European Union Aviation Safety Agency

Notice of Proposed Amendment 2023-08 (B)

in accordance with Article 6 of MB Decision No 01-2022

Regular update of the air traffic management / air navigation services rules

Implementing rules, acceptable means of compliance and guidance material

RMT.0719 (SUBTASK 4B)

EXECUTIVE SUMMARY

The provision of air traffic management/air navigation services (ATM/ANS) is subject to constant evolution generated by a variety of factors, such as the introduction of new technologies and operational concepts, the acquisition of experience from the implementation and oversight of the applicable rules or the evolution of the interdependent EU and/or International Civil Aviation Organization (ICAO) regulatory frameworks. It is therefore necessary to perform regular reviews and maintenance of the currently applicable regulatory material for the provision of ATM/ANS, as regulatory consistency is a key enabler to ensure a safe and efficient aviation system.

The general objective of the amendments proposed in this Notice of Proposed Amendment (NPA) is to ensure a high and uniform level of safety in ATM/ANS and other ATM network functions and to reflect the state of the art and best practices by proposing amendments based on the selection of non-complex, non-controversial or mature subjects originating from European Commission requests, ICAO developments, stakeholders and expert groups or individuals which EASA has assessed as suitable and beneficial.

It includes proposed updates to a variety of provisions in Regulation (EU) 2017/373 and associated AMC and GM, in particular concerning air traffic services (ATS) and aeronautical information services (AIS) requirements. Consequential amendments to Regulation (EU) No 923/2012 and Regulation (EU) No 139/2014 and related AMC and GM are also proposed for consistency reasons.

NPA 2023-08 is divided in four parts. The present NPA 2023-08 (B) includes the proposed amendments to Regulation (EU) 2017/373 and to the related AMC & GM.

REGULATIONS TO BE AMENDED	ED DECISIONS TO BE AMENDED
— Regulation (EU) 2017/373 (ATM/ANS) — Regulation (EU) No 923/2012 (SERA) — Regulation (EU) No 139/2014 (ADR)	— ED Decision 2017/001/R 'AMC/GM to Regulation (EU) 2017/373' — ED Decision 2013/013/R 'AMC/GM to Regulation (EU) No 923/2012' — ED Decision 2014/012/R 'AMC/GM to Regulation (EU) No 139/2014'

AFFECTED STAKEHOLDERS: ATM/ANS service providers; aerodrome operators; aircraft operators; national competent authorities (NCAs); Member States (MSs)

WORKING METHOD(S)		
Development	**Impact assessment(s)**	**Consultation**
By EASA with external support	Detailed	NPA — Public

PLANNING MILESTONES: Refer to the latest edition of the EPAS Volume II.

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1. Proposed amendments and rationale

The amendment is arranged to show deleted, new or amended, and unchanged text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

Where necessary, the rationale is provided in *blue italics.*

1.1. Draft regulation (draft EASA opinion)

Proposed amendments to Regulation (EU) 2017/373

Commission Regulation (EU) 2017/373 is amended as follows:

[…]

COVER REGULATION

Commission Implementing Regulation (EU) 2017/373
of 1 March 2017

[…]

Article 3

Provision of ATM/ANS and design of airspace structures

[…]

5. Member States shall: ~~ensure that:~~

(a) ensure that:

(i) entities originating aeronautical data or aeronautical information meet the requirements laid down in:

(~~i~~ A) point ATM/ANS.OR.A.085 of Annex III, except those in points (c), (d), (f)(1) and (i) thereof,

(~~ii~~ B) point ATM/ANS.OR.A.090 of Annex III;

~~(b)~~(ii) aeronautical data and aeronautical information are originated, processed and transmitted by adequately trained, competent and authorised personnel. When aeronautical data or aeronautical information is intended to be used for the purpose of IFR or special VFR flights, the requirements referred to in letters (a) and (b) of the first subparagraph shall apply to all entities originating such data and information;

(b) enable, through appropriate measures, the competent authority to be consulted for planned objects in Area 1 extending to a height of 60 m or more above ground elevation, in order to assess their effect on the safe and efficient use of airspace and to take all necessary measures to ensure aircraft safety and protect navigable airspace;

(c) ensure the origination of and provision to the aeronautical services provider of:

(i) obstacle data for objects in Area 1 whose height is 60 m or more above ground elevation,

(ii) terrain data for Area 1;

(d) remain ultimately responsible for the aeronautical data and aeronautical information provided regarding their entire territory and those areas over the high seas in which the Member State is responsible for the provision of air traffic services.

[…]

Rationale:

Paragraph 5 of Article 3 of Regulation (EU) 2017/373 is proposed to be amended for three reasons.

– The first reason is to ensure proper implementation of certain provisions of Annex 15 (and PANS-AIM) regarding the availability of obstacle data for a certain group of obstacles located in Area 1, and therefore to enhance the safety level.

In particular, paragraph 5.3.3.4.3 of ICAO Annex 15 requires that 'Obstacle data shall be provided for obstacles in Area 1 whose height is 100 m or higher above ground', while a similar provision exists in ICAO PANS-AIM concerning the en-route part of the AIP (ENR 5.4 Air navigation obstacles). These provisions have been transposed as part of Annex VI to Regulation (EU) 2017/373, however without defining origination responsibilities. Due to the location of such obstacles, it is considered that the responsibility to ensure the origination of relevant obstacle data should normally be with the State. On the other hand, it is noted that in Appendix 8 of ICAO PANS-AIM it is stated that 'Data on every obstacle within Area 1 whose height above the ground is 100 m or higher shall be collected and recorded in the database in accordance with the Area 1 numerical requirements specified in Appendix 1', a provision that has not been directly transposed in the EU regulatory framework [1], while on the other hand AIS.OR.360 requires the provision of data for such obstacles.

Moreover, the definition of obstacle foresees that:

'obstacle' means all fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

(a) are located on an area intended for the surface movement of aircraft; or

(b) extend above a defined surface intended to protect aircraft in flight; or

(c) stand outside those defined surfaces and have been assessed as being a hazard to air navigation'.

[1] Point AIS.TR.360, on obstacle data sets, defines the obstacle data to be collected for Areas 2 and 3 but it does not include Area 1.

Given the significance of obstacles on the safety of air navigation, including for Area 1, it is commonly accepted that one needs to assess the potential impact of such planned objects on air navigation and, in any case, to promulgate relevant obstacle data for publication through the AIS. Therefore, an assessment mechanism that would allow the ex ante assessment of proposed objects in Area 1, through the involvement of the appropriate competent authorities, is required to be established by the State. This assessment mechanism should be linked to a process for the origination of relevant obstacle data to the AIS provider for promulgation though the AIP. Currently, the AIP-related provisions of Regulation (EU) 2017/373 foresee in section 'ENR 5.4 Air navigation obstacles' the publication of the following:

> *'The list of obstacles affecting air navigation in Area 1 (the entire Member State territory), including:*
>
> *1. obstacle identification or designation;*
>
> *2. type of obstacle;*
>
> *3. obstacle position, represented by geographical coordinates in degrees, minutes and seconds;*
>
> *4. obstacle elevation and height to the nearest metre or foot;*
>
> *5. type and colour of obstacle lighting (if any); and*
>
> *6. if appropriate, an indication that the list of obstacles is available in electronic form, and a reference to point GEN 3.1.6.'*[2]*,*

while the relevant part of the aeronautical data catalogue (Table 6 – Obstacle data) addresses the issue in greater detail.

Thus, based merely on the current content of Annex 15 and PANS-AIM, one might reach the conclusion that it would be sufficient to establish a mechanism to assess the impact of planned objects in Area 1 and to ensure the publication of relevant data for all objects having a height of 100 m or greater above ground elevation[3]*. Although this solution may appear to be in line with the provisions of Annex 15 and PANS-AIM, it does not seem to consider all operational dimensions and aviation safety needs, nor to reflect today's situation. In particular, at the ICAO level, provisions relating to the need for the assessment of proposed objects, including for areas beyond the obstacle limitation surfaces such as*

[2] This provision should be read in conjunction with requirement 'AIS.OR.360 Obstacle data sets' which foresees that 'An AIS provider shall ensure that obstacle data, if available, is provided: (a) for obstacles in Area 1 whose height is 100 m or higher above ground;'.

[3] It should be clarified that the analysis of all relevant ICAO material since 2003 indicates that the Annex 15 provision 'Obstacle data shall be provided for obstacles in Area 1 whose height is 100 m or higher above ground', but also the relevant PANS-AIM provisions, does not imply an individual assessment of every planned object of such height in order to determine whether it is an obstacle or not (as per case (c) of the obstacle definition), but rather that all objects of such height are considered to be obstacles. Such ICAO material includes but is not limited to ICAO SL AN 2/2-03/58; ICAO SL AN 2/2-04/25, which reveals the original concept and proposals and their consequent approval.

Area 1, appear to take into account exclusively the operational needs of aeroplanes[4] [5]*. This approach is consistently reflected in the relevant part of the aeronautical data catalogue of PANS-AIM (table 6 – obstacle data). The same conclusion is also reached through the analysis of the Annex 15 (and PANS-AIM) provisions, and the review of the introduction of the various obstacle-related areas.*

Put differently, the operational needs of helicopters, the majority of whose operations take place away of aerodromes/heliports, at lower altitudes, are not taken into account. This conclusion is verified by the approach adopted by other organisations; for instance, in EUROCAE document 'User Requirements for Terrain and Obstacle Data – ED-98C', dated October 2015, it is stated that 'Every obstacle within Area 1 whose height above the ground is equal to or greater than 100 m for aircraft and 60 m for rotorcraft operations shall be collected and recorded … … The numerical requirements have been adapted to cover the needs of aircraft operations and rotorcraft operations. Due to the lower altitude trajectories of rotorcraft operations, the numerical requirements for vertical and horizontal accuracy are adapted accordingly. …'. This conclusion is also verified in the 'EUROCONTROL Terrain and Obstacle Data (TOD) Manual'[6]*, where it is stated that '… The current requirements for obstacle data provision outside aerodrome areas are insufficient for helicopter operations in terms of accuracy and collection surfaces …'.*

It should also be noted that according to Regulation (EU) No 923/2012 (SERA.5005 Visual flight rules), establishing the 'rules of the air' based on ICAO Annex 2:

'…. (f) Except when necessary for take-off or landing, or except by permission from the competent authority, a VFR flight shall not be flown:

> *(1) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300 m (1 000 ft) above the highest obstacle within a radius of 600 m from the aircraft;*
>
> *(2) elsewhere than as specified in (1), at a height less than 150 m (500 ft) above the ground or water, or 150 m (500 ft) above the highest obstacle within a radius of 150 m (500 ft) from the aircraft. …'*

The fact that the term 'obstacle' appears in the above SERA provision already demonstrates the need for the further refinement of the relevant obstacle-related provisions to enable the proper implementation of the provision.

At the EU level, EPAS 2023-25 includes amongst the safety issues of the rotorcraft safety risk portfolio the 'Inadequate obstacle clearance during low-altitude operation, take-off and landing (SI-8031)',

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4 ICAO Annex 14 Vol. I, foresees the following in paragraphs 4.3.1 and 4.3.2:

'4.3.1 Arrangements should be made to enable the appropriate authority to be consulted concerning proposed construction beyond the limits of the obstacle limitation surfaces that extend above a height established by that authority, in order to permit an aeronautical study of the effect of such construction on the operation of aeroplanes.'

'4.3.2 In areas beyond the limits of the obstacle limitation surfaces, at least those objects which extend to a height of 150 m or more above ground elevation should be regarded as obstacles, unless a special aeronautical study indicates that they do not constitute a hazard to aeroplanes.'

5 The same approach is repeated in ICAO SL 2023/33 (released on 30 May 2023) in the proposed paragraph 4.6.1 (p. 70). This proposal attempts also, amongst others, to resolve a longstanding inconsistency between ICAO Annex 14 and Annex 15 regarding the height of obstacles standing beyond the obstacle limitation surfaces, yet adopting a position which seems to imply that not all objects above 100 m may be obstacles and therefore need to be published in the AIP, which again seems to be contradictory to the provisions of Annex 15 in this very area.

6 Eurocontrol, 'EUROCONTROL Terrain and Obstacle Data (TOD) Manual', edition 3.0, released 4 May 2021.

which 'relates to the inability to identify and safely avoid obstacles during the helicopter take-off and landing phase, as well as during low-level operations such as agricultural work or power lines check, both in urban and natural environments.'[7] The safety issue in question is ranked amongst the 20 higher-risk cross-domain safety issues in the EU aviation system[8] and amongst the top three safety issues identified in the rotorcraft safety risk portfolio[9]. At the same time, various safety investigations of occurrences have already identified either that the lack of relevant aeronautical data concerning obstacles contributed to an occurrence, or that the availability of such data could have contributed to the prevention of the occurrence, and various relevant safety recommendations have been issued in the respect[10]. Thus, quality-assured obstacle data, collected under common requirements and made available at predetermined intervals to the next intended user through the aeronautical information services, would obviously facilitate the introduction and use of relevant technologies by aircraft and aircraft operators, and in general contribute to the obstacle awareness and improvement of safety of helicopter operations, while it is considered that they would also be beneficial for certain aeroplane

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7 EPAS Volume III, p. 41.

8 EPAS Volume III, p. 13.

9 EPAS Volume II, p. 99.

10 *— Safety recommendation SL no. 2019/01T: 'The Accident Investigations Board Norway recommends that the Civil Aviation Authority introduce requirements for physical marking of crossing lines in Norway';*

— Safety recommendation SL No 2015/05T: 'the Accident Investigation Board Norway therefore recommends that the Ministry of Transport and Communications take responsibility for coordinating the work on further developing the current obstacle database with the aim of utilising the safety benefit that can be gained from modern GPS-based warning systems.';

— Safety Recommendation 2014-030: 'It is recommended that the Department for Transport implement measures that enable the Civil Aviation Authority to assess, before planning permission is granted, the potential implications of new en-route obstacles for airspace arrangements and procedures.';

— Safety Recommendation 2014-027: 'It is recommended that the Department for Transport implement, as soon as practicable, a mechanism compliant with Regulation (EU) 73/2010 and applicable to the whole of the UK for the formal reporting and management of obstacle data, including a requirement to report data relating to newly permitted developments.';

— Safety Recommendation 2014-028: 'It is recommended that the Department for Transport remind all recipients of the Office of the Deputy Prime Minister Circular 01/2003 that they are requested to notify the Civil Aviation Authority:

1. whenever they grant planning permission for developments which include an obstacle,

2. about obstacles not previously notified,

3. about obstacles previously notified that no longer exist.';

— Safety Recommendation 2014-025: 'It is recommended that the Civil Aviation Authority require UK Air Navigation Service Providers to assess the effect of obstacles, notified through the UK Aeronautical Information Regulation and Control cycle, on operational procedures relating to published VFR routes near those obstacles, and modify procedures to enable pilots to comply simultaneously with ATC instructions, and the Air Navigation Order and Commission Implementing Regulation (EU) 923/2012 as applicable.';

— Safety Recommendation 45/17: 'Se recomienda a la Agencia Estatal de Seguridad Aérea que realice estudios en aquellos embalses susceptibles de ser utilizados en tareas de lucha contra incendios en los que existe un riesgo para la seguridad operacional debido a una línea eléctrica. En los casos en los que el estudio determine que las líneas eléctricas o los cables pueden constituir un peligro para las aeronaves debería exigir su señalización o balizamiento.' [Courtesy translation: 'The State Aviation Safety Agency is recommended to carry out studies in those reservoirs likely to be used in firefighting tasks in which there is a risk to operational safety due to a power line. In the cases in which the study determines that power lines or cables may constitute a danger to aircraft should require their marking or lighting.'];

— Safety Recommendation 2020-556: 'The Federal Office for Civil Aviation (FOCA) should take the following measures to prevent cable collisions:

— Ensure an aviation obstacle database that represents the current state as far as possible.

— Promotion programme for sensor-based, autonomous obstacle warning systems.';

— Safety Recommendation 2019-21: 'The provision and distribution of up-to-date eTOD-compliant terrain and obstacle data should be announced in an aeronautical manner in order to make this data available to all air traffic participants in the interest of aviation safety.'

operations, such as aerial works taking place at altitudes below 500 ft (VFR flights). It is also envisaged that the existence of such data would be beneficial for UAS operations.

EASA is aware that certain States of the 'EASA system', based on lessons learnt, have already established mechanisms for the collection and availability of obstacle data below 100 m which, as already discussed, is currently the limit established in Part-AIS of Regulation (EU) 2017/373 (and ICAO Annex 15). It should be noted, however, that such practices seem to differ in terms of the object height. Nevertheless, such initiatives demonstrate both the existence and the magnitude of the identified safety issue described above and, at the same time, the need to address the issue in a uniform manner, at the EU level, in order to ensure the 'high and uniform level of safety' required by the EASA basic regulation.

Therefore, to address this issue in a consistent manner, EASA proposes to take into account the already established needs of the end users in terms of obstacle data. To this end, the EASA proposal is based on the material contained in the EUROCAE document 'User Requirements for Terrain and Obstacle Data – ED-98C', dated October 2015, and proposes as a threshold for the assessment of objects in Area 1 the height of 60 m to determine their impact on navigable airspace and the promulgation of relevant obstacle data for all such objects. EASA is of the opinion that this approach will provide tangible safety benefits for all parties involved, especially for the end users, without unnecessary impact on the States. The above issues are addressed through the proposed paragraphs (b) and (c)(i). The Agency intends to propose a 3-year transition period for the implementation of this provision.

Nevertheless, EASA would like to ask the opinion of its stakeholders regarding this issue, and in particular whether or not a lower threshold (e.g. 45 m) should be established for assessment and obstacle data publication purposes in Area 1.

In addition, the Agency would like to have its stakeholders' view regarding the length of the transition period for the provision of such obstacle data.

This proposal is supplemented by one AMC, to ensure the consistent treatment of such objects in Area 1.

Moreover, as a result of this proposal, the amendment of certain elements of the aeronautical data catalogue (Table 6 – obstacle data) is also necessary, to ensure consistency amongst the relevant regulatory provisions concerning obstacles in Area 1 and to fully address the needs of the end users. These consequential amendments are presented in the proposed AMC to Appendix 1 concerning the aeronautical data catalogue (ADC). Another set of consequential proposed amendments is that of AIS.OR.360, in order to reflect the proposed change to the obstacle height from 100 m to 60 m; and AIS.TR.360, in order to reflect the ICAO PANS-AIM provision of Appendix 8 (see analysis above) concerning the need for the collection of obstacle data in Area 1.

As a result of the proposal, it is understood that the proposed height of 60 m would be lower than that of the applicable height for the outer section of Area 2. Although EASA does not envisage any impact stemming from that difference, it would like to have the opinion of its stakeholders regarding the need for the future review of the adjacent obstacle collection surfaces.

– The second reason is to ensure the transposition of the Annex 15 (and PANS-AIM) provisions in a manner that ensures clear allocation of responsibilities regarding the provision of terrain data for Area 1. In fact, provision 5.3.3.3.2 of Annex 15 foresees that 'Terrain data shall be provided for Area 1.', while the current provisions concerning the provision of such data does not specify who is responsible for the data provision. Thus, the proposed amendment introduced with paragraph (c)(ii) resolves the issue by recognising the provision of such data as an obligation of the State.

– The third reason is to fully transpose the provisions of Annex 15 paragraph 2.1.3, according to which a State remains responsible for the aeronautical data and information provided in its entire territory and those areas over the high seas in which the Member State is responsible for the provision of air traffic services. To this end, a new paragraph (c) is proposed.

Article 3c Coordination of activities ~~air operations~~ potentially hazardous to civil aviation

1. ~~Member States shall ensure that operations potentially hazardous to civil aircraft over their territory are coordinated, including over the high seas, in case the competent authority has accepted, pursuant to an ICAO Regional Air Navigation Agreement, the responsibility to provide air traffic services within the airspace concerned. The coordination shall be effected early enough to permit timely promulgation of information regarding those activities.~~ Member States shall ensure that the arrangements for activities potentially hazardous to civil aircraft over their territory are coordinated with the competent authority and the ATS provider(s) concerned. When over the high seas, potentially hazardous activities shall be coordinated with the competent authority of the State having accepted, pursuant to an ICAO Regional Air Navigation Agreement, the responsibility to provide air traffic services within the airspace concerned. The coordination shall be effected early enough to permit timely promulgation of information regarding these activities.
2. Member States shall establish arrangements for the promulgation of information regarding the activities referred to in paragraph 1.
3. Member States shall ensure that a safety risk assessment is conducted, as soon as practicable, for activities potentially hazardous to civil aircraft and that appropriate risk mitigation measures are implemented. For this purpose, Member States shall designate the responsible entity for conducting such an assessment.
4. Member States shall establish procedures to enable the organisation or unit conducting or identifying activities potentially hazardous to civil aircraft to contribute to the safety risk assessment in order to facilitate consideration of all relevant safety-significant factors.
5. Member States shall take adequate measures to prevent the emission of laser beams from adversely affecting flight operations.

Rationale:
In accordance with the originating ICAO Standard 2.19.1 in Annex 11, the requirement should address the coordination of activities potentially hazardous to civil aviation as a whole (e.g. gunnery), and not

only those relating to air operations. For this purpose, it is proposed to amend the titles of Article 3c and point 1, in order to resume the alignment with the original ICAO provision and to clarify the scope and the intent of the provision, in particular to ensure the adequate notification of activities other than air operations which could have a potentially harmful effect on the safety of civil aviation. Moreover, it is proposed to amend point 1 to indicate that the coordination shall be undertaken with the competent authority and/or the ATS provider concerned, either within the national airspace or within the airspace over high seas.

The new proposed points 3 and 4 result from the transposition of the new Sections 2.19.3 and 2.19.3.1 introduced as Standards within ICAO Annex 11 by its amendment 52. Such new provisions addressed to Member States concern the obligation to perform a safety risk assessment and to designate the responsible entity thereof, along with the implementation of related mitigating measures, when activities potentially hazardous to civil aircraft are envisaged. Supporting guidance material to points 3 and 4 is provided to indicate reference document to be used in such processes.

In this context, EASA proposes the introduction of a Member State requirement, new proposed point 5, concerning the protection of air operation from laser beam emissions in accordance with Section 2.19.6 of ICAO Annex 11.

ANNEX I – PART-DEFINITIONS

[…]

(125) 'AFIS aerodrome' means an aerodrome ~~where~~ at which AFIS is provided to aerodrome traffic ~~within the airspace associated with such aerodrome~~;

[…]

(129) 'air traffic advisory service' means a service provided ~~within an airspace of defined dimensions, or a designated route (advisory airspace) to ensure separation, in so far as practical, between aircraft which are operating on instrument flight rules (IFR) flight plans;~~ within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on instrument flight rules (IFR) flight plans;

[…]

(209) 'movement area' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s);

[…]

(267) 'accepting control unit' means the air traffic control unit next to take control of an aircraft;

(268) 'aeronautical chart' means a representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation;

(269) 'aircraft classification rating (ACR)' means a number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category;

(270) 'air defence identification zone (ADIZ)' means special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services;

(271) 'air traffic' means all aircraft in flight or operating on the manoeuvring area of an aerodrome;

(272) 'base turn' means a turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal. Base turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure;

(273) 'data product' means a data set or data set series that conforms to a data product specification;

(274) 'human factors principles' means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek a safe interface between the human and other system components by proper consideration to human performance;

(275) 'orthometric height' means the height of a point related to the geoid, generally presented as an MSL elevation;

(276) 'Pavement classification rating (PCR)' means a number expressing the bearing strength of a pavement;

(277) 'performance-based surveillance (PBS)' means surveillance based on performance specifications applied to the provision of air traffic services;

(278) 'post spacing' means angular or linear distance between two adjacent elevation points;

(279) 'pre-flight information bulletin (PIB)' means a presentation of current NOTAM information of operational significance, prepared prior to flight;

(280) 'terrain and obstacle coverage areas' means the following areas intended to be used for the collection of terrain and obstacle data:

(a) 'Area 1': the entire territory of a Member State;

(b) 'Area 2': an area within the vicinity of an aerodrome, subdivided as follows:

(1) 'Area 2a': a rectangular area around a runway which comprises the runway strip plus any clearway that exists,

(2) 'Area 2b': an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 % to each side,

(3) 'Area 2c': an area extending outside Areas 2a and 2b at a distance of not more than 10 km from the boundary of Area 2a, and

(4) 'Area 2d': an area outside Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing terminal control area (TMA) boundary, whichever is nearer;

(c) 'Area 3': the area bordering an aerodrome movement area which extends horizontally from the edge of a runway to 90 m from the runway centre line and 50 m from the edge of all other parts of the aerodrome movement area; and

(d) 'Area 4': the area extending 900 m prior to the runway threshold and 60 m to each side of the extended runway centre line in the direction of the approach.

[…]

Rationale:

The proposed amendment to the definition of 'AFIS aerodrome' aligns it with the logic established for the definition of 'controlled aerodrome', with regard to the reference to airspace concerned.

The proposed amendment of the definition 'movement area' aims at introducing coherence with the actual definition as established in ICAO Annex 11 and in Regulation (EU) No 923/2012 (SERA). It should be recognised that a movement area may include more than one apron.

The proposed amendment of the definition 'air traffic advisory service' would ensure regulatory consistency with ICAO and SERA frameworks. The definitions of 'advisory airspace' and 'advisory route' are provided in GM1 Annex IV Part-ATS.

It is proposed to add definitions 'accepting control unit', 'air traffic' and 'base turn', previously included in GM1, to Annex IV Part-ATS, as such terms are used in the text of implementing rules of Regulation (EU) 2017/373.

Other definitions proposed to be transposed are related to terms which are already contained in Regulation (EU) 2017/373 and for which an equivalent definition exists in Annex 15. Moreover, the definitions of 'aircraft classification rating (ACR)' and 'pavement classification rating (PCR)', contained in ICAO SL 202/26, are introduced to support the proposed amendments to the ADC and certain AIP sections related to pavement strength.

In addition, a definition is proposed to define the areas related to the collection of terrain and obstacle areas. The content of the definition is based on AIS.TR.350, which is proposed to be deleted to simplify the set of the applicable rules. Furthermore, the new definition corrects a mistake regarding the meaning of the acronym TMA, whose correct notion, as prescribed in definition No 239, is 'terminal control area'.

[…]

ATM/ANS.OR.A.090 Common reference systems for air navigation

For the purpose of air navigation, service providers shall use:

(a) the World Geodetic System – 1984 (WGS-84) as the horizontal reference system~~;~~ and shall determine and report to the AIS provider geographical coordinates, indicating latitude and longitude, in terms of WGS-84 geodetic reference datum;

(b) the mean sea level (MSL) datum as the vertical reference system;

(c) the Gregorian calendar and coordinated universal time (UTC) as the temporal reference systems.

Rationale:

The use of WGS-84 for air navigation purposes is foreseen in both ICAO Annex 15 (1.2.1.1) and Annex 14 (1.3.1). Annex 15, with regard to publication of aeronautical geographical coordinates, also foresees in the same provision that '… published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum'. On the origination side, a similar provision is included in Annex 14 1.3.1 ('…Reported aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum', while a similar provision (4.1.3) in PANS-AIM foresees that 'Geographical coordinates indicating latitude and longitude shall be determined and reported to the AIS in terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum'.

Currently, neither ATM/ANS.OR.A.090 (which, as a common requirement, is the reference point for all ATM/ANS organisations), nor ADR.OPS.A.020 (which addresses aerodrome operators as data originators using identical provisions), fully address the respective requirements. It is therefore proposed to amend paragraph (a) of both said requirements, in a manner consistent with the relevant ICAO Annex 15 and 14 provisions. To ensure full consistency, it is also proposed to amend point (a) of FPD.TR.105, concerning flight procedure design, and align it with the proposed provisions ATM/ANS.OR.A.090 and ADR.OPS.A.020.

Furthermore, it is proposed to introduce a new requirement (AIS OR.255) specifically for AIS providers, which is based on the content of above-mentioned provision (1.2.1.1) of ICAO Annex 15), concerning the publication of such aeronautical data.

The proposed changes are supported with a new AMC1 ATM/ANS.OR.A.090(a), the deletion of GM2 ATM/ANS.OR.A.090(a) and the amendment of AMC1 ATM/ANS.OR.A.090(b), whose rationale is explained separately. For consistency reasons, new AMC1 ADR.OPS.A.020(a) and AMC1 ADR.OPS.A.020(b) are proposed for the area of aerodromes, along with the proposed deletion of GM2 ADR.OPS.A.020(a).

APPENDIX 1

AERONAUTICAL DATA CATALOGUE

~~**Introduction**~~

(a) The aeronautical data catalogue is a reference to the aeronautical data subjects, properties and subproperties, presented in tabular format, organised ~~in~~ as follows:

(1) aerodrome and heliport data, covering especially their physical characteristics, visual aids and facilities;

(2) airspace data, covering especially ATS, special activity and other regulated airspaces and ATS control sectors;

(3) ATS and other route data, covering especially ATS and other routes, route segments, waypoints and en-route holding;

(4) instrument flight procedure data, covering especially procedures, procedure segments, final approach segments, procedure fix, procedure holding, helicopter procedure specifics and aeronautical information in textual format (AITF);

(5) radio navigation aids / systems data, covering especially radio navigation aids, GNSS, aeronautical ground lights, marine lights and special navigation systems;

(6) obstacle data, covering obstacles in Area 1, Area 2, Area 3 and Area 4;

(7) geographic~~al position~~ data, covering especially buildings, built-up areas, railroads, highways and roads, landmarks, political boundaries, hydrography, wooded areas, service roads, construction areas, areas unsuitable for aircraft movement, survey control points and aerodrome surface routing network (ASRN) nodes and edges.

(b) The tables of the aeronautical data catalogue referred to in point (a) ~~are~~ shall be composed of the following columns:

(1) subject for which data ~~can~~ shall be collected;

(2) property: an identifiable characteristic of a subject which may be further defined into sub-properties;

(3) subproperty: same as (2);

(4) types: the data is classified into different types;

(5) description: a description of the data item;

(6) notes: additional information or conditions for the provision of the data;

(7) accuracy: requirements for aeronautical data are based on a 95 % confidence level;

(8) integrity classification;

(9) origination type: data is identified as surveyed, calculated or declared;

(10) publication resolution;

(11) chart resolution.

(c) The classification of a catalogue element under points (b)(2) and (b)(3) as subject, property or sub-property does not impose a certain data model.

For the fixes and points under point (b)(7) serving a dual purpose, such as holding points and missed approach points, the higher accuracy applies. Accuracy requirements for obstacle and terrain data are based on a 90 % confidence level.

The publication resolutions under point (b)(10) for geographic data (latitude and longitude) are applicable to coordinates formatted in degrees, minutes and seconds. When a different format is used (such as degrees with decimals for digital data sets) or when the location is significantly further to the north/south, the publication resolution needs to be commensurate with the accuracy requirements.

(d) The aeronautical data catalogue is also a reference to the aeronautical data subjects regarding:

(1) terrain data for Area 1, Area 2, Area 3 and Area 4;

(2) EU, national and local regulations, services and procedures.

~~*Note for items 2 and 3 under point (b): the classification of a catalogue element as subject, property or sub-property does not impose a certain data model.*~~

~~*Note for item 7 under point (b): for those fixes and points that serve a dual purpose, e.g. holding point and missed approach point, the higher accuracy applies. Accuracy requirements for obstacle and terrain data are based on a 90 % confidence level.*~~

~~*Note for item 10 under point (b): the publication resolutions for geographical position data (latitude and longitude) are applicable to coordinates formatted in degrees, minutes, seconds. When a different format is used (such as degrees with decimals for digital data sets) or when the location is significantly further to the north/south, the publication resolution needs to be commensurate with the accuracy requirements.*~~

1. Aerodrome data

Subject	Property	Sub-property	Type	Description	Note	Accuracy	Integrity	Orig. Type	Pub. Res.	Chart Res.
Aerodro-me/Heliport				A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.						

(...)

2. Airspace data

(...)

3. ATS and other routes data

(...)

4. Instrument flight procedure data

(...)

5. Radio navigation aids/systems data

(...)

6. Obstacle data

(...)

7.Geographic data

Subject	Property	Sub-property	Type	Description	Note	Accuracy	Integrity	Orig. Type	Pub. Res.	Chart Res.
Buildings				Buildings (of operational significance) and other salient/prominent (aerodrome) features						

(...)

	Geometry		Line	Geographical location of the ASRN edge						

~~Data types referred to in column 4 'Type'~~

~~Type~~	~~Description~~	~~Data items~~
~~Point~~	~~A pair of coordinates (latitude and longitude) refer- enced to the mathematical ellipsoid, which define the position of the point on the surface of the Earth~~	~~Latitude Longitude Horizontal reference system Units of measurement Horizontal accuracy achieved~~
~~Line~~	~~Sequence of points defining a linear object~~	~~Sequence of points~~
~~Polygon~~	~~Sequence of points forming the boundary of the polygon; the first and last point are identical~~	~~Closed sequence of points~~
~~Height~~	~~The vertical distance of a level, point or an object, considered as a point, measured from a specific datum~~	~~Numerical value Vertical reference system Units of measurement Vertical accuracy achieved~~
~~Altitude~~	~~The vertical distance of a level, point or an object, considered as a point, measured from the MSL~~	~~Numerical value Vertical reference system Units of measurement Vertical accuracy achieved~~
~~Elevation~~	~~The vertical distance of a point or a level on, or affixed to, the surface of the Earth, measured from the MSL~~	~~Numerical value Vertical reference system Units of measurement Vertical accuracy achieved~~
~~Distance~~	~~An linear value~~	~~Numerical value Units of measurement Accuracy achieved~~
~~Angle/bearing~~	~~An angular value~~	~~Numerical value Units of measurement Accuracy achieved~~
~~Value~~	~~Any measured, declared or derived value not listed above~~	~~Numerical value Units of measurement Accuracy achieved~~
~~Date~~	~~A calendar date referencing a particular day or month~~	~~Text~~
~~Schedule~~	~~A repetitive time period, composed of one or more intervals or special dates (e.g. holidays) occurring cy- clically~~	~~Text~~
~~Code list~~	~~A set of predefined text strings or values~~	~~Text~~
~~Text~~	~~Free text~~	~~String of characters without constraints'~~

Rationale:

The amendments to Appendix 1 (ADC) to Annex III to Regulation (EU) 2017/373 are proposed for a variety of reasons.

Paragraph 4.1.1 of Annex 15 and the content of Appendix 1 of PANS-AIM define the areas to be covered by the ADC. In this respect, the ADC of Regulation (EU) 2017/373 is incomplete, as there are two missing areas ('terrain data' and 'national regulations, rules and procedures'). This impacts the compliance of the EU regulatory framework with the ICAO provisions framework and creates practical issues to the regulated entities, but also to the competent authorities. The Agency, in the context of the NPA 2021-103, has already received requests to update the content of the ADC[11]*.*

Similarly, it has been noted that the content of certain tables of the ADC of Regulation (EU) 2017/373 is not in line with the content of the ICAO ADC. This again impacts the compliance level of the EU regulatory framework and creates practical issues to the EASA stakeholders, who have already asked for the elimination of these inconsistencies[12]*.*

Moreover, it has been noticed that in certain cases, the content of the ADC of Regulation (EU) 2017/373 may not fully serve the role of the 'reference point' for all involved entities (AISPs and organisations originating aeronautical data), despite the fact that its content truthfully reflects the respective content of the ICAO ADC. Indeed, ICAO PANS-AIM stipulates that '… Appendix 1 (aeronautical data catalogue) presents the scope of data and information to be collected and maintained by an AIS. … It provides a reference for aeronautical data origination and publication requirements … … provides a means for States to facilitate the identification of the organisations and authorities responsible for the origination of the aeronautical data and aeronautical information…'. However, in the case that certain elements are not included in the ICAO ADC (and subsequently in the ADC of Regulation (EU) 2017/373), then an apparent need for the further development of the ADC emerges. Yet, an uncontrolled further development (and use) of the ADC content at the level of the Member State, to address such needs, would raise obvious questions about the legality of such actions and the impact on the harmonised implementation of the existing regulatory framework, whose provisions clearly require the use the ADC of Regulation (EU) 2017/373 (see, for instance, AIS.OR.200, ATM/ANS.OR.A.085 and ADR.OPS.A.030).

It has also been realised that the ADC of Regulation (EU) 2017/373 has a rather large amount of technical content that is difficult to maintain, which is assessed as rather unsuitable for this regulatory level, while certain elements such as 'Description' and 'Note' are not considered appropriate to be included in a regulation.

To address these issues, EASA proposes to improve Appendix 1 as follows:

- *amend the content of existing point (a) by including more material describing the content of the respective tables of the ADC in a more detailed manner;*
- *introduce a new point (c) whose content reflects the current 'note' regarding the content of certain cases of point (b);*
- *introduce a separate regulatory requirement (point (d)), due to the fact that the content and structure of the two currently non-transposed ICAO ADC tables ('terrain data' and 'national regulations, rules and procedures') do not match with the content of the other seven tables*

11 See Opinion No 03/2022 – Amendments to the aeronautical data catalogue and the aeronautical information publication structure and content.

12 Ibid.

currently included in this Appendix, and therefore dedicated legal requirements need to be introduced;

— *delete the existing Tables 1–7 from the current ADC of Regulation (EU) 2017/373 and introduce them as a new AMC1 Appendix 1 (a) and, in parallel, update their content to address the identified inconsistencies and missing elements. Similarly, introduce, unchanged, as part of the same AMC the content of the table titled 'Data types referred to in column 4 'Type';*

— *introduce the two currently non-transposed tables ('terrain data' and 'national regulations, rules and procedures' of PANS-AIM) as new AMC2 Appendix 1 (d)(1) and AMC3 Appendix 1 (d)(2) respectively, whose content would be updated to ensure consistency with other provisions (e.g. EU AWO concept as opposed to the CAT II/III operations that may be found in the respective part of the ICAO ADC).*

With regard to the missing table 'Terrain data', in line with the approach proposed to be followed regarding the provision of obstacle data for Area 1 (for the full rationale, see proposed amendment of Article 3), it is proposed to address the identified safety concerns, by adapting the content of the ICAO table for 'Terrain data' for Area 1, based on the content of the EUROCAE document 'User Requirements for Terrain and Obstacle Data – ED-98C', dated October 2015. Indeed, this EUROCAE document, as in the case of obstacle data, contains specific terrain data requirements to address the operational needs of rotorcraft, which are currently not covered by the equivalent ICAO provisions, which serve the operational needs of aeroplanes. This is expected to provide a tangible safety benefit to the aviation community throughout the EU. The Agency considers that a transition period for the provision of such terrain data would be required, and to this end intends to propose a 3-year transition period.

In this way, the proposed restructuring of Appendix 1 to Annex III to Regulation (EU) 2017/373 will contain a regulatory text which provides the necessary legal certainty, allowing for future changes of the ADC by ICAO to be addressed more efficiently and effectively. In addition, any potential proposals by the EASA stakeholders for the further future development of the ADC will be addressed more easily and in a controlled manner, and eventually all necessary amendments will be realised in a timely manner.

The Agency therefore invites its stakeholders to provide their feedback about this proposal and, if possible, suggest alternative ways to accommodate the content of the ICAO aeronautical data catalogue in the overall EU regulatory framework, in a meaningful manner, allowing for its timely transposition and consistent implementation.

In addition, the Agency would like to have its stakeholders' view regarding the proposed provisions for terrain data for Area 1, including the length of the transition period for the provision of such terrain data.

