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Subject:	ANNEX to the COMMISSION REGULATION (EU) No .../.. of XXX amending Regulation (EU) No 965/2012 as regards operational approval of performance-based navigation, certification and oversight of data services providers and helicopter offshore operations, and correcting that Regulation

Delegations will find attached document D042243/03.

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Brussels, **XXX**
[...] (2016) **XXX** draft

ANNEX 1

ANNEX

to the COMMISSION REGULATION (EU) No .../.. of XXX

amending Regulation (EU) No 965/2012 as regards operational approval of performance-based navigation, certification and oversight of data services providers and helicopter offshore operations, and correcting that Regulation

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Annexes I, II, IV, V, VI, VII and VIII to Regulation (EU) No 965/2012 are amended as follows:

(1) In Annex I (Definitions):

(a) point (69) is replaced by the following:

'(69) 'hostile environment' means:

(a) an area in which:

(i) a safe forced landing cannot be accomplished because the surface is inadequate; or

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

(iii) search and rescue response/capability are not provided consistent with anticipated exposure; or

(iv) there is an unacceptable risk of endangering persons or property on the ground;

(b) in any case, the following areas:

(i) for overwater operations, the open sea area north of 45N and south of 45S, unless any part is designated as non-hostile by the responsible authority of the State in which the operations take place; and

(ii) those parts of a congested area without adequate safe forced landing areas.';

(b) point (86) is replaced by the following:

'(86) 'offshore operation' means a helicopter operation that has a substantial proportion of any flight conducted over open sea areas to or from an offshore location.';

(c) the following point (86a) is inserted:

'(86a) 'offshore location' means a facility intended to be used for helicopter operations on a fixed or floating offshore structure or a vessel.';

(d) the following point (86b) is inserted:

'(86b) 'open sea area' means the area of water to seaward of the coastline.';

(e) the following point (103a) is inserted:

'(103a) 'required navigation performance (RNP) specification' means a navigation specification for PBN operations which includes a requirement for on-board navigation performance monitoring and alerting.';

(2) In Annex II (Part-ARO):

(a) the following ARO.OPS.240 is added:

'ARO.OPS.240 Specific approval of RNP AR APCH

(a) When compliance with the requirements in SPA.PBN.105 has been demonstrated by the applicant, the competent authority shall grant a generic specific approval or a procedure-specific approval for RNP AR APCH.

(b) In the case of a procedure-specific approval, the competent authority shall:

(1) list the approved instrument approach procedures at specific aerodromes in the PBN approval;

(2) establish coordination with the competent authorities for these aerodromes, if appropriate; and

(3) take into account possible credits stemming from RNP AR APCH specific approvals already issued to the applicant.';

(b) Appendix II is replaced by the following:

'Appendix II

OPERATIONS SPECIFICATIONS (subject to the approved conditions in the operations manual)			
Issuing Authority Contact Details			
Telephone ¹ : _____; Fax: _____;			
E-mail: _____			
AOC ² :	Operator Name ³ :	Date ⁴ :	Signature:
	Db a Trading Name		
Operations Specifications#:			

Aircraft Model ⁵ :				
Registration Marks ⁶ :				
<input type="checkbox"/> Commercial operations				
Area of operation ⁷ :				
Special Limitations ⁸ :				
Specific Approvals:	Yes	No	Specification ⁹	Remarks
Dangerous Goods	<input type="checkbox"/>	<input type="checkbox"/>		
Low Visibility Operations			CAT ¹⁰	
Take-off			RVR ¹¹ : m	
Approach and Landing	<input type="checkbox"/>	<input type="checkbox"/>	DA/H: ft RVR: m	
RVSM ¹² N/A	<input type="checkbox"/>	<input type="checkbox"/>		
ETOPS ¹³ N/A	<input type="checkbox"/>	<input type="checkbox"/>	Maximum Diversion Time ¹⁴ : min.	
Complex navigation specifications for PBN operations ¹⁵	<input type="checkbox"/>	<input type="checkbox"/>		16
Minimum navigation performance specification	<input type="checkbox"/>	<input type="checkbox"/>		
Helicopter operations with the aid of night vision imaging systems	<input type="checkbox"/>	<input type="checkbox"/>		
Helicopter hoist operations	<input type="checkbox"/>	<input type="checkbox"/>		
Helicopter emergency medical service operations	<input type="checkbox"/>	<input type="checkbox"/>		
Helicopter offshore operations	<input type="checkbox"/>	<input type="checkbox"/>		
Cabin crew training ¹⁷	<input type="checkbox"/>	<input type="checkbox"/>		
Issue of CC attestation ¹⁸	<input type="checkbox"/>	<input type="checkbox"/>		
Continuing airworthiness	<input type="checkbox"/>	<input type="checkbox"/>	19	

