

**CAA Decision to adopt AMC and GM for UK Reg (EU) 965/2012
pursuant to Article 76(3) UK Reg (EU) 2018/1139**

DECISION No. 26

Publication date: 23 December 2022

Decision adopting Acceptable Means of Compliance (AMC) and Guidance Material (GM) for UK Reg (EU) No 965/2012 Annex V Sub Part K, Helicopter Offshore Operations Part-SPA.HOFO.160(c) regarding Equipment Requirements for Helicopter Terrain Awareness Warning Systems (HTAWS)

Background

CAA UK-EU Transition Decision No. 1 adopted a form of Acceptable Means of Compliance (“**AMC**”) as means by which the requirements in Regulation (EU) No **965/2012** as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 (“**UK Reg (EU) No 965/2012**”) could be met. That decision also adopted Guidance Material (“**GM**”) as non-binding explanatory and interpretation material on how to achieve the requirements in **UK Reg (EU) No 965/2012**. The CAA has decided to adopt revised AMC and GM in respect of **UK Reg (EU) No 965/2012**.

Decision

1. The CAA, under Article 76(3) of Regulation (EU) No 2018/1139 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018, has decided to adopt the AMC and GM attached at Schedule 1.
2. This AMC and GM supplements and/or replaces that which was adopted for **UK Reg (EU) No 965/2012 Annex V Sub-Part-K** by CAA UK-EU Transition Decision No. 1 dated 22 December 2020.
3. This Decision will remain in force unless revoked or amended by the CAA.
4. The AMC and GM attached at Schedule 1 to this Decision came into force on 23 December 2022.

Definitions

All references to *Regulations* are to the UK law bearing that title or number, being EU retained law as retained (and amended in UK domestic law) pursuant to the European Union (Withdrawal) Act 2018.



Rob Bishton
For the Civil Aviation Authority and the United Kingdom

Date of Decision: 23 December 2022

Date of Decision Coming into force: 23 December 2022

Schedule 1

Includes the Acceptable Means of Compliance (AMC) and Guidance Material (GM) documents referenced below.

The text of the amendment is arranged to show deleted text, new or amended text as shown below:

- (a) ~~Text to be deleted is shown struck through~~;
- (b) New text is highlighted in grey;
- (c) ~~Text to be deleted is shown struck through~~ followed by the replacement text which is highlighted in grey.

AMC1.SPA.HOFO.160(c)(2) Helicopter terrain awareness and warning system (HTAWS)

HTAWS configured for offshore operations should meet all of the following criteria:

- (a) The acceptable standard referred to in SPA.HOFO.160(c)(2) is as follows:
 - (1) For new HTAWS installations and upgrades to existing HTAWS installations performed prior to 1 January 2025 the HTAWS should be granted with ETSO-C194 approval and meet the criteria detailed in (b) through (e) below utilising the alert envelopes defined in UK CAA CAP 1519.
 - (2) For new HTAWS installations and upgrades to existing HTAWS installations performed from 1 January 2025 the HTAWS should meet the requirements of ETSO-2C522 including Mode 7a or, alternatively, be demonstrated to be compliant with technical requirements set out in EUROCAE ED-285/RTCA DO-376 including Mode 7a. The HTAWS should also provide altitude callouts meeting the requirements of CAT.IDE.H.145 and SPA.HOFO.160(a)(2).
- (b) The HTAWS should provide caution and warning alerts, with at least an aural indication, for at least the following conditions:
 - (1) Mode 1: Excessive rate of descent;
 - (2) Mode 3: Loss of airspeed or height after take-off;
 - (3) Mode 4: Flight into terrain when not in landing configuration/gear position warning;
 - (4) Mode 5: Excessive downward deviation from an instrument approach glidepath;
 - (5) Mode 6: Altitude callouts meeting the requirements of CAT.IDE.H.145 and SPA.HOFO.160(a)(2).
 - (6) Mode 7: Loss of airspeed/low energy state on approach.

The functionality provided by the Offshore Envelopes listed in points (1) to (6) above must be available throughout all normal flight conditions.

- (c) The HTAWS should provide aural alerts that meet the following criteria:
 - (1) The aural alerts should be appropriately prioritised;
 - (2) The implementation of the aural alerts should be consistent with the design philosophy of the aircraft type;
 - (3) The aural alerts should be continuously provided until the condition for alerting the crew no longer exists.
- (d) Where provided, HTAWS visual alerts should meet the following criteria:
 - (1) The visual alerts should be consistent with the design philosophy of the aircraft type;

- (2) Caution alerts should be indicated using an amber indicator light. This may be supplemented with an amber text message that is obvious, concise, and consistent with the aural message;
 - (3) Warning alerts should be indicated using a red indicator light. This may be supplemented with a red text message that is obvious, concise, and consistent with the aural message.
- (e) Where the HTAWS includes alerting functions that are not specifically designed for offshore operations, these should be segregated from the dedicated offshore functionality. Automatic transition to and from the offshore mode on crossing the coastline may be provided. However, manual selection and the ability for the pilot to override the automatic transition by manually selecting the desired mode should always be provided. A clear indication should be given to the pilot of the selected mode of operation.

GM1.SPA.HOFO.160(c) Helicopter terrain awareness & warning system (HTAWS)

- (a) The alert envelopes defined in EUROCAE ED-285/RTCA DO-376 may be used in lieu of those defined in CAP 1519 for upgrades to HTAWS installations and new HTAWS installations performed prior to 1 January 2025.
- (b) Where available for the helicopter type, the Mode 7/7a alert envelopes defined in UK CAA CAP 1519 may be used. Alternatively, or where no Mode 7/7a alert envelope is defined in UK CAA CAP 1519, Mode 7 alert envelopes may be derived using a representative sample of flight data collected from normal revenue service operations using the methodology described in UK CAP 1538. Mode 7/7a envelopes may also be developed using the methodology described in Appendix B of EUROCAE ED-285/RTCA DO-376; either fixed or variable Mode 7a envelopes may be implemented.
- (c) Additional alerting functions may be included, provided that an acceptably low nuisance alert rate can be demonstrated.
- (d) Where Forward-Looking Terrain Avoidance (FLTA) functionality is provided, operational experience indicates that it will likely be necessary to remove offshore oil & gas installations from the obstacle database in order to prevent an excessive nuisance alert rate.
- (e) Inadvertent use of any non-offshore mode while operating offshore may result in reduced protection and/or and excessive nuisance alerts. Inadvertent use of the offshore mode while operating onshore may result in nuisance alerts, for example, when flying ILS approaches at high ground speeds.