Another issue that, in the Agency's view, requires regulatory attention is the clarity regarding the overall aeronautical data/information origination responsibilities. Indeed, Regulation (EU) 2017/373 does not regulate this issue as such, as point AIS.OR.205 Regulation (EU) 2017/373 requires the AIS provider to have formal arrangements with the organisation that provides aeronautical data/information to them, while a similar requirement exists under ATM/ANS.OR.A.085 for all ATM/ANS organisations, yet without defining relevant responsibilities as to which data/information is

to be provided by each organisation, thus leaving this issue open. On the other hand, in Regulation 139/2014 certain elements regarding aeronautical data/information origination do exist (i.e. Subpart A – Aerodrome data), which however do not suffice to ensure the completeness of the system. EASA has determined that the ambiguity concerning the responsibilities of the various families of organisations needs to be addressed, as this may be the cause of gaps regarding the origination of aeronautical data/information and their subsequent update. EASA has also concluded that there are two possible ways to approach this issue to define data originators:

- *using the content of the relevant ADC tables; or*
- *using the content of the sections of the three Parts of the AIP, assuming their correspondence with the content of the ADC.*

EASA's assessment is that the definition of origination responsibilities, from a regulatory perspective, is generally easier using the second option. Thus, taking into account the already existing regulatory provisions at the EU level (which are not meant to be amended), along with the relevant ICAO material (mainly Annex 14 and PANS-aerodromes), this approach is envisaged to follow the principles below:

- *Part-1 (GEN):*
  - *GEN 0.1 to GEN 0.6, AIS provider,*
  - *GEN 1, 2, 3 and 4, State;*
- *Part-2 (ENR):*
  - *ENR 0.1, AIS provider,*
  - *ENR 1, State,*
  - *ENR 2, responsible ANSP,*
  - *ENR 3, responsible ANSP,*
  - *ENR 4, responsible ANSP; and for ENR 4.4 and 4.5, State,*
  - *ENR 5, State,*
  - *ENR 6, AIS provider;*
- *Part-3 (AD):*
  - *AD 0.1, AIS provider,*
  - *AD 1, State,*
  - *AD 2.1 to AD 2.10, aerodrome operator,*
  - *AD 2.11, MET services provider,*
  - *AD 2.12 to AD 2.16, aerodrome operator,*
  - *AD 2.17 and AD 2.18, ATS provider,*
  - *AD 2.19, 2.20, aerodrome operator,*
  - *AD 2.21, ATS provider,*
  - *AD 2.22, LVPs aerodrome operator; remaining elements ATS provider,*
  - *AD 2.23 aerodrome operator,*

- *AD 2.24, AIS provider / aerodrome operator / ANSP / flight procedure design organisation (depending on the chart),*
- *AD 2.25, aerodrome operator,*
- *AD 3.1 to AD 3.10, heliport operator,*
- *AD 3.11, MET services provider,*
- *AD 3.12 to AD 3.15, heliport operator,*
- *AD 3.16 and AD 2.17, ATS provider,*
- *AD 3.18, AD 3.19, aerodrome operator,*
- *AD 3.20, ATS provider,*
- *AD 2.21, LVPs heliport operator; remaining elements ATS provider,*
- *AD 3.22, heliport operator,*
- *AD 3.23, AIS provider/heliport operator/ANSP/flight procedure design organisation (depending on the chart).*

Lastly, the Agency would like to indicate that, as part of this proposal, it also intends to incorporate an additional step prior to the release of the aeronautical product. Indeed, under the current provisions, a rather linear process between the data originator and the AIS provider exists, while the role of the competent authority appears to be only an ex post one. The intent of this new step would be to ensure the ex ante involvement of the respective competent authority, thus ensuring that the AIS provider will receive aeronautical data/information which has been previously reviewed/authorised by the respective competent authority of the data originator (e.g. aerodrome or ATM/ANS competent authority).

The proposed step is in line with the current ICAO material (see for instance paragraph 5.2.2 of ICAO Doc 9774), intending to create an additional control which would:

– *further improve and maintain the quality of the EU aeronautical data/information; and*
– *remove the misconception that this phase concerns the data/information originator and the AIS provider only.*

The Agency therefore invites its stakeholders to provide their feedback about this proposal, namely:

— ***if they would prefer the assignment of responsibilities through the ADC tables or through the AIP sections, as explained above;***
— ***the proposed attribution of origination responsibilities, irrespective of the method they would prefer for the assignment of responsibilities;***
— ***the 'authorisation' of aeronautical data/information by the respective competent authority.***

ANNEX IV – Part-ATS

SPECIFIC REQUIREMENTS FOR THE PROVIDERS OF AIR TRAFFIC SERVICES

SUBPART A – ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF AIR TRAFFIC SERVICES (ATS.OR)

SECTION 1 – GENERAL REQUIREMENTS

[…]

ATS.OR.435 Aeronautical fixed service (ground–ground communications) – communication within a flight information region

[…]

(c) Description of communication facilities

[…]

(5) All facilities for direct-speech or data link communications between air traffic ~~services~~ control units and between air traffic ~~services~~ control units and other units described under points (b)(1) and (b)(2) shall be provided with automatic recording.

(6) All facilities for direct-speech or data link communications between units providing flight information service, including AFIS, and between units providing flight information service, including AFIS, and other units described under points (b)(1) and (b)(2) shall be provided with automatic recording, unless otherwise prescribed by the competent authority.

Rationale:

The proposed amendment aims at resolving a regulatory inconsistency between ATS.OR.400(c) and ATS.OR.435(c)(5) in relation to the recording of ground–ground communications.

ATS.OR.400(c) provides flexibility for the competent authority not to impose, for aerodrome flight information service providers, to record air–ground communications. Instead, ATS.OR.435(c)(5) does not provide the same flexibility in respect to ground–ground communications. The proposed amendment aligns the two sets of requirements with the same level of flexibility. Accordingly, it is proposed to amend relevant provisions in ATS.OR.455 on retention of recorded information and data are amended accordingly.

[…]

ATS.OR.455 Retention of recorded information and data

(a) An air traffic services provider shall retain for a period of at least 30 days the following:

[…]

(2) recordings of data and communications, as specified in points ATS.OR.435(c)(3), ~~and~~ (5) and (6);

[…]

Rationale:

The proposed amendment aims at ensuring consistency with that of ATS.OR.435.

[…]

ATS.TR.210 Operation of air traffic control service

[…]

(c) Except for cases of operations on parallel or near-parallel runways referred to in point ATS.TR.255, or when visual or own ~~a reduction in~~ separation ~~minima~~ in the vicinity of aerodromes can be applied, separation by an air traffic control unit shall be obtained by at least one of the following:

[…]

Rationale:

The proposed amendments to ATS.TR.210 point (c) and to AMC3 ATS.TR.210(c)(2), along with the introduction of the new AMC2 ATS.TR.210(c) with the two new related GM, should be considered as elements of a comprehensive regulatory initiative to clarify the application of separation of aircraft in certain specified circumstances.

The objectives of such initiative are:

- *to ensure clearer operational scenarios eligible for the application of methods to separate aircraft in the vicinity of an aerodrome, by requiring the ATS provider to define such configurations of traffic and their limitations;*
- *to provide guidance/recommendations for elements to be considered when establishing the limits and scenarios for the use of the said methods to separate aircraft in the vicinity of the aerodrome;*
- *to eliminate ambiguities relating to the use of the expression 'reduction of separation', where in fact in some cases these methods are the only means available to aerodrome controllers to provide separation to the aircraft concerned;*
- *to ensure consistency in the use of terminology in other provisions (e.g. use of visual separation, adequate separation, own separation).*

Accordingly, it is proposed to amend point (c) of ATS.TR.210 to explicitly allow the application of visual separation by air traffic controllers or own separation between aircraft in the vicinity of an aerodrome.

Subsequently, point (b) of AMC3 ATS.TR.210(c)(2), which refers to the option to reduce specific lateral and longitudinal separation minima in the vicinity of aerodromes, is removed. A new AMC2 ATS.TR.210(c) is proposed to specify the conditions and circumstances where 'visual separation' and 'own separation' as methods to separate aircraft in the vicinity of aerodromes may be applied. Such new AMC is supported by two new related GM to further describe the operational scenarios.

These proposed amendments were submitted to EASA by the experts working arrangements (APDSG) operating within the scope of the Eurocontrol NDOP. Corresponding amendments to the originating ICAO PANS-ATM provisions (e.g. to Section 6.1 of said ICAO documents) have been submitted by Eurocontrol to ICAO for consideration. EASA has in principle positively evaluated the validity of the proposed amendments which are included in the NPA for public consultation.

[…]

ATS.TR.220 Application of wake turbulence separation

[…]

(b) ~~Paragraph (a) shall not apply to arriving VFR flights and to arriving IFR flights executing visual approach when the aircraft has reported the preceding aircraft in sight and has been instructed to follow and maintain own separation from that aircraft. In those cases, the air traffic control unit shall issue caution for wake turbulence.~~ The provisions in point (a) shall not apply to:

(1) arriving VFR flights;

(2) IFR flights that have requested, or have been instructed and have accepted, to maintain own separation from another aircraft.

(c) In all cases listed in point (b), the air traffic control unit shall issue a caution for wake turbulence.

Rationale:

The proposed amendments to ATS.TR.220, AMC1 ATS.TR.220, AMC2 ATS.TR.220, along with the repeal of the actual GM1 to AMC1 ATS.TR.220 and the proposed introduction of the new GM1 and GM2 ATS.TR.220, have to be considered as part of a comprehensive regulatory initiative. These proposed amendments were submitted to EASA by the expert working arrangements (APDSG) operating within the scope of the Eurocontrol NDOP. It shall be noted that a proposal to amend the related originating provisions has been concurrently submitted to ICAO. EASA has positively evaluated the validity of the proposals and hereby submits them for consultation.

During the EASA Workshop on the implementation of Part-ATS held in June 2021, participants requested EASA to consider introducing changes to ATS.TR.220 addressing specified issues in relation to the application of wake turbulence separation, in particular with regard to circumstances where pilots accept to maintain own separation.

The main elements that governed the proposed changes to the aforementioned provisions are the following:

- *wake turbulence separation minima are prescribed for all the cases where the separation minima defined to fulfil the air traffic service objectives (i.e. to avoid collisions between aircraft) is not sufficient to protect for wake turbulence encounters;*
- *acceptance by the pilots to maintain own separation would also include the responsibility to maintain an appropriate distance to avoid wake turbulence encounters;*

— *air traffic controllers are required to provide appropriate wake cautionary information accordingly.*

ATS.TR.265 Control of aerodrome surface traffic in low-visibility conditions

(a) When there is a requirement for traffic to operate on the manoeuvring area in conditions of visibility which prevent the aerodrome control tower from applying visual separation between aircraft, and between aircraft and vehicles, the following shall apply:

(1) at the intersection of taxiways, an aircraft or vehicle on a taxiway shall not be permitted to hold closer to the other taxiway than the holding position limit defined by intermediate holding positions marking, stop bar or taxiway intersection marking, in accordance with the applicable aerodrome design specifications;

[…]

Rationale:

The proposed amendment aims at establishing consistency with the ICAO Annex 14 SARPs, the related ADR rules in Regulation (EU) No 139/2014 and the associated EASA ED Decision 2014/013/R 'Certification Specification and Guidance Material for Aerodrome Design' on the term 'intermediate holding position markings'.

ATS.TR.400 Application

(a) Alerting service shall be provided by the air traffic services units:

(1) for all aircraft provided with air traffic control service;

(2) in so far as practicable, to all other aircraft having filed a flight plan or otherwise known to the air traffic services;

(3) to any aircraft known or believed to be the subject of unlawful interference.

(b) Flight information centres or area control centres shall serve as the central point for collecting all information relevant to a state of emergency of an aircraft operating within the flight information region or control area concerned and for forwarding such information to the appropriate rescue coordination centre.

(c) The ATS service provider shall maintain up-to-date contact details in the OPS Control Directory for flight information centres or area control centres referred to in point (b).

~~(c)~~(d) In the event of a state of emergency arising to an aircraft while it is under the control of an aerodrome control tower or approach control unit or in contact with an AFIS unit, such unit shall notify immediately the flight information centre or area control centre responsible, which shall in turn notify the rescue coordination centre, except that notification of the area control centre, flight information centre or rescue coordination centre shall not be required if the nature of the emergency is such that the notification would be superfluous.

~~(d)~~(e) Nevertheless, the aerodrome control tower or approach control unit responsible or the relevant AFIS unit shall first alert and take other necessary steps to set in motion all appropriate local rescue and emergency organisations which can give the immediate assistance required, in accordance with local instructions, whenever either of the following situations occurs:

(1) an aircraft accident has occurred on or in the vicinity of the aerodrome;

(2) information is received that the safety of an aircraft which is or will come under the jurisdiction of the aerodrome control tower or of the AFIS unit may have or has been impaired;

(3) requested by the flight crew;

(4) when otherwise deemed necessary or desirable or the urgency of the situation so requires.

Rationale:

The proposed new point (c) stems from amendment to ICAO Annex 11 with State letter 2022/47. A central contact database shall be established to facilitate contact between air traffic services (ATS) units and operators, thereby supporting them in meeting their obligations to establish coordination in a timely manner when an aircraft is in distress.

ATS.TR.405 Notification to rescue coordination centres

(a) […]

(2) Alert phase when either of the following situations applies:

(i) following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failed to reveal any news of the aircraft;

(ii) an aircraft has been cleared to land and fails to land within 5 minutes of the estimated time of landing and communication has not been re-established with the aircraft;

(iii) at AFIS aerodromes, under circumstances as prescribed by the competent authority;

(iv) information has been received which indicates that the operating efficiency of the aircraft has been impaired, but not to the extent that a forced landing is likely or where the likelihood of a forced landing has not been determined;

(v) an aircraft is known or believed to be the subject of unlawful interference.

Points (i) to (iv) do not apply when evidence exists that would allay apprehension as to the safety of the aircraft and its occupants.

[…]

Rationale:

The proposed amendment to point (a)(2)(iv) stems from amendment to ICAO Annex 11 with State letter 2022/47. The current provisions do not address the specific scenario where the operating efficiency of the aircraft is known to be impaired but where the likelihood of a forced landing cannot be determined. Such an event becomes a possibility through the advent of autonomous distress tracking provisions.

ANNEX VI – Part-AIS

SPECIFIC REQUIREMENTS FOR THE PROVIDERS OF AERONAUTICAL INFORMATION SERVICES

SUBPART A – ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF AERONAUTICAL INFORMATION SERVICES (AIS.OR)

SECTION 1 – GENERAL REQUIREMENTS

AIS.OR.100 Aeronautical information management

(a) An aeronautical information services (AIS) provider shall establish information management resources and processes that are adequate to ensure the timely collection, processing, storing, integration, exchange and delivery of quality-assured aeronautical data and aeronautical information within the ATM system.

(b) An AIS provider shall ensure that:

(1) its organisation, along with the design, contents, processing and distribution of aeronautical data and aeronautical information, takes into consideration human factors principles which facilitate their optimum utilisation;

(2) due consideration is given to the integrity of aeronautical data and information where human interaction is required and mitigating measures are taken where risks are identified.

Rationale:

The proposed point (b) introduces a requirement for human factors considerations in the way an AIS provider is organised, operates and provides its services, by transposing Annex 15 standards 3.7.1 and 3.7.2.

AIS.OR.105 Responsibilities of aeronautical information services (AIS) providers

(a) An AIS provider shall:

(1) receive, manage and maintain aeronautical data and aeronautical information covering at least the areas specified in points (a) and (d) of Appendix 1 to Annex III;

(2) ensure the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation.

(b) An AIS provider shall receive, collate or assemble, edit, format, publish, store and distribute aeronautical data and aeronautical information, as aeronautical information products, concerning the entire territory of a Member State as well as those areas over the high seas in which the Member State is responsible for the provision of air traffic services.

(c) An AIS provider shall ensure that aeronautical data and aeronautical information are available in a form suitable for the operational requirements of the air traffic management (ATM) community, including for:

(1) personnel involved in flight operations, including flight crews, flight planning and flight simulators;

(2) ATS providers responsible for flight information service;~~,~~ and

(3) the services responsible for pre-flight information.

(d) An AIS provider shall provide 24-hour services for NOTAM origination and issuance in its area of responsibility and for pre-flight information needed in relation to route stages originating at the aerodrome/heliport in its area of responsibility.

(e) Without prejudice to point (b), an AIS provider shall:

(1) obtain aeronautical data and aeronautical information to enable it to provide pre-flight information service and to meet the need for in-flight information:

(i) from the AIS providers of other States, and

(ii) from other sources that may be available;

(2) ~~An AIS provider shall~~make available to other AIS providers all available aeronautical data and aeronautical information required by them.

(f) An AIS provider shall ensure that procedures are in place to assess and mitigate safety risks to aviation arising from data and information errors and that due consideration is given to the integrity of information where human interaction is required.

(g) An AIS provider shall:

(1) clearly indicate that aeronautical data and aeronautical information provided for and on behalf of a Member State are provided under the authority of that Member State, irrespective of the format in which it is provided;

(2) when distributing aeronautical data and aeronautical information obtained in accordance with point (e)(1)(i), clearly identify them as having the authority of the originating State.

Rationale:

The intent of the proposed amendment is to ensure the full transposition, at the appropriate level, of Annex 15 standards 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5 and 2.3.1, regarding the responsibilities and functions, especially with regard to the users of the AIS services (ATM community), the use and distribution of aeronautical data and information from other States and other sources (e.g. post-flight information), thus ensuring that Member States discharge their responsibilities towards ICAO, with the necessary legal certainty.

It also addresses Annex 15 standard 3.7.2 regarding the need to consider the impact on information integrity as a result of human interaction and the need to identify and implement mitigating risks.

Moreover, it aims at the transposition of paragraph 4.1.1 of Annex 15, which defines the areas for which the AIS provider must collect and manage aeronautical data and information, thus being part of its responsibilities, and which are linked to the areas that the ADC specifies. This proposal is also accompanied by a proposal to delete GM1 AIS.OR.200(a), which on the one hand does not provide legal certainty and on the other hand becomes unnecessary.

In addition, the proposed new numbering of the points will improve the readability of the provisions.

SECTION 2 – DATA QUALITY MANAGEMENT

AIS.OR.200 General

An AIS provider shall ensure that:

(a) aeronautical data and aeronautical information are provided in accordance with the specifications laid down in the aeronautical data catalogue, specified in Appendix 1 to Annex III (Part-ATM/ANS.OR);

(b) data quality is maintained; and

(c) automation is applied to enable the processing and exchange of digital aeronautical data and to ensure the quality, efficiency and cost-effectiveness of aeronautical information services.

Rationale: *The proposed amendment transposes the content of paragraph 3.5.1 of Annex 15.*

AIS OR.255 Geographical coordinates

The AIS provider shall publish aeronautical geographical coordinates, indicating latitude and longitude, expressed in terms of the WGS-84 geodetic reference datum.

Rationale: *The use of WGS-84 for air navigation purposes is foreseen in both ICAO Annex 15 (1.2.1.1) and Annex 14 (1.3.1). Annex 15, with regard to publication of aeronautical geographical coordinates, also foresees in the same provision that '… published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum'. On the*

origination side, a similar provision is included in Annex 14 1.3.1 ('…Reported aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum'), while a similar provision (4.1.3) in PANS-AIM foresees that 'Geographical coordinates indicating latitude and longitude shall be determined and reported to the AIS in terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum'.

Currently, neither ATM/ANS.OR.A.090 (which, as a common requirement, is the reference point for all ATM/ANS organisations), nor ADR.OPS.A.020 (which addresses aerodrome operators as data originators using identical provisions), fully address the respective requirements. It is therefore proposed to amend point (a) of both said requirements, in a manner consistent with the relevant ICAO Annex 15 and 14 provisions. To ensure full consistency, it is also proposed to amend point (a) of FPD.TR.105, concerning flight procedure design, and align it with the proposed provisions ATM/ANS.OR.A.090 and ADR.OPS.A.020.

Furthermore, it is proposed to introduce a new specific requirement (AIS OR.255) for AIS providers, which is based on the content of the aforementioned provision (1.2.1.1) of ICAO Annex 15, concerning the publication of such aeronautical data.

The proposed changes are supported with a new AMC1 ATM/ANS.OR.A.090(a), the deletion of GM2 ATM/ANS.OR.A.090(a) and the amendment of AMC1 ATM/ANS.OR.A.090(b), whose rationale is explained separately. For consistency reasons, new AMC1 ADR.OPS.A.020(a) and AMC1 ADR.OPS.A.020(b) are proposed for the area of aerodromes, along with the proposed deletion of GM2 ADR.OPS.A.020(a).

SECTION 3 – AERONAUTICAL INFORMATION PRODUCTS

AIS.OR.300 General – Aeronautical information products

When providing aeronautical data and aeronautical information in multiple formats, an AIS provider shall undertake consistency checks, in accordance with established ~~ensure that~~processes and procedures, to ensure ~~are implemented for~~ data and information consistency between those formats.

Rationale:

The proposed amendment intends to reflect paragraph 2.1.3.2 of PANS-AIM and the relevant ICAO proposal for its amendment as per ICAO State Letter 2023/06 (13 February 2023).

CHAPTER 1 – AERONAUTICAL INFORMATION IN A STANDARDISED PRESENTATION

[…]

AIS.OR.325 Aeronautical charts

~~An AIS provider shall ensure that the following aeronautical charts, where made available:~~

~~(a) form part of the AIP or are provided separately to recipients of the AIP:~~

~~(1) aerodrome obstacle chart – Type A;~~

~~(2) aerodrome/heliport chart;~~

~~(3) aerodrome ground movement chart;~~

~~(4) aircraft parking/docking chart;~~

~~(5) precision approach terrain chart;~~

~~(6) ATC surveillance minimum altitude chart;~~

~~(7) area chart;~~

~~(8) standard arrival chart – instrument (STAR);~~

~~(9) standard departure chart – instrument (SID);~~

~~(10) instrument approach chart;~~

~~(11) visual approach chart; and~~

~~(12) en-route chart; and~~

~~(b) are provided as part of the aeronautical information products:~~

~~(1) aerodrome obstacle chart – Type B;~~

~~(2) world aeronautical chart 1:1 000 000;~~

~~(3) world aeronautical chart 1:500 000;~~

~~(4) aeronautical navigation chart – small scale; and~~

~~(5) plotting chart.~~

(a) An AIS provider shall ensure that the following aeronautical charts are made available as part of the AIP, or are provided separately to recipients of the AIP:

(1) ‘aerodrome/heliport chart – ICAO’, at least for the aerodromes open to public use;

(2) ‘aerodrome ground movement chart – ICAO’, if due to congestion of information, details necessary for the ground movement of aircraft along the taxiways to and from the aircraft stands may not be shown with sufficient clarity on the ‘aerodrome/heliport chart – ICAO’;

(3) ‘aircraft parking/docking chart – ICAO’, if due to the complexity of the terminal facilities, detailed information to facilitate the ground movement of aircraft between the taxiways and the aircraft stands and the parking/docking of aircraft may not be shown with sufficient clarity on the ‘aerodrome/heliport chart – ICAO’ or the ‘aerodrome ground movement chart – ICAO’;

(4) 'aerodrome terrain and obstacle chart – ICAO (electronic)', at least for aerodromes open to public use where the aerodrome traffic density is medium or heavy;

(5) 'aerodrome obstacle chart – ICAO Type A (operating limitations)', at least for aerodromes open to public use, except that such a chart may not be provided where:

(i) the aerodrome terrain and 'obstacle Chart – ICAO (electronic)' is provided, or

(ii) there are no obstacles in the take-off flight path areas, in which case a notification to this effect shall be published in the AIP;

(6) 'aerodrome obstacle chart – ICAO Type B', at least for the aerodromes open to public use, where it is necessary to provide information for the determination of safe altitudes/heights, including those for circling procedures, procedures for use in the event of an emergency during take-off or landing, and of obstacle clearing and marking criteria, except that:

(i) such a chart may not be provided where the 'aerodrome terrain and obstacle chart – ICAO (electronic)' is provided,

(ii) the content of the 'aerodrome obstacle chart – ICAO Type B' chart may be combined with the content of the 'aerodrome obstacle chart – ICAO Type A (operating limitations)', and in this case the chart shall be called the 'aerodrome obstacle chart – ICAO (comprehensive)';

(7) 'precision approach terrain chart – ICAO', at least for aerodromes open to public use, for:

(i) precision approach runways Category II and III;

(ii) other runways authorised for operations with operational credits with a DH less than 200 ft,

except that such a chart may not be provided where the necessary information is provided in the 'aerodrome terrain and obstacle chart – ICAO (electronic)'.

(8) 'en-route chart – ICAO', for all areas or all areas where flight information regions have been established;

(9) 'area chart – ICAO', where the ATS routes or position reporting requirements are complex and may not be adequately shown on an 'en-route chart – ICAO';

(10) 'standard arrival chart – instrument (STAR) – ICAO', wherever a standard arrival route – instrument has been established and may not be shown with sufficient clarity on the 'area chart – ICAO';

(11) 'standard departure chart – instrument (SID) – ICAO', wherever a standard departure route – instrument has been established and may not be shown with sufficient clarity on the 'area chart – ICAO';

(12) supplementary 'ATC surveillance minimum altitude chart – ICAO', where vectoring procedures are established and minimum vectoring altitudes may not be shown adequately on the 'area chart – ICAO', 'standard departure chart – instrument (SID) – ICAO' or 'standard arrival chart – instrument (STAR) – ICAO';

(13) 'instrument approach chart – ICAO', at least for aerodromes open to public use and where instrument approach procedures have been established;

(14) 'visual approach chart – ICAO', at least for aerodromes open to public use where:

(i) only limited navigation facilities are available, or

(ii) radio communication facilities are not available, or

(iii) no adequate aeronautical charts of the aerodrome and its surroundings at 1:500 000 or greater scale are available, or

(iv) visual approach procedures have been established;

(b) An AIS provider shall ensure that the following aeronautical charts are made available as aeronautical information products:

(1) 'world aeronautical chart – ICAO 1:1 000 000', for all areas delineated in Appendix 5 of ICAO Annex 4, except that such a chart may not be provided if the operational requirements are satisfied by the provision of 'aeronautical chart – ICAO 1:500 000' or 'aeronautical navigation chart – ICAO small scale';

(2) 'plotting chart – ICAO', to cover major air routes over oceanic areas and sparsely settled areas used by international civil aviation.

Rationale:

The current requirements concerning aeronautical charts are based solely on the provisions of (ICAO) Annex 15 (paragraph 5.2.5) and subsequently do not clarify which aeronautical charts need to be made available by the AIS providers, as the criteria for the chart availability are included in (ICAO) Annex 4. This leads to a legal uncertainty that may create implementation and enforceability issues and therefore needs to be resolved. Such problems have already been identified during the EASA standardisation activities.

Additionally, the criteria contained in Annex 4 in relation to the availability of certain aerodrome-related charts have been assessed as not being suitable. This is because in Annex 4, chart availability is linked to the use of aerodromes serving international civil aviation (and sometimes required even in a manner that does not ensure internal consistency amongst the various Annex 4 provisions). In addition, such criteria are found not to serve the actual safety needs of the aviation system and especially those of the end users, and to not being fully compatible with other applicable regulatory provisions (e.g. aerodrome certification). Moreover, the criteria contained in Annex 4 are not aligned with the EU all-weather operations (AWOs) concept that has already been under deployment in the EU and which allows certain operations to take place at runways which are not classified as CAT II or III that Annex 4 refers to, subject to, amongst others, the availability of certain aeronautical charts (for more information about the AWOs concept, see Regulation (EU) 2022/208 amending Regulation (EU) 139/2014, and Regulation (EU) 2021/2237 amending Regulation (EU) 965/2012). It is also worth mentioning that Part-AIS of Regulation (EU) 2017/373 already reflects this concept, following its last amendment with Regulation (EU) 2022/938.

Furthermore, under the currently applicable requirements, the 'Aerodrome Terrain and Obstacle Chart – ICAO (electronic)' is not required to be made available, while the 'Aerodrome Obstacle Chart – ICAO Type B' is not foreseen to form part of the AIP, as specified in paragraph 5.2.5.1 of Annex 15.

Moreover, the current naming of the aeronautical charts is not fully in line with that of ICAO, as foreseen in both Annex 15 and Annex 4.

The proposed amendments address the above deficiencies in a manner that ensures the necessary clarity, legal certainty and enforceability. In particular, the proposed provision includes all aeronautical charts included in Annex 15 using the ICAO naming convention. The order in which the aeronautical charts appear facilitates the reader, as charts that are relevant to each other appear in a logical order.

The criteria for the availability of aeronautical charts are based on the content of Annex 4, while the proposed provisions establish at least the 'aerodromes open to public use' as a baseline for the provision of aerodrome-related charts. This approach is believed to:

- *remove the current uncertainty caused by the criteria contained in Annex 4;*
- *satisfy the needs of the end users;*
- *align with the provisions of other relevant regulatory provisions at the EU level;*
- *not create an impact, as in fact the content of the AIPs already covers this scenario;*
- *allow for the publication of charts for other aerodromes, apart from the ones 'open to public use', depending on the actual content of the AIP;*
- *address the need to facilitate the deployment of the AWOs concept, which is reflected in point (a)(7)(ii), 'precision approach terrain chart – ICAO'.*

Regarding the 'aerodrome terrain and obstacle Chart – ICAO (electronic)', an additional criterion related to the 'aerodrome traffic density' for the provision of this chart is proposed, which is believed to ensure proportionality and consistency with the relevant safety risks.

The proposed amendment does not include any additional requirement regarding aeronautical chart production. This follows the current logic and structure of the overall set of legal requirements, where a regulatory link and aeronautical data/information flow exists only between data originators and AIS providers, while the definition of the aeronautical information product does include 'aeronautical information charts'. This implies that the responsibility for the actual aeronautical chart production is with the AIS providers, as the sole recipient of the originated aeronautical data/information, a situation that is believed to represent the current practice across the EU.

The Agency, therefore, would like to have the opinion of its stakeholders on this issue, including whether there is a need for further clarification of the requirements, and/or a need to introduce additional requirements for chart production and related organisations and to define their relationships with data originators and AIS providers, including the need to amend the current template of the certificate which does not include charting as part of the scope of service/function.

Moreover, the proposed requirement is complemented by the existing AMC1 AIS.OR.325, which is dedicated to chart production and contains a direct reference to Annex 4 by stating that 'Aeronautical charts should be produced in accordance with the specifications contained in ICAO Annex 4.'. However, this direct reference is not considered optimal for a variety of reasons, including the fact that its individual chapters contain chart availability specifications which would overlap with the proposed

In this context, the Agency would like to receive feedback from its stakeholders regarding this proposal, including potential difficulties encountered based on the implementation of the existing regulatory status.

amendments to AIS.OR.325. The Agency therefore considers as a solution the development of individual AMC/GM for each of the proposed aeronautical charts, based on the content of Annex 4 and, where needed, ICAO Doc 8697 (Aeronautical Chart Manual).

CHAPTER 2 – DIGITAL DATA SETS

AIS.OR.335 General – Digital data sets

~~If available, a~~An AIS provider shall ensure that digital data is in the form of the following data sets:

(1) AIP data set;

(2) terrain data set;

(3) obstacle data sets;

(4) aerodrome mapping data sets; and

(5) instrument flight procedure data sets.

~~When made available, t~~Terrain data shall be provided in the form of terrain data sets. A checklist of valid data sets shall be regularly provided.

AIS.OR.345 AIP data set

An AIS provider shall ensure that the AIP data set~~, if available,~~ contains the digital representation of aeronautical information of lasting character, including permanent information and long-duration temporary changes.

AIS.OR.350 Terrain and obstacle data – General requirements

An AIS provider shall ensure that terrain and obstacle data~~, if available,~~ are provided for the terrain and obstacle coverage areas ~~in accordance with point AIS.TR.350~~.

AIS.OR.355 Terrain data sets

An AIS provider shall ensure that terrain data~~, if available,~~ is provided:

(a) for Area 1~~, as laid down in point AIS.TR.350~~; and

(b) at least for aerodromes open to public use, to cover:

(1) Area 2a or parts thereof~~, as laid down in point AIS.TR.350(b)(1),~~,

(2) Areas 2b, 2c and 2d or parts thereof~~, as laid down in points AIS.TR.350(b)(2), (3) and (4)~~, for terrain:

(i) within 10 km from the aerodrome reference point (ARP), and

(ii) beyond 10 km from the ARP if the terrain penetrates the horizontal plane 120 m above the lowest runway elevation;

(3) the take-off flight path area or parts thereof;

(4) an area, or parts thereof, bounded by the lateral extent of the aerodrome obstacle limitation surfaces;

(5) Area 3 or parts thereof~~, as laid down in point AIS.TR.350(c)~~, for terrain that extends 0.5 m above the horizontal plane, passing through the nearest point on the aerodrome movement area; and

(6) Area 4 or parts thereof, ~~as laid down in point AIS.TR.350(d),~~ for all ~~runways where~~ precision approach runways Category II or III, ~~operations~~ or runways authorised for operations with operational credits with a DH less than 200 ft, ~~have been established~~ and where detailed terrain information is required by operators to enable them to assess the effect of terrain on decision height determination by use of radio altimeters.

AIS.OR.360 Obstacle data sets

An AIS provider shall ensure that obstacle data~~, if available,~~ is provided:

(a) for obstacles in Area 1 whose height is~~100~~ 60 m or higher above ground;

(b) at least for aerodromes open to public use, for all obstacles within Area 2 that are assessed as being a hazard to air navigation; and

(c) at least for aerodromes open to public use, to cover:

(1) Area 2a or parts thereof, for those obstacles that penetrate the relevant obstacle data collection surface,

(2) objects in the take-off flight path area or parts thereof, which project above a plane surface having a 1.2 % slope and having a common origin with the take-off flight path area,

(3) penetrations of the aerodrome obstacle limitation surfaces or parts thereof,

(4) Areas 2b, 2c and 2d, for obstacles that penetrate the relevant obstacle data collection surfaces,

(5) Area 3 or parts thereof, for obstacles that penetrate the relevant obstacle data collection surface, and

(6) Area 4 or parts thereof, for all ~~runways where~~precision approach runways Category II or III, or runways authorised for operations with operational credits with a DH less than 200 ft~~have been established~~.

AIS.OR.365 Aerodrome mapping data sets

An AIS provider shall ensure that aerodrome mapping data sets~~, if available,~~ are provided, at least for aerodromes at which an advanced surface movement and control system (A-SMGCS) has been implemented, in accordance with point AIS.TR.365.

AIS.OR.370 Instrument flight procedure data sets

An AIS provider shall ensure that instrument flight procedure data sets~~, if available,~~ are provided at least for aerodromes open to public use served by instrument flight procedures, in accordance with point AIS.TR.370.

Rationale:

The requirements concerning the provision of digital data sets are considered to lack legal certainty, because they do not clarify the conditions under which a certain data set has to be provided; if such an obligation exists at all.

As an example, AIS.OR.365 does not clarify for which aerodromes the AISP needs to make such data available. Similarly, AIS.OR.355 does not clarify for which aerodromes terrain data needs to be made available, while in all other cases, the provision of the data is 'subject to availability', despite the fact that the sole objective of the AISP should be to make such data available.

This undeniable uncertainty may create situations where an arbitrary decision may be made, thus impacting the necessary level playing field which is needed for the proper and standardised implementation of the requirements and thus the full discharge of the obligations of the State under the Chicago Convention.

To this end, the relevant requirements are proposed to be amended through the deletion of the expressions 'if available' and 'when made available', which are sources of uncertainty. In addition, in certain cases where criteria need to be established, these are included in the relevant requirement (e.g. AIS.OR.365 Aerodrome mapping data sets, AIS.OR.370 Instrument flight procedure data sets, AIS.OR.355 Terrain data sets, AIS.OR.360 Obstacle data sets).

This is described in more detail below.

- *In all requirements, the expressions 'if available' and 'when made available' are deleted to ensure legal certainty.*
- *AIS.OR.350 is proposed to be amended to include the term 'terrain and obstacle coverage areas' of proposed definition (101a) and to remove the reference to the AIS.TR.350. The latter is also proposed to be deleted, given that its content is proposed as a new definition (101a), describing the areas related to the collection of terrain and obstacle data. In this way, the relevant rules are simplified, without unnecessary cross-references.*
- *AIS.OR.355 is proposed to be amended by deleting the references to AIS.TR.350, as the content of this provision has been transposed as a new definition. In addition, the proposed amendment of point (b) clarifies the minimum scope of aerodromes covered under this provision, while point*

(b)(6) intends to address the case of runways which are authorised for operations with operational credit in accordance with Regulation (EU) No 139/2014, in the context of the implementation of the all-weather operations (AWO) concept, but which had not been designed as CAT II/III runways. This also ensures consistency with the latest amendments to the AIP content, which were introduced to reflect the AWO concept.

— *AIS.OR.360 is proposed to be consequentially amended in point (a) regarding the height of the obstacles, in order to align with the proposed amendment to Article 3 paragraph (5). Moreover, the proposed amendments in points (b) and (c) intend to clarify the minimum scope of aerodromes covered under this provision, while the proposed amendment of point (c)(6) intends to address the case of runways which are authorised for operations with operational credit in accordance with Regulation (EU) No 139/2014, in the context of the implementation of the AWO concept, but which had not been designed as CAT II/III runways.*

— *AIS.OR.365 is amended to clarify that the provision of such aerodrome mapping data concerns only the aerodromes which have implemented an advanced surface movement and control system (A-SMGCS);*

— *AIS.OR.370 is amended to clarify the minimum scope of the requirement, which currently is undefined.*

Lastly, to ensure that the relevant data is to be made available without unnecessary impact, the Agency intends to propose a transition period for the implementation of the proposed provisions which is proposed to be 31 December 2024, subject to the finalisation of the regulatory process.

In this context, the Agency would like to receive feedback from its stakeholders regarding the proposed compliance date.

Moreover, EASA would like to request the feedback of its stakeholders on the following issue. Annex 15 foresees in paragraph 5.3.3.4.4 that '….obstacle data shall be provided for all obstacles within Area 2 that are assessed as being a hazard to air navigation.', while paragraphs 5.3.3.4.5 and 5.3.3.4.6 define specifically the cases where obstacle data shall be provided for Areas 2a, 2b, 2c and 2d, using as a criterion the penetration of the obstacle collection surfaces[13]. These provisions have been transposed as part of AIS.OR.360.

EASA understands that the wording of paragraph 5.3.3.4.4 may create interpretation problems because, by definition, obstacles are meant to be hazardous, and this paragraph may seem to overlap with the content of paragraphs 5.3.3.4.5 and 5.3.3.4.6, which also cover elements of Area 2. However, it is EASA's position that the case of paragraph 5.3.3.4.4 concerns objects which do not penetrate any of the defined surfaces, and yet have been assessed as being a hazard to air navigation. This understanding is based on the content of paragraph 4.4 of ICAO Annex 14, where it is noted that 'In certain circumstances, objects that do not project above any of the surfaces enumerated in 4.1 may constitute a hazard to aeroplanes as, for example, where there are one or more isolated objects in the

In this context, the Agency requests the opinion of its stakeholders about the clarity of the relevant requirements and the potential need for the provision of additional supporting material to facilitate the implementation of the relevant requirement.

[13] Apart from the case of the obstacle collection penetration, paragraph 5.3.3.4.5 also introduces the criterion of penetration of the obstacle limitation surfaces and of the take-off flight path area.

vicinity of an aerodrome.'. Such an assessment is performed by the organisations involved in aerodrome safeguarding, in accordance with the relevant mechanism established at the State level.