1. Telephone and fax contact details of the competent authority, including the country code. E-mail 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 'DbA' before the trading name (for 'Doing business as').
4. Issue date of the operations specifications (dd-mm-yyyy) and signature of the competent authority 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 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 operation manual. In case not all specific approvals apply to the aircraft model, the registration marks of the aircraft could be entered in the remark column to the related specific approval.
7. Listing of geographical area(s) of authorised operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).
8. Listing of applicable special limitations (e.g. VFR only, Day only, etc.).
9. List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).
10. Insertion of applicable precision approach category: LTS CAT I, CAT II, OTS CAT II, CAT IIIA, CAT IIIB or CAT IIIC. Insertion of minimum runway visual range (RVR) in meters and decision height (DH) in feet. One line is used per listed approach category.
11. Insertion of approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.
12. Not Applicable (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.
13. 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 more or less than two engines.
14. The threshold distance may also be listed (in NM), as well as the engine type.
15. 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' and/or 'Remarks' columns. Individual 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 should have a reference to the related page in the operations manual.

16. Specify if the specific approval is limited to certain runway ends and/or aerodromes.

17. 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 Commission Regulation (EU) No 1178/2011.

18. Approval to issue cabin crew attestations as specified in Annex V (Part-CC) to Commission Regulation (EU) No 1178/2011.

19. The name of the person/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. Annex I (Part-M), Subpart G to Commission Regulation (EU) 1321/2014.

20. Other approvals or data can be entered here, using one line (or one multi-line block) per authorisation (e.g. short landing operations, steep approach operations, helicopter operations to/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, aircraft used for non-commercial operations).

EASA FORM 139 Issue 2';

(c) note 6 to EASA FORM 140 in Appendix V is replaced by the following:

'(6) List in this column any approved operations, e.g. dangerous goods, LVO, RVSM, PBN, MNPS, HOFO.';

(3) In Annex IV (Part-CAT):

(a) CAT.OP.MPA.120 is deleted;

(b) the following CAT.OP.MPA.126 is inserted:

'CAT.OP.MPA.126 Performance-based navigation

The operator shall ensure that, when performance-based navigation (PBN) is required for the route or procedure to be flown:

(a) the relevant PBN navigation specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

- (b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document referred above.’;
- (c) CAT.OP.MPA.135(a)(1) is replaced by the following:
- ’(1) space-based facilities, ground facilities and services, including meteorological services, adequate for the planned operation are provided;’;
- (d) in CAT.OP.MPA.175(b):
- (i) point (6) is replaced by the following:
- ’(6) space-based facilities, ground facilities and services that are required for the planned flight are available and adequate;’
- (ii) the word 'and' at the end of point (7) is deleted;
- (iii) the following point (7a) is inserted:
- ’(7a) any navigational database required for performance-based navigation is suitable and current; and’;
- (e) CAT.OP.MPA.181 is replaced by the following:
- ’CAT.OP.MPA.181 Selection of aerodromes and operating sites — helicopters
- (a) For flights under instrument meteorological conditions (IMC), the commander shall select a take-off alternate aerodrome within one hour flying time at normal cruising speed if it would not be possible to return to the site of departure due to meteorological reasons.
- (b) For IFR flights or when flying under VFR and navigating by means other than by reference to visual landmarks, the commander shall specify at least one destination alternate aerodrome in the operational flight plan unless:
- (1) for a flight to any other land destination, the duration of the flight and the meteorological conditions prevailing are such that, at the estimated time of arrival at the site of intended landing, an approach and landing is possible under visual meteorological conditions (VMC); or
- (2) the site of intended landing is isolated and no alternate is available; in this case, a point of no return (PNR) shall be determined.
- (c) The operator shall select two destination alternate aerodromes when:
- (1) the appropriate weather reports and/or forecasts for the destination aerodrome indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima; or
- (2) no meteorological information is available for the destination aerodrome.

