

ANNEX V

Draft Annex V to draft Commission Regulation (EU) .../... amending Regulation (EU) 2017/373 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight and Regulation (EU) No 139/2014 laying down requirements and administrative procedures related to aerodromes

ANNEX VI — SPECIFIC REQUIREMENTS FOR PROVIDERS OF AERONAUTICAL INFORMATION SERVICES (Part-AIS) to Regulation (EU) 2017/373 is replaced as follows:

‘ANNEX VI

SPECIFIC REQUIREMENTS FOR THE PROVIDERS OF AERONAUTICAL INFORMATION SERVICES

(Part-AIS)

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

SECTION 1 — GENERAL REQUIREMENTS

AIS.OR.100 Aeronautical information management

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.

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

- (a) An AIS provider shall 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 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 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) An AIS provider shall make available to other AIS providers 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.
- (g) An AIS provider shall 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.

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) to this Regulation;
- (b) data quality is maintained; and
- (c) automation is applied to enable the processing and exchange of digital aeronautical data.

AIS.OR.205 Formal arrangements

An AIS provider shall ensure that formal arrangements are established with:

- (a) all parties transmitting data to them; and
- (b) other AIS providers, when exchanging aeronautical data and aeronautical information with them.

AIS.OR.210 Exchange of aeronautical data and aeronautical information

An AIS provider shall ensure that:

- (a) the format of aeronautical data is based on an aeronautical information exchange model designed to be globally interoperable; and
- (b) aeronautical data is exchanged through electronic means.

AIS.OR.215 Tools and software

An AIS provider shall ensure that tools and software used to support or automate aeronautical data and aeronautical information processes perform their functions without adversely impacting on the quality of aeronautical data and aeronautical information.

AIS.OR.220 Validation and verification

An AIS provider shall ensure that verification and validation techniques are employed so that the aeronautical data meets the associated data quality requirements (DQRs) specified in AIS.TR.200.

AIS.OR.225 Metadata

An AIS provider shall collect and preserve metadata.

AIS.OR.230 Data error detection and authentication

An AIS provider shall ensure that:

- (a) digital data error detection techniques are used during the transmission and/or storage of aeronautical data in order to support the applicable data integrity levels specified in AIS.TR.200(c); and
- (b) the transfer of aeronautical data is subject to a suitable authentication process such that recipients are able to confirm that the data or information has been transmitted by an authorised source.

AIS.OR.235 Error reporting, measurement, and corrective actions

An AIS provider shall ensure that error reporting, measurement and corrective action mechanisms are established and maintained.

AIS.OR.240 Data limitations

An AIS provider shall identify, in the aeronautical information products, except NOTAM, the aeronautical data and aeronautical information that do not meet the DQRs.

AIS.OR.250 Consistency requirement

Where aeronautical data or aeronautical information is duplicated in the AIP of more than one Member State, the AIS providers responsible for those AIPs shall establish mechanisms to ensure consistency between the duplicated information.

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 ensure that processes are implemented for data and information consistency between those formats.

Chapter 1 — Aeronautical information in a standardised presentation

AIS.OR.305 Aeronautical information publication (AIP)

An AIS provider shall issue an AIP.

AIS.OR.310 AIP amendments

An AIS provider shall:

- (a) issue permanent changes to the AIP as AIP amendments; and
- (b) ensure that the AIP is amended or reissued at such regular intervals as necessary to ensure that the information is complete and up to date.

AIS.OR.315 AIP supplements

An AIS provider shall:

- (a) issue, as AIP supplements, temporary changes of long duration — three months or longer — and information of short duration which contains extensive text and/or graphics;
- (b) regularly provide a checklist of the valid AIP supplements; and
- (c) publish a new AIP supplement as a replacement when an error occurs in an AIP supplement or when the period of validity of an AIP supplement is changed.

AIS.OR.320 Aeronautical information circular (AIC)

- (a) An AIS provider shall issue as an AIC the following:
 - (1) a long-term forecast of any major change in legislation, regulations, procedures or facilities; or
 - (2) information of a purely explanatory or advisory nature which affects flight safety; or
 - (3) information or notification of an explanatory or advisory nature, concerning technical, legislative or purely administrative matters.
- (b) An AIS provider shall review at least once a year the validity of an AIC in force.

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.

AIS.OR.330 NOTAM

- (a) An AIS provider shall:
 - (1) promptly issue a NOTAM whenever the information to be distributed is of a temporary nature and of short duration or when operationally significant permanent changes, or temporary changes of long duration, are made at short notice, except for extensive text and/or graphics; and
 - (2) issue, as a NOTAM, information on the establishment, condition, or change of any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel involved with flight operations;
- (b) Compliance with AIS.OR.200 shall not inhibit the urgent distribution of aeronautical information necessary to ensure the safety of flight.