SECTION 4 – DISTRIBUTION, ~~AND~~ PRE-FLIGHT AND POST-FLIGHT INFORMATION SERVICES

AIS.OR.400 Distribution services

An AIS provider shall:

(a) distribute available aeronautical information products to those users who request them;

(b) make available the AIP, AIP amendments, AIP supplements, NOTAM and AIC by the most expeditious means;

(c) ensure that NOTAM are distributed through the aeronautical fixed service (AFS) whenever practicable;

(d) ensure that:

(i) where more than one international NOTAM office is designated within a State, appropriate coordination procedures are established, according to the defined extent of responsibility and the territory covered by each international NOTAM office,

(ii) international exchange of NOTAM takes place only as mutually agreed between the international NOTAM offices and multinational NOTAM processing units concerned; and

(e) arrange, as necessary, the issuance and receipt of NOTAM distributed by telecommunication to satisfy operational requirements;

(f) ensure that the digital data sets are made available through information services which shall provide the possibility to:

(i) to query and retrieve, the whole, or selected elements, of each of the digital data sets,

(ii) subscribe to notifications on data set updates.

Rationale:

The proposed amendment of point (d) addresses the content of an Annex 15 provision (standard 2.3.3), which deals with the case where more than one international NOTAM offices are established within the territory of a State, in which case they need to have defined areas of responsibility and therefore procedures to ensure their coordination.

The proposed addition of point (f) is based on the content of ICAO State Letter 2023/06 (13 February 2023) and the intent is to make the digital data sets available through information services, as well as defining certain minimum capabilities of such information services.

The Agency intends to propose a transition period for the implementation of point (f) which is proposed to be 31 December 2024, subject to the finalisation of the regulatory process.

In this context, the Agency would like to receive feedback from its stakeholders regarding the proposed compliance date.

AIS.OR.410 Post-flight information services

An AIS provider shall ensure that, for any aerodrome/heliport open to public use, arrangements are in place with other organisations to enable the AIS provider to receive and distribute information concerning:

(a) the state and operation of air navigation facilities or services noted by flight crews; and

(b) the presence of wildlife hazards observed by flight crews.

Rationale:

The proposed requirement addresses the provisions of Annex 15 (standards 5.6.1, 5.6.2, 5.6.3. and 5.6.4) which deal with post-flight information services. The transposition of these provisions would ensure the existence of a feedback mechanism to the AIS provider that would contribute to the distribution of safety-related information. This requirement is proposed to cover all aerodromes open to public use, to ensure that the safety benefits stemming from its implementation reach all such aerodromes. The proposed requirement is supported with relevant new guidance to facilitate its implementation.

SECTION 6 – PERSONNEL REQUIREMENTS

AIS.OR.600 Training ~~General~~ requirements

~~In addition to point ATM/ANS.OR.B.005(a)(6) of Annex III, the AIS provider shall ensure that personnel responsible for the provision of aeronautical data and aeronautical information is:~~

~~(a) made aware of and applies the following:~~

~~(1) the requirements on aeronautical information products and services, as specified in Sections 2 to 5;~~

~~(2) the update cycles applicable to the issuing of AIP amendments and AIP supplements for the areas for which they provide aeronautical data or aeronautical information;~~

~~(b) adequately trained, competent and authorised for the job they are required to do~~.

(a) As part of its management system, the AIS provider shall:

(1) identify and document the competencies and the associated knowledge, skills and attitudes required for each function within its organisation relating to the provision of aeronautical data and aeronautical information;

(2) analyse, establish and document the training needs of its personnel and develop appropriate training material, as part of a training programme approved by the competent authority.

(b) The AIS provider shall ensure that, as part of its training programme, its personnel:

(1) successfully complete initial training, prior to being allowed to perform their duties unattended. The initial training shall include theoretical and practical training of adequate duration and assessment of the personnel following the provision of the training,

(2) receive:

(i) recurrent training, at specified intervals not exceeding 24 months,

(ii) refresher training, prior to performing their duties unattended when they are absent from their duties for a period not less than 3 and not more than 12 consecutive months. In case of absence beyond 12 consecutive months, such personnel shall undergo initial training; and

(iii) continuation training, due to changes to their operating environment or assigned tasks, as necessary.

(3) The AIS provider shall ensure that, following the competition of their initial training, its personnel are assessed at established intervals in accordance with a methodology approved by the competent authority, to ensure that they maintain the required competencies, knowledge, skills and attitudes.

(4) The AIS provider shall evaluate and update the training programme and the assessment methodology, to remain consistent with emerging requirements and address feedback received.

The updated training programme and the assessment methodology shall require the approval of competent authority.

(5) The AIS provider shall:

(1) nominate suitably experienced and specifically trained personnel as training instructors and assessors for the provision of training and the assessment of its personnel, according to documented criteria;

(2) ensure that suitable facilities, means and equipment are used for the provision of the training and, where applicable, for the conduct of the assessments.

(6) The AIS provider shall maintain records of all the training completed by such personnel, as well as their assessments, and make such records available:

(1) to the personnel concerned upon their request;

(2) upon request, and with the agreement of the personnel concerned, to the new employer when such personnel is employed by a new entity.

Rationale:

The Agency proposes the replacement of the current provision because it contains rather high-level requirements which are considered inadequate to ensure the provision of structured training and assessment of the AIS personnel, along with ensuring standardised implementation and the required level playing field. These specific provisions do not affect the ATSEP-related provisions.

The proposed requirement is based on the content of:

— *paragraph 3.6.4 of Annex 15, which outlines the training requirements for the AIS personnel;*

— *the proposals contained in ICAO State Letter 2023/06, which proposes the introduction of new provisions regarding the training methodology and training management in PANS-AIM.*

To this end, it is proposed to introduce requirements which outline the training path of AIS employees, detailing the different type of training that need to be provided, along with the timelines during which certain training needs to be provided.

It is also proposed that training is to be delivered by nominated, experienced and specifically trained personnel using appropriate means and facilities, to ensure the quality of the training and assessment process, while ensuring the evolution of the training programme to remain relevant and adequate.

In the context of this proposal, the Agency would like to receive feedback from its stakeholders as to the need for the provision of relevant supportive material to facilitate compliance.

ANNEX VI – PART-AIS

SPECIFIC REQUIREMENTS FOR THE PROVIDERS OF AERONAUTICAL INFORMATION SERVICES

SUBPART B – TECHNICAL REQUIREMENTS FOR PROVIDERS OF AERONAUTICAL INFORMATION SERVICES (AIS.TR)

[…]

SECTION 2 – DATA QUALITY MANAGEMENT

[…]

AIS.TR.235 Error reporting, error measurement and corrective actions

The AIS provider shall, through its error reporting, error measurement and corrective mechanisms, ~~shall~~ ensure that:

(a) problems identified during origination, production, storage, handling and processing, or those reported by users after publication, are recorded;

(b) all problems reported in relation to the aeronautical data and aeronautical information are analysed by the AIS provider, the responsible originator is informed without delay, and the necessary corrective actions are implemented ~~performed~~ without delay;

(c) all errors, inconsistencies or anomalies detected in aeronautical data are resolved prior to its delivery and priority is given to resolution of all errors, inconsistencies and anomalies detected in critical and essential aeronautical data;

(d) affected users are warned of errors in the aeronautical data and aeronautical information that have been made available by the most effective means, taking into account the integrity level of the aeronautical data and aeronautical information;

(e) error feedback is facilitated and encouraged;

(f) any such error, inconsistency, anomaly and problem is managed in accordance with ATM/ANS.OR.A.065.

Rationale:

Part of the proposed amendments (point (c)) stem from the content of the existing guidance which currently supports requirement AIS.OR.235. In addition, it is proposed to include in the requirements the obligation to inform the responsible data originator in case of an identified problem, and to implement corrective actions without delay (point (b)). In addition, point paragraph (d) is proposed to be amended to clarify that the requirement concerns aeronautical data/information which has already been made available.

Moreover, because part of the guidance supporting AIS.OR.235 is already contained as legal requirements in AIS.TR.235, it is also proposed to delete the existing guidance and provide support for the implementation of AIS.TR.235 in the form of a new AMC.

Finally, a new point (f) is proposed, linking the requirement for error reporting, error measurement and corrective mechanisms with the occurrence reporting requirements contained in ATM/ANS.OR.A.065. In this way, it is required to ensure that the mechanisms established under AIS.TR.235 feed the occurrence reporting mechanism. The addition of this requirement does not alter the occurrence reporting obligations of the organisations, yet it is considered that it helps their further clarification in a manner that does not leave room for misinterpretation of the occurrence reporting obligations.

SECTION 3 – AERONAUTICAL INFORMATION PRODUCTS

AIS.TR.300 General – Aeronautical information products

[…]

(c) International Civil Aviation Organization (ICAO) abbreviations shall be used in the aeronautical information products whenever they are appropriate, and their use will facilitate the distribution of aeronautical data and aeronautical information.

Rationale:

The amendment is proposed in order to ensure the full transposition of Annex 15 standard 1.3.4 regarding the use of ICAO abbreviations.

AIS.TR.305 Aeronautical information publication (AIP)

(a) The AIP, AIP amendments and AIP supplements shall be provided as an 'electronic AIP' (eAIP). The eAIP shall allow for displaying on a computer screen and printing on paper. In addition, the AIP, AIP amendments and AIP supplements may also be provided on paper.

[…]

(c) Except as provided in points (m) and (n), ~~T~~the AIP shall contain information related to and arranged under the subject headings listed in Appendix 1.

(d) The issuing Member State and AIS provider shall be clearly indicated on the cover and in the table of contents.

(e) When two or more Member States jointly provide an AIP, they shall be clearly indicated in accordance with point (d).

[…]

(l) Any amendment to the printed volume of the AIP shall be made using replacement sheets.

(m) Notwithstanding point (c) and subject to the prior approval of the competent authority and compliance with point (o), when the AIP data set is made available, the following sections of the AIP may be left blank and a reference to the data set availability shall be included in the AIP:

(1) ENR 2.1 FIR, UIR, TMA and CTA;

(2) ENR 3.1 Conventional navigation routes;

(3) ENR 3.2 Area navigation routes;

(4) ENR 3.3 Other routes;

(5) ENR 3.4 En-route holding;

(6) ENR 4.1 Radio navigation aids – en-route;

(7) ENR 4.4 Name-code designators for significant points;

(8) ENR 4.5 Aeronautical ground lights – en-route;

(9) ENR 5.1 Prohibited, restricted and danger areas;

(10) ENR 5.2 Military exercise and training areas and air defence identification zone (ADIZ);

(11) ENR 5.3.1 Other activities of a dangerous nature;

(12) ENR 5.5 Aerial sporting and recreational activities;

(13) ****AD 2.17 Air traffic services airspace;

(14) ****AD 2.19 Radio navigation and landing aids;

(15) ****AD 3.16 Air traffic services airspace;

(16) ****AD 3.18 Radio navigation and landing aids.

(n) Notwithstanding point (c) and subject to the prior approval of the competent authority and compliance with point (o), when the obstacle data set is made available, the following sections of the AIP may be left blank and a reference to the data set availability shall be included in the AIP:

(1) ENR 5.4 Air navigation obstacles;

(2) ****AD 2.10 Aerodrome obstacles;

(3) ****AD 3.10 Heliport obstacles.

(o) A data set provided in accordance with point (m) and (n) shall:

(1) be successfully tested for an adequate period of time prior to being made available;

(2) contain at least the same aeronautical data and information contained in the respective sections of the AIP to be left blank;

(3) be made available to the users under the same conditions as the AIP;

(4) allow for displaying on computer screen by any user consulting the eAIP in the corresponding AIP sections, printing on paper, in a manner readable by humans.

(p) Where, subject to the prior approval of the competent authority, both the AIP and the AIP data set and/or the obstacle data set are made available in accordance with the provisions of this requirement:

(1) the consistency of their aeronautical data and information shall be ensured, in accordance with AIS.OR.300;

(2) they shall have equal legal status.

Rationale:

Under the current provisions, the AIP needs to be provided as an 'electronic AIP' (eAIP), and it is also foreseen that 'The AIP shall contain information related to, and arranged under, the subject headings listed in Appendix 1'.

On the other hand, PANS-AIM foresees in paragraphs 5.2.1.1.3 and 5.2.1.1.4 that certain sections of the AIP may be omitted when the AIP data set and/or the obstacle data set is/are provided. These PANS-AIM provisions have been transposed as GM3 AIS.TR.305(c) and GM4 AIS.TR.305(c).

Therefore, given that the existing requirement regarding the eAIP is to 'allow for displaying on computer screen and printing on paper', while the relevant guidance foresees the possible omission of the relevant sections, a legal uncertainty is created as to the conditions under which the omission of the concerned AIP sections may take place, but also about the actual meaning of the requirement to 'allow for displaying on computer screen' when it comes to humans, if AIP sections were to be left blank (omitted as per ICAO), as the current guidance foresees. Additionally, the possible impact that such an omission of certain AIP sections may have on certain organisations and individuals would also need to be considered. EASA is also aware of various concerns that have been raised regarding this issue, and in particular those raised by data services providers, but also other individual stakeholders, including Member States. This legal uncertainty may thus also lead to efficiency concerns.

Therefore, to ensure compliance with the ICAO provisions, while ensuring legal certainty, it is proposed to update the current requirement concerning the AIP based on the ICAO provisions, and thus ensure that when the AIP and/or obstacle data sets are provided, the relevant AIP sections will continue to allow to be displayed on the screen as before (as part of the e-AIP), printed and be readable by humans. In addition, the availability of such data sets should be subject to the same conditions that apply to the 'classic' eAIP, to avoid possible 'distortions' during the provision of the services. In addition, prior to making such data sets available, relevant testing should have taken place for an adequate time, to ensure product quality and therefore minimisation of impact to the end users. Moreover, it is proposed that the decision to leave blank AIP sections should be subject to an approval of the competent authority, as such a decision affects a State's obligations.

Moreover, it is proposed to address the case where both the AIP and the AIP and/or obstacle data sets are provided in parallel to the classic eAIP, to ensure that in such cases their contents remain consistent and that none of the sources are considered as a 'primary source'. This option is also proposed to be subject to the approval of the competent authority since, as indicated above, such a decision relates to a State's obligations.

The proposed amendments are also accompanied with a proposal to delete GM3 AIS.TR.305(c) and GM4 AIS.TR.305(c), because their existence would be unnecessary. To support the implementation of the proposed requirements, a new AMC1 AIS.TR.305(m); (n); (o); (p) is proposed.

Finally, points (d) and (e) are proposed to be amended to fully transpose the content of paragraph 5.2.3.1.3 of PANS-AIM.

AIS.TR.310 AIP amendments

(a) Any operationally significant changes to the AIP, in accordance with point AIS.OR.505, shall be issued under AIRAC and clearly identified as such.

(b) Each AIP amendment shall be allocated a serial number, which shall be consecutive and based on the calendar year.

[….]

(h) Each AIP amendment page~~, including the cover sheet,~~ shall contain a publication date or~~and~~, when applicable, an effective date. The cover sheet shall contain the publication date and, when applicable, an effective date.

(i) The regular intervals between the AIP amendments shall be specified in Part 1 – General (GEN) of the AIP.

Rationale:

The proposed amendment is based on the content of ICAO State Letter 2023/06 (13 February 2023) and the intent is to ensure that the serial number for AIP amendments is based on the calendar year to ensure consistency, as is the case with other aeronautical products, and to harmonise the use of dates used on AIS publications.

AIS.TR.315 AIP supplements

(a) The AIP supplement ~~issued in printed form~~ shall be provided by means of distinctive, conspicuous pages. AIP supplement pages shall:

(1) be kept in the AIP as the first item in the AIP parts; and

(2) be kept in the AIP as long as all or some of their contents remain valid.

(b) The most current update cycles applicable to AIP supplements shall be made publicly available.

[….]

Rationale:

The intent of the proposal is the full transposition of the relevant provisions of PANS-AIM, and in particular paragraphs 5.2.3.1.15 and 5.2.3.1.16.

AIS.TR.330 NOTAM

(a) A NOTAM shall be issued when it is necessary to provide the following information:

(1) establishment of, closure of or significant changes in the operation of aerodromes or heliports or runways;

(2) establishment of, withdrawal of and significant changes in the operation of aeronautical services (aerodromes, AIS, ATS, CNS, MET, search and rescue (SAR), etc.);

(3) establishment of, withdrawal of and significant changes in the operational capability of radio navigation and air–ground communication services. This includes: interruption or return to operation, change of frequencies, change in notified hours of service, change of identification, change of orientation (directional aids), change of location, power increase or decrease amounting to 50 % or more, change in broadcast schedules or contents, or irregularity or unreliability of operation of any radio navigation and air–ground communication services or limitations of relay stations including operational impact, affected service, frequency and area;

(4) unavailability of backup and secondary systems, having a direct operational impact;

(5) establishment of, withdrawal of or significant changes to visual aids;

(6) interruption of or return to operation of major components of aerodrome lighting systems;

(7) establishment of, withdrawal of or significant changes to procedures for air navigation services;

(8) occurrence or correction of major defects or impediments in the manoeuvring area;

(9) changes to and limitations on the availability of fuel, oil and oxygen;

(10) major changes to ~~search and rescue (~~SAR~~)~~ facilities and services available;

(11) establishment of, withdrawal of or return to operation of hazard beacons marking obstacles to air navigation;

(12) changes in regulations applicable in the Member State(s) concerned that require immediate action from an operational perspective;

(13) operational directives requiring immediate action or changes thereto;

(14) presence of hazards that affect air navigation (including obstacles, military exercises and operations, intentional and unintentional radio frequency interferences, rocket launches, displays, fireworks, sky lanterns, rocket debris, races and major parachuting events);

(15) conflict zones which affect air navigation (to include information that is as specific as possible regarding the nature and extent of threats of that conflict and its consequences for civil aviation);

(16~~5~~) planned laser emissions, laser displays and search lights if pilots' night vision is likely to be impaired;

(17~~6~~) erecting or removal of, or changes to, obstacles to air navigation in the take-off/climb, missed approach, approach areas as well as on the runway strip;

(18~~7~~) establishment or discontinuance of, including activation or deactivation, as applicable, or changes in, the status of prohibited, restricted or danger areas;

(19~~8~~) establishment or discontinuance of areas or routes, or portions thereof, where the possibility of interception exists and where the maintenance of guard on the very high frequency (VHF) emergency frequency 121.500 MHz is required;

(20~~19~~) allocation, cancellation or change of location indicators;

(21~~20~~) changes in aerodrome/heliport rescue and firefighting (RFF) category;

(22~~21~~) presence of, removal of, or significant changes in, hazardous conditions due to snow, slush, ice, radioactive material, toxic chemicals, volcanic ash deposition or water on the movement area;

(23~~22~~) outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;

(24~~23~~) ~~forecasts of solar cosmic radiation, where provided~~ observations or forecasts of space weather phenomena, the date and time of their occurrence, the flight levels where provided and portions of the airspace which may be affected by the phenomena;

(25~~24~~) an operationally significant change in volcanic activity, the location, date and time of volcanic eruptions and/or the horizontal and vertical extent of a volcanic ash cloud, including direction of movement, flight levels and routes or portions of routes that could be affected;

(26~~25~~) ~~(~~release into the atmosphere of radioactive materials or toxic chemicals following a nuclear or chemical incident, the location, date and time of the incident, the flight levels and routes, or portions thereof, that could be affected, as well as the direction of movement;

(27~~26~~) establishment of operations of humanitarian relief missions, together with procedures and/or limitations that affect air navigation;

(28~~27~~) implementation of short-term contingency measures in cases of disruption, or partial disruption, of ATS and related supporting services;

(29~~28~~) specific loss of integrity of satellite-based navigation systems~~.~~; and

(30~~29~~) unavailability of a runway due to runway marking works or, if the equipment used for those works can be removed, a time lag required for making the runway available.~~'~~

(b) A NOTAM shall not be issued to provide any of the following information:

[…]

(10) limitations to ~~airport~~ aerodrome facilities or general services, with no operational impact;

(11) ~~national~~ regulations not affecting general aviation;

(12) announcements or warnings about possible/potential limitations, with no operational impact;

[…]

Rationale:

The proposal aims at the transposition of the latest applicable Annex 15 provisions concerning the cases where the issuance of NOTAM is required (standard 6.3.2.3), to ensure NOTAM quality and therefore safety. It also proposes the replacement of the term 'airport' with 'aerodrome', in line with the terms used in the basic regulation and ICAO Annex 14, and the deletion of the word 'national' in point (b)(11), because such regulations may also be adopted at the EU level. EASA is aware of the content of ICAO State Letter AN 10/1-23/1, proposing the deletion of point (a)(24); however, as this proposal is linked with other proposed amendments contained in the same ICAO State Letter, which necessitate a coordinated regulatory action, this proposal is not incorporated in this NPA.

AIS.TR.345 AIP data set

(a) The AIP data set shall include data about the following subjects, including the properties indicated, if applicable:

Data subjects	Associated properties as a minimum
…	….
Aerodrome/heliport	Location indicator, name, International Air Transport Association (IATA) designator, served city, certification date, certification expiration date~~,~~ (if applicable), control type, field elevation, reference temperature, magnetic variation, ~~airport~~ aerodrome/heliport reference point
….	…

Rationale:

The proposal intends to correct the terminology used in the regulatory texts, given that the reference point is associated both with an aerodrome and a heliport and that the term airport is not relevant to the reference point.

~~AIS.TR.350 Terrain and obstacle data – General requirements~~

~~The coverage areas for sets of terrain and obstacle data shall be specified as:~~

~~(a) Area 1: the entire territory of a Member State;~~

~~(b) Area 2: within the vicinity of an aerodrome, subdivided as follows:~~

~~(1) Area 2a: a rectangular area around a runway which comprises the runway strip plus any clearway that exists;~~

~~(2) Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 % to each side;~~

~~(3) Area 2c: an area extending outside Areas 2a and 2b at a distance of not more than 10 km from the boundary of Area 2a; and~~

~~(4) Area 2d: an area outside Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing terminal manoeuvring area (TMA) boundary, whichever is nearer;~~

~~(c) Area 3: the area bordering an aerodrome movement area which extends horizontally from the edge of a runway to 90 m from the runway centre line and 50 m from the edge of all other parts of the aerodrome movement area; and~~

~~(d) Area 4: the area extending 900 m prior to the runway threshold and 60 m to each side of the extended runway centre line in the direction of the approach on a precision approach runway, Category II or III.~~

Rationale:

The requirement is proposed to be deleted, as its content is proposed as a new definition (101a), describing the areas related to the collection of terrain and obstacle data. In this way, the relevant rules are simplified, without unnecessary cross-references. Moreover, the new definition corrects a mistake regarding the meaning of the acronym TMA whose correct notion, as prescribed in definition No 239, is 'terminal control area'.

AIS.TR.360 Obstacle data sets

When obstacle data sets are provided in accordance with point AIS.OR.360:

[….]

(f) obstacle data for Area 1 shall be collected for obstacles whose height above ground elevation is 60 m or higher in accordance with the Area 1 numerical requirements;

~~(f)~~ (g) obstacle data sets shall contain the digital representation of the vertical and horizontal extent of the obstacles; and

~~(g)~~ (h) obstacles shall not be included in terrain data sets.

Rationale:

The proposed amendment intends to address the requirement contained in 'Appendix 8 – Terrain and obstacle data requirements' of PANS-AIM which foresees that 'Data on every obstacle within Area 1 whose height above the ground is 100 m or higher shall be collected and recorded in the database in accordance with the Area 1 numerical requirements specified in Appendix 1.' Indeed, the current requirement does address other areas, but it does not expressly address Area 1, despite the fact that the figure that follows the requirement is titled 'Obstacle data collection surfaces for Area 1 and Area 2'. For the rationale for the decrease of height of the obstacles to 60 m, please see the rationale for the amendment of Article 3.

AIS.TR.510 NOTAM

[…]

(c) At least 7 days' advance notice shall be given of the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions other than for emergency operations.

(d) Notice of any subsequent cancellation of the activities or any reduction of the hours of activity or the dimensions of the airspace shall be given as soon as possible.

(e~~c~~) Within ~~three~~ 3 months from the issuing of a permanent NOTAM, the information contained in the NOTAM shall be included in the aeronautical information products affected.

(f~~d~~) Within ~~three~~ 3months from the issuing of a temporary NOTAM of long duration, the information contained in the NOTAM shall be included in an AIP supplement.

(g~~e~~) When a NOTAM with an estimated end of validity unexpectedly exceeds the ~~three~~3-month period, a replacement NOTAM shall be issued unless the condition is expected to last for a further period of more than three months; in that case, an AIP supplement shall be issued.

(h~~f~~) A 'trigger NOTAM' shall briefly describe the content, the effective date and time, as well as the reference number of the amendment, or supplement.

(i~~g~~) A 'trigger NOTAM' shall come into force on the same effective date and time as the AIP amendment or supplement.

(j~~h~~) In case of an AIP amendment, a 'trigger NOTAM' shall remain valid for a period of 14 days.

(k~~i~~) In case of an AIP supplement that is valid for less than 14 days, the 'trigger NOTAM' shall remain valid for the complete validity period of the AIP supplement.

(l~~j~~) In case of an AIP supplement that is valid for 14 days or more, the 'trigger NOTAM' shall remain valid for at least 14 days.

Rationale:

Under the current provisions regulating the issuance of NOTAM, there is no requirement for the advance notice of the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions other than for emergency operations. The proposal aims at addressing this gap, by introducing two new points (c) and (d) to transpose the relevant provisions of ICAO PANS-AIM (provisions 6.1.4.3 and 6.1.4.3.1) and satisfying the need to ensure legal certainty and enforceability regarding airspace planning activities, while contributing to the issue of NOTAM quality. As a result of this proposal, an amendment of the relevant GM1 AIS.TR.510(a) is also proposed.

APPENDICES TO ANNEX VI

APPENDIX 1

CONTENTS OF THE AERONAUTICAL INFORMATION PUBLICATION (AIP)

PART 1 – GENERAL (GEN)

[…]

GEN 1.5 Aircraft instruments, equipment and flight documents

Brief description of aircraft instruments, equipment and flight documents, including:

1. instruments, equipment (including aircraft communication, navigation and surveillance equipment) and flight documents to be carried on aircraft~~, including any special requirement in addition to the provisions specified in Subpart D of Annex IV (Part-CAT) to Regulation (EU) No 965/2012;~~ ; and

2. emergency locator transmitter (ELT), signalling devices and life-saving equipment ~~as presented in point CAT.IDE. A.280 of Annex IV (Part-CAT) and point NCC.IDE.A.215 of Annex VI (Part-NCC) to Regulation (EU) No 965/2012, where so determined by regional air navigation meetings~~, for flights over designated ~~land~~ areas.

Rationale:

ICAO PANS-AIM prescribes in Appendix 2 the content of a State's AIP. Under GEN 1 (national regulations and requirements), GEN 1.5 calls for a brief description of 'aircraft instruments, equipment and flight documents', by making references to Annex 6, Part I, Chapters 6 and 7 and Annex 6, Part I, 6.6 and Part II, 2.4.5.

The way this PANS-AIM provision is structured, and has been transposed in EU law, may cause misunderstandings as to the intent of the requirement, which is to briefly present the relevant State's requirements for the operation of an aircraft in general in its airspace, in terms of 'aircraft instruments, equipment and flight documents'.

In particular, with regard to subparagraph (1) of GEN 1.5, this misunderstanding may occur because the general reference made to Subpart D Annex IV of Regulation (EU) 965/2012:

- *covers only the case of the commercial air-operations;*
- *does not cover the case of flight documents (they are covered under Subpart A of the Same regulation), as opposed to Chapter 6 of ICAO Annex 6, which covers the flight documents as well.*

Moreover, there are additional regulatory requirements (e.g. SERA provisions, airspace usage requirements) that the competent authority would need to consider when originating the information to be published under GEN 1.5.

With regard to subparagraph (2) of GEN 1.5, the specific references made to CAT.IDE. A.280 and NCC.IDE.A.215 of Regulation (EU) No 965/2012 may also be misleading, because they cover only:

— *certain provisions regarding aeroplane operations;*

— *the case of the ELTs.*

In addition, the reference to 'designated land areas' used in GEN 1.5 may be the cause of an additional misunderstanding, as the relevant provisions of Regulation (EU) No 965/2012 refer generally to 'areas' – without limiting their applicability to 'land areas'. Moreover, the case of helicopter operations should also be taken into account, as Annex 6 Part III but also Regulation (EU) No 965/2012 address them, while the current provision of PANS-AIM covers only the cases of Annex 6, Part I and Part II, which in itself is considered as an inconsistency between PANS-AIM and Annex 6.

For these reasons, it is considered more appropriate to remove the existing references to specific provisions of EU law, as they serve no specific purpose, and instead provide a relevant AMC to facilitate implementation. The solution to replace the references made to specific provisions of Regulation (EU) No 965/2012, with references to the relevant provisions of Annex 6, as is currently the case in PANS-AIM, is not considered appropriate, because the intent of GEN 1.1 in general, and GEN 1.5 specifically, is to present the requirements which are applicable in a State, which presupposes their transposition in the relevant legal framework.

GEN 2.1.3 Horizontal reference system

Brief description of the horizontal (geodetic) reference system used, including:

1. name/designation of the reference system;
2. identification and parameters of the projection;
3. identification of the ellipsoid used;
4. identification of the datum used;
5. area(s) of application; and
6. an explanation, if applicable, of the asterisk used to identify those coordinates that do not meet the ~~ICAO Annex 11 and 14~~ accuracy requirements.

GEN 2.1.4 Vertical reference system

Brief description of the vertical reference system used, including:

1. name/designation of the reference system;
2. description of the geoid model used including the parameters required for height transformation between the model used and EGM-96;
3. an explanation, if applicable, of the asterisk used to identify those elevations/geoid undulations that do not meet the ~~ICAO Annex 14~~ accuracy requirements.

GEN 2.2 Abbreviations used in ~~AIS publications~~ aeronautical information products

A list of alphabetically arranged abbreviations and their respective significations used by the Member State in its AIP and in the distribution of aeronautical data and aeronautical information with appropriate annotation for those national abbreviations that are different from those contained in ICAO Document 8400 'Procedures for Air Navigation Services – ICAO Abbreviations and Codes (PANS-ABC, Doc 8400)'.

GEN 3. SERVICES

GEN 3.1 Aeronautical information services

GEN 3.1.1 Responsible service

Description of the aeronautical information service (AIS) provided and its major components, including:

1. service/unit name;
2. postal address;
3. telephone number;
4. telefax number;
5. email address;
6. AFS address;
7. website address, if available;
8. a statement concerning the provisions on which the service is based and a reference to the AIP location where differences, if any, are listed; and
9. an indication if the service is not available for 24 hours a day and 7 days a week.

GEN 3.2 Aeronautical charts

GEN 3.2.1 Responsible service(s)

Description of service(s) responsible for the production of aeronautical charts, including:

1. service name;
2. postal address;
3. telephone number;
4. telefax number;
5. email address;
6. AFS address;
7. website address, if available; ~~and~~
8. a statement concerning the provisions on which the service is based and a reference to the AIP location where differences from ICAO, if any, are listed; and

9 an indication if the service is not available for 24 hours a day and 7 days a week.

Rationale:

The above-proposed amendments are based on the content of ICAO PANS-AIM and aim at ensuring consistency with the ICAO provisions.

GEN 3.3.2 Area of responsibility

Brief description of area of responsibility for which ATS are provided. If aerodrome/heliport ATS is provided remotely, indication of which aerodrome(s)/heliport(s) are provided with such ATS, description of any interdependencies regarding the provision of such services, including indication of aerodromes/heliports served by the same remote ATS centre.

Rationale:

For the rationale of this proposal, see proposed amendment of section AD.2.23.

GEN 3.6.4 SAR agreements

Brief description of SAR agreements in force, including provisions for facilitating entry and departure of other ~~Member~~ States' aircraft for search, rescue, salvage, repair or salvage in connection with lost or damaged aircraft, either with airborne notification only or after flight plan notification.

Rationale:

The proposed amendment is based on the content of ICAO PANS-AIM and aims at ensuring consistency with the ICAO provisions. With regard to GEN 3.6.4, the current provision is amended as it limits the presentation of the SAR agreements only to those concluded with other EU Member States.

GEN 3.7 Information services

GEN 3.7.1 SWIM Registry(s) / Information Service Overview(s)

When SWIM registries are used, the corresponding Uniform Resource Locator (URL) of each registry is provided. Otherwise, a list of the URLs where information service overviews can be found are provided.

Rationale:

The proposed amendment is based on the content of ICAO State Letter 2023/06 (13 February 2023) and the intent is to make SWIM registries and their associated information service overviews discoverable to information service consumers by publicising the Uniform Resource Locators (URLs) in the AIP.

PART 2 – EN-ROUTE (ENR)

ENR ~~0.6~~ 0.1 Table of contents to Part 2

A list of sections and subsections contained in Part 2 – En-route.

Rationale:

The proposed amendment is based on the content of ICAO PANS-AIM and aims at ensuring consistency with the ICAO provisions.

PART 3 – AERODROMES (AD)

[….]

AD 0.1~~6~~ Table of contents to Part 3

A list of sections and subsections contained in Part 3 – Aerodromes (AD).

Rationale:

The proposed amendment is based on the content of ICAO PANS-AIM and aims at ensuring consistency with the ICAO provisions.

AD 1.5 Status of certification of aerodromes/heliports

A list of aerodromes/heliports in the Member State, indicating the status of certification, including:

1. aerodrome/heliport name and ICAO location indicator;
2. date and, if applicable, validity of certification;
3. remarks, if any.

Rationale:

The amendment is proposed to ensure consistency between the various provisions of Part AIS, and to reflect the existing practice to publish the certification status of heliports. ICAO has also recently proposed the publication of the certification status of heliports (see ICAO State Letter 2023/32).

****** AD 2.2 Aerodrome geographical and administrative data**

Aerodrome geographical and administrative data shall be published, including:

1. aerodrome reference point (geographical coordinates in degrees, minutes and seconds) and its site;
2. direction and distance of aerodrome reference point from centre of the city or town that the aerodrome serves;
3. aerodrome elevation to the nearest metre or foot, ~~and~~ reference temperature and mean low temperature;
4. where appropriate, geoid undulation at the aerodrome elevation position to the nearest metre or foot;

5. magnetic variation to the nearest degree, date of information and annual change;
6. name of aerodrome operator, address, telephone and telefax numbers, email address, AFS address and, if available, website address;
7. types of traffic permitted to use the aerodrome (IFR/VFR); and
8. remarks.

Rationale:

The proposed amendments are based on the content of ICAO PANS-AIM and aim at ensuring consistency with the ICAO provisions and the availability of the required 'mean low temperature' of an aerodrome.

****** AD 2.3 Operational hours**

Detailed description of the hours of operation of services at the aerodrome, including:

1. aerodrome operator;
2. customs and immigration;
3. health and sanitation;
4. AIS briefing office;
5. ATS reporting office (ARO);
6. MET briefing office;
7. ATS;
8. apron management service (AMS), if applicable;
9 ~~8~~. fuelling;
10 ~~9~~. handling;
11 ~~10~~. security;
12 ~~11~~. de-icing; and
13 ~~12~~. remarks.

Rationale:

The proposed amendment is based on the need to accommodate the content of Regulation (EU) No 139/2014 (Annex III, Subpart F and Annex IV, Subpart D), regarding the provision of apron management service. It is also noted that the current ICAO PANS-AIM does not address this case, despite the fact that ICAO Annex 14 and PANS-AERODROMES (Doc 9981) do cover it. A relevant amendment is also proposed for the ADC.

****** AD 2.8 Aprons, taxiways and check locations/positions data**

Details related to the physical characteristics of aprons, taxiways and locations/positions of designated checkpoints, including:

1. designation, surface and strength (PCR, where appropriate) of aprons;
2. designation, aerodrome reference code letter, width, slope, surface and strength (PCR, where appropriate) of taxiways;
3. location and elevation to the nearest metre or foot of altimeter checkpoints;
4. location of VOR checkpoints;
5. position of INS checkpoints in degrees, minutes, seconds and hundredths of seconds;
6. remarks.

If check locations/positions are presented on an aerodrome chart, a note to that effect shall be provided under this subsection.

Rationale:

The proposed amendment stems from the provisions contained in ICAO SL 2020/26, which introduced changes to the AIP content, as a result of the new concept for reporting pavement bearing strength, introduced in Annex 14.

However, the use of PCR is not absolute, as Annex 14 specifies in paragraph 2.6.2 that it applies only for pavements to be used by aircraft of apron (ramp) mass greater than 5 700 kg. Therefore, the text has been adjusted, and a relevant AMC is also proposed to support the way in which this information needs to be published in the AIP under AD 2.8.

Moreover, the proposed changes address the need to publish the aerodrome reference code in the AIP in a consistent manner, an operational information which is currently published by many Member States, but for which currently there is no specific publication requirement, although it is amongst the aeronautical data included in the ADC for both the runway and taxiway facilities. In parallel, the inclusion of the taxiway slope is considered necessary to be included amongst the published information, to facilitate new taxiing technologies, an amendment which is also reflected in the content of the ADC.

****** AD 2.9 Surface movement guidance and control system and markings**

Brief description of the surface movement guidance and control system and runway and taxiway markings, including:

1. use of aircraft stand identification signs, taxiway guide lines and visual docking / parking guidance system at aircraft stands;
2. runway and taxiway markings and lights;
3. stop bars and runway guard lights (if any);
4. other runway incursion prevention measures; and
5. remarks.

Rationale:

The proposed amendment intends to ensure compliance with the provisions contained in ICAO PANS-AIM concerning the presentation of an aerodrome's SMGCS, and in particular to also include the case

of runway guard lights. In point 4, which is currently missing from the relevant section of Regulation (EU) 2017/373, it is suggested to use the expression 'other runway incursion prevention measures', instead of the text 'other runway protection measures' that is currently used in PANS-AIM, to indicate the intent of the provision more accurately.

****** AD 2.12 Runway physical characteristics**

Detailed description of runway physical characteristics, for each runway, including:

1. designations~~,~~ and related aerodrome reference code number and code letter;
2. true bearings to one hundredth of a degree;
3. dimensions of runways to the nearest metre or foot;
4. strength of runway pavement ~~(pavement classification number (PCN) and associated data)~~ (PCR and associated data, where appropriate); ~~and~~ surface of each runway and associated stopways;

[….]

Rationale:

The proposed amendment stems from the provisions contained in ICAO SL 2020/26, which introduced changes to the AIP content, as a result of the new concept for reporting pavement bearing strength, introduced in Annex 14.

However, the use of PCR is not absolute, as Annex 14 specifies in paragraph 2.6.2 that PCR is required only for pavements to be used by aircraft of apron (ramp) mass greater than 5 700 kg. Therefore, the text has been adjusted, and a relevant AMC5 AIS.TR.305(c) has been developed to support the way in which this information needs to be published in the AIP under AD 2.12.

In addition, the sentence of point '4.' has been slightly modified to clarify that that the there is no need to publish strength information regarding the stopway, which is aligned with the Annex 14 provisions and the content of the ADC.

Moreover, the proposed changes address the need to publish the aerodrome reference code in the AIP in a consistent manner, an operational information which is currently published by many Member States, but for which currently there is no specific publication requirement, although it is amongst the aeronautical data included in the ADC for both the runway and taxiway facilities.

****** AD 2.15 Other lighting, secondary power supply**

Description of other lighting and secondary power supply, including:

1. location, characteristics and hours of operation of aerodrome beacon/identification beacon (if any);
2. location and lighting (if any) of anemometer / landing direction indicator; location of the signalling lamp;
3. taxiway edge and taxiway centre line lights;

4. secondary power supply including switchover time; and

5. remarks.

****** AD 2.22 Flight procedures**

Detailed description of the conditions and flight procedures, including radar and/or ADS-B procedures, and actions required by the airspace users following an emergency/abnormal situation and possible contingency measures by the ATS provider in case of disruptions established on the basis of airspace organisation at the aerodrome. When established, detailed description of the LVP at the aerodrome, including:

1. runway(s) and associated equipment authorised for use when LVP are in effect, including for operations with operational credits with RVR less than 550 m, if applicable;

2. defined meteorological conditions under which initiation, use and termination of LVP would be made;

3. description of ground marking/lighting for use under LVP;

4. remarks.