(d) The operator shall specify any required alternate aerodrome(s) in the operational flight plan.’;

(f) the following CAT.OP.MPA.182 is inserted:

‘CAT.OP.MPA.182 Destination aerodromes — instrument approach operations

The operator shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.’;

(g) point (b) in CAT.OP.MPA.247 is deleted;

(h) CAT.OP.MPA.295 is replaced by the following:

‘CAT.OP.MPA.295 Use of airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.’;

(i) point (a)(3) of CAT.IDE.A.205 is replaced by the following:

‘(3) a seat belt with upper torso restraint system on each passenger seat and restraining belts on each berth in the case of aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine, having an individual CofA first issued on or after 8 April 2015;’;

(j) point (b) of CAT.IDE.A.205 is replaced by the following:

‘(b) A seat belt with upper torso restraint system shall have:

(1) a single point release;

(2) on the seats for the minimum required cabin crew, two shoulder straps and a seat belt that may be used independently; and

(3) on flight crew seats and on any seat alongside a pilot’s seat:

(i) two shoulder straps and a seat belt that may be used independently; or

(ii) a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

(A) aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

(B) aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine that are not compliant with the emergency landing dynamic

conditions defined in the applicable certification specification and having an individual CofA first issued before 28 October 2014; and

(C) aeroplanes certified in accordance with CS-VLA or equivalent and CS-LSA or equivalent.’;

- (k) the following point (f) is added in CAT.IDE.A.345:

’(f) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’

- (l) CAT.IDE.A.355 is replaced by the following:

’CAT.IDE.A.355 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.’;

- (m) point (b) in CAT.IDE.H.280 is deleted;

- (n) CAT.IDE.H.295 is replaced by the following:

’CAT.IDE.H.295 Crew survival suits

Each crew member shall wear a survival suit when operating in performance class 3 on a flight over water beyond autorotational distance or safe forced landing distance from land, when the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight.’;

- (o) CAT.IDE.H.310 is deleted;

- (p) the following point (e) is added in CAT.IDE.H.345:

’(e) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’;

- (q) the following CAT.IDE.H.355 is added:

’CAT.IDE.H.355 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.';

(4) In Annex V (Part-SPA):

(a) SPA.PBN.100 PBN is replaced by the following:

'SPA.PBN.100 PBN operations

(a) An approval is required for each of the following PBN specifications:

(1) RNP AR APCH; and

(2) RNP 0.3 for helicopter operation.

(b) An approval for RNP AR APCH operations shall allow operations on public instrument approach procedures which meet the applicable ICAO procedure design criteria.

(c) A procedure-specific approval for RNP AR APCH or RNP 0.3 shall be required for private instrument approach procedures or any public instrument approach procedure that does not meet the applicable ICAO procedure design criteria, or where required by the Aeronautical Information Publication (AIP) or the competent authority.';

(b) SPA.PBN.105 PBN is replaced by the following:

'SPA.PBN.105 PBN operational approval

To obtain a PBN specific approval from the competent authority, the operator shall provide evidence that:

(a) the relevant airworthiness approval, suitable for the intended PBN operation, is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval;

(b) a training programme for the flight crew members and relevant personnel involved in the flight preparation has been established;

(c) a safety assessment has been carried out;

- (d) operating procedures have been established specifying:
- (1) the equipment to be carried, including its operating limitations and appropriate entries in the minimum equipment list (MEL);
 - (2) flight crew composition, qualification and experience;
 - (3) normal, abnormal and contingency procedures; and
 - (4) electronic navigation data management;
- (e) a list of reportable events has been specified; and
- (f) a management RNP monitoring programme has been established for RNP AR APCH operations, if applicable.’;
- (c) the following Subpart K is added:

’SUBPART K

HELICOPTER OFFSHORE OPERATIONS

SPA.HOFO.100 Helicopter offshore operations (HOFO)

The requirements of this Subpart apply to:

- (a) a commercial air transport operator holding a valid AOC in accordance with Part-ORO;
- (b) a specialised operations operator having declared its activity in accordance with Part-ORO; or
- (c) a non-commercial operator having declared its activity in accordance with Part-ORO.

SPA.HOFO.105 Approval for helicopter offshore operations

- (a) Prior to engaging in operations under this Subpart, a specific approval by the competent authority shall have been issued to the operator.
- (b) To obtain such approval, the operator shall submit an application to the competent authority as specified in SPA.GEN.105, and shall demonstrate compliance with the requirements of this Subpart.
- (c) The operator shall, prior to performing operations from a Member State other than the Member State that issued the approval under (a), inform the competent authorities in both Member States of the intended operation.

