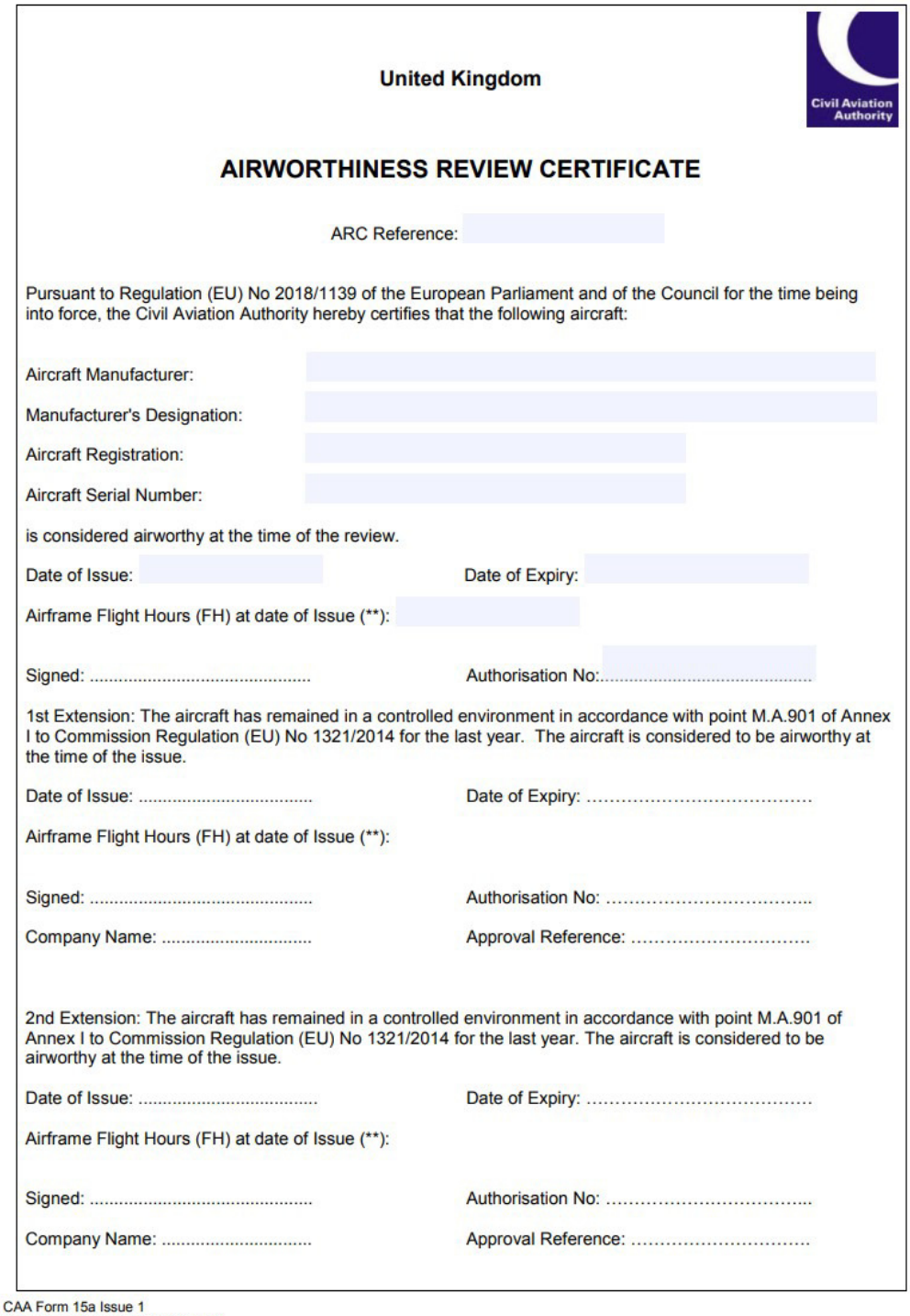
(b) Alternative means of compliance may be used by an organisation to establish compliance with this Regulation when approved by the CAA.".