****** AD 2.23 Additional information**

Additional information at the aerodrome, such as an indication of bird concentrations at the aerodrome, together with an indication of significant daily movement between resting and feeding areas, to the extent practicable.

~~Specific additional information regarding remote aerodrome ATS:~~

~~1. indication that remote aerodrome ATS is provided;~~

~~2. location of the signalling lamp by e.g. the phrase 'signalling lamp positioned at [geographical fix]' as well as a clear indication of the signalling lamp location in the aerodrome chart for each relevant aerodrome;~~

~~3. description of any specific communication methods as deemed necessary in case of multiple mode of operation, such as e.g. the inclusion of airport names/ATS unit call sign for all transmissions (i.e. not only for the first contact) between pilots and ATCOs/aerodrome flight information service offices (AFISOs);~~

~~4. description of any relevant actions required by the airspace users following an emergency/abnormal situation and possible contingency measures by the ATS provider in case of disruptions, if applicable (in point AD 2.22 'Flight Procedures'); and~~

~~5. description of the interdependencies of remote aerodrome ATS availability or indication of aerodromes not suitable for diversion from the aerodrome (airspace users shall not plan an aerodrome as alternate when serviced by the same remote tower centre), if deemed applicable.~~

Rationale:

This proposal concerns an amendment of the part of SECTION AD 2.23 which contains requirements regarding the information to be made available in the case of remote aerodrome ATS provision.

The amendment intends to resolve an issue concerning an operational requirement on the selection of the alternate aerodrome in circumstances where both the destination and the selected alternate aerodrome are served by the same RTC. EASA has already acknowledged that this requirement in sub-paragraph (5) is misplaced, as it addresses aircraft operators directly, and in the context of NPA 2022-02 on 'Remote aerodrome air traffic services' requested the stakeholders' view on this issue. To address this, it is proposed to maintain only the part of sub-paragraph (5) which calls for the publication of a description of the interdependencies for the provision of the remote aerodrome ATS, where this is deemed necessary.

Moreover, a further review of the same section of AD 2.23 has revealed that the logic according to which this part of Section AD 2.23 was initially developed (i.e. to group all remote aerodrome ATS-related information in a single place by using a 'thematic' approach), deviates from the overall logic governing the structure and content of the AIP, which is to publish the required information in the dedicated sections.

As an example, sub-paragraph (4) requires the description of actions in the case of emergency/abnormal situation, which however is something general and not relevant to the way ATS is provided, while at the same time requires the publication of this information in Section AD 2.22. To resolve this, it is suggested to enrich the current text of Section AD 2.22.

Similarly, sub-paragraph (2) deals with the provision of information on the location of the signalling lamp to be published under AD 2.23 and in parallel introduces charting specifications for the aerodrome chart, even though the charting specifications are currently included in AMC1 AIS.OR.325 (Aeronautical charts) which in turn refers to Annex 4, which however does not foresee this case. To solve this inconsistency, the following are proposed.

- *To include general information about the signalling lamp in AD 2.15, supported by a relevant AMC.*
- *In order to ensure the harmonisation of the published information in terms of the symbol used, it is suggested to enrich AMC1 AIS.OR.325 and include an additional specification concerning the inclusion of additional information on the signalling lamp on the aerodrome chart for the cases where the remote aerodrome ATS is provided. To this end, the following symbol, inspired by the relevant ICAO Annex 2 figure illustrating the relevant signals, annotated with the acronym 'R-ATS', is proposed.*

The Agency therefore invites its stakeholders to provide their feedback about the proposed symbol, and the way this is to be annotated on the aerodrome chart.

With regard to sub-paragraph (3), it is proposed that such information is published under section AD 2.18, which covers the ATS communication facilities and is the natural place for such information. A relevant AMC is also developed for this.

Moreover, EASA considers that section AD 2.3 may also be used to publish information regarding the nature of the aerodrome ATS, by indicating the times where the ATS service is provided remotely. To this end, EASA proposes a new AMC clarifying the relevant information to be published in such cases.

In addition, EASA considers that it is more appropriate to publish information regarding any interdependencies of remote aerodrome ATS availability under GEN 3.3.2, as it is the natural place for the publication of similar information allowing for the single listing of similar information, instead of its repetition under the section AD 2.23 of each concerned aerodrome.

Finally, regarding sub-paragraph (1), it is noted that it currently requires the publication of an indication that remote aerodrome ATS is provided at the aerodrome, yet without clarifying the way this should be done. EASA notes that this requirement may be superfluous for the following reasons:

— *section AD 2.15, AD 2.22, along with the aerodrome chart, will already contain information about the provision of remote aerodrome ATS;*

— *GEN 3.3.2 may already contain relevant information, depending on the overall system design.*

As a result, EASA is of the opinion that there is no need to publish additional information on the approach charts for denoting the remote nature of the aerodrome ATS, given that such information, adequate for flight preparation/operations purposes, for all types of end users. would already be available in the AIP.

The Agency therefore invites its stakeholders to provide their feedback about the proposal not to include such information on the aerodrome approach charts, and especially any arguments supporting the inclusion of such information on the aerodrome approach charts.

****** AD 2.24 Aeronautical charts related to an aerodrome**

Aeronautical charts related to an aerodrome shall be included in the following order:

1. *Aerodrome/Heliport Chart – ICAO;*
2. *Aircraft Parking/Docking Chart – ICAO;*
3. *Aerodrome Ground Movement Chart – ICAO;*
4. *Aerodrome Obstacle Chart – ICAO Type A (for each runway);*
5. *Aerodrome Obstacle Chart – ICAO Type B;*
6. ~~5~~ *Aerodrome Terrain and Obstacle Chart – ICAO (Electronic);*
7. ~~6~~ *Precision Approach Terrain Chart – ICAO* ~~*(precision approach Category II and III runways)*~~;
8. ~~7~~ *Area Chart – ICAO (departure and transit routes);*
9. ~~8~~ *Standard Departure Chart – Instrument – ICAO;*
10. ~~9~~ *Area Chart – ICAO (arrival and transit routes);*
11. ~~10~~ *Standard Arrival Chart – Instrument – ICAO;*
12. ~~11~~ *ATC Surveillance Minimum Altitude Chart – ICAO;*
13. ~~12~~ *Instrument Approach Chart – ICAO (for each runway and procedure type);*
14. ~~13~~ *Visual Approach Chart – ICAO; and*
15. ~~14~~ *bird concentrations in the vicinity* of the aerodrome.

If some of the aeronautical charts are not produced, a statement to this effect shall be given in section GEN 3.2 'Aeronautical charts'.

Rationale:

The proposed amendment intends to fully transpose the relevant provision of PANS-AIM concerning the AIP content (section AD 2.24), concerning the order in which charts related to an aerodrome should be published.

In addition, the text accompanying the 'Precision Approach Terrain Chart – ICAO' is deleted because on the one hand, the current text is not aligned with the relevant elements of the AWO concept introduced in the EU, as it only covers the case of Cat II and III approach runways, and on the other hand, it contradicts the provisions of paragraph 5.2.5.1 of Annex 15, which refers only to 'Precision Approach Terrain Chart – ICAO'.

****** AD 2.26 Apron management service communication facilities**

Detailed description of apron management communication facilities established at the aerodrome, including:

1. service designation;
2. call sign;
3. channel(s)/frequency(ies);
4. hours of operation; and
5. remarks.

Rationale:

*The proposed amendment is based on the need to accommodate the content of Regulation (EU) No 139/2014 (Annex III, Subpart F and Annex IV, Subpart D) regarding the provision of apron management service. In particular, ADR.OPS.D.010 addresses the case of coordination of aircraft entry to/exit from the apron, and the relevant AMC foresees the publication of related information in the AIP. It is also noted that the current ICAO PANS-AIM does not address this case, despite the fact that ICAO Annex 14 and PANS-AERODROMES (Doc 9981) do cover it. It is therefore proposed to introduce a separate section in the AIP, to cover the case where apron management service is provided at an aerodrome, and therefore relevant information needs to be made available. This solution is considered to be the most appropriate, given that section 2.18 concerns only the ATS. A possible alternative to the introduction of a new section would be the renaming of section AD 2.18, in a manner that would cover both ATS and apron management services, that is '**** AD 2.18 Air traffic and apron management services communication facilities', with the creation of two distinct paragraphs to differentiate the case of air traffic services from that of apron management services.*

The Agency therefore invites its stakeholders to provide their feedback about this proposal along with the alternative to amend section AD 2.18 to read '* AD 2.18 Air traffic and apron management services communication facilities', as explained above.***

AD 3. HELIPORTS

Note.* '*' is to be replaced by the relevant ICAO location indicator.**

[….]

****** AD 3.2 Heliport geographical and administrative data**

The requirement is for heliport geographical and administrative data, including:

1. heliport reference point (geographical coordinates in degrees, minutes and seconds) and its site;
2. direction and distance of heliport reference point from centre of the city or town that the heliport serves;
3. heliport elevation to the nearest metre or foot, ~~and~~ reference temperature and mean low temperature;
4. where appropriate, geoid undulation at the heliport elevation position to the nearest metre or foot;
5. magnetic variation to the nearest degree, date of information and annual change;
6. name of heliport operator, address, telephone and telefax numbers, email address, AFS address and, if available, website address;
7. types of traffic permitted to use the heliport (IFR/VFR); and
8. remarks.

Rationale:

The proposed amendment is based on the content of ICAO PANS-AIM and aims at ensuring consistency with the ICAO provisions and the availability of the required 'mean low temperature' of a heliport.

****** AD 3.15 Other lighting, secondary power supply**

Description of other lighting and secondary power supply, including:

1. location, characteristics and hours of operation of heliport beacon;
2. location and lighting of wind direction indicator (WDI); location of the signalling lamp;
3. taxiway edge and taxiway centre line lights;
4. secondary power supply including switchover time; and
5. remarks.

Rationale:

The proposed amendment is on the rationale concerning the promulgation of information regarding the provision of remote ATS (see proposed changes in AD 2.15 above).

****** AD 3.17 Air traffic services communication facilities**

Detailed description of ATS communication facilities established at the heliport, including:

1. service designation;

2. call sign;
3. channel(s) ~~frequency(ies)~~;
4. SATVOICE number(s), if available;
5. logon address, as appropriate;
6. ~~4~~ hours of operation; and
7. ~~5~~ remarks.

Rationale:

The proposed amendment is based on the content of ICAO PANS-AIM and aims at ensuring consistency with the ICAO provisions and the availability of the required information regarding ATS communication of a heliport.

****** AD 3.21 Flight procedures**

Detailed description of the conditions and flight procedures, including radar and/or ADS-B procedures, and actions required by the airspace users following an emergency/abnormal situation and possible contingency measures by the ATS provider in case of disruptions established on the basis of airspace organisation established at the heliport. When established, detailed description of the LVP ~~low visibility procedures~~ at the heliport, including:

1. touchdown and lift-off (TLOF) area(s) and associated equipment authorised for use under LVP ~~low visibility procedures~~;
2. defined meteorological conditions under which initiation, use and termination of LVP ~~low visibility procedures~~ would be made;
3. description of ground marking/lighting for use under LVP ~~low visibility procedures~~; and
4. remarks.

Rationale:

The proposed amendment is on the rationale concerning the promulgation of information regarding the provision of remote ATS (see proposed changes in AD 2.22 above), and to align the provision regarding the acronyms already introduced.

APPENDIX 3

SNOWTAM FORMAT

[…]

f) The abbreviated heading 'TTAAiiii CCCC MM~~YY~~DDGGgg (BBB)' is included to facilitate the automatic processing of SNOWTAM messages in computer databanks. The explanation of these symbols is:

TT = data designator for SNOWTAM = SW;

AA = geographical designator for Member States, e.g. LF = FRANCE;

iiii = SNOWTAM serial number in a four-digit group;

CCCC = four-letter location indicator of the aerodrome to which the SNOWTAM refers;

MM~~YY~~DDGGgg = date/time of observation/measurement, whereby:

MM = month, e.g. January = 01, December = 12;

~~YY~~ DD = day of the month;

GGgg = time in hours (GG) and minutes (gg) UTC;

(BBB) = optional group for:

Correction, in the case of an error, to a SNOWTAM message previously disseminated with the same serial number = COR. *Brackets in (BBB) shall be used to indicate that this group is optional. When reporting on more than one runway and individual dates/times of observation/assessment are indicated by repeated Item B, the latest date/time of observation/assessment shall be inserted in the abbreviated heading (MM~~YY~~DDGGgg).*

[…]

Rationale:

The proposed amendments of item (e) of the general section of the instructions of the SNOWTAM format are based on the content of ICAO State Letter 2023/06 (13 February 2023) and the intent is to correct the current abbreviation ('YY') of the 'day of the month' to 'DD' because 'YY' is normally understood to mean year. The proposed amendment in the last paragraph is not included in the relevant ICAO State Letter, however EASA understands that this was an omission, which was addressed.

The Agency intends to propose a transition period for the implementation of the proposed amendments which is proposed to be 31 December 2024, subject to the finalisation of the regulatory process.

In this context, the Agency would like to receive feedback from its stakeholders regarding the proposed compliance date.

ANNEX VIII – Part-CNS

[…]

SUBPART B – TECHNICAL REQUIREMENTS FOR PROVIDERS OF COMMUNICATION, NAVIGATION OR SURVEILLANCE SERVICES (CNS.TR)

SECTION 1 – GENERAL REQUIREMENTS

CNS.TR.100 Working methods and operating procedures for providers of communication, navigation or surveillance services

A communication, navigation or surveillance services provider shall be able to demonstrate that its working methods and operating procedures are compliant with the standards of Annex 10 to the Chicago Convention on aeronautical telecommunications in the following versions, as far as they are relevant to the provision of communication, navigation or surveillance services in the airspace concerned:

(a) Volume I on radio navigation aids in its ~~6th~~ 7th edition of July ~~2006~~ 2018, including all amendments up to and including No ~~89~~ 93;

(b) Volume II on communication procedures, including those with PANS status in its ~~6th~~ 7th edition of ~~October 2001~~ July 2016, including all amendments up to and including No ~~89~~ 92;

(c) Volume III on communications systems in its 2nd edition of July 2007, including all amendments up to and including No ~~89~~ 91;

[…]

Rationale:

This proposed amendment aligns the reference to ICAO Annex 10 Volume I to III with the latest ICAO amendments. Similar amendment for Volume IV is proposed in NPA 2023-04 under RMT.0682 and thus is not included in this NPA.

[…]

Annex XI – PART-FPD

[…]

SUBPART B – TECHNICAL REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.TR)

[…]

FPD.TR.105 Coordinates and aeronautical data

(a) ~~In addition to point ATM/ANS.OR.A.090 of Annex III,~~ ~~g~~Geographical coordinates indicating latitude and longitude shall be determined and reported to the aeronautical information

services provider(s) (AIS provider(s)) in accordance with point ATM/ANS.OR.A.090(a). ~~terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum or~~ equivalent.

(b) The order of accuracy of the fieldwork and the determinations and calculations derived therefrom shall be such that the resulting operational navigation data for the phases of flight are within the maximum deviations with respect to an appropriate reference frame, as specified in Appendix 1 to Annex III (Part-ATM/ANS.OR).

Rationale:

This proposal intends to ensure consistency among the various requirements dealing with the use of horizontal reference systems, and to ensure consistency with relevant ICAO provisions. The full rationale for this proposal is provided under the proposal for the amendment of ATM/ANS.OR.A.090.

1.2. Draft acceptable means of compliance and guidance material (draft EASA decision)

Proposed amendments to the AMC & GM to Regulation (EU) 2017/373[14]

GM2 Article 3(1) Provision of ATM/ANS and design of airspace structures

ESTABLISHMENT AND PUBLICATION OF PROHIBITED, RESTRICTED AND DANGER AREAS

Member States should establish coordination procedures amongst their authorities to ensure that, whenever a need arises to:

(a) establish a danger area; or

(b) prohibit or restrict aircraft flight in an area (irrespective of the objective that the introduction of such a prohibition or a restriction intends to serve e.g. environmental protection reasons, etc.),

danger, prohibited or restricted areas are formally established, as appropriate.

The coordination procedures, apart from establishing the decision-making mechanism and the channels for the timely flow of information amongst the responsible authorities within the State, should also be such that they enable the State to ensure that:

— such areas are properly identified and delineated and the relevant details are provided to the aeronautical services provider for promulgation, in accordance with Section VI of Appendix 1 to Annex XI to this Regulation;

— all necessary information is published in section 'ENR 5.1 Prohibited, restricted and danger areas' of the AIP, and the relevant aeronautical charts, as per Annex VI to this Regulation;

[14] Due to their length, the proposed AMC1 Appendix 1 (a) Aeronautical data catalogue; AMC2 Appendix 1 (d)(1) Aeronautical data catalogue and AMC3 Appendix 1 (d)(2) Aeronautical data catalogue, which relate to the proposed restructuring of the aeronautical data catalogue (Appendix 1 to Annex III), appear separately, as 'Appendix 1 – AMC to the aeronautical data catalogue' at the end of Section 1.2 of this Annex 1.

— NOTAMs are timely originated and issued, as necessary, concerning the establishment, discontinuance, activation, deactivation or changes to the status of such areas, in accordance with AIS.TR.330 NOTAM.

When designing the coordination procedures, due care should be given to the fact that the proper publication of information about prohibited and restricted areas is a necessary condition to consider such areas as 'duly published' as per 'SERA.3145 Prohibited areas and restricted areas' of Regulation (EU) No 923/2012, and thus this SERA provision produces its legal effect.

Rationale:

SERA 3145 foresees that 'Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the Member State over whose territory the areas are established.'.

The proposed AMC1 SERA.3145 (a) to Regulation (EU) No 923/2012 (and proposed GM2 Article 3(1) to Regulation (EU) 2017/373), aim at supporting the implementation of this SERA requirement by clarifying the meaning of the term 'duly published'. Indeed, the need for the introduction of a prohibition or a restriction of aircraft flight over certain areas may be the result of a variety of reasons, including of a non-aviation nature, such as the protection of natural reserves.

However, the mere adoption of measures by the responsible administration services of a State (e.g. an environmental protection authority) which intend to prohibit or restrict aircraft flight over certain areas (e.g. to protect wildlife), is not on its own sufficient for aviation purposes, nor in line with the provisions of the Chicago Convention. This is because such information needs to also be published in the en-route section of the AIP of the responsible State and the respective aeronautical charts, to ensure the awareness of the aviation community. It is only then that the particulars of a prohibited or restricted area are 'duly published' as per SERA.3145, and thus the latter produces its legal effects and the State discharges its responsibilities under the Chicago Convention.

The publication of information regarding prohibited or restricted areas in the AIP is required to be made in section 'ENR 5.1 Prohibited, restricted and danger areas', as per Appendix 1 to Annex VI (Part-AIS) to Regulation (EU) 2017/373. Moreover, Section VI of Appendix 1 to Annex XI (Part-FPD) to Regulation (EU) 2017/373 requires that 'When prohibited areas, restricted areas or danger areas are established, upon initial establishment, they shall be given an identification, and full details shall be provided for promulgation.'.

This assumes the existence of an effective mechanism, at the State level, which ensures coordination amongst the various authorities, to avoid the uncoordinated introduction of de facto restrictions or prohibitions, in a manner that is not in line with international and EU law.

It is therefore necessary for States to establish adequate coordination of their authorities, to ensure that:

— *whenever a need arises to establish a danger area, or to restrict or prohibit aircraft flight over certain areas, irrespective of the reason, such areas are formally established;*

— *details relevant to such areas are provided to the aeronautical services provider for promulgation, in accordance with Section VI of Appendix 1 to Annex XI to Regulation (EU) 2017/373;*

— *all necessary information relevant to such areas is published in section 'ENR 5.1 Prohibited, restricted and danger areas' of the AIP, and the relevant aeronautical charts;*

— *NOTAMs are issued, as necessary, concerning the establishment, discontinuance, activation, deactivation, or changes to the status of such areas, in accordance with AIS.TR.330 NOTAM.*

~~GM1 to AMC2 Article 3(6) (a) Provision of ATM/ANS and design of airspace structures~~

~~**AERODROMES**~~

~~The aerodrome traffic zone should be linked to controlled aerodromes as potential aerodrome delineation.~~

Rationale:

It is proposed to delete this GM to avoid a misunderstanding with regard to the design of the airspace structure associated with the controlled aerodrome. Currently, aerodrome traffic zones are also established around uncontrolled aerodromes.

AMC1 Article 3(5) Provision of ATM/ANS and design of airspace structures

ASSESSMENT OF OBJECTS

(a) The assessment should, as a minimum, take into account the following:

(1) location of the planned object;

(2) height of the planned object;

(3) current and planned airspace structures and possible impact of the planned object;

(4) level and type of concerned aircraft operations in the area, as well as applicable flight rules;

(5) topography;

(6) existence of other obstacles;

(7) prevailing meteorological conditions.

(b) For the marking and lighting of obstacles, the specifications contained in the EASA certification specifications for aerodrome design (CS-ASR-DSN), CHAPTER Q – VISUAL AIDS FOR DENOTING OBSTACLES apply.

Rationale:

The proposed AMC supports the implementation of the proposed amendment of Article 3 paragraph (5) of Regulation (EU) 2017/373. Its intent is to ensure the uniform treatment of certain objects in Area 1 and at the same time provide a uniform approach for treating them with regard to marking and lighting.

The proposed point (a) defines the minimum aspects that need to be taken into account for the assessment and point (b) refers to applicable design specifications for marking and lighting of

obstacles, a sine qua non condition to ensure uniformity in terms of obstacle marking lighting within the same territory, and at a more general level in the EU.

GM1~~2~~ Article 3c(1) Coordination of activities ~~air operations~~ potentially hazardous to civil aviation

COORDINATION OF MILITARY ACTIVITIES POTENTIALLY HAZARDOUS TO CIVIL AVIATION

(….)

GM1 Article 3c(2) Coordination of activities ~~air operations~~ potentially hazardous to civil aviation

(…)

GM1 Article 3c(3) Coordination of activities potentially hazardous to civil aviation

RISK MITIGATION MEASURES

Risk mitigation measures may include, but would not be limited to, airspace restriction or temporary withdrawal of established ATS routes or portions thereof.

Rationale:

See rationale provided for the proposed amendments to Article 3(c).

GM2 Article 3c(3) Coordination of activities potentially hazardous to civil aviation

SAFETY RISK MANAGEMENT

Guidance on safety risk management can be found in the Safety Management Manual (SMM) (Doc 9859).

Rationale:

See rationale provided for the proposed amendments to Article 3(c).

GM1 Article 3c(4) Coordination of activities potentially hazardous to civil aviation

SAFETY RISK ASSESSMENT — COLLABORATIVE DECISION-MAKING

Guidance on collaborative decision-making (CDM) processes for safety risk assessment and promulgation through NOTAM that could involve military authorities can be found in the Manual

Concerning Safety Measures Relating to Military Activities Potentially Hazardous to Civil Aircraft Operations (Doc 9554).

Rationale:

See rationale provided for the proposed amendments to Article 3(c).

GM1 Article 3c(5) Coordination of activities potentially hazardous to civil aviation

HAZARDOUS EFFECTS OF LASER EMITTERS

Guidance material regarding the hazardous effects of laser emitters on flight operations is contained in the Manual on Laser Emitters and Flight Safety (Doc 9815).

Rationale:

See rationale provided for the proposed amendments to Article 3(c).

GM1 ATM/ANS.OR.A.001 Scope

DEFINITIONS AND SCOPE IN RELATION TO SERVICE PROVIDERS

(f).....

(g) Figure 1 indicates both a further breakdown of ATS[1] into air traffic control services (ATC), ~~alerting services,~~ air traffic advisory services, and flight information services and groupings of:

(1) air traffic management (ATM): comprising ATS, ASM, and ATFM;

(2) air navigation services (ANS): comprising ATS, CNS, MET, and AIS; and

(3) flight procedure design services (FPD) and data services (DAT) and ATM network functions.

(h).....

[1] ATS covers alerting service.

Rationale:

It is proposed to remove the alerting service, since this is not included in Figure 1 as a separate box but included in ATS, and add it as a footnote. The proposal also provides alignment with Appendix 1 to Annex II.

GM1 ATM/ANS.OR.A.085(a) Aeronautical data quality management

AERONAUTICAL DATA CATALOGUE

The aeronautical data catalogue presents the scope of data ~~that can~~ to be collected, managed and maintained by the AIS providers and provides a common terminology that can be used by data originators and service providers.

Rationale:

The proposed amendment is initiated because the expression 'that can be collected and maintained' is not aligned with paragraph 4.1.1 of Annex 15, which defines the areas for which the AIS provider must collect and manage aeronautical data and information, thus being part of its responsibilities, and which are linked to the areas that the ADC specifies.

AMC1 ATM/ANS.OR.A.085(f) Aeronautical data quality management

FORMAL ARRANGEMENTS

Formal arrangements should include the following minimum content:

(a) the aeronautical data to be provided;

(b) the data quality requirements (DQRs) for each data item supplied according to the aeronautical data catalogue;

(c) the method(s) for demonstrating that the data provided conforms with the specified requirements;

(d) the actions to be taken in the event of discovery of a data error or inconsistency in any data provided;

(e) the following minimum criteria for notification of data changes:

(1) criteria for determining the timeliness of data provision based on the operational or safety significance of the change;

(2) any prior notice of expected changes; and

(3) the means to be adopted for notification;

(f) the party responsible for documenting data changes;

(g) data exchange details, such as format or format change processes and data exchange means/tools;

(h) any limitations on the use of data;

(i) requirements for the production of data origination quality reports;

(j) metadata to be provided; ~~and~~

(k) contingency ~~requirements~~ measures to be applied concerning the continuity of data provision; and

(l) nominated persons in each organisation for the exchange of aeronautical data.

~~GM1 ATM/ANS.OR.A.085(f) Aeronautical data quality management~~

~~**FORMAL ARRANGEMENTS**~~

~~ATM/ANS providers may use the predetermined template 'Data Provision Agreement' developed by EUROCONTROL (ADQ Formal Arrangement Template, version 1.1. issued on 22 February 2016.)~~

Rationale:

The deletion of this GM is initiated because the current AMC with the proposed amendments adequately details the issues that need to be covered by the arrangements and thus the use of a template for such arrangements is considered unnecessary.

AMC1 ATM/ANS.OR.A.090(a) Common reference systems for air navigation

HORIZONTAL REFERENCE SYSTEM

To ensure the required consistency of the determined and reported geographical coordinates, a service provider originating aeronautical data concerning a specific operating environment, such as on or in the vicinity of the aerodrome, or in other areas where the potential impact of inconsistent geographical coordinates on air navigation may be significant, should coordinate with other responsible data originators in that environment, to ensure the use of the same reference frame.

Rationale:

Given that the determination and reporting of geographical coordinates for the same operational environment (e.g. on and around an aerodrome) using different reference frames may lead to inconsistencies which may have an effect on air navigation, there is a need to address this case.

Therefore, a new AMC1 ATM/ANS.OR.A.090(a) is proposed to facilitate compliance in this area, through the use of a common reference frame. To ensure regulatory consistency, a new AMC1 ADR.OPS.A.020(a) is proposed for the domain of aerodromes.

GM1 ATM/ANS.OR.A.090(a) Common reference systems for air navigation

HORIZONTAL REFERENCE SYSTEM – WGS-84

(a) A reference system provides a definition of a coordinate system in terms of the position of an origin in space, the orientation of an orthogonal set of Cartesian axes, and a scale. A terrestrial reference system defines a spatial reference system in which positions of points anchored on the Earth's solid surface have coordinates. Examples are WGS-84, ITRS/European Terrestrial Reference System (ETRS) and national reference systems.

(b) WGS-84 defines, inter alia, a conventional terrestrial reference system, a reference frame and a reference ellipsoid. WGS-84 is currently the reference system that the relevant ICAO provisions specify ~~requires~~ for geo-referencing aeronautical information.

(c) Further explanation and guidance may be found in Annex B (Horizontal reference systems) to EUROCONTROL Specification for the Origination of Aeronautical Data~~, Volume 2: Guidance material~~ (EUROCONTROL-SPEC-154, Edition 2.0 ~~1.0~~ of 16 December 2021 ~~04/02/2013~~), and ICAO Doc 9674, 'World Geodetic System – 1984 (WGS-84) Manual'.

Rationale:

The proposed update of this guidance addresses an update made to the relevant Eurocontrol document, released in December 2021. In addition, a reference is proposed to the relevant ICAO Manual WGS-84. A minor rewording is also suggested, as the relevant ICAO specifications are not requirements per se, although they are elements of international law.

~~GM2 ATM/ANS.OR.A.090(a) Common reference systems for air navigation~~

~~**TEMPORARY NON-COMPLIANCE OF GEOGRAPHICAL COORDINATES**~~

~~In those particular cases where geographical coordinates have been transformed into WGS-84 coordinates by mathematical means and whose accuracy of original field work does not meet the applicable requirements contained in the aeronautical data catalogue, they should be identified until the time when they can be compliant.~~

Rationale:

The guidance in question is proposed to be deleted as unnecessary and potentially confusing in relation to the relevant requirements calling for compliance with the content of the ADC.

AMC1 ATM/ANS.OR.A.090(b) Common reference systems for air navigation

VERTICAL REFERENCE SYSTEM

(a) A service provider should use the Earth Gravitational Model – 1996 (EGM-96), as the global gravity model.

(b) At those geographical positions where the accuracy of EGM-96 does not meet the accuracy requirements for elevation and geoid undulation on the basis of EGM-96 data, regional, national or local geoid models containing high resolution (short wavelength) gravity field data should be developed and used. When a geoid model other than the EGM-96 model is used, a description of the model used, including the parameters required for height transformation between the model and EGM-96, should be provided in the aeronautical information publication (AIP).

Rationale:

AMC1 ATM/ANS.OR.A.090(b) is proposed to be amended in order to fully transpose the provisions of Annex 15 standard 1.2.2.3 regarding the earth gravitational model and the occasions where the EGM-96 may not be used, including the necessary actions on such occasions. A similar AMC is proposed for the area of aerodromes.

GM2 ATM/ANS.OR.A.090(b) Common reference systems for air navigation

VERTICAL REFERENCE SYSTEM

Further explanation and guidance may be found in Annex C (Vertical reference systems) to EUROCONTROL Specification for the Origination of Aeronautical Data~~, Volume 2~~ (EUROCONTROL-SPEC-154, Edition 2.0 ~~1.0~~ of 16 December 2021~~04/02/2013~~).

Rationale:

The proposed update of this guidance addresses an update made to the relevant Eurocontrol document, released in December 2021.

GM1 Annex IV (Part-ATS)

GENERAL

In the context of the AMC and GM to Part-ATS, the terms listed below have the following meaning:

[…]

~~– 'accepting control unit' refers to the air traffic control unit next to take control of an aircraft;~~

[…]

~~– 'air traffic' refers to all aircraft in flight or operating on the manoeuvring area of an aerodrome;~~

[…]

~~– 'base turn' refers to a turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal. Base turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure;~~

Rationale:

It is proposed to remove these definitions from GM1 Annex IV (Part-ATS) because of their proposed introduction within Annex I to Regulation (EU) 2017/373 (see above).

[…]

AMC7 ATS.OR.110 Coordination between aerodrome operators and air traffic services providers

INTERSECTION TAKE-OFFS AND MULTIPLE LINE-UPS

The air traffic services provider should coordinate the use of and the procedures for intersection take-offs and multiple line-ups with the aerodrome operator.

GM1 to AMC7 ATS.OR.110 Coordination between aerodrome operators and air traffic services providers

INTERSECTION TAKE-OFFS AND MULTIPLE LINE-UPS

Intersection take-offs and multiple line-ups depend on the aerodrome's runway and taxiway layout. They can only be allowed if the relevant requirements according to ADR.OPS.B.105 are implemented.

Rationale:

It is proposed to add new AMC7 ATS.OR.110 and GM1 to AMC7 ATS.OR.110 to specify the need for coordination between an ATS provider and an aerodrome operator when intersection take-off and multiple line-up procedures are implemented.

[…]

GM4 ATS.OR.135 Contingency arrangements

Guidance on contingency planning for air navigation services providers, including air traffic services providers, may be found in:

(a) ICAO Annex 11 – Attachment C 'Material relating to contingency planning'; and

(b) the 'EUROCONTROL Guidelines for Contingency Planning of Air Navigation Services (including Service Continuity)' Edition 2.0 of 06/04/2009~~, available at:~~

~~https://www.eurocontrol.int/sites/default/files/article/content/documents/nm/safety/safety-guidelines-contingency-planning-ans-2009.pdf,~~

and in its complementary document named 'Reference Guide to EUROCONTROL Guidelines for Contingency Planning of Air Navigation Services (including Service Continuity)' Edition 2.0 of 06/04/2009, both available at: https://skybrary.aero/articles/contingency-planning.

~~https://www.eurocontrol.int/publication/eurocontrol-guidelines-contingency-planning-air-navigation-services~~

Rationale:

The proposed amendment updates the weblink where the referred documents are available, as the previous link was no longer accessible.

[…]

GM1 ATS.OR.145 Operation of air traffic control

PRESENTATION AND UPDATING OF FLIGHT PLAN AND CONTROL DATA AND OTHER RELEVANT INFORMATION FOR THE AIR TRAFFIC CONTROL SERVICE PROVISION

Human factors principles should be considered when establishing the provisions and procedures stipulated in ATS.OR.145. The SESAR Joint Undertaking has developed a project titled 'Human Performance in Automation Support' (Project Nr. 16.05), which addressed the subject. The relevant final Project Report may be found at https://wikiengagektn.com/16.05_Human_Performance_in_Automation_Support

~~https://www.sesarju.eu/sites/default/files/DEL_16.05-D09-Final_Project_Report_.00.01.00.pdf~~.

Rationale:

The proposed amendment updates a new weblink where the referred document is available, instead of the previous one which has become obsolete.

[…]

GM1 ATS.OR.405 Use and availability of the VHF emergency frequency

LISTENING WATCH OF THE VHF EMERGENCY ~~CHANNEL~~ FREQUENCY

Requirements for air traffic services units to maintain continuous guard on the emergency frequency 121.500 MHz are specified in SERA.14080(b) of Regulation (EU) No 923/2012.

Rationale:

The proposed amendment aims at regulatory consistency, as in both Regulation (EU) 2017/373 and Regulation (EU) No 923/2012 the text refers to 'VHF emergency frequency'.

GM1 ATS.OR.405(a)(3) Use and availability of the VHF emergency frequency

USE OF VHF EMERGENCY ~~CHANNEL~~ FREQUENCY IN CASE OF HANDLING OF DISTRESS TRAFFIC

The use of the frequency 121.500 MHz for the purpose outlined in point (a)(3) of ATS.OR.405 is to be avoided if it interferes in any way with the efficient handling of distress traffic.

Rationale:

The proposed amendment aims at regulatory consistency, as in both Regulation (EU) 2017/373 and Regulation (EU) No 923/2012 the text refers to 'VHF emergency frequency'.

GM1 ATS.OR.405(b) Use and availability of the VHF emergency frequency

VHF EMERGENCY ~~CHANNEL~~ FREQUENCY

Where two or more of the air traffic services units listed in point (b) of ATS.OR.405 are co-located, provision of the frequency 121.500 MHz at one would meet the requirement.

Rationale:

The proposed amendment aims at regulatory consistency, as in both Regulation (EU) 2017/373 and Regulation (EU) No 923/2012 the text refers to 'VHF emergency frequency'.

GM1 ATS.OR.145(b)(2) Operation of air traffic control

SUSPENSION OF VISUAL FLIGHT RULES OPERATIONS ON AND IN THE VICINITY OF AN AERODROME

In cases where VFR flight operations are suspended due to weather conditions, aerodrome control towers should normally obtain approval from the unit providing approach control service prior to authorising operation of special VFR flights, as prescribed in letters of agreement or local instructions.

Rationale:

The proposed amendment aims to clarify that special VFR flights are to be conducted only in an agreement between the unit providing approach control service and a unit providing aerodrome control service, and the aerodrome control tower should obtain approval from the unit providing approach control service prior to authorising operation of special VFR flight.

AMC1 ATS.TR.155(b)(2)(i) ATS surveillance services

FACTORS DETERMINING THE NUMBER OF AIRCRAFT SIMULTANEOUSLY PROVIDED WITH AIR TRAFFIC CONTROL SERVICE USING ATS SURVEILLANCE SYSTEMS

When determining the number of aircraft simultaneously provided with ATS surveillance services, the air traffic services provider should take into account, as a minimum:

(a) the structural complexity of the control zone, control area or sector concerned;

(b) the functions to be performed within the control zone, control area or sector concerned;

(c) assessments of air traffic controller workloads, taking into account different aircraft capabilities, and ~~sector~~ capacity of the airspace where ATC is provided; and

(d) the degree of technical reliability and availability of the primary and backup communications, navigation and surveillance systems, both in the aircraft and on the ground.

Rationale:

Based on the feedback provided to EASA during the ANS/ATM TeB meeting 1-2023, this AMC is proposed to be amended to also cover the cases where ATS surveillance services are provided in the provision of aerodrome control service and to further clarify the applicability of the implementing rule to such an operational context. The implementing rule ATS.TR.155(b)(2)(i) requires the ATS provider to determine the number of aircraft simultaneously provided with ATS surveillance. This requirement results from the transposition of ICAO PANS-ATM point 8.4.2 into the EU regulatory framework. Taking into account the fact that ATS surveillance services are provided, to an increasing extent, also in aerodrome control service in EU airspace, EASA considers it necessary to emphasise the importance of determining the number of aircraft in all portions of airspace and also in the aerodrome control service provision. For this reason, instructions/procedures to ATCOs should be made available by the ATS provider to handle cases of traffic in excess of the determined maximum traffic loads.

GM1 ATS.TR.155(b)(2)(i) ATS surveillance services

DETERMINING THE NUMBER OF AIRCRAFT SIMULTANEOUSLY PROVIDED WITH AERODROME AIR TRAFFIC CONTROL SERVICE USING ATS SURVEILLANCE SYSTEMS

The functions for which surveillance could be used in aerodrome control service differ from those described for area and approach control service; moreover, the structural complexity of a CTR may be less relevant as most demanding functions address the vicinity of the aerodrome and the final approach and successive departures. In determining the number of aircraft simultaneously provided with ATS surveillance services by an aerodrome air traffic controller, an air traffic services provider may also consider other factors which are specifically relevant for aerodrome control. These factors may include:

(a) the complexity of the aerodrome traffic; and

(b) other functions to be performed by the aerodrome air traffic controller concerned.

Rationale:

Based on the feedback provided to EASA during the ANS/ATM TeB meeting 1-2023, this new GM is proposed to be added to also cover the cases where ATS surveillance services are provided in aerodrome air traffic control service, and to emphasise the specificities included in aerodrome air traffic control service compared to ATS surveillance service in en-route or approach sectors.

AMC3 ATS.TR.155(c)(1) ATS surveillance services

METHODS OF IDENTIFICATION – TRANSFER OF IDENTIFICATION

[…]

(b) Transfer of identification should be effected by one of the following methods:

[…]

(3) ~~notification of the automated or system to system aircraft address;~~ automated and/or system to system notification of aircraft address;

[…]

Rationale:

The proposed amendment to point (b)(3) introduces a reformulation of the method of identification concerned, to better clarify its applicability.