SPA.HOFO.110 Operating procedures

- (a) The operator shall, as part of its safety management process, mitigate and minimise risks and hazards specific to helicopter offshore operations. The operator shall specify in the operations manual the:

- (1) selection, composition and training of crews;
 - (2) duties and responsibilities of crew members and other involved personnel;
 - (3) required equipment and dispatch criteria; and
 - (4) operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.
- (b) The operator shall ensure that:
- (1) an operational flight plan is prepared prior to each flight;
 - (2) the passenger safety briefing also includes any specific information on offshore related items and is provided prior to boarding the helicopter;
 - (3) each member of the flight crew wears an approved survival suit:
 - (i) when the weather report or forecasts available to the pilot-in-command/commander indicate that the sea temperature will be less than plus 10°C during the flight; or
 - (ii) when the estimated rescue time exceeds the calculated survival time; or
 - (iii) when the flight is planned to be conducted at night in a hostile environment;
 - (4) where established, the offshore route structure provided by the appropriate ATS is followed;
 - (5) pilots make optimum use of the automatic flight control systems (AFCS) throughout the flight;
 - (6) specific offshore approach profiles are established, including stable approach parameters and the corrective action to be taken if an approach becomes unstable;
 - (7) for multi-pilot operations, procedures are in place for a member of the flight crew to monitor the flight instruments during an offshore flight, especially during approach or departure, to ensure that a safe flight path is maintained;
 - (8) the flight crew takes immediate and appropriate action when a height alert is activated;
 - (9) procedures are in place to require the emergency flotation systems to be armed, when safe to do so, for all overwater arrivals and departures; and
 - (10) operations are conducted in accordance with any restriction on the routes or the areas of operation specified by the competent authority or the appropriate authority responsible for the airspace.

SPA.HOFO.115 Use of offshore locations

The operator shall only use offshore locations that are suitable in relation to size and mass of the type of helicopter and to the operations concerned.

SPA.HOFO.120 Selection of aerodromes and operating sites

(a) *Onshore destination alternate aerodrome.* Notwithstanding CAT.OP.MPA.181, NCC.OP.152, and SPO.OP.151, the pilot-in-command/commander does not need to specify a destination alternate aerodrome in the operational flight plan when conducting flights from an offshore location to a land aerodrome if either:

(1) the destination aerodrome is defined as a coastal aerodrome, or

(2) the following criteria are met:

(i) the destination aerodrome has a published instrument approach;

(ii) the flight time is less than 3 hours; and

(iii) the published weather forecast valid from 1 hour prior, and 1 hour subsequent to the expected landing time specifies that:

(A) the cloud base is at least 700 feet above the minima associated with the instrument approach, or 1 000 feet above the destination aerodrome, whichever is the higher; and

(B) visibility is at least 2 500 meters.

(b) *Offshore destination alternate helideck.* The operator may select an offshore destination alternate helideck when all of the following criteria are met:

(1) An offshore destination alternate helideck shall be used only after the point of no return (PNR) and when an onshore destination alternative aerodrome is not geographically available. Prior to the PNR, an onshore destination alternate aerodrome shall be used.

(2) One engine inoperative (OEI) landing capability shall be attainable at the offshore destination alternate helideck.

(3) To the extent possible, helideck availability shall be guaranteed prior to PNR. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be suitable for its use as an alternate helideck by each helicopter type intended to be used.

(4) Weather minima shall be established taking into account the accuracy and reliability of meteorological information.

(5) The MEL shall contain specific provisions for this type of operation.

(6) An offshore destination alternate helideck shall only be selected if the operator has established a procedure in the operations manual.

SPA.HOFO.125 Airborne radar approaches (ARAs) to offshore locations — CAT operations

(a) A commercial air transport (CAT) operator shall establish operational procedures and ensure that ARAs are only flown if:

(1) the helicopter is equipped with a radar that is capable of providing information regarding the obstacle environment; and

(2) either:

(i) the minimum descent height (MDH) is determined from a radio altimeter; or

(ii) the minimum descent altitude (MDA) plus an adequate margin is applied.

(b) ARAs to rigs or vessels in transit shall be flown as multi-pilot operations.