Chapter 2 — Digital data sets

AIS.OR.335 General — Digital data sets

- (a) If available, 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.
- (b) When made available, terrain data shall be provided in the form of terrain data sets.
- (c) A checklist of valid data sets shall be regularly provided.

AIS.OR.340 Metadata requirements

Each data set shall include a minimum set of metadata to be provided to the next user.

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 in accordance with 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 AIS.TR.350; and
- (b) for aerodromes to cover:
 - (1) Area 2a or parts thereof, as laid down in AIS.TR.350(b)(1);
 - (2) Areas 2b, 2c and 2d or parts thereof, as laid down in 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 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 AIS.TR.350(d), for all runways where precision approach Category II or III operations 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 m or higher above ground;
- (b) for aerodromes, for all obstacles within Area 2 that are assessed as being a hazard to air navigation; and

- (c) for aerodromes, 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 Category II or III operations have been established.

AIS.OR.365 Aerodrome mapping data sets

An AIS provider shall ensure that aerodrome mapping data sets, if available, are provided in accordance with 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 in accordance with AIS.TR.370.

SECTION 4 — DISTRIBUTION AND PRE-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 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.

AIS.OR.405 Pre-flight information services

An AIS provider shall ensure that:

- (a) for any aerodrome/heliport, aeronautical information relative to the route stages originating at the aerodrome/heliport is made available to flight operations personnel, including flight crew and services responsible for pre-flight information; and
- (b) aeronautical information provided for pre-flight planning purposes includes information of operational significance from the elements of the aeronautical information products.

SECTION 5 — AERONAUTICAL INFORMATION PRODUCTS UPDATES

AIS.OR.500 General — Aeronautical information products updates

An AIS provider shall ensure that aeronautical data and aeronautical information are amended or reissued to keep them up to date.

AIS.OR.505 Aeronautical information regulation and control (AIRAC)

- (a) An AIS provider shall ensure that information concerning the circumstances listed in AIS.TR.505(a) is distributed under the AIRAC system.
- (b) An AIS provider shall ensure that:
 - (1) the information notified under the AIRAC system is not changed further for at least another 28 days after the AIRAC effective date unless the circumstance notified is of a temporary nature and would not persist for the full period;
 - (2) the information provided under the AIRAC system is distributed/made available so as to reach recipients at least 28 days in advance of the AIRAC effective date; and
 - (3) implementation dates other than the AIRAC effective dates are not used for pre-planned operationally significant changes requiring cartographic work and/or for updating of navigation databases.

AIS.OR.510 NOTAM

An AIS provider shall:

- (a) ensure that NOTAM are provided in accordance with AIS.TR.510; and
- (b) provide a ‘trigger NOTAM’, as laid down in AIS.TR.510(f), when an AIP amendment or an AIP supplement is published in accordance with AIRAC procedures.

AIS.OR.515 Data set updates

An AIS provider shall:

- (a) amend or reissue data sets at such regular intervals as may be necessary to keep them up to date; and
- (b) issue permanent changes and temporary changes of long duration — three months or longer — made available as digital data in the form of a complete data set and/or a subset that includes only the differences from the previously issued complete data set.

SECTION 6 — PERSONNEL REQUIREMENTS

AIS.OR.600 General requirements

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

- (a) made aware of, and applies:
 - (1) the requirements for aeronautical information products and services, as specified in Sections 2 to 5; and
 - (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; and
- (b) adequately trained, competent and authorised for the job they are required to do.

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

SECTION 2 — DATA QUALITY MANAGEMENT

AIS.TR.200 General

- (a) The accuracy of aeronautical data shall be as specified in the aeronautical data catalogue (hereinafter referred to as the ‘data catalogue’), specified in Appendix 1 to Annex III (Part-ATM/ANS.OR) to this Regulation.
- (b) The resolution of aeronautical data shall be commensurate with the actual data accuracy.
- (c) The integrity of aeronautical data shall be maintained. Based on the integrity classification specified in the data catalogue, procedures shall be put in place so that:
 - (1) for routine data, corruption is avoided throughout the processing of the data;
 - (2) for essential data, corruption does not occur at any stage of the entire process and additional processes are included, as needed, to address potential risks in the overall system architecture to further assure data integrity at this level; and
 - (3) for critical data, corruption does not occur at any stage of the entire process and additional integrity assurance processes are included to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks.
- (d) The traceability of aeronautical data shall be ensured.
- (e) The timeliness of the aeronautical data shall be ensured, including any limits on the effective period of the data.
- (f) The completeness of the aeronautical data shall be ensured.
- (g) The format of the delivered data shall meet the specified requirements.

AIS.TR.210 Exchange of aeronautical data and aeronautical information

Except for terrain data, the exchange format of aeronautical data shall:

- (a) enable the exchange of data for both individual features and feature collections;
- (b) enable the exchange of baseline information as a result of permanent changes; and
- (c) be structured in accordance with the subjects and properties of the aeronautical data catalogue, and be documented through a mapping between the exchange format and the aeronautical data catalogue.