[…]

AMC1 ATS.TR.155(g) ATS surveillance services

VERIFICATION OF LEVEL OCCUPANCY

(a) ~~In accordance with AMC1 ATS.TR.155(f), t~~The criterion which should be used to determine that a specific level is occupied by an aircraft should be ± 60 m (± 200 ft) in RVSM airspace. In other airspace, this criterion should be ± 90 m (± 300 ft), except that the competent authority may specify a smaller criterion, but not less than ± 60 m (± 200 ft), if this is found to be more practical.

[…]

Rationale:

The processes described in AMC1 ATS.TR.155(f) and in AMC1 ATS.TR.155(g) are separate, although they are based on the same numerical values, and in principle should be applied consistently. Therefore, the text of point (a) of AMC1 ATS.TR.155(g) is proposed to be amended accordingly, and contextually it is proposed to introduce the new GM1 AMC1 ATS.TR.155(g) to explain such interrelation.

GM1 AMC1 ATS.TR.155(g) ATS surveillance services

VERIFICATION OF LEVEL OCCUPANCY

The criteria and values for the verification of level occupancy should be the same as those defined in AMC1 ATS.TR.155(f) tolerance value for pressure-altitude-derived level information.

Rationale:

The proposed new GM provides guidance pertaining to the proposed amendment to point (a) of AMC1 ATS.TR.155(g).

GM2 to AMC16 ATS.TR.210(a)(3) Operation of air traffic control service

CANCELLING A TAKE-OFF CLEARANCE FOR DEPARTING AIRCRAFT

[…]

(c) The cancellation of a take-off clearance after an aircraft has commenced its take-off run should only occur when the aircraft will be in serious and imminent danger should it continue. Air traffic controllers should be aware of the potential for an aircraft to overrun the end of the runway if the take-off is abandoned at a late stage; this is particularly so with large aircraft or those operating close to their performance limit, such as at maximum take-off mass, in high ambient temperatures or when the ~~runway braking action~~ deceleration rate and directional control may be adversely affected by the runway surface condition. Because of this risk, even if a take-off clearance is cancelled, the pilot-in-command may consider it safer to continue the take-off than to attempt to stop the aircraft.

[…]

Rationale:

Due to the requirements for the Global Reporting Format, braking action is no longer reported but runway surface condition instead, so the relevant change is proposed accordingly.

[…]

AMC22 ATS.TR.210(a)(3) Operation of air traffic control service

PROCEDURES TO BE APPLIED FOR INTERSECTION TAKE-OFFS

When intersection take-offs are implemented:

(a) an aircraft should only be cleared to depart from a published intersection take-off position:

(1) when requested by the pilot, or

(2) prior to take-off, when initiated by the air traffic controller and accepted by the pilot by a read-back of the ATC clearance;

(b) information on the take-off run available (TORA) from the intersection should be provided when requested by an aircraft or whenever deemed necessary by the controller.

Rationale:

A new AMC22 ATS.TR.210(a)(3) is proposed for inclusion of the procedures regarding intersection take-offs stemming from Doc 7030/EUR point 6.5.2 and to ensure consistency with the applicable

phraseology given in Appendix 1 to AMC1 SERA.14001 point 1.4.10, hence it seems relevant and appropriate that the related procedures are also transposed in Part-ATS. A transposition of the requirements would also be in line with the similar transposition of the requirements for visual departure stemming from Doc 7030/EUR point 6.5.4 and transposed in AMC20 ATS.TR.210(a)(3).

AMC23 ATS.TR.210(a)(3) Operation of air traffic control service

MULTIPLE LINE-UPS ON THE SAME RUNWAY

When intersection take-offs are implemented, line-up instructions should only be issued to more than one aircraft at different points on the same runway, provided that:

(a) air traffic services for aircraft involved in multiple line-ups on the same runway are provided on the same radio frequency;

(b) pilots are advised of the position of any essential traffic on the same runway;

(c) pilot read-back of line-up instructions is required and contains the runway designator, the name of the intersection, if applicable, and the number in the departure sequence; and

(d) wake turbulence separation is applied.

Rationale:

A new AMC23 ATS.TR.210(a)(3) is proposed for inclusion of the procedures regarding multiple line-ups on the same runway stemming from Doc 7030/EUR point 6.5.3 and to ensure consistency with the applicable phraseology given in Appendix 1 to AMC1 SERA.14001 point 1.4.10, hence it seems relevant and appropriate that the related procedures are also transposed in Part-ATS. A transposition of the requirements would also be in line with the similar transposition of the requirements for visual departure stemming from Doc 7030/EUR point 6.5.4 and transposed in AMC20 ATS.TR.210(a)(3).

[…]

GM2 ATS.TR.210(a)(3) Operation of air traffic control service

AERODROME CONTROL – INSTRUCTIONS FOR LANDING AND ROLL-OUT MANOEUVRES

[…]

(b) In requesting a landing aircraft to perform a specific landing and/or roll-out manoeuvre, the type of aircraft, runway length, location of exit taxiways, reported ~~braking action~~ surface condition on the runway and taxiways, and prevailing meteorological conditions should be considered. A SUPER or HEAVY aircraft should not be requested to land beyond the touchdown zone of a runway.

[…]

Rationale:

The proposed amendment to this GM would ensure alignment with the originating Section 7.10.3 of ICAO PANS-ATM as modified by its Amendment 9 to reflect the introduction of the 'SUPER' category. Due to the requirements for the Global Reporting Format, braking action is no longer reported but runway surface condition instead, so the relevant change is proposed accordingly.

[…]

AMC2 ATS.TR.210(c) Operation of air traffic control service

SEPARATION IN THE VICINITY OF AERODROMES

(a) Visual separation

Under conditions and circumstances specified by the air traffic services provider and approved by the competent authority, the aerodrome air traffic controller may apply visual separation between aircraft operating in the vicinity of the aerodrome when aircraft concerned are continuously visible to such controller.

(b) Own separation

An air traffic controller may instruct aircraft in the vicinity of the aerodrome to maintain own separation in either of the following cases:

(1) when each aircraft is continuously visible to flight crews of the other aircraft concerned and the pilots thereof report that they can maintain their own separation; or

(2) in the case of one aircraft following another, when the flight crew of the succeeding aircraft reports that the other aircraft is in sight and own separation can be maintained.

Rationale:

See rationale provided for the proposed amendments to ATS.TR.210 point (c).

GM1 to AMC2 ATS.TR.210(c) Operation of air traffic control service

SEPARATION IN THE VICINITY OF AERODROMES

When applying point (a) of AMC2 ATS.TR.210(c), the air traffic services provider should address, inter alia, the following:

(a) that weather conditions are such that the aircraft concerned are continuously visible to the aerodrome air traffic controller;

(b) to establish scenarios and limitations for the application of these methods and describe them accordingly in local instructions or manual of operations;

(c) that the use of such methods is consistent with the coordination and transfer of control conditions agreed with adjacent air traffic control units;

(d) that the approach air traffic controller is informed when such methods to separate aircraft are used by the aerodrome air traffic controller;

(e) that such methods cannot be used when wake turbulence separation has to be provided between the aircraft concerned;

(f) that as soon as it becomes apparent that these methods can no longer be used, another form of separation is established and the approach air traffic controller is informed, as appropriate.

Rationale:

See rationale provided for proposed amendments to ATS.TR.210 point (c).

GM2 to AMC2 ATS.TR.210(c) Operation of air traffic control service

SEPARATION IN THE VICINITY OF AERODROMES

(a) When applying point (b) of AMC 2 ATS.TR.210(c), if the projected flight path of an aircraft will cross or follow behind the flight path of another aircraft, at the same altitude or less than 300 m (1 000 ft) below, the air traffic con2troller should issue a caution of possible wake turbulence when necessary, prior to instructing the flight crew to maintain own separation.

(b) When pilots accept to maintain own separation in the vicinity of an aerodrome, the air traffic controller should monitor the progress of flights and issue alternative instructions whenever the distance between aircraft will not ensure the applicable runway separation or at the request of the accepting air traffic control unit.

AMC1 ATS.TR.210(c)(2) Operation of air traffic control service

HORIZONTAL SEPARATION MINIMA BASED ON ATS SURVEILLANCE SYSTEM

[…]

(b) If so established by the air traffic services provider and approved by the competent authority, the separation minimum in point (a) may be reduced but not below:

[…]

(2) 4.6 km (2.5 NM) between succeeding aircraft which are established on the same final approach track within 18.5 km (10 NM) of the runway threshold. A reduced separation minimum of 4.6 km (2.5 NM) may be applied, provided:

[…]

(ii) ~~braking action is reported as good~~ reported runway condition code is 6 or 5 and runway occupancy times are not adversely affected by runway contaminants such as slush, snow or ice;

[…]

Rationale:

Due to the requirements for the Global Reporting Format, braking action is no longer reported but runway surface condition instead, so the relevant change is proposed accordingly.

AMC3 ATS.TR.210(c)(2) Operation of air traffic control service

PROCEDURAL SEPARATION — REDUCTION IN LATERAL AND LONGITUDINAL SEPARATION MINIMA

~~(a)~~ Provided that prior consultation with airspace users is undertaken and that an appropriate safety assessment has shown that an acceptable level of safety is maintained, the lateral and longitudinal separation minima established in:

— AMC1 ATS.TR.210(c)(2)(i);

— AMC2 ATS.TR.210(c)(2)(i);

— AMC3 ATS.TR.210(c)(2)(i);

— AMC4 ATS.TR.210(c)(2)(i);

— AMC5 ATS.TR.210(c)(2)(i);

— AMC6 ATS.TR.210(c)(2)(i); and

— AMC1 ATS.TR.210(c)(2)(ii)

may be reduced in the following circumstances:

(~~1~~a) when special electronic or other aids enable the pilot-in-command of an aircraft to determine accurately the aircraft's position and when adequate communication facilities exist for that position to be transmitted without delay to the appropriate air traffic control unit; or

(~~2~~b) when, in association with rapid and reliable communication facilities, information of an aircraft's position, derived from an ATS surveillance system, is available to the appropriate air traffic control unit; or

(~~3~~c) when RNAV-equipped aircraft operate within the coverage of electronic aids that provide the necessary updates to maintain navigation accuracy.

~~(b) In addition to the circumstances mentioned in point (a), the lateral and longitudinal separation minima established in:~~

~~— AMC1 ATS.TR.210(c)(2)(i);~~

~~— AMC2 ATS.TR.210(c)(2)(i);~~

~~— AMC3 ATS.TR.210(c)(2)(i);~~

~~— AMC4 ATS.TR.210(c)(2)(i);~~

~~— AMC5 ATS.TR.210(c)(2)(i);~~

~~— AMC6 ATS.TR.210(c)(2)(i); and~~

~~— AMC1 ATS.TR.210(c)(2)(ii)~~

~~may be reduced in the vicinity of aerodromes if:~~

~~(1) adequate separation can be provided by the aerodrome air traffic controller when each aircraft is continuously visible to this air traffic controller; or~~

~~(2) each aircraft is continuously visible to flight crews of the other aircraft concerned and the pilots thereof report that they can maintain their own separation; or~~

~~(3) in the case of one aircraft following another, the flight crew of the succeeding aircraft reports that the other aircraft is in sight and separation can be maintained.~~

Rationale:

See rationale provided for proposed amendments to ATS.TR.210 point (c). In particular, it shall be noted that amendments to this AMC are proposed for regulatory consistency and for simplification (e.g. to remove complex cross references).

AMC4 ATS.TR.210(c)(2)(i) Operation of air traffic control service

PROCEDURAL SEPARATION – LONGITUDINAL SEPARATION MINIMA BASED ON DISTANCE USING DISTANCE MEASURING EQUIPMENT (DME) AND/OR GNSS – AIRCRAFT CLIMBING OR DESCENDING

[…]

(b) Aircraft on reciprocal tracks

Aircraft utilising on-track DME and/or collocated waypoint or same waypoint may be cleared to climb or descend to or through the levels occupied by other aircraft utilising on-track DME and/or collocated waypoint or same waypoint, provided that it has been positively established that the aircraft have passed each other and are at least 10 NM apart, or such other value determined by the air traffic services provider and approved by the competent authority.

Rationale:

It is proposed to amend this AMC for alignment with the originating Section 5.4.2.3.4.2 of ICAO PANS-ATM as modified by its Amendment 9 to provide clarity on the application of the existing separation method.

AMC5 ATS.TR.210(c)(2)(i) Operation of air traffic control service

PROCEDURAL SEPARATION – LONGITUDINAL SEPARATION MINIMA WITH MACH NUMBER TECHNIQUE BASED ON TIME

[…]

(b) if the aircraft have not reported over the same common point and it is possible to ensure, by radar, ADS-B or other means, that the appropriate time interval will exist at the common point from which they either follow the same track or continuously diverging tracks, minimum longitudinal separation between ~~turbojet~~ aircraft on the same track, whether in level, climbing or descending flight should be:

[…]

Rationale:

The AMC is proposed to be amended for alignment with the originating Section 5.4.2.4.3 of ICAO PANS-ATM as modified by its Amendment 9 to provide clarity on which aircraft the existing separation method is to be applied.

AMC9 ATS.TR.210(c)(2)(i) Operation of air traffic control service

REDUCED RUNWAY SEPARATION MINIMA BETWEEN AIRCRAFT USING THE SAME RUNWAY

[…]

(e) Reduced runway separation minima should be subject to the following conditions:

[…]

(7) the ~~braking action~~ deceleration rate and directional control should not be adversely affected by runway contaminants such as ice, slush, snow and water.

[…]

Rationale:

Due to the requirements for the Global Reporting Format, braking action is no longer reported but runway surface condition instead, so the relevant change is proposed accordingly.

AMC11 ATS.TR.210(c)(2)(i) Operation of air traffic control service

PROCEDURAL CONTROL — SEPARATION OF DEPARTING AIRCRAFT FROM ARRIVING AIRCRAFT

The following separation should be applied when take-off clearance is based on the position of an arriving aircraft:

[…]

(c) If an arriving aircraft is following an RNAV or RNP instrument flight procedure, a departing aircraft may take off on a departure path that is clear of the arrival protection area for the arriving aircraft (see Figure 37a), provided that:

(1) vertical separation is applied until the arriving aircraft has reported passing the compulsory reporting waypoint on the instrument flight procedure, the location of such waypoint to be determined by the ATS provider,

(2) the take-off takes place before the arriving aircraft crosses a designated waypoint on the instrument flight procedure, the location of such waypoint to be determined by the ATS provider, and

(3) the departing aircraft remains clear of the arrival protection area until another form of separation is established.

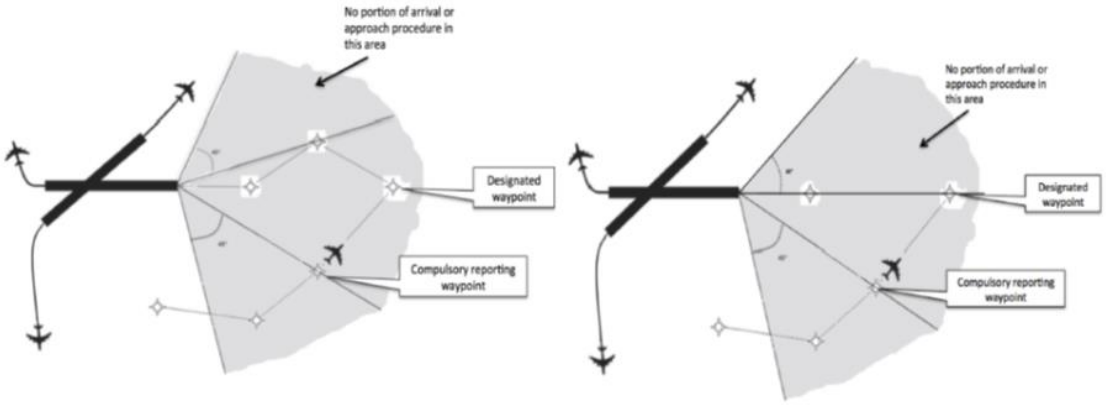


Figure 37a: Examples of an arrival protection area

Rationale:

An AltMoC proposed by a Member State was assessed as being of a general nature and the new point (c) to AMC11 ATS.TR.210(c)(2)(i) is proposed to be added. The proposed amendment to the AMC adds contents of Section 5.7.1.3 of ICAO PANS-ATM pertinent to the EU ATS provision, specifically for separation between a departing aircraft and an arriving aircraft following an RNAV or RNP instrument flight procedure. This amendment is proposed to complete the transposition of Section 5.7 of PANS-ATM.

GM1 to AMC11 ATS.TR.210(c)(2)(i) Operation of air traffic control service

ARRIVAL PROTECTION AREA

The arrival protection area is defined as the shaded area extending from a line 45 degrees from an established compulsory reporting waypoint to a line 45 degrees from the outermost edge of the remainder of the arrival and/or approach procedure (See Figure 37a).

Rationale:

The new GM, derived from a Note to Section 5.7.1.3 of ICAO PANS-ATM, is proposed to describe the elements for the determination of the arrival protection area in the operational scenario of the AMC. This amendment is proposed to complete the transposition of Section 5.7 of PANS-ATM.

[…]

AMC1 ATS.TR.220 Application of wake turbulence separation

CATEGORISATION OF AIRCRAFT FOR THE PURPOSES OF WAKE TURBULENCE SEPARATION MINIMA

(a) Wake turbulence separation minima are defined for scenarios and pairs of aircraft for which the separation minima applied to fulfil the objectives of ATS are not sufficient to protect against potential wake encounters.

(b) […]

Rationale:

With regard to the proposed amendments to point (a), see the rationale provided for proposed amendments to ATS.TR.220 points (b) and (c).

~~GM1 to AMC1 ATS.TR.220 Application of wake turbulence separation~~

~~For the Airbus A380-800 aircraft, with a maximum take-off mass in the order of 560 000 kg, it is recommended to apply an increase of the wake turbulence separation minima associated with the HEAVY category.~~

Rationale:

In accordance with the proposed amendment to point (b) of AMC1 ATS.TR.220, it is proposed to delete this GM as the related wake turbulence categories per type of aircraft are now mentioned in point (b) of AMC1 ATS.TR.220 (see SERA Opinion No 02/2023). It shall be noted that currently the 'SUPER' category does not include only the A-380.

[…]

AMC2 ATS.TR.220 Application of wake turbulence separation

TIME-BASED WAKE TURBULENCE LONGITUDINAL SEPARATION MINIMA – ARRIVING AIRCRAFT

Except for ~~arriving VFR flights, and for arriving IFR flights executing visual approach~~ the cases listed in point (b) of ATS.TR.220, the following separation minima should be applied to aircraft landing behind a SUPER, a HEAVY and a MEDIUM:

(a) HEAVY aircraft landing behind SUPER aircraft: 2 minutes;

~~(a)~~ (b) MEDIUM aircraft landing behind SUPER aircraft: 3 minutes;

~~(b)~~ (c) MEDIUM aircraft landing behind HEAVY aircraft: 2 minutes;

~~(c)~~ (d) LIGHT aircraft landing behind SUPER aircraft: 4 minutes; and

~~(d)~~ (e) LIGHT aircraft landing behind a HEAVY or MEDIUM aircraft: 3 minutes.

Rationale:

See rationale provided for proposed amendments to ATS.TR.220 points (b) and (c).

AMC3 ATS.TR.220 Application of wake turbulence separation

TIME-BASED WAKE TURBULENCE LONGITUDINAL SEPARATION MINIMA – DEPARTING AIRCRAFT

(a) A separation minimum of 2 minutes should be applied for a HEAVY aircraft taking off behind a SUPER aircraft when the aircraft are using:

(1) the same runway;

(2) parallel runways separated by less than 760 m (2 500 ft);

(3) crossing runways, if the projected flight path of the second aircraft will cross the projected flight path of the first aircraft at the same altitude or less than 300 m (1 000 ft) below; and

(4) parallel runways separated by 760 m (2 500 ft) or more, if the projected flight path of the second aircraft will cross the projected flight path of the first aircraft at the same altitude or less than 300 m (1 000 ft) below.

~~(a)~~(b) A separation minimum of 3 minutes should be applied for a LIGHT or MEDIUM aircraft and 2 minutes for a HEAVY aircraft taking off behind a SUPER aircraft when the aircraft are using:

(1) the same runway;

(2) parallel runways separated by less than 760 m (2 500 ft);

(3) crossing runways if the projected flight path of the second aircraft will cross the projected flight path of the first aircraft at the same altitude or less than 300 m (1 000 ft) below; and

(4) parallel runways separated by 760 m (2 500 ft) or more if the projected flight path of the second aircraft will cross the projected flight path of the first aircraft at the same altitude or less than 300 m (1 000 ft) below.

~~(b)~~(c) A separation minimum of 4 minutes should be applied for a LIGHT or MEDIUM aircraft when taking off behind a~~n~~ SUPER aircraft from:

(1) an intermediate part of the same runway; or

(2) an intermediate part of a parallel runway separated by less than 760 m (2 500 ft).

~~(c)~~(d) A separation minimum of 2 minutes should be applied between a LIGHT or MEDIUM aircraft taking off behind a HEAVY aircraft or a LIGHT aircraft taking off behind a MEDIUM aircraft when the aircraft are using:

(1) the same runway (see Figure 43);

(2) parallel runways separated by less than 760 m (2 500 ft) (see Figure 43);

(3) crossing runways if the projected flight path of the second aircraft will cross the projected flight path of the first aircraft at the same altitude or less than 300 m (1 000 ft) below (see Figure 44); and

(4) parallel runways separated by 760 m (2 500 ft) or more if the projected flight path of the second aircraft will cross the projected flight path of the first aircraft at the same altitude or less than 300 m (1 000 ft) below (see Figure 44).

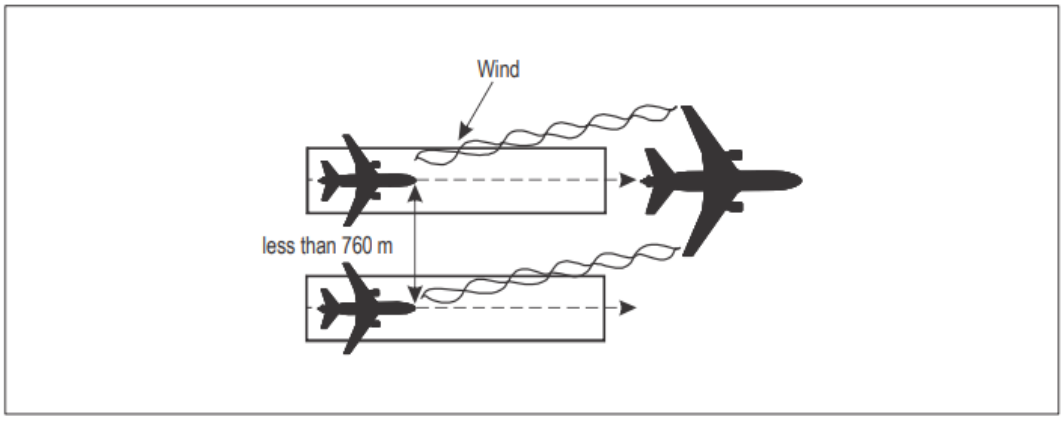


Figure 43: ~~2-minute~~ Wake turbulence separation for following aircraft

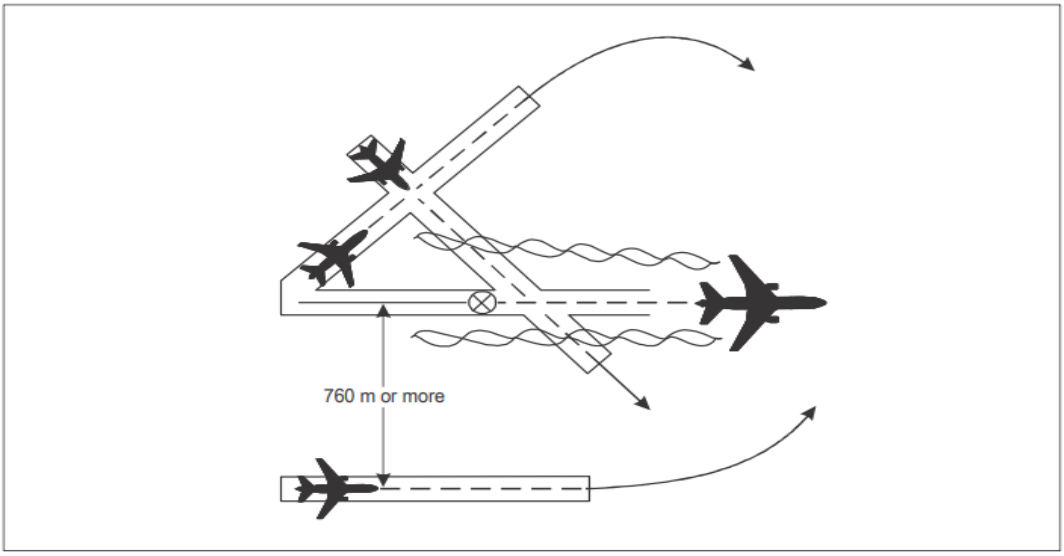


Figure 44: ~~2-minute w~~Wake turbulence separation for crossing aircraft

~~(d)~~(e) A separation minimum of 3 minutes should be applied (see Figure 45) between a LIGHT or MEDIUM aircraft when taking off behind a HEAVY aircraft or a LIGHT aircraft when taking off behind a MEDIUM aircraft or a HEAVY aircraft when taking off behind a SUPER aircraft from:

(1) an intermediate part of the same runway; or

(2) an intermediate part of a parallel runway separated by less than 760 m (2 500 ft).

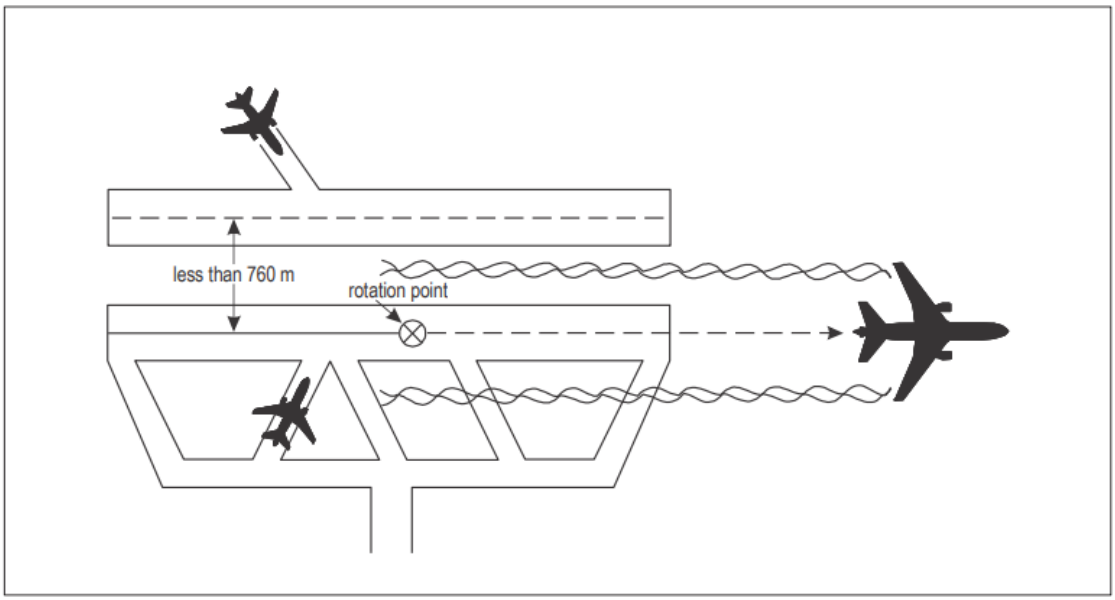


Figure 45: ~~3-minute w~~Wake turbulence separation for following aircraft

Rationale:

The proposed amendments to this AMC would ensure its complete alignment with Sections 5.8.3.1 and 5.8.3.3 and related Figures, of ICAO PANS-ATM in accordance with its Amendment 9, to reflect the introduction of the 'SUPER' category and related separation minima for departing aircraft.

AMC4 ATS.TR.220 Application of wake turbulence separation

TIME-BASED WAKE TURBULENCE LONGITUDINAL SEPARATION MINIMA – DISPLACED LANDING THRESHOLD

(a) A separation minimum of 3 minutes should be applied between a LIGHT or MEDIUM aircraft and a SUPER aircraft when operating on a runway with a displaced landing threshold when:

(1) a departing LIGHT or MEDIUM aircraft follows a SUPER aircraft arrival; or

(2) an arriving LIGHT or MEDIUM aircraft follows a SUPER aircraft departure,

if the projected flight paths are expected to cross.

(b) A separation minimum of 2 minutes should be applied between a HEAVY aircraft and a SUPER aircraft and between a LIGHT or MEDIUM aircraft and a HEAVY aircraft and between a LIGHT aircraft and a MEDIUM aircraft when operating on a runway with a displaced landing threshold when:

(1) a departing HEAVY aircraft follows a SUPER aircraft arrival and a departing LIGHT or MEDIUM aircraft follows a HEAVY aircraft arrival and a departing LIGHT aircraft follows a MEDIUM aircraft arrival; or

(2) an arriving HEAVY aircraft follows a SUPER aircraft departure and an arriving LIGHT or MEDIUM aircraft follows a HEAVY aircraft departure and an arriving LIGHT aircraft follows a MEDIUM aircraft departure,

if the projected flight paths are expected to cross

Rationale:

The proposed amendments to this AMC would ensure its complete alignment with Section 5.8.4.1 of ICAO PANS-ATM in accordance with its Amendment 9, to reflect the introduction of the 'SUPER' category and related separation minima in case of a displaced landing threshold.

AMC5 ATS.TR.220 Application of wake turbulence separation

TIME-BASED WAKE TURBULENCE LONGITUDINAL SEPARATION MINIMA – OPPOSITE DIRECTION

(a) A separation minimum of ~~3~~4 minutes should be applied between a LIGHT or MEDIUM aircraft and a SUPER aircraft when the SUPER aircraft is making a low or missed approach and the LIGHT or MEDIUM aircraft is:

(1) utilising an opposite-direction runway for take-off; or

(2) landing on the same runway in the opposite direction, or on a parallel opposite-direction runway separated by less than 760 m (2 500 ft).

(b) A separation minimum of ~~2~~3 minutes should be applied between a HEAVY aircraft and a SUPER aircraft and between a LIGHT or MEDIUM aircraft and a HEAVY aircraft and between a LIGHT aircraft and a MEDIUM aircraft when the heavier aircraft is making a low or missed approach and the lighter aircraft is:

(1) utilising an opposite-direction runway for take-off (see Figure 46); or

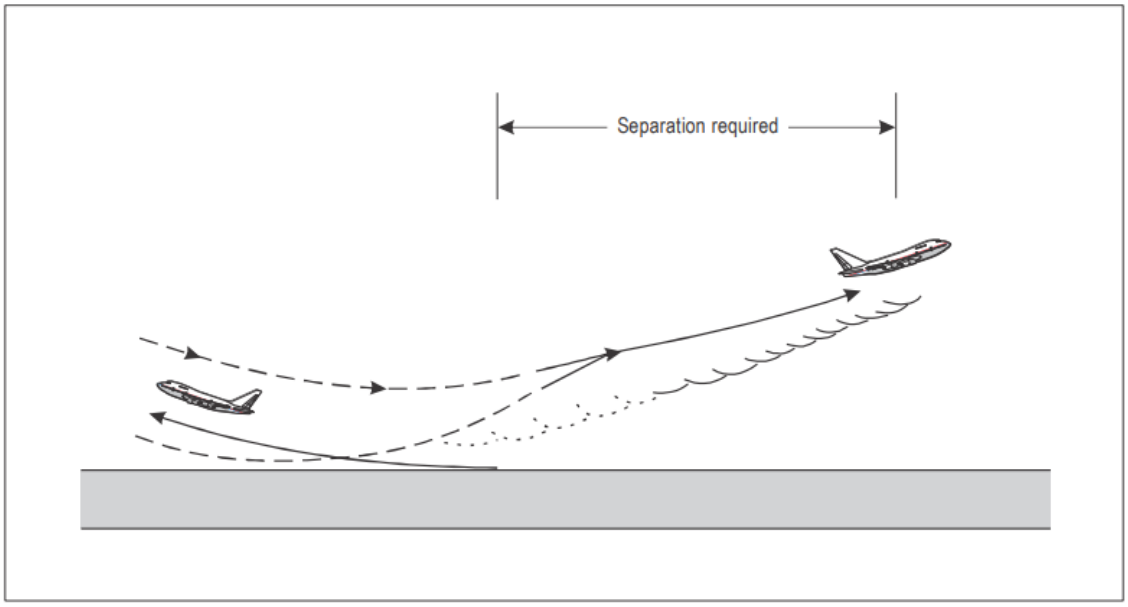


Figure 46: ~~2-minute w~~Wake turbulence separation for opposite-direction take-off

(2) landing on the same runway in the opposite direction, or on a parallel opposite-direction runway separated by less than 760 m (2 500 ft) (see Figure 47).

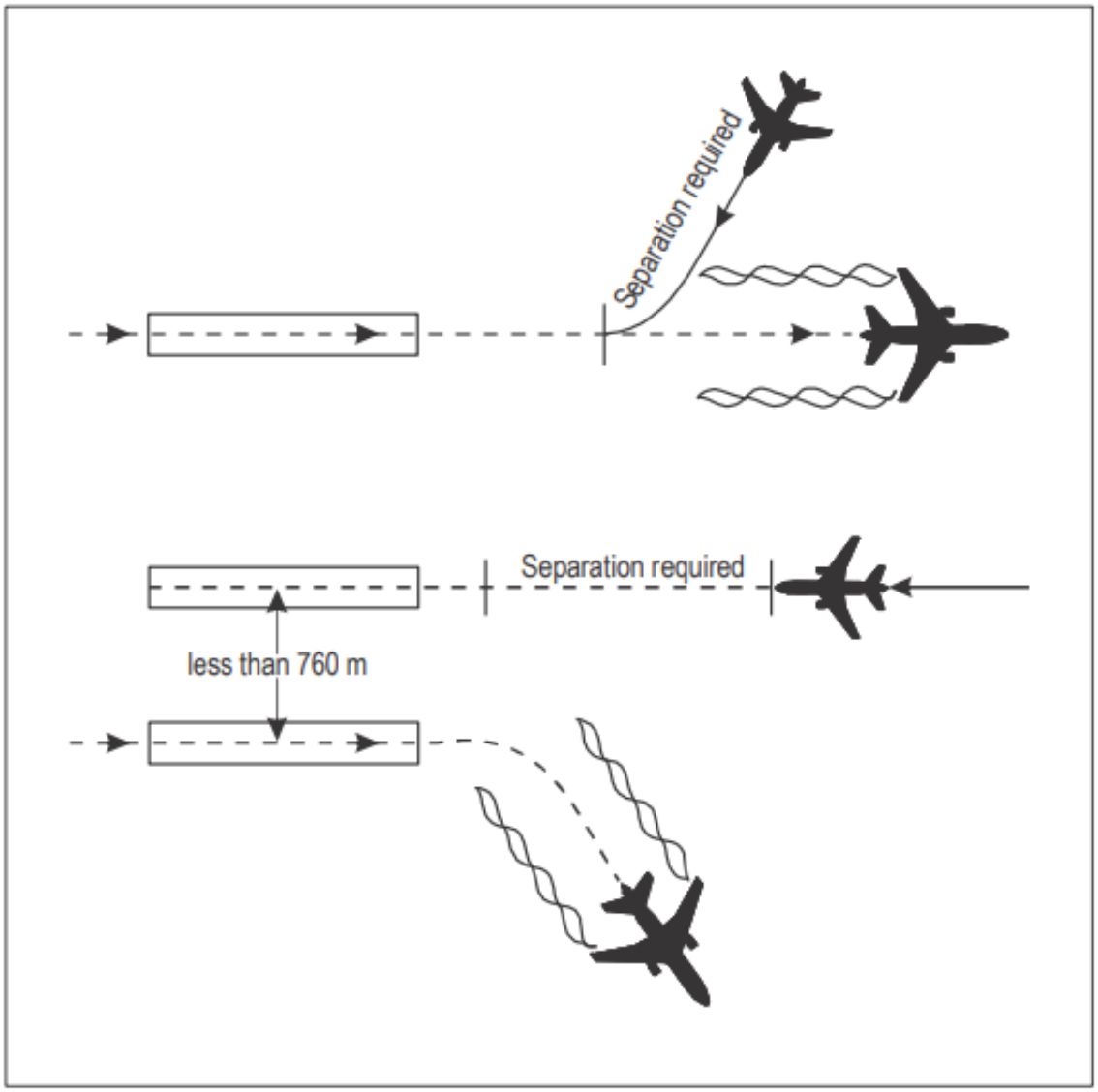


Figure 47: ~~2-minute w~~Wake turbulence separation for opposite-direction landing

Rationale:

The proposed amendments to this AMC would ensure its complete alignment with Section 5.8.5.1 and related figures of ICAO PANS-ATM in accordance with its Amendment 9, to reflect some amendments to the wake turbulence separation minima for aircraft flying in opposite directions in consequence of the introduction of the SUPER category.

AMC6 ATS.TR.220 Application of wake turbulence separation

DISTANCE-BASED WAKE TURBULENCE SEPARATION MINIMA BASED ON ATS SURVEILLANCE SYSTEM

The following distance-based wake turbulence separation minima should be applied to aircraft being provided with an ATS surveillance service in the approach and departure phases:

PRECEDING AIRCRAFT	SUCCEEDING AIRCRAFT	WAKE TURBULENCE RADAR SEPARATION MINIMA
SUPER or HEAVY	SUPER	Not required. In this case, separation reverts to radar separation minima as established by the air

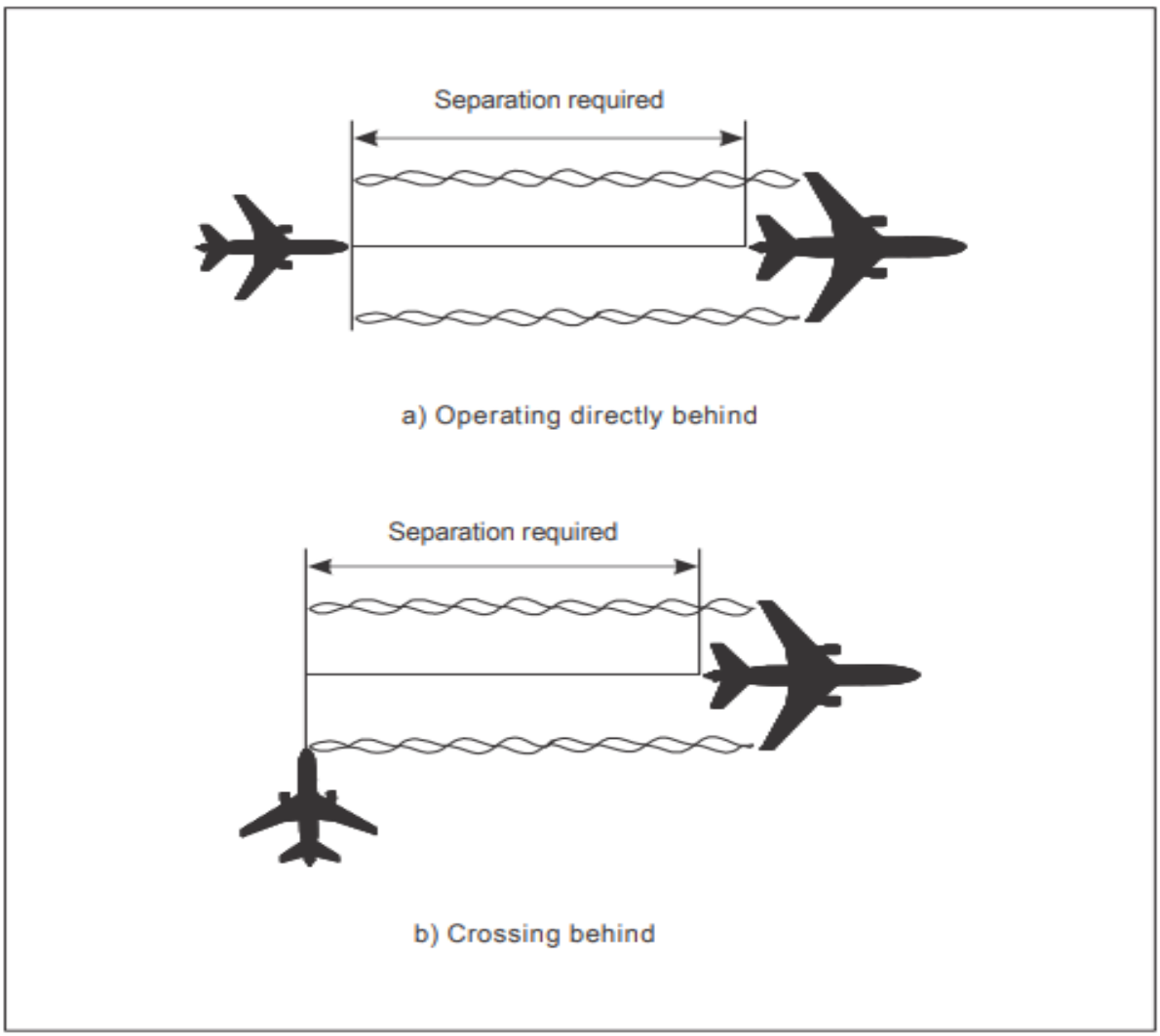
		traffic services provider and approved by the competent authority.
SUPER	HEAVY	~~11.1 km (6.0 NM)~~ 9.3 km (5.0 NM)
SUPER	MEDIUM	13.0 km (7.0 NM)
SUPER	LIGHT	14.~~8~~9 km (8.0 NM)
HEAVY	HEAVY	7.4 km (4.0 NM)
HEAVY	MEDIUM	9.3 km (5.0 NM)
HEAVY	LIGHT	11.1 km (6.0 NM)
MEDIUM	LIGHT	9.3 km (5.0 NM)

Rationale:

The proposed amendments to this AMC would ensure its complete alignment with Section 8.7.3.4 and related figures of ICAO PANS-ATM in accordance with its Amendment 9, to reflect some amendments to the wake turbulence separation minima based on ATS surveillance systems, in particular the revision of minima for separation between the SUPER category and the other categories.