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

(d) The approach shall only be continued beyond decision range or below the minimum descent altitude/height (MDA/H) when visual reference to the destination has been established.

(e) For single-pilot CAT operations, appropriate increments shall be added to the MDA/H and decision range.

(f) When an ARA is flown to a non-moving offshore location (i.e. fixed installation or moored vessel) and a reliable GPS position for the location is available in the navigation system, the GPS/area navigation system shall be used to enhance the safety of the ARA.

SPA.HOFO.130 Meteorological conditions

Notwithstanding CAT.OP.MPA.247, NCC.OP.180 and SPO.OP.170, when flying between offshore locations located in class G airspace where the overwater sector is less than 10 NM, VFR flights may be conducted when the limits are at, or better than, the following:

Minima for flying between offshore locations located in class G airspace				
	Day		Night	
	Height*	Visibility	Height*	Visibility
Single pilot	300 feet	3 km	500 feet	5 km
Two pilots	300 feet	2 km**	500 feet	5 km***

* The cloud base shall allow flight at the specified height to be below and clear of cloud.

** Helicopters may be operated in flight visibility down to 800 m, provided the destination or an intermediate structure is continuously visible.

*** Helicopters may be operated in flight visibility down to 1 500 m, provided the destination or an intermediate structure is continuously visible.

SPA.HOFO.135 Wind limitations for operations to offshore locations

Operation to an offshore location shall only be performed when the wind speed at the helideck is reported to be not more than 60 knots including gusts.

SPA.HOFO.140 Performance requirements at offshore locations

Helicopters taking off from and landing at offshore locations shall be operated in accordance with the performance requirements of the appropriate Annex according to their type of operation.

SPA.HOFO.145 Flight data monitoring (FDM) system

(a) When conducting CAT operations with a helicopter equipped with a flight data recorder, the operator shall establish and maintain a FDM system, as part of its integrated management system, by 1 January 2019.

(b) The FDM system shall be non-punitive and contain adequate safeguards to protect the source(s) of the data.

SPA.HOFO.150 Aircraft tracking system

An operator shall establish and maintain a monitored aircraft tracking system for offshore operations in a hostile environment from the time the helicopter departs until it arrives at its final destination.

SPA.HOFO.155 Vibration health monitoring (VHM) system

(a) The following helicopters conducting CAT offshore operations in a hostile environment shall be fitted with a VHM system capable of monitoring the status of critical rotor and rotor drive systems by 1 January 2019:

(1) complex motor-powered helicopters first issued with an individual Certificate of Airworthiness (C of A) after 31 December 2016;

(2) all helicopters with a maximum operational passenger seating configuration (MOPSC) of more than 9 and first issued with an individual C of A before 1 January 2017;

(3) all helicopters first issued with an individual C of A after 31 December 2018.

(b) The operator shall have a system to:

(1) collect the data including system generated alerts;

(2) analyse and determine component serviceability; and

(3) respond to detected incipient failures.

SPA.HOFO.160 Equipment requirements

(a) The operator shall comply with the following equipment requirements:

(1) Public Address (PA) system in helicopters used for CAT and non-commercial operations with complex motor-powered helicopters (NCC):

(i) Helicopters with a maximum operational passenger seat configuration (MOPSC) of more than 9 shall be equipped with a PA system.

(ii) Helicopters with an MOPSC of 9 or less need not be equipped with a PA system if the operator can demonstrate that the pilot's voice is understandable at all passengers' seats in flight.

(2) Radio altimeter

Helicopters shall be equipped with a radio altimeter that is capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot.

(b) Emergency exits

All emergency exits, including crew emergency exits, and any door, window or other opening that is suitable for emergency egress, and the means for opening them shall be clearly marked for the guidance of occupants using them in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized or the cabin is submerged.

(c) Helicopter terrain awareness warning system (HTAWS)

Helicopters used in CAT operations with a maximum certificated take-off mass of more than 3 175 kg or a MOPSC of more than 9 and first issued with an individual C of A after 31 December 2018 shall be equipped with an HTAWS that meets the requirements for class A equipment as specified in an acceptable standard.

SPA.HOFO.165 Additional procedures and equipment for operations in a hostile environment

(a) Life jackets

Approved life jackets shall be worn at all times by all persons on board unless integrated survival suits that meet the combined requirement of the survival suit and life jacket are worn.