Amendment of Appendix 2 to Annex 1 to Commission Regulation (EU) No 748/2012

24. For Appendix 2 to Annex 1, substitute—

"Appendix II

UK CAA Form 15a – Airworthiness Review Certificate



United Kingdom

Civil Aviation Authority

AIRWORTHINESS REVIEW CERTIFICATE

ARC Reference:

Pursuant to Regulation (EU) No 2018/1139 of the European Parliament and of the Council for the time being into force, the Civil Aviation Authority hereby certifies that the following aircraft:

Aircraft Manufacturer:

Manufacturer's Designation:

Aircraft Registration:

Aircraft Serial Number:

is considered airworthy at the time of the review.

Date of Issue: Date of Expiry:

Airframe Flight Hours (FH) at date of Issue (**):

Signed: ..... Authorisation No:.....

1st Extension: The aircraft has remained in a controlled environment in accordance with point M.A.901 of Annex I to Commission Regulation (EU) No 1321/2014 for the last year. The aircraft is considered to be airworthy at the time of the issue.

Date of Issue: ..... Date of Expiry: .....

Airframe Flight Hours (FH) at date of Issue (**):

Signed: ..... Authorisation No: .....

Company Name: ..... Approval Reference: .....

2nd Extension: The aircraft has remained in a controlled environment in accordance with point M.A.901 of Annex I to Commission Regulation (EU) No 1321/2014 for the last year. The aircraft is considered to be airworthy at the time of the issue.

Date of Issue: ..... Date of Expiry: .....

Airframe Flight Hours (FH) at date of Issue (**):

Signed: ..... Authorisation No: .....

Company Name: ..... Approval Reference: .....

CAA Form 15a Issue 1
(**) except for balloons and airships

UK CAA Form 15c – Airworthiness Review Certificate

Airworthiness Review Certificate – UK CAA Form 15c

NOTE: *persons and organisations performing the airworthiness review in combination with the 100-h/annual inspection may use the reverse side of this form in order to issue the CRS referred to in point ML.A.801 corresponding to the 100-h/annual inspection.*

United Kingdom

AIRWORTHINESS REVIEW CERTIFICATE (ARC)
(for aircraft complying with Annex Vb (Part-ML)

ARC Reference:

Pursuant to Regulation (EU) 2018/1139 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018:

The Civil Aviation Authority

hereby certifies that:

☐ it has performed an airworthiness review in accordance with Regulation (EU) No 1321/2014 on the following aircraft:

[or] ☐ the following new aircraft:

Aircraft Manufacturer:

Manufacturer's Designation:

Aircraft Registration:

Aircraft Serial Number:

(and) is considered airworthy at the time of review.

Date of Issue: Date of Expiry:

Airframe Flight Hours (FH) at the time of review (*):

Signed: Authorisation No:

1st Extension: The aircraft complies with the conditions of point ML.A.901(c) of Annex Vb (Part-ML).

Date of Issue: Date of Expiry:

Airframe Flight Hours (FH) at date of Issue (*):

Signed: Authorisation No:

Company Name: Approval Reference:

2nd Extension: The aircraft complies with the conditions of point ML.A.901(c) of Annex Vb (Part-ML).

Date of Issue: Date of Expiry:

Airframe Flight Hours (FH) at date of Issue (*):

Signed: Authorisation No:

Company Name: Approval Reference:

CAA Form 15c Issue 2
(*) except for balloons and airships

".

CHAPTER 2

Amendment of Commission Regulation (EU) No 1321/2014

Amendment of Commission Regulation (EU) No 1321/2014

25. Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of

organisations and personnel involved in these tasks(**a**) is amended in accordance with regulations 26 to 28.