GM1 to AMC6 ATS.TR.220 Application of wake turbulence separation

Figure~~s~~ 48 ~~and 49~~ illustrate~~s~~ the application of the separation minima between SUPER, HEAVY, MEDIUM and LIGHT aircraft prescribed in AMC6 ATS.TR.220.



Rationale:

The GM is proposed to be amended for consistency with the introduction of the 'SUPER' category in the context of ATS.TR.220 and related AMC and GM.

EASA requests its stakeholders to express their views on the need to implement the so-called enhanced Wake Turbulence Separation scheme (RECAT-ICAO) introduced with Amendment 9 to ICAO PANS-ATM (Doc 4444) as an acceptable means of compliance to ATS.TR.220, in addition to the existing 'legacy' and RECAT-EU schemes.

[…]

GM1 ATS.TR.220(b)(2) Application of wake turbulence separation

IFR FLIGHTS MAINTAINING OWN SEPARATION

IFR flights may be instructed to maintain own separation in the following circumstances:

(a) IFR flights executing visual approach when the aircraft has reported the preceding aircraft in sight and has been instructed to follow and maintain own separation from that aircraft;

(b) in the vicinity of an aerodrome:

(1) when each aircraft is continuously visible to flight crews of the other aircraft concerned and the pilots thereof report that they can maintain their own separation, and

(2) in the case of one aircraft following another, the flight crew of the succeeding aircraft reports that the other aircraft is in sight and own separation can be maintained;

(c) in airspace classes D and E, below 10 000 ft, during the hours of daylight in visual meteorological conditions, when requested by an aircraft and agreed by the pilot of the other aircraft to maintain own separation.

[…]

Rationale:

See rationale provided for proposed amendments to ATS.TR.220 points (b) and (c). This GM describes the circumstances where flights may be instructed to maintain own separation and, consequently, wake turbulence separation does not have to be ensured by an air traffic controller. The new GM1 SERA.8012(b) replicating the amended text of GM1 ATS.TR.220(b) is proposed accordingly.

GM3 to AMC3 ATS.TR.255 Operations on parallel or near-parallel runways

AIR TRAFFIC CONTROLLERS RESPONSIBLE FOR SEQUENCING AND SPACING AIRCRAFT

With reference to point (a) of AMC3 ATS.TR.255, the air traffic controller responsible for applying and maintaining:

(a) horizontal separation diagonally between successive aircraft on adjacent final approaches, and/or

(b) horizontal longitudinal between successive aircraft on the same final approach,

is different from the air traffic controller responsible for sequencing and spacing arriving aircraft to final approaches for each runway.

Rationale:

The primary purpose for permitting simultaneous operations on parallel or near-parallel instrument runways is to increase arrival capacity. The largest increase in arrival capacity is achieved through the use of independent approaches to parallel or near-parallel instrument runways. The second largest is through the use of dependent approaches to parallel or near-parallel instrument runways.

The primary difference between the simultaneous parallel approach operations is the application of an NTZ for independent parallel approaches and the application of a longitudinal stagger between adjacent flight paths for dependent parallel approaches. The differences in the concepts and geometries have led to differences in the assumptions, and occasionally the methodologies, of the analyses of the two modes of operation.

For dependent parallel approaches, the diagonal separation between the aircraft is key for safety; although there is a lateral component to this separation, it includes a longitudinal measure. A combination of the ATS surveillance system range error and longitudinal display errors are therefore inputs to the dependent parallel approach analysis. Only the lateral component of the track separation

is considered in the case of independent parallel approaches; although a longitudinal component may exist as well, it has not been taken into consideration in the modelling.

Dedicated monitoring is required for independent (but not for dependent) parallel approaches. Collision risk modelling presumed that a monitoring controller will detect any penetration of an NTZ immediately. For dependent parallel approaches without separate monitoring controllers, consideration needs to be given to the fact that the approach controller's attention may, at times, be directed elsewhere.

The absence of separate monitoring positions also leads to a difference in the delay times used in the modelling calculations. The evaluation of independent operations assumed that it will take 8 seconds for the monitoring controller to react, coordinate with the other air traffic controllers and determine the appropriate resolving action, communicate the instructions to achieve separation, and for the pilot and aircraft to respond. For dependent parallel approaches, the modelling assumed that the controller would wait for the next ATS surveillance update to verify that a deviation has actually occurred.

Nevertheless, for both modes of simultaneous parallel approaches, the reaction time of the controller to potential deviation of aircraft on the final approaches is important. Therefore, tasks taking the attention of the controllers elsewhere and heavy communications for sequencing and spacing the aircraft to their final approaches might hamper a fast reaction to deviation on final approaches.

For independent simultaneous parallel approaches, dedicated monitoring controllers are required for each of the final approaches to ensure that the aircraft remain in NOZ. With appropriate system support in form of deviations alert and thorough assessment of other contributory factors (such as crosswind, approach geometry complexity, traffic mix), the functions could be fulfilled by only one monitoring controller for two final approach segments.

The argument of separate controllers for dependent simultaneous parallel approaches is justified by the frequency load and controllers' workload, to ensure appropriate and timely reaction to potential deviation on the final approach. Rather than having controllers monitoring each approach, it would be more efficient that the controller performing the sequencing and spacing to final approaches is different than the one that would apply and monitor the application of diagonal separation between aircraft on adjacent parallel final approaches.

This rationale is built upon the arguments provided in ICAO Doc 9643 'Manual on Simultaneous Operations on Parallel or Near-Parallel Instrument Runways (SOIR)'.

GM1 ATS.TR.265(a)(1) Control of aerodrome surface traffic in low-visibility conditions

HOLDING POSITION LIMITS

The definition of holding position limits by intermediate holding positions marking, stop bar or taxiway intersection marking is established in accordance with EASA ED Decision 2014/013/R 'Certification Specification and Guidance Material for Aerodrome Design', as amended.

Rationale:

The proposed amendment aims at establishing consistency with the ICAO Annex 14 SARPs, with the related ADR rules in Regulation (EU) No 139/2014 and the associated EASA ED Decision 2014/013/R 'Certification Specification and Guidance Material for Aerodrome Design' on the term 'intermediate holding position markings'.

GM1 to AMC1 ATS.TR.265(b) Control of aerodrome surface traffic in low-visibility conditions

NAVIGATION EQUIPMENT

With reference to points (c)(2) and (c)(4), navigation equipment may include, inter alia:

(a) ILS,

(b) MLS,

(c) GLS,

(d) GNSS augmentation (e.g. SBAS, GBAS),

(e) etc.

Rationale:

The new GM is proposed to provide a non-exhaustive list of navigation equipment mentioned in AMC1 ATS.TR.265(b).

AMC1 ATS.TR.305 Scope of flight information service

TRANSMISSION OF INFORMATION

[…]

(g) Transmission of information to supersonic aircraft

The following information should be available at appropriate ACCs or flight information centres for aerodromes determined by the competent authority and should be transmitted on request to supersonic aircraft prior to commencement of deceleration/descent from supersonic cruise:

[…]

(3) ~~sufficient~~ information on the runway surface conditions to permit assessment of the ~~runway braking action~~ landing performance characteristics of the runway in use.

Rationale:

Due to the requirements for the Global Reporting Format, braking action is no longer reported but runway surface condition instead, so the relevant change is proposed accordingly.

GM1 ATS.TR.400(c) Application

CONTACT DETAILS

The contact details to be maintained in the OPS Control Directory should be those of the appropriate ATS duty supervisor position or equivalent.

Rationale:

See rationale provided to ATS.TR.400.

~~GM1 AIS.OR.105 Responsibilities of aeronautical information services providers~~

~~**AVAILABILITY OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION**~~

~~An AIS provider is not obliged to provide data or information requested by other AIS providers when they are not available.~~

GM1 AIS.OR.105(c)(1) Responsibilities of aeronautical information services (AIS) providers

PERSONNEL INVOLVED IN FLIGHT OPERATIONS, INCLUDING FLIGHT CREWS, FLIGHT PLANNING, AND FLIGHT SIMULATORS

The data services (DAT) providers are considered as one of the entities or parties listed in AIS.OR.105(c)(1). They also receive, assemble, translate, select, format, distribute and/or integrate aeronautical data and information that are released by an authoritative source for use in aeronautical databases on certified aircraft application/equipment.

AMC1 AIS.OR.105(e) Responsibilities of aeronautical information services providers

AERONAUTICAL INFORMATION PRODUCTS MADE AVAILABLE TO OTHER AIS PROVIDERS UPON REQUEST

The aeronautical data and information should be provided in a mutually agreed form. Requested aeronautical data and information may cover the following aeronautical products:

(a) Aeronautical Information Publication (AIP), including Amendments and Supplements;

(b) Aeronautical Information Circulars (AIC);

(c) NOTAM; and

(d) aeronautical charts.

GM1 AIS.OR.105(e) Responsibilities of aeronautical information services providers

Point (e) of AIS.OR.105 requires an AIS provider to obtain aeronautical data and aeronautical information, also from the AIS providers of other States, but also other sources that may be available (e.g. post-flight information sources). It also requires an AIS provider to make available to other AIS providers similar data and information that it has available.

This implies that the AIS provider needs to be suitably organised internally, so that it is able to deal with:

(a) requests of other organisations for aeronautical data and aeronautical information provided by other States – and consequently distribute such data and/or information to the organisation that requested it;

(b) similar requests for the provision of aeronautical data and information from other AIS organisations.

To facilitate such activities, an AIS provider should also make its relevant contact details for such purposes publicly available.

~~GM1 AIS.OR.105(3) Responsibilities of aeronautical information services providers~~

~~**SERVICES RESPONSIBLE FOR PRE-FLIGHT INFORMATION**~~

~~An AIS provider obtains aeronautical data and aeronautical information to provide pre-flight information service and to meet the need for in-flight information from:~~

~~(a) the aeronautical information services of other States;~~

~~(b) other sources that may be available.~~

Rationale:

As a result of the proposed transposition of the relevant Annex 15 provisions (Annex 15 standards 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.3.1) and the proposed amendments to AIS.OR.105, some of the above guidance is either no longer necessary (GM1 AIS.OR.105 and GM1 AIS.OR.105(3)) or needs to be amended (GM1 AIS.OR.105(1)) to align with the new numbering.

Moreover, a new AMC AIS.OR.105(e) is proposed, based on the content of Annex 15 standard 2.3.6 concerning the provision of aeronautical information products to AIS providers of other States. In addition, the new GM1 AIS.OR.105(e) is proposed to facilitate the implementation of the relevant legal provision that is proposed in AIS.OR.105.

~~GM1 AIS.OR.200(a) General~~

~~**AERONAUTICAL DATA CATALOGUE**~~

~~The aeronautical data catalogue presents the scope of data that can be collected and maintained by the AIS providers and provides a common terminology that can be used by data originators and service providers.~~

Rationale: *GM1 AIS.OR.200(a) is proposed to be deleted because its content does not ensure legal certainty and is not aligned with paragraph 4.1.1 of Annex 15 that specifies the information that must be collected and maintained by an AIS provider. This proposal is accompanied by a proposal to update the content of requirement AIS.OR.105, which defines the responsibilities of AISPs.*

AMC1 AIS.OR.210(a) Exchange of aeronautical data and aeronautical information

EXCHANGE MODEL

An AIS provider should use the aeronautical information exchange model (AIXM) to enable the management and distribution of aeronautical information services data in digital format. AIXM 5.1 is considered as being the minimum baseline for the exchange of aeronautical data and aeronautical information.

GM1 AIS.OR.210(a) Exchange of aeronautical data and aeronautical information

EXCHANGE MODEL

~~(a) AIXM 5.1 is considered as being the minimum baseline for the exchange of aeronautical data and aeronautical information.~~

~~(b)~~ More information on the AIXM may be found under http://www.aixm.aero/.

Rationale:

GM1 AIS.OR.210(a) is proposed to be amended, and the deleted part is proposed to be included in the related AMC1 AIS.OR.210(a). The reason for this proposal is the need to reflect the current situation in the AIS domain and at the same time ensure a minimum level of interoperability, by removing legal uncertainty.

GM2 AIS.OR.210(a) Exchange of aeronautical data and aeronautical information

DIGITAL TERRAIN DATA

(a) The existing formats for the exchange of electronic terrain data sets ~~datasets~~ do not fully meet the requirements of the ISO 19100 series on geographic information, therefore the GeoTIFF format and Shape file with metadata is preferred.

(b) The list of most used terrain formats can be found in Appendix D to the EUROCONTROL 'Terrain and Obstacle Data (TOD) Manual' (edition 3.0 ~~2.2~~, dated 4 May 2021 ~~28 November 2019~~).

Rationale:

The proposed update of this guidance addresses an update made to the relevant Eurocontrol document, released in May 2021.

AMC1 AIS.OR.220 Validation and verification

DATA PROTECTION

(a) The processes implemented to carry out validation and verification should define the means used to:

(1) verify received data and confirm that the data has been received without corruption;

(2) preserve data quality and ensure that stored data is protected from corruption; and

(3) confirm that originated data has not been corrupted prior to being stored.

(b) Those processes should define the:

(1) actions to be taken when data fails a verification or validation check; and

(2) tools required for the verification and validation process.

(c) The verification process should also cover aeronautical data and information obtained from other available sources, such as post-flight information, prior to their distribution.

Rationale:

The intent of the amendment of this AMC is to transpose Annex 15 standard 2.2.6, which calls for the verification of aeronautical data and information obtained by other sources, such as post-flight information.

~~GM1 AIS.OR.235 Error reporting, error measurement and corrective actions~~

~~**ERROR MANAGEMENT**~~

~~(a) An AIS provider should have a system for handling errors and anomalies identified both during data processing and after delivery of the data to the users.~~

~~(b) All problems reported with the data should be analysed and any errors or anomalies documented and resolved or addressed.~~

~~(c) All errors or anomalies detected in the data should be resolved or addressed prior to delivery.~~

~~(d) Information concerning any errors in the data that have been delivered should be made available to all affected users.~~

Rationale:

As a result of the proposed amendments to AIS.TR. 235, it is proposed to delete the current guidance. This is due to the fact that part of this guidance is either already included in AIS.TR.235 (e.g. points (b) and (d)) or is proposed to be part of this requirement for reasons related to legal certainty.

AMC1 AIS.OR.325 Aeronautical charts

PRODUCTION

Aeronautical charts should be produced in accordance with the specifications contained in ICAO Annex 4, Amendment No 61, except that the following symbol, annotated with the acronym 'R-ATS', should be used on an 'Aerodrome/heliport chart – ICAO' to indicate that the aerodrome ATS is provided remotely.

Rationale:

The amendment is a consequential change resulting from the proposed amendments to AIP section AD 2.23, whose sub-paragraph (2) deals with the publication of information regarding the location of the signalling lamp, and in parallel introduces charting specification for the aerodrome chart, even though the charting specifications are currently included in AMC1 AIS.OR.325 (Aeronautical charts), which in turn refers to Annex 4.

Given that Annex 4 does not contain a relevant symbol to indicate this information, there is a need to ensure the harmonisation of the published information in terms of the way such information is published. It is thus suggested to enrich AMC1 AIS.OR.325 and include an additional specification concerning the inclusion of additional information on the signalling lamp on the aerodrome chart for the cases where the remote aerodrome ATS is provided. The proposed symbol is inspired by the relevant ICAO Annex 2 figure illustrating the relevant signals and the need to be 'user-friendly', thus including the self-evident annotated text 'R-ATS'.

AMC1 AIS.OR.350 Terrain and obstacle data – General requirements

AREA 4

Where the terrain at a distance greater than 900 m (3 000 ft) from the runway threshold is mountainous or otherwise significant, the length of Area 4 should be extended to a distance not exceeding 2 000 m (6 500 ft) from the runway threshold.

GM1 AIS.OR.350 Terrain and obstacle data – General requirements

GENERAL

(a) ~~Useful~~ Information for those organisations involved in the origination, processing and provision of digital terrain and obstacle data, ~~from the point at which the need for origination is identified through to the point when the Member State makes it is made available in accordance with the requirements of ICAO Annex 15, can~~ may be found in the EUROCONTROL 'Terrain and Obstacle Data (TOD) Manual' (edition 3.0 ~~2.2~~, dated 4 May 2021 ~~28 November 2019~~).

(b) ~~In addition,~~ EUROCAE ED-98C 'User Requirements For Terrain And Obstacle Data' (October 2015) provides guidance for data gathering by data originators, for data processing by data integrators, for implementation by application integrators, and for end use by the aviation community (e.g. air carriers, air traffic services, procedure designers).

Rationale:

The proposed AMC is based on the content of GM1 AIS.TR.350(d) which, due to the proposed deletion of AIS.TR.350, needs to be accommodated in a relevant provision.

The proposed update of this guidance addresses an update made to the relevant Eurocontrol document, released in May 2021. Moreover, the text is simplified and references to Annex 15 are removed, as the applicable regulatory framework is Regulation (EU) 2017/373.

GM1 AIS.OR.355(b)(3) Terrain data sets

TAKE-OFF FLIGHT PATH AREA

The '~~T~~take-off flight path area' is ~~defined~~ described in paragraph 3.8.2 of ICAO Annex 4.

Rationale:

The amendment is proposed because paragraph 3.8.3 of ICAO Annex 4 does not contain a definition of this area, but rather its description.

GM1 AIS.OR.405(b) Pre-flight information services

OPERATIONAL SIGNIFICANCE

(a) Geographic coverage for pre-flight information services should be determined and periodically reviewed. In general, the coverage zone should be limited to the flight information region (FIR) within which the aerodrome/heliport is located, the FIR(s) adjacent thereto, and all air route or portion of route flown without an intermediate landing, originating at the aerodrome/heliport and extending beyond the FIR(s) mentioned.

(b) The elements of the aeronautical information products may be limited to national publications and when practicable, those of immediately adjacent States, provided that a complete library of aeronautical information is available at a central location and means of direct communications with that library are available.

(c) A recapitulation of valid NOTAM of operational significance and other information of urgent character can be made available to flight crews in the form of plain-language pre-flight information bulletins (PIBs).

(d) Guidance on the preparation of pre-flight information services and PIBs may be found in Part III, Chapter 10 ~~8~~ of ICAO Doc 8126 'Aeronautical Information Services Manual' and in Chapter 7 of the EUROCONTROL 'Guidelines for Operating Procedures for AIS Dynamic Data (OPADD)' (edition~~:~~ 4.1 ~~4.0~~, dated 7 December 2020~~17 April 2015~~).

Rationale:

The proposed update of this guidance addresses an update made to the relevant Eurocontrol document, released in December 2020. Moreover, the reference to ICAO Doc 8126 is updated to reflect the latest version of this document, released in 2022.

GM1 AIS.OR.410 Post-flight information services

ARRANGEMENTS FOR POST-FLIGHT INFORMATION

For each aerodrome/heliport, the AIS provider needs to have arrangements at least with the aerodrome/ heliport operator and the responsible air navigation services provider.

Post-flight information may be received from the flight crews in various forms and used by various organisations for different purposes, in the context of their responsibilities. For instance, information about the presence of wildlife presence at the aerodrome or its vicinity may be reported by the flight crew to the ATS provider, who would then pass it to the aerodrome operator for action, as part of its wildlife strike hazard reduction programme. However, this may also necessitate the distribution of relevant information by the AIS provider.

Therefore, these arrangements would need to clearly define the flow of information among the responsible entities, including the responsible persons, to make sure that such information is provided to the AIS provider in a timely manner for further distribution, as necessary.

Rationale:

The proposed guidance is expected to facilitate the implementation of the proposed requirement (AIS.OR.410) regarding post-flight information.

GM1 AIS.OR.505 Aeronautical information regulation and control (AIRAC)

AIRAC SYSTEM

Further explanations with regard to the application of the AIRAC system can be found in Part III, Chapter 3 of ICAO Doc 8126 'Aeronautical Information Services Manual' and in the EUROCONTROL Guidelines on Aeronautical Data Processes', section ADP-4.1 (edition 1.0, dated 26 November 2020). ~~Procedure for the Assessment of Information for Notification by AIRAC' (SDP/8), (edition 2.0, dated 17 July 2009)~~. ~~Additional details can be found in SDP/9, 10 and 13 for specific products.~~

Rationale:

The proposed update of this GM addresses an update made to the relevant Eurocontrol document, released in November 2020, and the relevant ICAO AIS Manual.

AMC1 AIS.TR.235 Error reporting, error measurement, and corrective actions

ERROR MANAGEMENT

(a) The AIS provider should assign one or more suitably qualified persons that has or have clearly defined authority and responsibility to coordinate all actions relating to error management, including error feedback encouragement.

(b) The mechanisms employed need to be supported by documented procedures, defining as a minimum the following:

— the necessary steps to be followed in each case;

— responsibilities of the individuals;

— methods and means to receive information from external organisations, following the delivery of aeronautical data and information;

— methods and means to inform originating organisations, without delay, including for the cases where the originated aeronautical data or information present errors, inconsistencies or anomalies and request them to conduct a root-cause analysis;

— methods and means to inform end users without delay;

— error measurement;

— description of the relationship of the AISP's error management process with its occurrence reporting responsibilities and procedures, and the means for informing the personnel responsible for reporting occurrences without delay;

— deadlines to be met.

Where necessary, relevant forms should be developed. The procedures should be part of the management system documentation.

(c) The methods and means used for recording identified problems, conducted analyses and results, corrective actions, communication with users and originators, should allow for their easy retrieval and follow up by the AIS provider.

Rationale:

This AMC is proposed with the objective of supporting the implementation of AIS.TR.235 which, although it contains detailed technical requirements, is currently not supported by relevant material. The proposed AMC also takes into account the proposed changes to AIS.TR.235 and its intent is to describe the areas that need to be covered by the relevant operating procedures that support the overall error management process and link the error management process with the occurrence reporting process.

AMC1 AIS.TR.305(a) Aeronautical information publication (AIP)

ELECTRONIC FORM

The eAIP, eAIP amendments and eAIP supplements should be provided according to the EUROCONTROL 'Specification for the Electronic Aeronautical Information Publication (eAIP)' (edition ~~2.1~~ 3.0, dated 30 November 2021 ~~6 October 2015~~).

PRINTED AIP

(a) The AIP should be published in loose-leaf form unless the complete publication is reissued at frequent intervals.

(b) A system of page numbering adaptable to the addition or deletion of sheets should be adopted. The page number should include:

(1) an identification of the part of the AIP;

(2) the section; and

(3) subsection, as applicable, thus creating a separate set of numbers for each subject (e.g. GEN 2.1-3, ENR 4.1-1 or AD 2.2-3).

(c) If it is necessary, by reason of bulk or for convenience, to publish an AIP in two or more parts or volumes, each of them will indicate that the remainder of the information is to be found in the other part(s) or volume(s).

(d) A checklist giving the current date of each page in the AIP shall be reissued frequently to assist the user in maintaining a current publication.

(e) The sheet size should be no larger than 210 × 297 mm, except that larger sheets may be used provided they are folded to the same size.

(f) When a small number of charts are to be included and chart size is not larger than 210 × 297 mm or allows for folding to these dimensions, they should be contained in the AIP. If there are many charts and they are frequently amended, they may be placed in a separate volume.

(g) Maps and charts included in the AIP should be paginated in the same manner as other material.

GM1 AIS.TR.305(a) Aeronautical information publication (AIP)

PRINTED AIP

~~(a) A system of page numbering adaptable to the addition or deletion of sheets should be adopted. The page number should include:~~

~~(1) an identification of the part of the AIP;~~

~~(2) the section; and~~

~~(3) subsection, as applicable,~~

~~thus creating a separate set of numbers for each subject (e.g. GEN 2.1-3, ENR 4.1-1 or AD 2.2-3).~~

~~(b) If it is necessary by reason of bulk or for convenience, to publish an AIP in two or more parts or volumes, each of them will indicate that the remainder of the information is to be found in the other part(s) or volume(s).~~

~~(c) When the AIP is provided in more than one volume, each volume should include:~~

~~(1) a preface;~~

~~(2) a record of AIP amendments;~~

~~(3) a record of AIP supplements;~~

~~(4) a checklist of AIP pages; and~~

~~(5) a list of current hand amendments.~~

~~(d) When the AIP is published as one volume, the above-mentioned subsections should appear only in Part 1 – GEN and the annotation 'not applicable' should be entered against each of these subsections in Parts 2 and 3.~~

~~(e) The AIP should be published in loose-leaf form unless the complete publication is reissued at frequent intervals.~~

~~(f) Further guidelines~~ Guidance for a harmonised AIP publication may be found in Part III, Chapter 2 of ICAO Doc 8126 'Aeronautical Information Services Manual' and in the EUROCONTROL 'Guidelines for harmonised AIP publication and data set provision' (edition 2.0, dated 23 May 2019).

Rationale:

The proposed update of AMC1 AIS.TR.305(a) consists of material currently contained in GM1 AIS.TR.305(a), along with certain provisions of PANS-AIM (5.2.3.1.10, 5.2.3.1.11, 5.2.3.1.12, 5.2.3.1.13) that need to be transposed. Points (c) and (d) of GM1 AIS.TR.305(a) are proposed to be deleted as they are already reproduced in the beginning of Appendix 1 (content of the AIP).

~~GM3 AIS.TR.305(c) Aeronautical information publication (AIP)~~

~~**INFORMATION RELATED TO THE AIP DATA SET**~~

~~When the AIP data set is provided, the following sections of the AIP may be left blank and a reference to the data set availability should be provided:~~

~~(a) ENR 2.1 FIR, UIR, TMA and CTA;~~

~~(b) ENR 3.1 Conventional navigation routes;~~

~~(c) ENR 3.2 Area navigation routes;~~

~~(d) ENR 3.3 Other routes;~~

~~(e) ENR 3.4 En route holding;~~

~~(f) ENR 4.1 Radio navigation aids – en route;~~

~~(g) ENR 4.4 Name-code designators for significant points;~~

~~(h) ENR 4.5 Aeronautical ground lights – en route;~~

~~(i) ENR 5.1 Prohibited, restricted and danger areas;~~

~~(j) ENR 5.2 Military exercise and training areas and air defence identification zone (ADIZ);~~

~~(k) ENR 5.3.1 Other activities of a dangerous nature;~~

~~(l) ENR 5.5 Aerial sporting and recreational activities;~~

~~(m) AD 2.17 Air traffic services airspace;~~

~~(n) AD 2.19 Radio navigation and landing aids;~~

~~(o) AD 3.16 Air traffic services airspace; and~~

~~(p) AD 3.18 Radio navigation and landing aids.~~

Rationale:

The proposed guidance is proposed to be deleted as its content is, for legal certainly and efficiency reasons, proposed to be incorporated in the relevant requirement.

~~GM4 AIS.TR.305(c) Aeronautical information publication (AIP)~~

~~**INFORMATION RELATED TO THE OBSTACLE DATA SET**~~

~~When the obstacle data set is provided, the following sections of the AIP may be left blank and a reference to the data set availability should be provided:~~

~~(a) ENR 5.4 Air navigation obstacles;~~

~~(b) AD 2.10 Aerodrome obstacles; and~~

~~(c) AD 3.10 Heliport obstacles.~~

Rationale:

The proposed guidance is proposed to be deleted as its content is, for legal certainly and efficiency reasons, proposed to be incorporated in the relevant requirement.

AMC1 AIS.TR.305(c) Aeronautical information publication (AIP)

PART 1 — GENERAL (GEN)

(a)

(1) GEN 0.1 Preface,

(2) GEN 0.2 Record of AIP Amendments,

(3) GEN 0.3 Record of AIP Supplements,

(4) GEN 0.4 Checklist of AIP pages,

(5) GEN 0.5 List of hand amendments to the AIP,

(6) GEN 0.6 Table of contents to Part 1;

(b) GEN 1. National regulations and requirements:

(1) GEN 1.1 Designated authorities,

(2) GEN 1.2 Entry, transit and departure of aircraft,

(3) GEN 1.3 Entry, transit and departure of passengers and crew,

(4) GEN 1.4 Entry, transit and departure of cargo,

(5) GEN 1.5 Aircraft instruments, equipment and flight documents.

The information to be published under this AIP section should be originated by the competent authority and briefly present the requirements with regard to the following:

— Aircraft instruments, equipment (including aircraft communication, navigation and surveillance equipment) and flight documents to be carried on the aircraft, in accordance with the applicable provisions. Such a description, should, apart from the provisions included in Regulation (EU) No 965/2012, also take into account other applicable requirements, such as airspace usage requirements, interoperability requirements, the Standardised European Rules of the Air (SERA), etc.

— Emergency locator transmitter (ELT), signalling devices and life-saving equipment for flights over designated areas in which search and rescue would be especially difficult. Regulation (EU) No 965/2012 contains such requirements in Part-CAT, Part NCC, Part-NCO, Part-SPO.

(6) GEN 1.6 Summary of national regulations and International agreements/conventions

(7) GEN 1.7 Differences from ICAO Standards, Recommended Practices and Procedures

(c) GEN 2. TABLES AND CODES

(1) GEN 2.1 Measuring system, aircraft markings, holidays

(i) GEN 2.1.1 Units of measurement

(ii) GEN 2.1.2 Temporal reference system

(iii) GEN 2.1.3 Horizontal reference system

(iv) GEN 2.1.4 Vertical reference system

(v) GEN 2.1.5 Aircraft nationality and registration marks

(vi) GEN 2.1.6 Public holidays

(2) GEN 2.2 Abbreviations used in AIS publications

(3) GEN 2.3 Chart symbols

(4) GEN 2.4 Location indicators

(5) GEN 2.5 List of radio navigation aids

(6) GEN 2.6 Conversion of units of measurement

(7) GEN 2.7 Sunrise/sunset

(d) GEN 3. SERVICES

(1) GEN 3.1 Aeronautical information services

(i) GEN 3.1.1 Responsible service

(ii) GEN 3.1.2 Area of responsibility

(iii) GEN 3.1.3 Aeronautical publications

(iv) GEN 3.1.4 AIRAC system

(v) GEN 3.1.5 Pre-flight information service at aerodromes/heliports

(vi) GEN 3.1.6 Digital data sets

(2) GEN 3.2 Aeronautical charts

(i) GEN 3.2.1 Responsible service(s)

(ii) GEN 3.2.2 Maintenance of charts

(iii) GEN 3.2.3 Purchase arrangements

(iv) GEN 3.2.4 Aeronautical chart series available

(v) GEN 3.2.5 List of aeronautical charts available

(vi) GEN 3.2.6 Index to the World Aeronautical Chart (WAC) – ICAO 1:1 000 000

(vii) GEN 3.2.7 Topographical charts

(viii) GEN 3.2.8 Corrections to charts not contained in the AIP

(3) GEN 3.3 Air traffic services (ATS)

(i) GEN 3.3.1 Responsible service

(ii) GEN 3.3.2 Area of responsibility

(iii) GEN 3.3.3 Types of services

(iv) GEN 3.3.4 Coordination between the operator and ATS

(v) GEN 3.3.5 Minimum flight altitude

(vi) GEN 3.3.6 ATS units address list

(4) GEN 3.4 Communication services

(i) GEN 3.4.1 Responsible service

(ii) GEN 3.4.2 Area of responsibility

(iii) GEN 3.4.3 Types of service

(iv) GEN 3.4.4 Requirements and conditions

(v) GEN 3.4.5 Miscellaneous

(5) GEN 3.5 Meteorological services

(i) GEN 3.5.1 Responsible service

(ii) GEN 3.5.2 Area of responsibility

(iii) GEN 3.5.3 Meteorological observations and reports

(iv) GEN 3.5.4 Types of services

(v) GEN 3.5.5 Notification required from operators

(vi) GEN 3.5.6 Aircraft reports

(vii) GEN 3.5.7 VOLMET service

(viii) GEN 3.5.8 SIGMET and AIRMET service

(ix) GEN 3.5.9 Other automated meteorological services

(6) GEN 3.6 Search and rescue (SAR)

(i) GEN 3.6.1 Responsible service(s)

(ii) GEN 3.6.2 Area of responsibility

The brief description of the area of responsibility with which SAR services are provided may be supplemented by a chart.

(iii) GEN 3.6.3 Types of service

(iv) GEN 3.6.4 SAR agreements

(v) GEN 3.6.5 Conditions of availability

(vi) GEN 3.6.6 Procedures and signals used

(e) GEN 4. CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES (ANS)

(1) GEN 4.1 Aerodrome/heliport charges

(2) GEN 4.2 Air navigation services charges

AMC2 AIS.TR.305(c) Aeronautical information publication (AIP)

PART 2 — EN-ROUTE (ENR)

(a) ENR 0.1 Table of contents to Part 2

(b) ENR 1. GENERAL RULES AND PROCEDURES

- (1) ENR 1.1 General rules
- (2) ENR 1.2 Visual flight rules
- (3) ENR 1.3 Instrument flight rules
  - (i) ENR 1.3.1 Rules applicable to all IFR flights
  - (ii) ENR 1.3.2 Rules applicable to IFR flights within controlled airspace
  - (iii) ENR 1.3.3 Rules applicable to IFR flights outside controlled airspace
  - (iv) ENR 1.3.4 Free route airspace (FRA) general procedures
- (4) ENR 1.4 ATS airspace classification and description
  - (i) ENR 1.4.1 ATS airspace classification
  - (ii) ENR 1.4.2 ATS airspace description
- (5) ENR 1.5 Holding, approach and departure procedures
  - (i) ENR 1.5.1 General
  - (ii) ENR 1.5.2 Arriving flights
  - (iii) ENR 1.5.3 Departing flights
  - (iv) ENR 1.5.4 Other relevant information and procedures
- (6) ENR 1.6 ATS surveillance services and procedures
  - (i) ENR 1.6.1 Primary radar
  - (ii) ENR 1.6.2 Secondary surveillance radar (SSR)
  - (iii) ENR 1.6.3 Automatic dependent surveillance – broadcast (ADS-B)
  - (iv) ENR 1.6.4 Other relevant information and procedures

(7) ENR 1.7 Altimeter setting procedures

(8) ENR 1.8 ICAO regional supplementary procedures

(9) ENR 1.9 Air traffic flow management (ATFM) and airspace management

(10) ENR 1.10 Flight planning

(11) ENR 1.11 Addressing of flight plan messages

(12) ENR 1.12 Interception of civil aircraft

(13) ENR 1.13 Unlawful interference

(14) ENR 1.14 Air traffic incidents

(c) ENR 2. AIR TRAFFIC SERVICES AIRSPACE

(1) ENR 2.1 FIR, UIR, TMA and CTA

(2) ENR 2.2 Other regulated airspace

(d) ENR 3. ATS ROUTES

(1) ENR 3.1 Conventional navigation routes

(2) ENR 3.2 Area navigation routes

(3) ENR 3.3 Other routes

(4) ENR 3.4 En-route holding

(e) ENR 4. RADIO NAVIGATION AIDS/SYSTEMS

(1) ENR 4.1 Radio navigation aids – en-route

(2) ENR 4.2 Special navigation systems

(3) ENR 4.3 Global navigation satellite system (GNSS)

(4) ENR 4.4 Name-code designators for significant points

(5) ENR 4.5 Aeronautical ground lights – en-route

(f) ENR 5. NAVIGATION WARNINGS

(1) ENR 5.1 Prohibited, restricted and danger areas

With regard to UAS, information on UAS geographical zones that are relevant to manned aircraft operations.

(2) ENR 5.2 Military exercise and training areas and air defence identification zone (ADIZ)

(3) ENR 5.3 Other activities of a dangerous nature and other potential hazards

(i) ENR 5.3.1 Other activities of a dangerous nature

For UAS geographical zones, information on where and how the relevant data is publicly available in the common unique digital format.

(ii) ENR 5.3.2 Other potential hazards

(4) ENR 5.4 Air navigation obstacles

(5) ENR 5.5 Aerial sporting and recreational activities

(6) ENR 5.6 Bird migration and areas with sensitive fauna

(g) ENR 6. EN-ROUTE CHARTS

AMC3 AIS.TR.305(c) Aeronautical information publication (AIP)

PART 3 — AERODROMES (AD)

(a) AD 1. AERODROMES/HELIPORTS – INTRODUCTION

(1) AD 1.1.1 General conditions

(2) AD 1.1.2 Use of military air bases

(3) AD 1.1.3 Low visibility procedures (LVPs)

(4) AD 1.1.4 Aerodrome operating minima

(5) AD 1.1.5 Other information

(6) AD 1.2.1 Rescue and firefighting services

(7) AD 1.2.2 Runway surface condition assessment and reporting, and snow plan

(8) AD 1.3 Index of aerodromes and heliports

(9) AD 1.4 Grouping of aerodromes/heliports

(10) AD 1.5 Status of certification of aerodromes

(b) AD 2. AERODROMES

(1) Information regarding exceptions, derogations and limitations concerning aerodromes

For each aerodrome, whenever an exemption, derogation or similar case regarding compliance of the aerodrome and its services with the applicable requirements exists, a relevant description of the situation, including any resulting limitations or specific procedures relating to the use of the aerodrome, should be published under the 'remarks' of the corresponding AIP section.

The description should be brief and provide factual information that may be easily understood by the airspace users, without making references to legal requirements (e.g. aerodrome design specifications).

The description should also include a timeline for the future compliance with the respective requirement and the removal of the exemption/derogation or similar case.

The relevant information is to be originated by the respective aerodrome operator and its content requires coordination with its competent authority.