(b) Survival suits

All passengers on board shall wear an approved survival suit:

(1) when the weather report or forecasts available to the commander/pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight; or

(2) when the estimated rescue time exceeds the calculated survival time; or

(3) when the flight is planned to be conducted at night.

(c) Emergency breathing system

All persons on board shall carry and be instructed in the use of emergency breathing systems.

(d) Life rafts

(1) All life rafts carried shall be installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation, and trim characteristics were evaluated for certification.

(2) All life rafts carried shall be installed so as to facilitate their ready use in an emergency.

(3) The number of life rafts installed:

(i) in the case of a helicopter carrying less than 12 persons, at least one life raft with a rated capacity of not less than the maximum number of persons on board; or

(ii) in the case of a helicopter carrying more than 11 persons, at least two life rafts, sufficient together to accommodate all persons capable of being carried on board and, if one is lost, the remaining life raft(s) having the overload capacity sufficient to accommodate all persons on the helicopter.

(4) Each life raft shall contain at least one survival emergency locator transmitter (ELT(S)); and

(5) Each life raft shall contain life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

(e) Emergency cabin lighting

The helicopter shall be equipped with an emergency lighting system with an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter.

(f) Automatically deployable emergency locator transmitter (ELT(AD))

The helicopter shall be equipped with an ELT(AD) that is capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

(g) Securing of non-jettisonable doors

Non-jettisonable doors that are designated as ditching emergency exits shall have a means of securing them in the open position so that they do not interfere with the occupants' egress in all sea conditions up to the maximum sea conditions required to be evaluated for ditching and flotation.

(h) Emergency exits and escape hatches

All emergency exits, including crew emergency exits, and any door, window or other opening suitable to be used for the purpose of underwater escape shall be equipped so as to be operable in an emergency.

(i) Notwithstanding (a), (b) and (c) above the operator may, based on a risk assessment, allow passengers, medically incapacitated at an offshore location, to partly wear or not wear life jackets, survival suits or emergency breathing systems on return flights or flights between offshore locations.

SPA.HOFO.170 Crew requirements

(a) The operator shall establish:

(1) criteria for the selection of flight crew members, taking into account the flight crew members' previous experience;

(2) a minimum experience level for a commander/pilot-in-command intending to conduct offshore operations; and

(3) a flight crew training and checking programme that each flight crew member shall complete successfully. Such programme shall be adapted to the offshore environment and include normal, abnormal and emergency procedures, crew resource management, water entry and sea survival training.

(b) Recency requirements

A pilot shall only operate a helicopter carrying passengers:

(1) at an offshore location, as commander or pilot-in-command, or co-pilot, when he or she has carried out in the preceding 90 days at least 3 take-offs, departures, approaches and landings at an offshore location in a helicopter of the same type or a full flight simulator (FFS) representing that type; or

(2) by night at an offshore location, as commander or pilot-in-command, or co-pilot, when he/she has carried out in the preceding 90 days at least 3 take-offs, departures, approaches and landings at night at an offshore location in a helicopter of the same type or an FFS representing that type.

The 3 take-offs and landings shall be performed in either multi-pilot or single-pilot operations, depending on the operation to be performed.

(c) Specific requirements for CAT:

(1) The 90-day period presented in points (b)(1) and (2) above may be extended to 120 days as long as the pilot undertakes line flying under the supervision of a type rating instructor or examiner.

(2) If the pilot does not comply with the requirements in (1), he/she shall complete a training flight in the helicopter or an FFS of the helicopter type to be used, which shall include at least the requirements described in (b)(1) and (2) before he or she can exercise his or her privileges.'

(5) In Annex VI (Part-NCC):

- (a) NCC.GEN.106 is amended as follows:
- (i) the word ‘and’ at the end of point (a)(4)(vii) is deleted;
 - (ii) the word ‘and’ at the end of point (a)(4)(viii) is inserted;
 - (iii) a new point (a)(4)(ix) is inserted as follows:
 - ‘(ix) any navigational database required for performance-based navigation is suitable and current.’;
- (b) the following NCC.OP.116 is inserted:
- ‘NCC.OP.116 Performance-based navigation — aeroplanes and helicopters
- The operator shall ensure that, when PBN is required for the route or procedure to be flown:
- (a) the relevant PBN specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and
 - (b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.’;
- (c) point (a) of NCC.OP.145 is replaced by the following:
- ‘(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.’;
- (d) NCC.OP.152 is amended as follows:
- (i) the word ‘and’ at the end of point (b)(2)(ii) is deleted;
 - (ii) point (b)(3) is deleted;
- (e) the following NCC.OP.153 is inserted:
- ‘NCC.OP.153 Destination aerodromes — instrument approach operations
- The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.’;
- (f) NCC.OP.220 is amended as follows:
- ‘NCC.OP.220 Airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programs when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.’;