Amendment of Annex 1 to Commission Regulation (EU) No 1321/2014

26.—(1) Annex 1 (Part-M), Section A (technical requirements) is amended as follows.

(2) In Subpart H (certificate of release to service – CRS), in point M.A.802 (component certificate to release to service), for point (a) substitute—

"(a) Except for components released to service by a maintenance organisation approved in accordance with Annex II (Part-145), a CRS must be issued at the completion of any maintenance carried out on an aircraft component in accordance with point M.A.502 of this Annex (Part-M).".

(3) In Subpart I (airworthiness review certificate), in point M.A.901 (aircraft airworthiness review), after point (o) insert—

"(p) A person or organisation who issues or extends an ARC must send a copy of that ARC to the CAA within 10 days of the date of issue or extension.".

Amendment of Annex 2 to Commission Regulation (EU) No 1321/2014

27.—(1) Annex 2 (part-145) is amended as follows.

(2) In Section A (technical requirements)—

(a) in point 145.A.30 (personnel requirements), in point (j)(1), after "United Kingdom," insert "certifying staff and";

(b) in point 145.A.45 (maintenance data), in point (a), for "145.A.55(a)(3)" substitute "145.A.55(c)";

(c) in point 145.A.70 (maintenance organisation exposition)—

(i) in point (a)(10), after "CAA" omit ", as required by point 145.A.85(c)";

(ii) in point (c), for "145.A.85(a)" substitute "145.A.85";

(d) in point 145.A.202 (internal safety reporting scheme), in point (a), for "point 145.A.60" substitute "points 145.A.60 and 145.A.61".

(3) In Section B (CAA requirements), in point 145.B.310 (initial certification procedure), in point (h), for "145.A.85(c)" substitute "145.A.70(a)(10)".

(4) In Appendix 2 (class and rating system for the terms of approval of Part-145 maintenance organisations), in point (k)—

(a) for "145.A.85(a)(1)" substitute "145.A.85";

(b) for "145.A.85(c)" substitute "145.A.70(a)(10)".

Amendment of Annex 5b to Commission Regulation (EU) No 1321/2014

28. In Annex 5b (part-ML), in Section A (technical requirements), in Subpart I (airworthiness review certificate ('ARC')), in point ML.A.903 (airworthiness review process), after point (e) insert—

"(f) A person or organisation who issues or extends an ARC must send a copy of that ARC to the CAA within 10 days of the date of issue or extension.".

(**a**) EUR 2014/1321, as amended by S.I. 2019/645, 2020/1116 and 2023/588. There are other amendments not relevant to these Regulations.

Signed by authority of the Secretary of State for Transport

Michael Kane
Parliamentary Under Secretary of State
5th December 2024 Department for Transport

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations amend assimilated EU law in the field of aviation safety and make consequential changes to the Air Navigation Order 2016 ("the ANO 2016") using powers conferred by Regulation (EU) 2018/1139 of 4 July 2018 on common rules in the field of civil aviation and the Retained EU Law (Revocation and Reform) Act 2023.

Part 2, Chapter 1 amends article 5 of, and the Annexes to, Commission Regulation (EU) No 965/2012 (technical requirements and administrative procedures related to air operations) ("the air operations regulation") to implement International Civil Aviation Organization ("ICAO") Standards and Recommended Practices ("SARPs") set out in Annex 6 (operation of aircraft) to the Convention on International Civil Aviation of 7th December 1944 ("the Chicago Convention").

The amendment in regulation 3 introduces a new concept of an "operational credit" which allows for some flights to be operated at a lower aerodrome operating minima. The amendments in regulation 4 update definitions in Annex 1 to the air operations regulation and the amendments in regulations 5 to 11 makes amendments to Annexes 2 to 8 of the air operations regulation. These amendments introduce the concept of "fuel schemes" for commercial air transport ("CAT"); establish requirements to plan and manage the consumption of fuel and energy both before and during flights (including the selection of appropriate aerodromes for landing); update aerodrome operating minima requirements; introduce changes in respect of helicopter operations under instrument flight rule, planning minima to avoid the loss of safe landing options during flights and requirements relating to altimeter setting and checking. These amendments are implemented across CAT operations generally; however, specific requirements vary dependent on the aircraft or operation and use of the aircraft. The concept of "energy" is a new addition throughout the amendments to allow for the use of non-hydrocarbon-based fuels in future.