(2) **** AD 2.1 Aerodrome location indicator and name

(3) **** AD 2.2 Aerodrome geographical and administrative data

(4) **** AD 2.3 Operational hours

Apart from the detailed description of the hours of operation of services at the aerodrome, a clear indication should be given in the case the aerodrome ATS is provided remotely (days and hours).

(5) **** AD 2.4 Handling services and facilities

(6) **** AD 2.5 Passenger facilities

(7) **** AD 2.6 Rescue and firefighting services

(8) **** AD 2.7 Runway surface condition assessment and reporting, and snow plan

(9) **** AD 2.8 Aprons, taxiways and check locations/positions data

Regarding the publication of information concerning the pavement strength and aerodrome reference code letter, the following apply:

(i) The bearing strength, expressed in PCR, is published only for pavements intended for aircraft of apron (ramp) mass greater than 5 700 kg.

The bearing strength of a pavement intended for aircraft of apron (ramp) mass equal to or less than 5 700 kg is made available using the following information:

(A) maximum allowable aircraft mass; and

(B) maximum allowable tire pressure.

(ii) Any limitations to the operation of aircraft resulting from the aerodrome reference code letter or pavement strength should be published under the ‘remarks’.

(10) **** AD 2.9 Surface movement guidance and control system and markings

(11) **** AD 2.10 Aerodrome obstacles

(12) **** AD 2.11 Meteorological information provided

(13) **** AD 2.12 Runway physical characteristics

Regarding the publication of information concerning the pavement strength and the aerodrome reference code, the following apply:

(i) The bearing strength, expressed in PCR, needs to be published only for pavements intended for aircraft of apron (ramp) mass greater than 5 700 kg.

The bearing strength of a pavement intended for aircraft of apron (ramp) mass equal to or less than 5 700 kg needs to be made available using the following information:

(A) maximum allowable aircraft mass; and

(B) maximum allowable tire pressure.

(ii) Any limitations to the operation of aircraft resulting from the aerodrome reference code or pavement strength should be published under the ‘remarks’.

(14) **** AD 2.13 Declared distances

(15) **** AD 2.14 Approach and runway lighting

(16) **** AD 2.15 Other lighting, secondary power supply

With regard to the signalling lamp:

(i) when no remote aerodrome ATS are provided at the aerodrome, the location 'aerodrome control tower' should be indicated;

(ii) in the case the aerodrome ATS is provided remotely, a description of the exact location of the signalling lamp should be provided; this information should be supplemented by its geographical coordinates in degrees, minutes and seconds.

(17) **** AD 2.16 Helicopter landing area

(18) **** AD 2.17 Air traffic services airspace

(19) **** AD 2.18 Air traffic services communication facilities

If remote aerodrome ATS is provided to more than one aerodrome/heliport by the same remote ATS centre (multiple mode of operation), a clear description of any specific communication methods deemed necessary, such as the inclusion of aerodrome/heliport name/ATS unit call sign for all transmissions (i.e. not only for the first contact) between pilots and ATCOs/aerodrome flight information service offices (AFISOs), should be made available.

(20) **** AD 2.19 Radio navigation and landing aids

(21) **** AD 2.20 Local aerodrome regulations

(22) **** AD 2.21 Noise abatement procedures

(23) **** AD 2.22 Flight procedures

(24) **** AD 2.23 Additional information

(25) **** AD 2.24 Aeronautical charts related to an aerodrome

(26) **** AD 2.25 Visual segment surface (VSS) penetration

(27) **** AD 2.26 Apron management service communication facilities.

(c) AD 3. Heliports

(1) **** AD 3.1 Heliport location indicator and name

(2) **** AD 3.2 Heliport geographical and administrative data

(3) **** AD 3.3 Operational hours

Apart from the detailed description of the hours of operation of services at the heliport, a clear indication should be given in the case the ATS is provided remotely (days and hours).

(4) **** AD 3.4 Handling services and facilities

(5) **** AD 3.5 Passenger facilities

(6) **** AD 3.6 Rescue and firefighting services

(7) **** AD 3.7 Seasonal availability – clearing

(8) **** AD 2.8 Aprons, taxiways and check locations/positions data

(9) **** AD 3.9 Markings and markers

(10) **** AD 3.10 Heliport obstacles

(11) **** AD 3.11 Meteorological information provided

(12) **** AD 3.12 Heliport data

(13) **** AD 3.13 Declared distances

(14) **** AD 3.14 Approach and FATO lighting

(15) **** AD 3.16 Air traffic services airspace

(16) **** AD 3.15 Other lighting, secondary power supply

With regard to the signalling lamp:

(i) when ATS are not provided remotely, the location 'heliport control tower' should be indicated;

(ii) in the case the ATS is provided remotely, a description of the exact location of the signalling lamp should be provided; this information should be supplemented by its geographical coordinates in degrees, minutes and seconds.

(17) **** AD 3.17 Air traffic services communication facilities

If ATS is provided remotely to more than one aerodrome/heliport by the same remote ATS centre (multiple mode of operation), a clear description of any specific communication methods deemed necessary, such as the inclusion of aerodrome/heliport name/ATS unit call sign for all transmissions (i.e. not only for the first contact) between pilots and ATCOs / aerodrome flight information service offices (AFISOs), should be made available.

(18) **** AD 3.18 Radio navigation and landing aids

(19) **** AD 3.19 Local heliport regulations

(20) **** AD 3.20 Noise abatement procedures

(21) **** AD 3.21 Flight procedures

(22) **** AD 3.22 Additional information

(23) **** AD 3.23 Charts related to a heliport

GM1 AIS.TR.305(c) Aeronautical information publication (AIP)

PART 1 – GENERAL (GEN)

(a)

(1) GEN 0.1 Preface

(2) GEN 0.2 Record of AIP Amendments

(3) GEN 0.3 Record of AIP Supplements

(4) GEN 0.4 Checklist of AIP pages

(5) GEN 0.5 List of hand amendments to the AIP

(6) GEN 0.6 Table of contents to Part 1

(b) GEN 1. National regulations and requirements

(1) GEN 1.1 Designated authorities

(2) GEN 1.2 Entry, transit and departure of aircraft

(3) GEN 1.3 Entry, transit and departure of passengers and crew

(4) GEN 1.4 Entry, transit and departure of cargo

(5) GEN 1.5 Aircraft instruments, equipment and flight documents

(6) GEN 1.6 Summary of national regulations and International agreements/conventions

(7) GEN 1.7 Differences from ICAO Standards, Recommended Practices and Procedures

(c) GEN 2. TABLES AND CODES

(1) GEN 2.1 Measuring system, aircraft markings, holidays

(i) GEN 2.1.1 Units of measurement

(ii) GEN 2.1.2 Temporal reference system

(iii) GEN 2.1.3 Horizontal reference system

(iv) GEN 2.1.4 Vertical reference system

(v) GEN 2.1.5 Aircraft nationality and registration marks

(vi) GEN 2.1.6 Public holidays

(2) GEN 2.2 Abbreviations used in AIS publications

(3) GEN 2.3 Chart symbols

(4) GEN 2.4 Location indicators

(5) GEN 2.5 List of radio navigation aids

(6) GEN 2.6 Conversion of units of measurement

(7) GEN 2.7 Sunrise/sunset

(d) GEN 3. SERVICES

(1) GEN 3.1 Aeronautical information services

(i) GEN 3.1.1 Responsible service

(ii) GEN 3.1.2 Area of responsibility

(iii) GEN 3.1.3 Aeronautical publications

(iv) GEN 3.1.4 AIRAC system

(v) GEN 3.1.5 Pre-flight information service at aerodromes/heliports

(vi) GEN 3.1.6 Digital data sets

(2) GEN 3.2 Aeronautical charts

(i) GEN 3.2.1 Responsible service(s)

(ii) GEN 3.2.2 Maintenance of charts

(iii) GEN 3.2.3 Purchase arrangements

(iv) GEN 3.2.4 Aeronautical chart series available

(v) GEN 3.2.5 List of aeronautical charts available

(vi) GEN 3.2.6 Index to the World Aeronautical Chart (WAC) – ICAO 1:1 000 000

(vii) GEN 3.2.7 Topographical charts

(viii) GEN 3.2.8 Corrections to charts not contained in the AIP

(3) GEN 3.3 Air traffic services (ATS)

(i) GEN 3.3.1 Responsible service

(ii) GEN 3.3.2 Area of responsibility

(iii) GEN 3.3.3 Types of services

(iv) GEN 3.3.4 Coordination between the operator and ATS

(v) GEN 3.3.5 Minimum flight altitude

(vi) GEN 3.3.6 ATS units address list

(4) GEN 3.4 Communication services

(i) GEN 3.4.1 Responsible service

(ii) GEN 3.4.2 Area of responsibility

(iii) GEN 3.4.3 Types of service

(iv) GEN 3.4.4 Requirements and conditions

(v) GEN 3.4.5 Miscellaneous

(5) GEN 3.5 Meteorological services

(i) GEN 3.5.1 Responsible service

(ii) GEN 3.5.2 Area of responsibility

(iii) GEN 3.5.3 Meteorological observations and reports

(iv) GEN 3.5.4 Types of services

(v) GEN 3.5.5 Notification required from operators

(vi) GEN 3.5.6 Aircraft reports

(vii) GEN 3.5.7 VOLMET service

(viii) GEN 3.5.8 SIGMET and AIRMET service

(ix) GEN 3.5.9 Other automated meteorological services

(6) GEN 3.6 Search and rescue (SAR)

(i) GEN 3.6.1 Responsible service(s)

(ii) GEN 3.6.2 Area of responsibility

The brief description of the area of responsibility with which SAR services are provided may be supplemented by a chart.

(iii) GEN 3.6.3 Types of service

(iv) GEN 3.6.4 SAR agreements

(v) GEN 3.6.5 Conditions of availability

(vi) GEN 3.6.6 Procedures and signals used

(e) GEN 4. CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES (ANS)

(1) GEN 4.1 Aerodrome/heliport charges

(2) GEN 4.2 Air navigation services charges

GM2 AIS.TR.305(c) Aeronautical information publication (AIP)

PART 2 – EN-ROUTE (ENR)

[…]

GM2 AIS.TR.305(c) Aeronautical information publication (AIP)

PART 3 – AERODROMES (AD)

[…]

Rationale:

Currently, the AMC and GM that are associated with the AIP content do not follow the order of the AIP sections, but are rather numbered according to the order they are introduced. As a result, an AMC which may for instance relate to an AIP section of the GEN part will instead be located after another AMC which relates to an AIP section of the AD part. This problem exists because all AMC/GM related to AIP are linked to a single regulatory requirement. EASA understands that this situation may be confusing, affect readability, and in summary be sub-optimal for the end user.

One way to address this issue would be to renumber all relevant AMC/GM every time a new AMC/GM related to the AIP content is introduced, to ensure that they are always in order according to the AIP

Part they belong to. However, this solution is considered as inappropriate, as these rearrangements will obviously lack efficiency and will again confuse the end users.

EASA has determined that the best way to address this problem is to avoid the introduction of new AMC/GM for each AIP section, but rather introduce a single AMC and a single GM for each AIP part (GEN, ENR, AD). Each AMC/GM of each AIP part would follow the structure of the relevant part of the AIP. Thus, whenever there is a need to introduce a new AMC/GM text for a given AIP section, this would be inserted under the respective placeholder of the existing AMC/GM.

To better understand the proposed concept, a new AMC1 AIS.TR.305(c) (dedicated to Part GEN of the AIP) is developed, which:

- *under GEN 1.5, accommodates a new AMC text that has been developed as part of the review of the relevant requirement; and*
- *under GEN 3.6.2, contains a new text regarding the use of chart to supplement the description of SAR responsibilities, based on a relevant note of ICAO PANS-AIM.*

This proposed new AMC1 AIS.TR.305(c) will be used whenever necessary in the future to accommodate additional text for any needed section of the GEN part, without introducing additional AMC.

In the same manner, for the Aerodromes (AD) part of the AIP, a new AMC3 AIS.TR.305(c) is developed, whose text relates to the following AIP sections.

- ***AD 2.** Aerodromes (information regarding exceptions, derogations and limitations concerning aerodromes): this part of the AMC supports the implementation of the need to publish in the AIP information regarding cases of non-compliance with the applicable requirements, whose knowledge is necessary to airspace users for safety reasons. Such information may concern the aerodrome itself or required aerodrome services. Indeed, the need for making public such safety-relevant information is mentioned in ICAO Doc 9734 (Safety Oversight Manual) Part A. This is already reflected in ADR.OR.C.005 and AMC1 ADR.OR.C.005(c) of Regulation (EU) No 139/2014. However, neither Annex 15 nor PANS-AIM or any other ICAO document contain relevant guidance as to the how the publication of such information should be done, which in turn has given rise to questions by the AISP as to how the publication of such information should be done, to ensure a harmonised and meaningful implementation.*

  The logic of the proposed solution is to make sure that the information provided is always associated with the relevant section and is always published under the 'remarks', thus enabling the end users to locate it easily, without referring to other non-relevant AIP sections. Moreover, the way the information is proposed to be published resolves the issue of the simple publication of the titles of the legal requirements in the AIP, a practice that does not provide any practical benefit to the end users, who need concise and easy-to-use information about the current situation.

- ***AD 2.3.** Operational hours: this part of the AMC intends to facilitate the provision of information regarding the hours that aerodrome ATS is provided remotely.*

- ***AD 2.8.** Aprons, taxiways and check locations/positions data: this part of the AMC supports the implementation of the new concept introduced in Annex 14 regarding reporting pavement bearing strength. It supports the way in which such information needs to be published in the AIP, under AD 2.8, by specifying when PCR needs to be published for pavement strength and when other information needs to be published. This is because the ICAO ADC is not currently consistent with ICAO Annex 14 on this subject. Moreover, this AMC addresses the case of limitations imposed on*

aircraft operation, which are the result of physical/geometric characteristics of the aerodrome (reference code) and the strength of the relevant surfaces.

— ***AD 2.12.*** *Runway physical characteristics: as in AD 2.8.*

— ***AD 2.15.*** *Other lighting, secondary power supply: this part of the AMC supports the review of AD 2.23, and in particular the need to clearly indicate in the AIP the location of the signalling lamp at an aerodrome when the ATS is provided remotely and the signalling lamp is physically located elsewhere at the aerodrome (e.g. terminal building or a mast), due to the physical absence of the ATS unit.*

— ***AD 2.18.*** *Air traffic services communication facilities: this part of the AMC supports the harmonised provision of information concerning any specific communication methods in the case where the same remote ATS centre provides its services to more than one aerodrome/heliport (multiple mode of operation).*

— ***AD 3.3.*** *Operational hours: as in AD 2.3.*

— ***AD 3.15.*** *Other lighting, secondary power supply: as in AD2.15.*

— ***AD 3.17.*** *Air traffic services communication facilities: as in AD 2.18.*

The Agency intends to incorporate in the respective part of the proposed AMC3 AIS.TR.305(c) the relevant text of all existing AMC, without any content change: AMC1 AIS.TR.305(c), AMC2 AIS.TR.305(c), AMC3 AIS.TR.305(c), AMC4 AIS.TR.305(c) concerning 'AD 1.2.2 RUNWAY SURFACE CONDITION ASSESSMENT AND REPORTING, AND SNOW PLAN', 'AD 2.7 RUNWAY SURFACE CONDITION ASSESSMENT AND REPORTING AND SNOW PLAN', 'AD 2.14 APPROACH AND RUNWAY LIGHTING', 'AD 2.25 VISUAL SEGMENT SURFACE (VSS) PENETRATION'. For space-saving reasons, these are not reproduced in the above draft AMC. A similar approach is proposed to be followed for the relevant guidance material related to this particular requirement.

Similarly, for the en-route part of the AIP, a draft AMC2 AIS.TR.305(c) is proposed, in which EASA proposes the incorporation of AIS-related materials that are found elsewhere (e.g. AMC2 Article 15(3) Operational conditions for UAS geographical zones), and in particular:

— *ENR 5.1 Prohibited, restricted and danger areas, which relates to UAS geographical zones relevant to manned aircraft operations; and*

— *ENR 5.3.1 Other activities of a dangerous nature, which clarifies the publishable content in respect to UAS geographical zones.*

To better illustrate the proposal, a draft GM1 AIS.TR.305(c) for part GEN is also included in the proposal.

If the proposed concept is considered acceptable, then the draft GM1 AIS.TR.305(c) will be complemented by GM2 AIS.TR.305(c) for Part ENR; and GM3 AIS.TR.305(c) for Part AD, incorporating without change the content of all currently available GM (e.g. GM5 AIS.TR.305(c), GM6 AIS.TR.305(c)),

The Agency therefore invites its stakeholders to provide their feedback about:
— the actual content of the proposed sections of AMC; and
— the proposal for the overall restructuring of the AMC/GM concerning this requirement regarding the AIP as explained above, including any alternative solutions that would prevent the need for renumbering the AMC in the future.

thus resulting in only three AMC and three GM relating to the AIP content, whose internal structure will follow that of the AIP and which would be able to serve any future needs.

AMC1 AIS.TR.305(m); (n); (o); (p) Aeronautical information publication (AIP)

AVAILABILITY OF AIP DATA SET AND OBSTACLE DATA SET

(a) Approval of the competent authority

Prior to introducing any change to the aeronautical products, the AISP should agree with its competent authority the course of action, including the required testing procedures regarding the provision of digital data sets. This agreement should also encompass the case of the provision of new digital data sets, the case of the omission of the respective AIP sections and the case where the AIP and the AIP data set and/or the obstacle data set are all made available (it has been decided to maintain and provide both type of aeronautical products as aeronautical products).

(b) Testing period

Prior to the official release of a data set by the AISP, the candidate data set should be tested for an adequate period, allowing various actual updates (four to six update cycles) of the data set content to take place.

During this period, the data set tested should be made publicly available, under the same conditions that the AIP is made available, with the clear indication that it is undergoing a testing process and that only the AIP is the official source of aeronautical data and information. Records of any identified or reported issues and of their analyses and corrective actions taken should be maintained by the AISP.

Once the testing phase has been concluded and the AISP has demonstrated to the satisfaction of the competent authority that the data set tested meets the applicable requirements, the AISP may, subject to the approval of the competent authority, make the data set available as an aeronautical product. Making a data set available as an aeronautical product should be considered a major change and therefore acted upon as per AIS.TR.505.

(c) Omission of AIP sections

The respective AIP sections may be left blank only if:

(1) the respective data set has been provided as an aeronautical product for at least 13 update cycles, but no longer than 18 months;

(2) during that period:

(i) the respective data sets were provided in accordance with the AIRAC provisions,

(ii) no difficulties in the use of the respective data set have been reported by the end users,

(iii) no discrepancies between the AIP and the respective data sets have been identified or reported;

(3) the omission of the AIP sections has been announced in a timely fashion.

(d) Provision of both AIP and digital data sets

Where the AIP and digital data sets are both provided as aeronautical products, their equal legal status should be clearly indicated. In addition, specific procedures should be developed and implemented to ensure the continuous consistency of the aeronautical data and information that is included in the concerned AIP sections and the respective data sets.

Rationale:

This AMC supports the implementation of the proposed provisions regarding the provision of data sets and the possible omission of the respective AIP sections, including the case where all AIP sections continue to be made available along with the respective data sets as official publications. The content of the AMC is based on the 'EUROCONTROL Guidelines for harmonised AIP publication and data set provision' released in 2022, adjusted to align with the proposed amendments of the relevant requirements.

AMC1 AIS.TR.320(a) Aeronautical information circular (AIC)

ELECTRONIC FORM

When AICs are provided as part of the 'electronic AIP', they should comply with the EUROCONTROL 'Specification for the Electronic Aeronautical Information Publication (eAIP)' (edition 3.0 ~~2.1~~, dated 30 November 2021 ~~6 October 2015~~).

Rationale:

The proposed update of this AMC addresses an update made to the relevant Eurocontrol document, released in November 2021.

AMC1 AIS.TR.330 NOTAM

USE OF OPADD

The origination and issuing of NOTAM by the AIS provider should be in accordance with the EUROCONTROL 'Guidelines for Operating Procedures for AIS Dynamic Data (OPADD)' (edition 4.1 ~~0~~, dated 7 December 2020~~17 April 2015~~).

Any references to provisions contained in ICAO Annex 15, PANS-AIM and other related ICAO documents should be understood as references to the corresponding provisions of the EU regulatory framework.

Rationale:

The AMC is proposed to be updated to the latest version of the Eurocontrol OPADD, published in 2020. Moreover, as in some cases the OPADD itself makes references to ICAO provisions which may be different from those of the EU, there is a need to ensure that such references are in fact made to the applicable regulatory material.

~~GM1 AIS.TR.350(d) Terrain and obstacle data – General requirements~~

~~AREA 4~~

~~Where the terrain at a distance greater than 900 m (3 000 ft) from the runway threshold is mountainous or otherwise significant, the length of Area 4 should be extended to a distance not exceeding 2 000 m (6 500 ft) from the runway threshold.~~

Rationale:

GM1 AIS.TR.350(d) is proposed to be deleted and its content to be an AMC to the AIS.OR.350.

GM1 AIS.TR.510(~~a~~ d) NOTAM

ADVANCE NOTICE

~~(a)~~ Whenever possible, an at least 24 hours' advance notice is desirable, to permit timely completion of the notification process and to facilitate airspace utilisation planning.

~~(b) Notice of any subsequent cancellation of the activities or any reduction of the hours of activity or the dimensions of the airspace should be given as soon as possible.~~

Rationale:

GM1 AIS.TR.510(a) is proposed to be updated, as a result of the proposed introduction of the new point (d) to the requirement AIS.TR.510.

Appendix 1 – AMC to the aeronautical data catalogue

AMC1 Appendix 1 (a) Aeronautical data catalogue

AERONAUTICAL DATA CATALOGUE[15]

(a) For data concerning aerodromes/heliports, the specifications contained in 'Table 1. Aerodrome/heliport data' should be used.

(b) For data concerning airspace, the specifications contained in 'Table 2. Airspace data' should be used.

[15] Normally, 'Table 1. Aerodrome/heliport data', 'Table 2. Airspace data', 'Table 3. ATS and other routes', 'Table 4. Instrument flight procedure data', 'Table 5. Radio navigation aids/systems data', 'Table 6. Obstacle data', and 'Table 7. Geographic data', because they are proposed as new AMC, should be highlighted in blue in their entirety. This however would not allow the identification of the proposed changes in relation to the original text. To resolve this, only the proposed amendments are highlighted in blue.

(c) For data concerning ATS and other routes, the specifications contained in 'Table 3. ATS and other routes' should be used.

(d) For data concerning instrument flight procedures, the specifications contained in 'Table 4. Instrument flight procedure data' should be used.

(e) For data concerning radio navigation aids/systems, the specifications contained in 'Table 5. Radio navigation aids / systems data' should be used.

(f) For data concerning obstacles, the specifications contained in 'Table 6. Obstacle data' should be used.

(g) For geographic data, the specifications contained in 'Table 7. Geographic data' should be used.

(h) For the data types referred to in column 4 'Type' of the tables referred to in points (a) to (g), the following apply:

Type	Description	Data items
Point	A pair of coordinates (latitude and longitude) referenced to the mathematical ellipsoid, which define the position of the point on the surface of the Earth	Latitude Longitude Horizontal reference system Units of measurement Horizontal accuracy achieved
Line	Sequence of points defining a linear object	Sequence of points
Polygon	Sequence of points forming the boundary of the polygon; the first and last points are identical	Closed sequence of points
Height	The vertical distance of a level, point or an object, considered as a point, measured from a specific datum	Numerical value Vertical reference system Units of measurement Vertical accuracy achieved
Altitude	The vertical distance of a level, point or an object, considered as a point, measured from the MSL	Numerical value Vertical reference system Units of measurement Vertical accuracy achieved
Elevation	The vertical distance of a point or a level on, or affixed to, the surface of the Earth, measured from the MSL	Numerical value Vertical reference system Units of measurement Vertical accuracy achieved
Distance	A linear value	Numerical value Units of measurement Accuracy achieved
Angle/bearing	An angular value	Numerical value Units of measurement Accuracy achieved
Value	Any measured, declared or derived value not listed above	Numerical value Units of measurement

		Accuracy achieved
Date	A calendar date referencing a particular day or month	Text
Schedule	A repetitive time period composed of one or more intervals or special dates (e.g. holidays) occurring cyclically	Text
Code list	A set of predefined text strings or values	Text
Text	Free text	String of characters without constraints

Table 1. Aerodrome/heliport data

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
Aerodrome/ Heliport				A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.						
……										
		Other	Text	A locally defined ~~airport~~ aerodrome/heliport identifier, if other than an ICAO location indicator						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Name		Text	The primary official name of an aerodrome/heliport as designated by the competent authority						
……										
	Control type		Text	Indication if an aerodrome/heliport is under civil control, military control or joint control						
	Certification ~~ed~~		Text	Indication if an aerodrome/heliport is/is not certified in accordance with the ICAO provisions ~~rules~~ or						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				Regulation (EU) No 139/2014						
	Certification date		Date	The date when the aerodrome/heliport ~~airport~~ certification was issued by the competent authority						
	Certification expiration date		Date	The date when the aerodrome/heliport certification becomes invalid						
……										
		Geoid undulation	Height	The geoid undulation at the aerodrome/heliport elevation position	Where appropriate	0.5 m	Essential	Surveyed	1 m or 1 ft	1 m or 1 ft

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Temperature									
	~~Reference temperature~~	Reference temperature	Value	The monthly mean of the daily maximum temperatures for the hottest month of the year at an aerodrome; this temperature must be averaged over a period of years						
	~~Mean low temperature~~	Mean low temperature	Value	The mean lowest temperature of the coldest month of the year, for the last 5 years of data at the aerodrome elevation		5 degrees				

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
……										
		Distance	Distance	Distance of the aerodrome reference point from the centre of the city or town which the aerodrome serves						
	Aerodrome operator		Contact	Information required to enable contact with the responsible person at the aerodrome						
	Operational hours			Detailed description of the hours of operation of services at the aerodrome						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Aerodrome operator	Schedule	Hours of operation of the aerodrome operator						
		Customs and immigration	Schedule	Hours of operation of customs and immigration						
		Health and sanitation	Schedule	Hours of operation of health and sanitation						
		AIS briefing office	Schedule	Hours of operation of the AIS briefing office						
		ATS reporting office (ARO)	Schedule	Hours of operation of the ARO						
		MET briefing office	Schedule	Hours of operation of the MET briefing office						
		Air traffic service	Schedule	Hours of operation of air traffic service						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Apron management service	Schedule	Hours of operation of apron management service						
		Fuelling	Schedule	Hours of operation of fuelling						
		Handling	Schedule	Hours of operation of handling						
		Security	Schedule	Hours of operation of security						
		De-icing	Schedule	Hours of operation of de-icing						
		Remarks	Text	Any other information on the operational hours						
	Area of responsibility			The boundaries of the Air Traffic Service						
		Boundary	Polygon	Area boundary of						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				the area of responsibility						
		Remarks	Text	Any other information on the area of responsibility						
	Status		Code list	Operational status of the aerodrome (open, closed, abandoned)						
	Remarks		Text	Any other general information on the aerodrome						
Meteorological information				Detailed description of meteorological information provided at the aerodrome and an indication of which meteorological office is responsible						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				for the service						
	Name of MET office		Text	Name of the associated meteorological office						
	Hours of service		Schedule	Hours of service and, where applicable, the designation of the responsible meteorological office outside these hours						
	Office responsible for the preparation of TAFs		Text	Office responsible for the preparation of TAFs and periods of validity and interval of issuance of the forecasts						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Availability of the trend forecasts		Text	Availability of the trend forecasts for the aerodrome and interval of issuance						
	Briefing and consultation		Text	Information on how briefing and/or consultation is provided						
	Types of flight documentation		Text	Types of flight documentation supplied and language(s) used in flight documentation						
	Charts and other information displayed		Text	Charts and other information displayed or available for briefing or consultation						
	Supplementary equipment		Text	Supplementary equipment						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				available for providing information on meteorological conditions, for example weather radar and receiver for satellite images						
	Air traffic services unit(s)		Text	Air traffic services unit(s) provided with meteorological information						
	Additional information		Text	Additional information (e.g. concerning any limitation of service)						
Regulations										
	Local aerodrome regulations		Text	Detailed description of regulations						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				applicable to the use of the aerodrome, including the acceptability of training flights, non-radio and microlight aircraft and similar, and to ground manoeuvring and parking but excluding flight procedures						
	Noise abatement procedures		Text	Detailed description of noise abatement procedures established at the aerodrome						
Handling services and facilities										

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Cargo handling facilities		Text	Description of cargo handling facilities						
	Fuel and oil types		Text	Description of fuel and oil types						
	Fuelling facilities and capacity		Text	Description of fuelling facilities and capacity						
	De-icing facilities		Text	Description of de-icing facilities						
	Hangar space for visiting aircraft		Text	Description of hangar space for visiting aircraft						
	Repair facilities for visiting aircraft		Text	Description of repair facilities for visiting aircraft						
	Remarks		Text	Any other information on handling services and facilities						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
Passenger facilities										
	Hotel(s)		Text	Hotel(s) at or in the vicinity of the aerodrome						
	Restaurant(s)		Text	Restaurant(s) at or in the vicinity of the aerodrome						
	Transportation possibilities		Text	Transportation possibilities at or in the vicinity of the aerodrome						
	Medical facilities		Text	Medical facilities at or in the vicinity of the aerodrome						
	Bank and post office		Text	Bank and post office at or in the vicinity of the aerodrome						
	Tourist office		Text	Tourist office at or in the vicinity of the aerodrome						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Remarks		Text	Any other information on passenger facilities						
Rescue and firefighting services										
	Aerodrome category for firefighting		Text	Aerodrome category for firefighting based on the longest aeroplanes normally using the aerodrome and their fuselage width						
	Rescue equipment		Text	Description of the rescue equipment						
	Removal of disabled aircraft		Text	Description of the capability for removal of disabled aircraft						
	Remarks		Text	Any other information on rescue and						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				firefighting services						
Runway surface condition assessment and reporting, and snow plan										
	Information on runway surface condition assessment and reporting		text							
	Description of the equipment and operational priorities for the clearance of aerodrome movement areas		text	Detailed description of the equipment and operational priorities established for the clearance of aerodrome movement areas of the aerodrome						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Type(s) of clearing equipment	text	Type(s) of clearing equipment available at the aerodrome						
		Clearance priorities	text	Description of the clearance priorities						
		Material for movement area surface treatment	text	Description of the material used						
		Specially prepared winter runways	text	Information as to whether the runway has been approved as such						
		Remarks	text	Any other information						
Wildlife										
	Wildlife concentration		text	Description of wildlife concentration at the aerodrome vicinity						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Movement of wildlife		text	Description of daily movement of wildlife between resting and feeding areas						
Flight procedures			text							
	Conditions and flight procedures		text	Description of conditions and flight procedures, including radar and/or ADS-B procedures, established on the basis of airspace organisation at the aerodrome						
	Low visibility procedures		text	Description of the LVP at the aerodrome/heliport, including: — runway(s) and						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				associated equipment authorised for use when LVP are in effect, including for operations with operational credits with RVR less than 550 m, if applicable; — defined meteorological conditions under which initiation, use and termination of LVP would be made; — description of ground marking/lighting for use under LVP; and any remarks						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Actions of airspace users		text	Actions required by the airspace users following an emergency / abnormal situation and possible contingency measures by the ATS provider in case of disruptions established on the basis of airspace organisation at the aerodrome						
……										
Aerodrome / heliport beacon (ABN) / identification beacon (IBN)				Aerodrome beacon / identification beacon used to indicate the location of an						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				aerodrome/heliport from the air						
	Location		Text	Location of the aerodrome/heliport beacon / identification beacon	If any					
	Characteristics		Text	Description of the aerodrome/heliport beacon / identification beacon						
	Hours of operation		Schedule	Hours of operation of the aerodrome/heliport beacon / identification beacon						
Wind direction indicator										
	Location		Text	Location of the wind						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				direction indicator						
	Lighting		Text	Lighting of the wind direction indicator						
Runway visual range (RVR) observation site				The observation site of the RVR						
	Position		Point	Geographical location of the RVR observation sites						
Frequency area				The designated part of a surface movement area where a specific frequency is required by ATC, ~~or~~ ground control, or apron management service						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Station		Text	Name of the station providing the service						
	Frequency		Value	Frequency of the station providing the service						
	Boundary		Polygon	Area boundary of the frequency area						
……										
	Centre line points									
		Position	Point	Geographical location of the RWY centre line at each end of the RWY, at the stopway (SWY) and at the origin of each take-off flight path area, and at	~~Definition from Annex 4 3.8.4.2~~	1 m	Critical	Surveyed		

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				each significant change in the slope of the RWY and SWY						
……										
	Strength									
		~~Pavement classification number (PCN)~~ PCR	Text	~~PCN~~ Pavement classification rating	Only for pavements intended to be used by aircraft with apron mass greater than 5 700 kg. For pavements intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
					aircraft mass and the maximum allowable tyre pressure are to be provided					
		Pavement type	Text	Pavement type for the aircraft classification rating – pavement classification rating (ACR-PCR) determination ~~number – pavement classification number (ACN-PCN) determination~~	Only for pavements intended to be used by aircraft with apron mass greater than 5 700 kg. For pavements intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable aircraft mass and					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
					the maximum allowable tyre pressure are to be provided					
……										
	Blast pad			~~Specially prepared surface placed adjacent to the end of a RWY to eliminate the erosive effect of the strong wind forces produced by aeroplanes at the beginning of their take-off roll~~						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				The area adjacent to the end of a runway provided to reduce the erosive effects of jet blast and propeller wash						
……										
	RWY centre line ~~LGT~~ lights									
……										
	RWY edge ~~LGT~~ lights									
……										
		Letter	Code list	A letter based on the aeroplane wingspan ~~and outer main gear wheel span~~						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
……										
	Magnetic bearing		Bearing	The true bearing of the RWY				Calculated	$\frac{1}{100}$ degree	
	Type		Text	Type of RWY: precision (Cat I, II, III) / non-precision / non-instrument / take-off						
……										
		Displacement	Distance	Distance of the displaced threshold	If threshold displaced	1 m	Routine	Surveyed	1 m or 1 ft	
	RWY end			RWY end (flight path alignment point)						
		Position	Point	Location of the RWY end in the direction of departure		1 m	Critical	Surveyed	$\frac{1}{100}$ sec	1 sec
		Elevation	Elevation	Elevation of the end		~~See RWY centre line points~~				

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				position of the RWY		See Note 3				
……										
	~~Land-and-hold short operations (LAHSOs)~~			~~LAHSOs~~						
		~~Geometry~~	~~Line~~	~~The geographical location of the LAHSOs~~						
		~~Protected element~~	~~Text~~	~~The name of the RWY or taxiway (TWY) being protected~~						
	Displaced area			The portion of a RWY between the beginning of the RWY and the displaced threshold						
		Geometry	Polygon	Geographical location of the						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				displaced area						
		~~PCN~~ PCR	Text	The ~~PCN~~ PCR of the displaced area						
……										
	RWY end ~~LGT~~ lights									
		Colour	Text	Colour of the RWY end lights						
		Position	Point	Geographical location of each individual light of the RWY end lights						
	SWY ~~LGT~~ edge lights									
		Length	Distance	The longitudinal extent of the SWY edge lights						
		Colour	Text	Colour of the SWY edge lights						
		Position	Point	Geographical location						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				of each individual light of the SWY edge lights						
	SWY end lights									
		Colour	Text	Colour of the SWY end lights						
		Position	Point	Geographical location of each individual light of the RWY end lights						
	Approach lighting system									
		Type	Text	Classification of the approach lighting system, using as criteria Regulation (EU) No 139/2014 and CS-						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				ADR-DSN, especially CS ADR-DSN.M.625, CS ADR-DSN M.630, CS ADR-DSN M.635 and CS ADR-DSN.M.626						
……										
	Arresting system			~~High-energy-absorbing material located at the end of a RWY or SWY, designed to be crushed under the weight of an aeroplane as the material exerts deceleration forces on~~						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				~~the aircraft landing gear~~ A system designed to decelerate an aeroplane overrunning the runway.						
……										
			Note 1	Threshold elevation for RWYs with non-precision approaches		0.5 m	Essential	Surveyed	1 m or 1 ft	1 m or 1 ft
				Threshold elevation for RWYs with precision approaches		0.25 m	Critical	Surveyed	0.1 m or 0.1 ft	0.5 m or 1 ft
				WGS-84 geoid undulation at the RWY threshold for non-		0.5 m	Essential	Surveyed	1 m or 1 ft	1 m or 1 ft

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
			Note 2	precision approaches						
				WGS-84 geoid undulation at the RWY threshold for precision approaches		0.25 m	Critical	Surveyed	0.1 m or 0.1 ft	0.5 m or 1 ft
			Note 3	Elevation of the runway end and any significant high and low intermediate points along the runway for non-precision approaches		0.5 m or 1 ft				
				Elevation of the runway end and the highest elevation of the touchdown zone for		0.25 m or 1 ft				

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				precision approach runways						
……										
	Approach lighting system									
		Type	Text	Classification of the approach lighting system, using as criteria Regulation (EU) No 139/2014 and CS-HPT-DSN ~~CS-ADR-DSN~~, specifically CS HPT-DSN.F.630 ~~CS-ADR-DSN.M.625 and CS-ADR-DSN.M.626~~						
……										

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				The FATO threshold for ~~heliports intended to be operated~~ instrument heliports with non-precision and/or precision approaches and instrument departures		0.25 m	Critical	Surveyed	1 m or 1 ft (non-precision) 0.1 m or 0.1 ft (precision)	
			Note 2	The WGS–84 geoid undulation at the FATO threshold and the TLOF geometric centre, for heliports with or without a PinS approach		0.5 m	Essential	Surveyed	1 m or 1 ft	
				The WGS-84 geoid		0.25 m	Critical	Surveyed	1 m or 1 ft (non-	

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				undulation at the FATO threshold and the TLOF geometric centre, ~~for heliports intended to be operated~~ instrument heliports with non-precision and/or precision approaches and instrument departures					precision) 0.1 m or 0.1 ft (precision)	
.....										
	Strength									
		~~PCN~~ PCR	Text	~~PCN of the apron~~ Pavement classification rating of apron	Only for pavements intended to be used by aircraft with apron mass greater than 5 700 kg.					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
					For pavements intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable aircraft mass and the maximum allowable tyre pressure are to be provided					
		Pavement type	Text	~~ACN-PCN determination~~ Pavement type for aircraft classification rating – pavement	Only for pavements intended to be used by aircraft with apron mass greater than 5 700 kg. For pavements					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				classification rating (ACR-PCR) determination	intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable aircraft mass and the maximum allowable tyre pressure are to be provided					
……										
	Surface type		Text	Surface type of the TWY						
	Strength									
		~~PCN~~ PCR	Text	~~PCN of the TWY~~ Pavement classification rating of taxiway	Only for pavements intended to be used by aircraft with apron mass					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
					greater than 5 700 kg. For pavements intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable aircraft mass and the maximum allowable tyre pressure are to be provided					
		Pavement type	Text	~~ACN-PCN determination~~ Pavement type for aircraft classification rating –	Only for pavements intended to be used by aircraft with apron mass greater than 5 700 kg.					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				pavement classification rating (ACR-PCR) determination	For pavements intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable aircraft mass and the maximum allowable tyre pressure are to be provided					
……										
	Aircraft restrictions		Text	Usage restriction (prohibition) for a specified aircraft type						
	Slope		Value	The slope of the TWY						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Reference code letter		Code list	A letter based on the aeroplane wingspan ~~and outer main gear wheel span~~						
	Location for wing tips extension		Point/Polygon	For aerodromes accommodating aeroplanes with folding wing tips, the location where to extend the wing tips						
	TWY ~~C~~centre line points									
……										
	Taxi stripe markings ~~Guidance lines~~									

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Geometry	Line	Geographical location of the taxi stripe markings ~~guidance lines~~		0.5 m	Essential	Surveyed	$\frac{1}{100}$ sec	$\frac{1}{100}$ sec
		Colour	Text	Colour of TWY taxi stripe markings ~~guidance lines~~						
		Style	Text	Style of TWY taxi stripe markings ~~guidance lines~~						
		Wingspan	Value	Wingspan						
		Maximum speed	Value	Maximum speed						
		Direction	Text	Direction						
	Intermediate holding position marking line		Line	Intermediate holding position marking line		0.5 m	Essential	Surveyed	$\frac{1}{100}$ sec	1 sec
	~~TWY marking~~									

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		~~Description~~	~~Text~~	~~Description of the TWY marking~~						
……										
	RWY guard lights									
		Description	Text	Description of the RWY guard lights ~~and other RWY protection measures~~	If any					
		~~Location~~ Position	Point	Location of the guard lights ~~stop bar~~	Configuration A					
		~~Location~~ Geometry	Line	Location of the guard lights ~~stop bar~~	Configuration B					
	RWY holding position			A designated position intended to protect a RWY, an obstacle limitation surface or an						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				instrument landing system (ILS) / microwave landing system (MLS) critical/sensitive area, at which taxiing aircraft and vehicles ~~shall~~ must stop and hold, unless otherwise authorised by the aerodrome control tower						
		Designator	Text	Designator of the RWY holding position						
		Geometry	Line	Geographical location of the RWY		0.5 m	~~Essential~~ Critical	Surveyed	$\frac{1}{100}$ sec	1 sec

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				holding position						
		Protected RWY	Text	Designator of the RWY protected						
		~~Cat stop~~ Type of protected RWY	Code list	~~Category (CAT) of the~~ RWY type (~~0,~~ non-instrument, non-precision, take-off, precision: CAT I, II, III)						
		RWY ahead text	Text	Actual text as in the marking, e.g. 'RWY AHEAD' or 'RUNWAY AHEAD'						
	Intermediate holding position	Geometry	Line	Geographical location of the intermediate holding position – a designated						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				position intended for traffic control, at which taxiing aircraft and vehicles ~~shall~~ must stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower						
		Designator	Text	Designator of the intermediate holding position						
.....										
INS checkpoint										
	~~Location~~ Position		Point	Geographical location	Where available	0.5 m	Routine	Surveyed	$\frac{1}{100}$ sec	$\frac{1}{100}$ sec

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				of the INS checkpoint						
Very-high-frequency (VHF) omnidirectional range (VOR) checkpoint										
	~~Location~~ Position		Point	Geographical location of the VOR checkpoint	Where available					
	Frequency		Value	Frequency of the VOR checkpoint						
Altimeter checkpoint										
	~~Location~~ Position		Point	Geographical location of the altimeter checkpoint						
……										
Aircraft stand				A designated area on an apron intended to be used for						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				aircraft parking						
	Name		Text	Name of the aircraft stand point						
	Aircraft stand points	~~Location~~ Position	Point	Geographical location of the aircraft stand point		0.5 m	Routine	Surveyed	$\frac{1}{100}$ sec	$\frac{1}{100}$ sec
.....										
	~~PCN~~ PCR		Text	~~PCN~~ PCR of the aircraft stand	Only for pavements intended to be used by aircraft with apron mass greater than 5 700 kg. For pavements intended to be used by aircraft with apron mass equal to or less than 5 700 kg, the maximum allowable					

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
					aircraft mass and the maximum allowable tyre pressure are to be provided					
	Stand guidance line			Stand identification, lead-in line, turn bar, turning line, alignment bar, stop line and lead-out line						
.....										
	~~Location~~ Position		Point	Geographical location of the helicopter stand point / INS checkpoints		0.5 m	Essential	Surveyed	$\frac{1}{100}$ sec	$\frac{1}{100}$ sec
.....										