(g) point (b) of NCC.IDE.A.180 is replaced by the following:

‘(b) A seat belt with upper torso restraint system shall have:

(1) a single point release;

(2) on the seats for the minimum required cabin crew, two shoulder straps and a seat belt that may be used independently; and

(3) on flight crew seats and on any seat alongside a pilot’s seat:

(i) two shoulder straps and a seat belt that may be used independently; or

(ii) a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

(A) aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

(B) aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 25 August 2016.’;

(h) the following point (d) is added in NCC.IDE.A.250:

‘(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’;

(i) NCC.IDE.A.260 is replaced by the following:

‘NCC.IDE.A.260 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.’;

- (j) point (b) of NCC.IDE.H.215 is deleted;
- (k) NCC.IDE.H.226 is replaced by the following:

‘NCC.IDE.H.226 Crew survival suits

Each crew member shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(a) flights over water beyond autorotational distance or safe forced landing distance from land, where in the case of a critical engine failure, the helicopter is not able to sustain level flight; and

(b) the weather report or forecasts available to the commander/pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight.’;

- (l) NCC.IDE.H.231 is deleted;
- (m) the following point (d) is added in NCC.IDE.H.250:

‘(d) When PBN is required the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’;

- (n) the following NCC.IDE.H.260 is added:

‘NCC.IDE.H.260 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.’;

- (6) In Annex VII (Part-NCO):

- (a) NCO.GEN.105 is amended as follows:

(i) the word ‘and’ at the end of point (a)(4)(v) is deleted;

(ii) the word ‘and’ at the end of point (a)(4)(vi) is inserted;

(iii) the following point (a)(4)(vii) is inserted:

‘(vii) any navigational database required for PBN is suitable and current.’;

- (b) the following point (f) is added in NCO.GEN.140:

‘(f) Reasonable quantities of articles and substances that would otherwise be classified as dangerous goods and that are used to facilitate flight safety, where carriage aboard the aircraft is advisable to ensure their timely availability for operational purposes, shall be considered authorised under paragraph 1;2.2.1(a) of the Technical Instructions. This is regardless of whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight.

The packing and loading on board of the above-mentioned articles and substances shall be performed, under the responsibility of the pilot in command, in such a way as to minimise the risks posed to crew members, passengers, cargo or the aircraft during aircraft operations.’;

- (c) the following NCO.OP.116 is inserted:

‘NCO.OP.116 Performance-based navigation — aeroplanes and helicopters

The pilot-in-command shall ensure that, when PBN is required for the route or procedure to be flown:

- (a) the relevant PBN navigation specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and
- (b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.’;

- (d) point (a) of NCO.OP.135 is replaced by the following:

‘(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.’;

- (e) the following NCO.OP.142 is inserted:

‘NCO.OP.142 Destination aerodromes — instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.’;

- (f) NCO.OP.190 is replaced by the following:

‘NCO.OP.190 Use of supplemental oxygen

(a) The pilot-in-command shall ensure that all flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members, and shall ensure that supplemental oxygen is available to passengers when lack of oxygen might harmfully affect passengers.

(b) In any other case when the pilot-in-command cannot determine how the lack of oxygen might affect all occupants on board, he/she shall ensure that:

(1) all crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen for any period in excess of 30 minutes when the pressure altitude in the the passenger compartment will be between 10 000 ft and 13 000 ft; and

(2) all occupants use supplemental oxygen for any period that the pressure altitude in the the passenger compartment will be above 13 000 ft.‘;

(g) the following NCO.OP.220 is added:

‘NCO.OP.220 Airborne collision avoidance system (ACAS II)

When ACAS II is used, pilot-in-command shall apply the appropriate operational procedures and be adequately trained.’;

(h) point (a)(4) of NCO.IDE.A.140 is replaced by the following:

‘(4) a seat belt with upper torso restraint system on each flight crew seat, having a single point release for aeroplanes having a CofA first issued on or after 25 August 2016.’;

(i) NCO.IDE.A.155 is replaced by the following:

‘NCO.IDE.A.155 Supplemental oxygen — non-pressurised aeroplanes

Non-pressurised aeroplanes operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.’;

(j) the following point (d) is added in NCO.IDE.A.195:

‘(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’;

(k) the following NCO.IDE.A.205 is added:

‘NCO.IDE.A.205 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The pilot-in-command shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to the aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the pilot-in-command shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to a flight.