Part 2, Chapter 2, makes consequential amendments to the ANO 2016, which are required as a result of amendments in regulations 6, 7 and 9 to 11 which either revoke, or revoke and replace, obligations in the air operations regulation to which criminal sanctions apply in the ANO.

Part 2, Chapter 3 amends Commission Regulation (EU) No 1178/2011 (requirements and administrative procedures related to civil aviation aircrew). The changes implemented by these Regulations will improve existing mandatory crew training and checking requirements for air operators. Specifically, the changes address: initial and recurrent training and checking; the conditions for the operation of more than one aircraft type or variant and the acceptance of previous training and checking by non-commercial operators. The amendments also allow for multi-pilot operations to take place on single-pilot certified helicopters.

Part 2, Chapter 4 amends Commission Regulation (EU) No 139/2014 (requirements and administrative procedures related to aerodromes). The amendments implement ICAO SARPs set out in Annexes 6 and 14 (aerodromes). They also reflect updates to the All-Weather Operations Manual (ICAO Document 9365). All-Weather Operations ("AWO") is the ability of aircraft to take off and land in an airport under low visibility conditions. These Regulations introduce the regulatory requirements necessary to support AWO at aerodromes, including ensuring that the appropriate infrastructure (including meteorological equipment), information and procedures are in place. They also introduce amendments which allow for the use of enhanced flight vision systems ("EFVS") to the maximum extent possible.

Part 3, Chapter 1 amends Commission Regulation (EU) No 748/2012 (implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations). These

amendments are further to those made by the Aviation Safety (Amendment) Regulations 2023 ("the 2023 Regulations"), which were done to implement SARPs set out in Annex 19 of the Chicago Convention. Those SARPs require organisations designing or producing aircraft, engines and components to implement a Safety Management System ("SMS"). These Regulations make further amendments to support the implementation of the Safety Management System. They also correct errors that have come to the Department's attention following the 2023 Regulations being made, by amending the requirements for the content of the handbook design organisations must provide to the CAA, amending specifications to when acceptable or alternative means of compliance may be used by organisations to establish compliance with relevant regulations, and replacing relevant CAA forms to clarify which forms should be used in particular situations.

Part 3, Chapter 2 amends Commission Regulation (EU) No 1321/2014 (continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks). These amendments are also further to amendments in the 2023 Regulations, which were made to require maintenance organisations to implement an SMS to bring into effect ICAO standards set out in Annex 19 to the Chicago Convention. These amendments also correct errors that have come to the Department's attention following the 2023 Regulations being made by amending requirements for when a component certificate of release to service must be issued following maintenance, expanding which staff are included in derogations for certain qualification requirements where base maintenance is carried out a location outside of the UK, and fixing incorrect cross-references to other provisions within Commission Regulation (EU) No 1321/2014. The amendments also reinstate legal requirements for those issuing or extending airworthiness review certificates to send them to the CAA within 10 days. These requirements had been removed by the Aviation Safety (Amendment) (EU Exit) Regulations 2020.

A full impact assessment of the effect that the amendments in this instrument regarding fuel planning and management will have on the costs to business, the voluntary sector and the public sector is available from the Department for Transport, Great Minster House, 33 Horseferry Road, London SW1P 4DR and is published alongside the Explanatory Memorandum to this instrument on the legislation.gov.uk website. A full impact assessment has not been produced for the remainder this instrument as no, or no significant, impact on the private, voluntary or public sector is foreseen.

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