Table 2. Airspace data

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
ATS airspace				Airspace of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which ATS and air traffic rules of operation are specified						
	Type		Text	Type of ATS airspace in accordance with Appendix 4 to Implementing Regulation (EU) No 923/2012 (SERA)						
	Designation		Text	The designator given to ~~the~~ an airspace by a responsible authority						
……										
	Class of airspace		Code list	A ~~categorisation~~ classification of airspace which determines the operating rules, flight requirements and services provided.						
……										

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Frequency									
		Value	Value	The frequency of the ATS airspace						
		Purpose	Text	Indications for specific purposes of the frequency						
	SATVOICE number				If applicable					
		Value	Value	The SATVOICE number of the ATS unit						
		Purpose	Text	Indications for specific purposes of the SATVOICE number						
			Note 1	FIR, UIR		2 km	Routine	Declared	1 min	As plotted
				TMA, CTA		100 m	Essential	Calculated	1 sec	As plotted
				~~Controlled traffic~~ region (CTR~~)~~		100 m	Essential	Calculated	1 sec	As plotted
Special-activity air space										
	Type		Code list	Type of the special-activity airspace (see Note 1)						
……..										

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
			Note 1	Prohibited area	Note 2 inside CTA/CTR	100 m	Essential	Calculated	1 sec	As plotted
				Restricted area	Note 2 outside CTA/CTR	2 km	Routine	Declared	1 min	As plotted
				Danger area						
				Military exercise area						
				Military training area						
				ADIZ						
				Other						
Aerial sporting activities airspace										
	Type of activity									
	Designator									

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	Lateral limits		Polygon	The surface defining the horizontal shape of the airspace						
	Vertical limits									
		Upper limit	Altitude	The upper limit of the airspace						
		Lower limit	Altitude	The lower limit of the airspace						
	Time of activity		Schedule	Time interval when the activity takes place						
	Operator		Text	Contact details (telephone number or frequency) of operator/user						
…….										

Table 3. ATS and other routes data

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8.Integrity	9.Orig. Type	10.Pub. Res.	11. Chart Res.
……										
Route segment										
	From point			Reference to the first point of a route segment						
		~~Name~~ Designator	Text	The coded designators or name-code ~~names~~ of a significant point						
		Reporting	Code list	Indication of the ATS/MET reporting requirement as 'compulsory' or 'on request'						
	To point			Reference to the second point of a						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8.Integrity	9.Orig. Type	10.Pub. Res.	11. Chart Res.
				route segment						
		~~Name~~ Designator	Text	The coded designators or name-code ~~names~~ of a significant point						
……										
	Minimum en-route altitude (MEA)		Altitude	The altitude of an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complying with the airspace structure, and providing the	For conventional navigation only	50 m	Routine	Calculated	50 m or 100 ft	50 m or 100 ft

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				required obstacle clearance						
	Minimum obstacle clearance altitude (MOCA)		Altitude	The minimum altitude of a defined segment that provides the required obstacle clearance	For conventional navigation only	50 m	Routine	Calculated	50 m or 100 ft	50 m or 100 ft
	Minimum flight altitude		Altitude	Minimum flight altitude		50 m	Routine	Calculated	50 m or 100 ft	50 m or 100 ft
	Lateral limits		Distance	Lateral limits of the route						
	~~Area minimum altitude (AMA)~~		~~Altitude~~	~~It is the minimum altitude to be used under instrument meteorological conditions (IMC),~~						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				~~which provides a minimum obstacle clearance within a specified area, normally formed by parallels and meridians.~~						
	~~Minimum vectoring altitude (MVA)~~		~~Altitude~~	~~MVA~~						
……										
	Class of airspace		Text	Classification of airspace which determines the operating rules, flight requirements and services provided						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8.Integrity	9.Orig. Type	10.Pub. Res.	11. Chart Res.
				according to Regulation (EU) No 923/2012						
……										
		Logon address	Text	A specified code used for data link logon to the controlling ATS unit	If applicable					
AMA										
	Lateral Limits		Distance	Lateral limits of the sectors						
	Vertical Limit		Altitude	Area Minimum Altitude (AMA) – the minimum altitude to be used under instrument meteorological conditions (IMC) that						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				provides a minimum obstacle clearance within a specified area, normally formed by parallels and meridians						
MVA										
	Lateral Limits		Distance	Lateral limits of the sectors						
	Vertical Limit		Altitude	Minimum Vector Altitude						
			Note 1	U = upper	Note 2 Airway segments length	$\frac{1}{10}$ km	Routine	Calculated	$\frac{1}{10}$ km or $\frac{1}{10}$ nm	1 km or 1 nm
				~~H~~K = helicopter	Note 2 Terminal arrival/departure route segments length	$\frac{1}{10}$ km	Essential	Calculated	$\frac{1}{100}$ km or $\frac{1}{100}$ nm	1 km or 1 nm
				S = supersonic						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8.Integrity	9.Orig. Type	10.Pub. Res.	11. Chart Res.
				T = tacan						
				Other						
Waypoint										
	Identification		Text	Names, coded designators or name-code ~~names~~ given to the significant point						
	Position		Point	Geographical location of the waypoint		100 m	Essential	Surveyed/calculated	1 sec	1 sec
	Formation									
		Navigation aid (navaid)	Text	The station identification of the VOR/DME reference						
		Bearing	Bearing	The bearing to the VOR/DME reference if the waypoint is not collocated with it		See Note 1 below				

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Distance	Distance	The distance from the VOR/DME reference if the waypoint is not collocated with it		See Note 2 below				
					Note 1 Bearing used for the formation of an en-route fix	$\frac{1}{10}$ degree	Routine	Calculated	$\frac{1}{10}$ degree	$\frac{1}{10}$ degree
						~~1/100 degree~~	~~Essential~~	~~Calculated~~	~~1/100 degree~~	~~1/10 degree~~
								~~Calculated~~		
					Note 2 Distance used for the formation of an en-route fix	$\frac{1}{10}$ km	Routine	Calculated	$\frac{1}{10}$ km or $\frac{1}{10}$ nm	$\frac{2}{10}$ km ($\frac{1}{10}$ nm)
						~~1/100 km~~	~~Essential~~	~~Calculated~~	~~1/100 km or 1/100 nm~~	~~2/10 km (1/10 nm)~~
.....										

Table 4. Instrument flight procedure data

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
Procedure										
……										
	Plain language designation									
		Basic indicator	Text	The basic indicator shall be the name or name-code ~~names~~ of the significant point where the standard departure route terminates or a standard arrival route begins	SID, STAR					
		Validity indicator	Text	The validity indicator shall be a number from 1 to 9	SID, STAR					
		Route indicator	Text	The route indicator shall be one letter of the alphabet. The letters 'I' and 'O' shall not be used	SID, STAR					
		Visual indication	Text	Indication if the route has been established for aircraft operating in accordance with VFR	VFR only					
	Coded designation									

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Significant Point	Text	The coded designator or name-code ~~names~~ of the significant point	SID, STAR					
……										
	Obstacle clearance altitude/height (OCA/H)			OCA/H	APCH					
		Aircraft category	Code list	Aircraft category	APCH					
		Approach type	Code list	Approach type (e.g. straight-in, Cat I, Cat II, LLZ, circling), or specific navigation aid (e.g. step-down fixes) or a specific navigation specification	APCH					
		Altitude	Altitude	The lowest altitude used in establishing compliance with appropriate obstacle clearance criteria	APCH		Essential			As specified in ICAO Doc 8168 (PANS-OPS)
		Height	Height	The lowest height above the elevation of the relevant RWY threshold or the aerodrome elevation, as applicable, used in establishing compliance with appropriate obstacle clearance criteria	APCH		Essential			As specified in ICAO Doc 8168 (PANS-OPS)

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
……										
	PBN requirements			Specific requirements related to a PBN procedure	PBN					
		Navigation specification	Code list	Identification of the navigation specification (RNAV 5, RNP 0.3, etc.)						
		Navigation sensor limitations ~~Navigation specification~~	Text	Any navigation sensor limitations (global navigation satellite system (GNSS) required)						
……										
	Procedure altitude/height		Altitude/height	~~A specified altitude/height flown operationally above the minimum altitude/height and established to accommodate a stabilised descent at a prescribed descent gradient/angle in the intermediate/final approach segment~~	Certain segments of SID, STAR, APCH only		Essential			As specified in ICAO Doc 8168 (PANS-OPS)

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
				A published altitude/height used in defining the vertical profile of a flight procedure, at or above the minimum obstacle clearance altitude/height where established						
……										
	True bearing		Bearing	True track to the nearest tenth of a degree between each successive significant point	SID, STAR, APCH	$\frac{1}{10}$ degree	Routine	Calculated	$\frac{1}{10}$ degree	1 degree
……										
	PBN Requirements			Specific requirements related to a PBN procedure segment	PBN					
		Navigation specification	Code list	Identification of the navigation specification (RNAV 5, PBN 0.3 etc.)						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
		Navigation sensor limitations	Text	Any navigation sensor limitations (GNSS required)						
		Functional requirements	Text	Any required functionalities that are described as options in the navigation specification, i.e. not included in the core navigation specification (RF required)						
……										
Procedure fix										
	Identification		Text	Names, coded designators or name-code ~~names~~ given to the significant point						
……										
					Note 1 En-route navaids and fixes, holding,	100 m	Essential	Surveyed/calculated	1 sec	1 sec

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
					STAR/SID points					
					Note 1 Final approach fixes/points and other essential fixes/points comprising the instrument approach procedure	3 m	Essential	Surveyed/calculated	$\frac{1}{10}$ sec	1 sec
					Note 2 Bearing used for the formation of a terminal fix	$\frac{1}{10}$ degree	Routine	Calculated	$\frac{1}{10}$ degree	$\frac{1}{10}$ degree
					Note 2 Bearing used for the formation of an instrument approach procedure fix	$\frac{1}{100}$ degree	Essential	Calculated	$\frac{1}{100}$ degree	$\frac{1}{10}$ degree
Procedure holding				A predetermined manoeuvre that keeps the aircraft within the specified airspace while awaiting further clearance						

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
……										
	Heliport crossing height (HCH)		Height	Heliport crossing height		0.5 m	Essential	calculated	1 m or 1 ft	1 m or 1 ft
……										

Table 5. Radio navigation aids/systems data

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8.Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
Radio navigation aid										
……										
	GBAS approach facility designation		Code list	A classification based on the GBAS service volume and performance requirements for each supported approach	GBAS					
	~~Area of operation~~ Purpose		Text	Indication whether navigation aid serves en-route (E), aerodrome/heliport (A/H) or dual (AE) purposes						
……										

1. Subject	2. Property	3. Sub-property	4. Type	5. Description	6. Note	7. Accuracy	8.Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
	RDH		Value	The value of the ILS reference datum height (ILS RDH)	ILS GP	0.5 m	Critical	Calculated	0.1 m or 0.1 ft	0.5 m or 1 ft
.....										
			Note 1		ILS Localiser	1 degree	Essential	Surveyed	1 degree	
					NDB	1 degree	Routine	Surveyed	1 degree	
								Surveyed		
			Note 2		Aerodrome navaid	3 m	Essential	Surveyed	$\frac{1}{10}$ sec	As plotted
					GBAS reference point	1 m		Surveyed		
					En-route	100 m	Essential	Surveyed	1 sec	
								~~Surveyed~~		
			Note 3		DME	30 m (100 ft)	Essential	Surveyed	30 m (100 ft)	30 m (100 ft)
					DME/P	3 m	Essential	Surveyed	3 m (10 ft)	
					GBAS reference point	0.25 m	Essential		1 m or 1 ft	
.....										

Table 6. Obstacle data

1.Subject	2.Property	3.Sub-property	4.Type	5.Description	6.Note	7.Accuracy	8.Integrity	9.Orig. Type	10. Pub. Res.	11. Chart Res.
Obstacle				All fixed (whether temporary or permanent) and mobile obstacles or parts thereof						
……										
			Note 1	Obstacles in Area 1		~~50 m~~ 16 m	Routine	Surveyed	1 sec	As plotted
				Obstacles in Area 2 (including 2a, 2b, 2c, 2d, take-off flight path area and obstacle limitation surfaces)		5 m	Essential	Surveyed	$\frac{1}{10}$ sec	$\frac{1}{10}$ sec
				Obstacles in Area 3		0.5 m	Essential	Surveyed	$\frac{1}{10}$ sec	$\frac{1}{10}$ sec
				Obstacles in Area 4		2.5 m	Essential	Surveyed		
			Note 2	Obstacles in Area 1		~~30 m~~ 7 m	Routine	Surveyed	1 m or 1 ft	3 m (10 ft)
				Obstacles in Area 2 (including 2a, 2b, 2c, 2d, take-off flight path area and obstacle limitation surfaces)		3 m	Essential	Surveyed	1 m or 1 ft	1 m or 1 ft

1.Subject	2.Property	3.Sub-property	4.Type	5.Description	6.Note	7.Accuracy	8.Integrity	9.Orig. Type	10. Pub. Res.	11. Chart Res.
				Obstacles in Area 3		0.5 m	Essential	Surveyed	0.1 m or 0.1 ft or 0.01 m	1 m or 1 ft
				Obstacles in Area 4		1 m	Essential	Surveyed	0.1 m	

Table 7. Geographic data

1.Subject	2.Property	3.Sub-property	4.Type	5.Description	6.Note	7.Accuracy	8. Integrity	9. Orig. Type	10. Pub. Res.	11. Chart Res.
……										

Rationale:

For the full rationale about the introduction of this AMC, please consult the rationale of the proposed amendment to Appendix 1 (Aeronautical Data Catalogue) to Annex III (Part-ATM/ANS.OR) to Regulation (EU) 2017/373. Points (a) to (g) of this AMC define which of the tables should be used in every case.

In point (h), the relevant table corresponds to the last table appearing in the current ADC of Regulation (EU) 2017/373, defining the data types and their description, along with the related data items. The content of this table has remained unchanged.

In 'Table 1. Aerodrome/heliport data', various changes are introduced (highlighted in blue) in instances such as:

- *introduction of the column numbers;*
- *introduction of the term heliport where needed, as per the ICAO ADC;*
- *replacement of the term 'airport' with 'aerodrome';*
- *addition of the case of 'apron management service' in the description of the subject 'frequency area', to align with the proposed amendment of the AIP;*
- *introduction of property 'temperature' and creation of relevant sub-properties;*
- *introduction of additional properties 'aerodrome operator', 'operational hours', 'area of responsibility', 'status' and 'remarks'. These properties are not part of the ICAO ADC, however EASA considers them necessary to the extent that they are linked to various elements of the AIP;*
- *introduction of new subjects 'meteorological information', 'handling services and facilities', 'passenger facilities', 'rescue and firefighting services', 'runway surface condition assessment and reporting, and snow plan', 'wildlife', 'regulations', 'flight procedures' and related properties. These subjects are not part of the ICAO ADC, as they appear separately under the table dedicated to the 'regulations services and procedures', however EASA considers them necessary to the extent that they are linked to various elements of the AIP and should appear along with the other aerodrome-related subjects;*
- *replacement of 'ICAO rules' with 'ICAO provisions';*
- *deletion of inaccurate texts (e.g. 'Definition from Annex 4 3.8.4.2');*
- *replacement of pavement classification number/PCN with pavement classification rating/PCR; addition of a clarification regarding the pavements where PCR needs to be reported as per ICAO Annex 14 chapter 2;*
- *replacement of description of 'blast pad' as per EASA and ICAO description;*
- *replacement of abbreviations such as 'LGT' with the full text;*
- *correction of inaccuracies regarding the meaning of the term 'code letter' and 'reference code letter' as per the latest amendments introduced in ICAO Annex 14 paragraph 1.6;*
- *addition of 'magnetic bearing' as per Annex 4;*
- *addition of 'take-off runways' in the RWY types;*
- *addition of missing resolution for displaced threshold;*

— *addition of missing notes regarding the 'RWY end' property;*

— *deletion of 'LAHSO', as it requires special procedures and authorisation, along with aerodrome design signs, a concept that has not been adopted in the EU;*

— *addition of 'stopway lights', in the same manner as for the RWY, given that the same logic should be followed;*

— *addition of an additional reference for CAT I/II/III approach lighting systems, because the current ones refer just to the simple approach lighting system;*

— *replacement of the description of the arresting system as per EASA and ICAO aerodrome design specifications, because the current one reflects a rather specific technology;*

— *addition of note 3 after the 'radio altimeter operating area' as per ICAO ADC;*

— *replacement of the design specifications for 'approach lighting systems' of heliports by the correct ones used for heliport design;*

— *correction of the notes related to the 'FATO threshold' and 'TLOF geometric centre' and update of the text, given that the ICAO ADC refers to Annex 14 Vol II, Appendix 2, which however does not exist anymore, following the amendment of ICAO Annex 14 Vol. II.;*

— *addition of the slope property for TWY, to facilitate new taxiing technologies, in line with a similar proposal made for the corresponding part of the AIP;*

— *correction of mistakes regarding 'guard lights';*

— *addition of the sub-property 'designator' for RWY holding position, an element not included in the ICAO ADC, and correction of integrity level as per ICAO SL 2023/06.*

— *replacement of the non-existing terms 'Cat stop' and 'Cat 0' related to the property 'RWY holding position';*

— *addition of the sub-property 'designator' for intermediate holding position, an element not included in the ICAO ADC;*

— *replacement of the term 'location' with 'position' for the subjects 'INS', 'VHF', 'VOR', 'altimeter checkpoint' and 'Helicopter stand' and for the property 'Aircraft stand points', as per ICAO ADC;*

— *addition of description for the term 'stand guidance line' based on the ICAO Annex 14 related provisions, given that the term 'stand guidance line' does not exist in the relevant ICAO material;*

— *addition or 'chart resolution' for the subject 'Helicopter stand', as per the relevant specifications for aeroplane stands, an element missing from the ICAO ADC;*

It should be noted that EASA is also concerned by certain terms which have been introduced in the ICAO ADC and have been transposed in the current ADC of Regulation (EU) 2017/373, because on the one hand their meaning is unclear and on the other hand, there seems to be inconsistency with the content of the other relevant ICAO material. As an example, under the subject 'TWY', the properties 'TWY centre line points', 'guidance lines' and 'TWY marking' are included. However, given that on a taxiway one may encounter the 'centreline line', and the 'taxi side stripe markings', EASA arrived at the conclusion that the 'guidance lines' correspond to what is defined in ICAO Annex 14 and EASA aerodrome design specifications as 'taxi side stripe markings'; yet it is unknown what the purpose of the 'TWY marking' property would be, given that it is a generic term that lacks precision and could theoretically cover all markings on a taxiway. It is for this reason, but also because the ADC needs to contain the already

adopted aviation terminology in order for it to be understood by the data originators, that EASA proposes the deletion of the property 'TWY marking' and the replacement of the term 'guidance lines' with the term 'taxi stripe markings'.

In parallel, EASA notes that the properties of the subject 'TWY' contains the property 'RWY guard lights', whose description specifies it as 'Description of the RWY guard lights and other RWY protection measures'. As a result, EASA considers that the description of the runway guard lights as also encompassing any 'other RWY protection measures' lacks logic and technical relevance. For this reason, the relevant description is proposed to be modified.

Moreover, EASA notes that according to the provisions of ICAO Annex 14 which have been transposed in the EU regulatory framework, there are additional visual aids which may be part of the design of an aerodrome but do not seem to be part of the ICAO (and EU) ADC such as the 'no-entry bar', 'runway status lights' etc.

EASA therefore would like to ask the opinion of its stakeholders regarding this issue, and whether EASA should complement such, and any other, missing elements of the aeronautical data catalogue.

In addition, EASA notes that in certain cases the ICAO (and the EU) ADC sub-property 'colour' exists for

EASA therefore would like to ask the opinion of its stakeholders regarding the proposed treatment of the sub-property colour.

properties such as 'RWY exit line', RWY centre line lights', RWY edge lights', 'RWY end lights', 'RWY threshold lights' and 'stand guidance line', while their description does not offer any additional help other than that it is the colour of the relevant 'property'. EASA considers that the way such sub-properties are presented may not convey the correct message to users of the aeronautical data catalogue, given that the colours of such elements are already defined in a standardised manner in both ICAO Annex 14 and the EU regulatory framework. EASA is therefore of the opinion that the description of such sub-properties should be complemented by the applicable standard colour or should be entirely removed to avoid potential confusion.

In 'Table 2. Airspace data', a limited number of changes is introduced (highlighted in blue), in instances such as:

- *introduction of the column numbers;*
- *class of airspace to denote that airspaces are classified and not categorised;*
- *introduction of SATVOICE number, in line with the current content of AIP section of ENR 2.1 and ENR 3.1;*
- *deletion of the term 'controlled traffic region', as the meaning of CTR is 'controlled zone';*
- *correction of note 2 concerning the requirements inside and outside CTA/CTR;*
- *addition of the missing subject 'Aerial sporting activities airspace'.*

In 'Table 3. ATS and other routes data', limited changes are introduced (highlighted in blue to be identified), in instances such as:

- *introduction of the column numbers;*

— *for subject 'route segment', the sub-property 'name' is replaced by 'designator' and its description is updated, in accordance with Annex 11;*

— *a note is proposed for properties 'MEA' and 'MOCA', as per ICAO ADC;*

— *properties 'AMA' and 'MVA' become subjects, as per ICAO ADC;*

— *amendment of notes 1 and 2 as per ICAO ADC;*

— *replacement of term 'code name' with 'name-code', as per Annex 11, for subject 'waypoint';*

— *deletion of unintentionally duplicated rows in both notes 1 and 2 of the subject 'waypoint', as per ICAO ADC.*

In 'Table 4. Instrument flight procedure data', limited changes are introduced (highlighted in blue), in instances such as:

— *introduction of the column numbers;*

— *for sub-properties 'basic indicator', 'significant point' and 'identification', the descriptions are updated, in accordance with Annex 11;*

— *for sub-properties 'altitude and 'height' and property 'procedure altitude/height', a reference to ICAO Doc 8168 (PANS-OPS) is added in column 11, as per ICAO ADC;*

— *sub-properties 'navigation specification' and 'navigation sensor limitations' are added, as per ICAO State letter 2023/07;*

— *for property 'procedure altitude/height' a new description is added, as per the new definition contained in Annex 4 Amendment 60;*

— *new property 'PBN requirements' is added, as per ICAO State letter 2023/07;*

— *notes 1 and 2 are amended, as per ICAO ADC.*

In 'Table 5. Radio navigation aids / systems data', limited changes are introduced (highlighted in blue to be identified), in instances such as:

— *introduction of the column numbers;*

— *replacement of properties 'area of operation' with 'purpose' and update of the description as per ICAO ADC;*

— *for property 'RDH', columns 10 and 11 are updated with the missing values, as per ICAO ADC.*

In 'Table 6. Obstacle data', limited changes are introduced (highlighted in blue), in the following cases:

— *introduction of the column numbers;*

— *two instances where the accuracy values in column 7 are replaced by the relevant values contained in the EUROCAE document 'Terrain and Obstacle Data – ED-98C, October 2015', in line with the rationale for the amendment of Article 3 paragraph 5 to address the operational needs of aircraft other than aeroplanes in Area 1 and identified safety issues.*

In 'Table 7. Geographic data', the only change (highlighted in blue) is the introduction of the column numbers.

AMC2 Appendix 1 (d)(1) Aeronautical data catalogue

AERONAUTICAL DATA CATALOGUE — TERRAIN DATA

For geographic data, the specifications contained in 'Table 8. Terrain data' should be used.

Table 8. Terrain data

Subject	Area 1	Area 2	Area 3	Area 4
Post spacing	1 arc second (approx. 30 m)	1 arc second (approx. 30 m)	0.6 arc seconds (approx. 20 m)	0.3 arc seconds (approx. 9 m)
Vertical accuracy	3 m	3 m	0.5 m	1 m
Vertical resolution	0.1 m	0.1 m	0.01 m	0.1 m
Horizontal accuracy	5 m	5 m	0.5 m	2.5 m
Confidence level	90 %	90 %	90 %	90 %
Integrity classification	Routine	Essential	Essential	Essential
Maintenance period	As required	As required	As required	As required

Rationale:

For the full rationale about the introduction of this AMC, please consult the rationale of the proposed amendment to Appendix 1 (Aeronautical Data Catalogue) to Annex III (Part-ATM/ANS.OR) to Regulation (EU) 2017/373.

The content of the proposed AMC transposes the relevant content of Table 'A1-8. Terrain data', which is published by ICAO as part of the ICAO ADC, adopted for Area 1 with regard to vertical accuracy, vertical resolution and horizontal accuracy, as per the content of EUROCAE document 'User Requirements for Terrain and Obstacle Data – ED-98C', dated October 2015, in order to address the operational needs of aircraft other than aeroplanes in Area 1 and identified safety issues which are presented in the rationale of the proposed amendment of Article 3.

AMC3 Appendix 1 (d)(2) Aeronautical data catalogue

AERONAUTICAL DATA CATALOGUE — EU, NATIONAL, AND LOCAL REGULATION, SERVICES AND PROCEDURES

For information concerning EU, national and local regulation, services and procedures, 'Table 9. Information about EU, national and local regulation, services and procedures' should be used.

Table 9. Information about EU, national and local regulation, services and procedures

1	**National regulations and requirements**
1.1	Civil aviation regulations

1.1.1	Name, contact information and description of the civil aviation authorities concerned with the facilitation of international air navigation
1.1.2	EU and national regulations and international agreements/conventions ratified by the State affecting air navigation
1.1.3	Differences between national regulations and practices of the State and related ICAO provisions, including:
	a) Provision concerned (Annex number, title, edition number and paragraph)
	b) The complete text of the difference
1.1.4	Regulations and other requirements concerning entry, transit and departure of aircraft on international flights, including:
	a) Regulations applicable to all types of operations
	b) Scheduled flights
	c) Non-scheduled flights
	d) Private flights
1.1.5	Aircraft instruments, equipment and flight documents, including:
	a) Instruments, equipment (including aircraft communication and navigation equipment) and flight documents to be carried on aircraft
	b) Emergency locator transmitter (ELT), signalling devices and lifesaving equipment
1.1.6	Information on rules as applied within the State:
	a) General rules
	b) Visual flight rules
	c) Instrument flight rules
1.1.7	The general conditions under which the LVPs applicable to low-visibility operations at aerodromes, if any, are applied
1.1.8	The details of aerodrome operating minima applied by the State
1.1.9	ATS airspace classification and description
1.1.10	Conditions under which coordination between the aerodrome operator and air traffic services is effected
1.1.11	Criteria used to determine minimum flight altitudes
1.1.12	Name, contact information and description of the authorities concerned with aircraft accident investigation
1.1.13	Interception procedures and visual signals to be used, with a clear indication of whether ICAO provisions are applied and, if not, that differences exist
1.1.14	Procedures to be applied in case of unlawful interference
1.1.15	Information on the occurrence reporting system
1.2	Aerodrome regulations and requirements
1.2.1	Name, contact information and description of the State's designated authority responsible for aerodromes and heliports
1.2.2	ICAO documents on which the operation of aerodromes is based
1.2.3	General conditions under which aerodromes/heliports and associated facilities are available for use
1.2.4	Criteria applied by the State in grouping aerodromes/heliports shall be provided for the production /distribution /provision of information purposes (e.g. international/national, primary/secondary, major/other, civil/military, etc.)
1.2.5	Regulations concerning civil use of military air bases
1.2.6	Rules governing the establishment of rescue and firefighting services at aerodromes and heliports, together with an indication of rescue and firefighting categories established by the Member State

1.2.7	Description of runway surface condition assessment and reporting, and brief snow plan considerations for aerodromes/heliports available for public use at which snow conditions are normally liable to occur
1.3	Customs regulation and requirements
1.3.1	Name, contact information and description of the customs authorities
1.3.2	Customs regulations and requirements concerning entry, transit and departure of passengers and crew
1.3.3	Customs regulations and requirements concerning entry, transit and departure of cargo and other articles
1.4	Immigration regulation and requirements
1.4.1	Name, contact information and description of the immigration authorities
1.4.2	Immigration regulations and requirements concerning entry, transit and departure of passengers and crew
1.5	Health regulation and requirements
1.5.1	Name, contact information and description of the health authorities
1.5.2	Regulations and requirements concerning public health measures applied to aircraft on entry, transit and departure on international flights
1.5.3	Public health regulations and requirements concerning entry, transit and departure of passengers and crew
1.6	Agricultural quarantine regulation and requirements
1.6.1	Name, contact information and description of the authorities concerned with agricultural quarantine
1.6.2	Agricultural quarantine regulations and requirements concerning entry, transit and departure of cargo
2	**Information on services and procedures**
2.1	Aeronautical information services
2.1.1	Name, contact information and description of aeronautical information service and charting service provided
2.1.2	Indication if service is not provided on a 24-hour basis
2.1.3	ICAO documents on which the service is based
2.1.4	Area of responsibility
2.1.5	Information on the elements of the aeronautical information products managed by the aeronautical information services, including how they may be obtained
2.1.6	Information on the AIRAC system provided, including present and near future AIRAC dates
2.1.7	Information on the pre-flight information service available at aerodromes/heliports:
	a) Elements of the Aeronautical Information Products held
	b) Maps and charts held
	c) General area of coverage of such data
2.1.8	Information on aeronautical charts and chart series availability, including:
	a) Title of series
	b) Scale of series
	c) Name and/or number of each chart or each sheet in a series
	d) Information on maintenance (chart revision and amendment)
	e) Information on how charts may be obtained
2.1.9	Information on availability of topographical charts
2.2	Air traffic services and procedures
2.2.1	Name, contact information and description of air traffic service provider and ATS units

2.2.2	ICAO documents on which the service is based
2.2.3	Indication if service is not provided on a 24-hour basis
2.2.4	Area of responsibility
2.2.5	Types of air traffic services provided
2.2.6	Holding, approach and departure procedures:
	a) Criteria on which holding, approach and departing procedures are established
	b) Procedures (conventional or area navigation or both) for arriving flights which are common to flights into or within the same type of airspace
	c) Information if different procedures apply within a terminal airspace
	d) Procedures (conventional or area navigation or both) for departing flights which are common to flights departing from any aerodrome/heliport
	e) Other relevant information and procedures, for example entry procedures, final approach alignment, holding procedures and patterns
2.2.7	ATS surveillance services and procedures for:
	a) Primary radar
	b) Secondary surveillance radar (SSR)
	c) Automatic dependent surveillance – broadcast (ADS-B)
	d) Other relevant information and procedures, for example radar failure procedures and transponder failure procedures
2.2.8	Altimeter setting procedures
2.2.9	Regional supplementary procedures (SUPPs) affecting the entire area of responsibility
2.2.10	Information on air traffic flow management (ATFM) system and airspace management
2.2.11	Flight planning:
	a) Restriction, limitation or advisory information related to the flight planning stage which may assist the user in the presentation of the intended flight operation
	b) Information on addressing of flight plans
2.3	Communication services
2.3.1	Name, contact information and description of service provider of telecommunication and navigation facilities
2.3.2	ICAO documents on which the service is based
2.3.3	Indication if service is not provided on a 24-hour basis
2.3.4	Area of responsibility
2.3.5	Information on types of services and facilities provided and an indication where detailed information can be obtained
2.3.6	Information on requirements and conditions under which the communication service is available
2.4	Meteorological services
2.4.1	Name, contact information and description of the authorities concerned with meteorology and of the meteorological service
2.4.2.	ICAO documents on which the service is based
2.4.3	Indication if service is not provided on a 24-hour basis
2.4.4	Area of responsibility
2.4.5	Information on meteorological observations and reports provided for international air navigation:
	a) Name of the station and the ICAO location indicator
	b) Type and frequency of observation including an indication of automatic observing equipment
	c) Types of meteorological reports (e.g. METAR) and availability of a trend forecast

	d) Specific type of observation system and number of observation sites used to observe and report surface wind, visibility, runway visual range, cloud base, temperature and, where applicable, wind shear (e.g. anemometer at intersection of runways, transmissometer next to touchdown zone, etc.)
	e) Hours of operation; and
	f) Indication of aeronautical climatological information available
2.4.6	Information on the main type of service provided
2.4.7	Minimum amount of advance notice required by the meteorological authority from operators in respect of briefing, consultation and flight documentation and other meteorological information they require or change
2.4.8	Requirements of the meteorological authority for the making and transmission of aircraft reports
2.4.9	Information on VOLMET and/or D-VOLMET service, including:
	a) Name of transmitting station
	b) Call sign or identification and abbreviation for the radio communication emission;
	c) Frequency or frequencies used for broadcast
	d) Broadcasting period
	e) Hours of service
	f) List of aerodromes/heliports for which reports and/or forecasts are included
	g) Reports, forecasts and SIGMET information included
2.4.10	SIGMET and AIRMET service: information on Meteorological watch provided within flight information regions or control areas for which air traffic services are provided, including a list of the meteorological watch offices with:
	a) Name of the meteorological watch office, ICAO location indicator
	b) Hours of service
	c) Flight information region(s) or control area(s) served
	d) SIGMET validity periods
	e) Specific procedures applied to SIGMET information (e.g. for volcanic ash and tropical cyclones)
	f) Procedures applied to AIRMET information (in accordance with relevant regional air navigation agreements)
	g) The air traffic services unit(s) provided with SIGMET and AIRMET
2.4.11	Information on other available automated services for the provision of meteorological information.
2.5	Search and rescue services and procedures
2.5.1	Name, contact information and description of the authorities responsible for search and rescue
2.5.2	ICAO documents on which the service is based
2.5.3	Area of responsibility
2.5.4	Types of services
2.5.5	Information on SAR agreements
2.5.6	Conditions of SAR availability
2.5.7	Procedures and signals employed by rescue aircraft and also the signals to be used by survivors
2.6	Charges for aerodromes/heliports and air navigation services
2.6.1	Information on the type of aerodrome/heliport charges, including methods of payment and exemptions/reductions where applicable
2.6.2	Information on the type of air navigation service charges, including methods of payment and exemptions/reductions where applicable

Rationale:

For the full rationale about the introduction of this AMC, please consult the rationale of the proposed amendment to Appendix 1 (Aeronautical Data Catalogue) to Annex III (Part-ATM/ANS.OR) to Regulation (EU) 2017/373.

EASA has reviewed the content of ICAO ADC 'Table A1-10 Information about national and local regulation, services and procedures'. Following the review, it has been identified that it would be more convenient for the users to have all relevant subjects in a single table rather than in separate ones. This would also follow the logic of the AIP. Thus, EASA has placed the content of part 'Services, procedures and local regulations on aerodromes and heliports' as a group of new subjects in 'Table 1. Aerodrome/heliport'. Moreover, the content of row 2.2.12 (information on the type of aerodrome/heliport and air navigation service charges, including methods of payment and exemptions/reductions where applicable) has been moved under a new group titled 'Charges for aerodromes/heliports and air navigation services', to also include the aerodrome/heliport charges which appear to be missing from the ICAO ADC. In addition, certain elements have been modified to align with the already applicable EU legal requirements (i.e. LVPs and GRF).

Moreover, the review that EASA performed has revealed that additional elements, such as those relating to 'GEN 2. Tables and codes', appear to be missing from ICAO Table A1-10, which in any case does not follow the order of the AIP or the logic of the other ADC tables ('subject', 'property', 'sub-property', 'type' 'description', etc.). EASA is aware of examples of certain Member States which have re-defined the content of Table A1-10 based on the AIP structure, which in EASA's view is a more practical solution. EASA therefore proposes to update the content of this table through the addition of the missing elements and the addition of properties, sub-properties, etc.; however, before doing so, EASA would like to have relevant feedback from its stakeholders.

EASA therefore would like to ask the opinion of its stakeholders regarding its proposal to update the content and the structure of 'Table 9. Information about EU, national and local regulation, services and procedures', on the basis of the AIP structure.