In such cases, the pilot-in-command shall not use the affected data.’;

(l) NCO.IDE.H.155 is replaced by the following:

‘NCO.IDE.H.155 Supplemental oxygen — non-pressurised helicopters

Non-pressurised helicopters operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.’;

(m) the following point (d) is added in NCO.IDE.H.195:

‘(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’;

(n) the following NCO.IDE.H.205 is added:

‘NCO.IDE.H.205 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to the aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the pilot-in-command shall not use the affected data.’;

(o) NCO.IDE.S.130 is replaced by the following:

‘NCO.IDE.S.130 Supplemental oxygen

Sailplanes operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.’;

(p) point (f) of NCO.SPEC.110 is replaced by the following:

'(f) ensure that task specialists and crew members use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members or harmfully affect task specialists. If the pilot-in-command cannot determine how the lack of oxygen might affect the occupants on board, he/she shall ensure that task specialists and crew members use supplemental oxygen continuously whenever the cabin altitude exceeds 10000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.';

(7) In Annex VIII (Part-SPO):

(a) SPO.GEN.107 is amended as follows:

(i) the word 'and' at the end of point (a)(4)(v) is deleted;

(ii) the word 'and' at the end of point (a)(4)(vi) is inserted;

(iii) a new point (a)(4)(vii) is inserted as follows:

'(vii) any navigational database required for PBN is suitable and current.';

(b) the following SPO.OP.116 is inserted:

'SPO.OP.116 Performance-based navigation — aeroplanes and helicopters

The operator shall ensure that, when PBN is required for the route or procedure to be flown:

(a) the relevant PBN specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

(b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.';

(c) point (a) in SPO.OP.140 is replaced by the following:

'(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.';

(d) point (b)(3) of SPO.OP.151 is deleted;

(e) the following SPO.OP.152 is inserted:

'SPO.OP.152 Destination aerodromes — instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate

aerodrome in the case of loss of capability for the intended approach and landing operation.’;

- (f) point (a) of SPO.OP.205 is replaced by the following:

‘(a) The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.’;

- (g) points (c) and (d) in SPO.IDE.A.160 are replaced by the following:

‘(c) for other-than-complex motor-powered aeroplanes, a seat belt with upper torso restraint system on each flight crew seat, having a single point release for aeroplanes having a CofA first issued on or after 25 August 2016;

(d) for complex motor-powered aeroplanes, a seat belt with upper torso restraint system, incorporating a device that will automatically restrain the occupant’s torso in the event of rapid deceleration:

(1) on each flight crew seat and on any seat alongside a pilot’s seat; and

(2) on each observer’s seat located in the flight crew compartment.’;

- (h) the following point (e) is added in SPO.IDE.A.160:

‘(e) The seat belt with upper torso restraint system required by (d) shall have:

(1) a single point release;

(2) on flight crew seats and on any seat alongside a pilot’s seat:

(i) two shoulder straps and a seat belt that may be used independently; or

(ii) a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

(A) aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

(B) aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 25 August 2016.’;

- (i) the following point (d) is added in SPO.IDE.A.220:

‘(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’;

- (j) the following SPO.IDE.A.230 is added:

‘SPO.IDE.A.230 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.’;

(k) SPO.IDE.H.198 is replaced by the following:

‘SPO.IDE.H.198 Survival suits — complex motor-powered helicopters

Each person on board shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(a) flights over water beyond autorotational distance or safe forced-landing distance from land, where, in the case of a critical engine failure, the helicopter is not able to sustain level flight; and

(b) the weather report or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight.’;

(l) SPO.IDE.H.201 is deleted;

(m) the following point (d) is added in SPO.IDE.H.220:

‘(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.’

(n) the following SPO.IDE.H.230 is added:

‘SPO.IDE.H.230 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database

provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.’;