AIS.TR.220 Validation and verification

- (a) The verification shall ensure that:
 - (1) the aeronautical data was received without corruption;
 - (2) the aeronautical data process does not introduce corruption.
- (b) Aeronautical data and aeronautical information entered manually shall be subject to independent verification to identify any errors that may have been introduced.

AIS.TR.225 Metadata

The metadata to be collected shall include, as a minimum:

- (a) the identification of the organisations or entities performing any action of originating, transmitting or manipulating the aeronautical data;
- (b) the action performed; and
- (c) the date and time the action was performed.

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

The 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 and the necessary corrective actions are performed;
- (c) 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 by the most effective means, taking into account the integrity level of the aeronautical data and aeronautical information; and
- (e) error feedback is facilitated and encouraged.

AIS.TR.240 Data limitations

The identification of data not meeting the DQRs shall be made with an annotation or by explicitly providing the quality value.

SECTION 3 — AERONAUTICAL INFORMATION PRODUCTS

AIS.TR.300 General — Aeronautical information products

- (a) Aeronautical information products intended for distribution shall include English text for those parts expressed in plain language, except those products intended to be distributed solely within a Member State.
- (b) Place names shall be spelt in conformity with local usage and transliterated, when necessary, into the International Organization for Standardization (ISO) basic Latin alphabet.
- (c) International Civil Aviation Organization (ICAO) abbreviations shall be used in the aeronautical information products whenever they are appropriate.

Chapter 1 — Aeronautical information in a standardised presentation

AIS.TR.305 Aeronautical information publication (AIP)

- (a) The AIP, AIP amendments and AIP supplements shall be provided as an ‘electronic AIP’ (eAIP) and/or on paper.
- (b) The AIP shall include:
 - (1) a statement of the competent authority responsible for the air navigation facilities, services or procedures covered by the AIP;
 - (2) the general conditions under which the services or facilities are available for use;
 - (3) a list of significant differences between the regulations and practices of the Member State and the related ICAO Standards and Recommended Practices (SARPs) and Procedures; and
 - (4) the choice made by a Member State in each significant case where an alternative course of action is provided for in the ICAO SARPs and procedures.
- (c) The AIP shall contain information related to, and arranged under, the subject headings listed in Appendix 1 to this Annex.
- (d) The issuing Member State and AIS provider shall be clearly indicated.
- (e) When two or more Member States jointly provide an AIP, they shall be clearly indicated.
- (f) Each AIP shall be self-contained and include a table of contents.
- (g) An AIP shall be organised in three parts (GEN, ENR and AD), sections and subsections, except when the AIP, or a volume of the AIP, is designed to facilitate operational use in-flight, in which case the precise format and arrangement may be left to the discretion of the Member State provided that an adequate table of contents is included.
- (h) Each AIP shall be dated.
- (i) The date, consisting of the day, month (by name), and year, shall be the publication date and/or the effective date (AIRAC) of the information.

- (j) When describing periods of activity, availability or operation, the applicable days and times shall be specified.
- (k) Each AIP issued as a printed volume and each page of an AIP issued in a loose-leaf form shall be annotated to clearly indicate:
 - (1) the identity of the AIP;
 - (2) the territory covered and its subdivisions, when necessary;
 - (3) the identification of the issuing Member State and producing organisation (authority); and
 - (4) page numbers/chart titles.
- (l) Any amendment to the printed volume of the AIP shall be made using replacement sheets.

AIS.TR.310 AIP amendments

- (a) Any operationally significant changes to the AIP, in accordance with 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.
- (c) When an AIP amendment is issued, it shall include references to the serial number of the NOTAM which have been incorporated into the amendment.
- (d) The most current update cycles applicable to AIP amendments shall be made publicly available.
- (e) Recourse to hand amendments/annotations shall be kept to a minimum; the normal method of amendment shall be by reissuing or by replacement of pages.
- (f) Each AIP amendment shall:
 - (1) include a checklist with the current dates and numbers of each loose-leaf page in the AIP; and
 - (2) provide a recapitulation of any outstanding hand amendments.
- (g) New or revised information shall be identified by an annotation against it in the margin.
- (h) Each AIP amendment page, including the cover sheet, shall contain a 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.

AIS.TR.315 AIP supplements

- (a) The AIP supplement issued in printed form shall be provided by means of distinctive pages.
- (b) The most current update cycles applicable to AIP supplements shall be made publicly available.

- (c) Each AIP supplement shall be allocated a serial number which shall be consecutive and based on the calendar year.
- (d) Whenever an AIP supplement is issued as a replacement of a NOTAM, a reference to the series and number of the NOTAM shall be included.
- (e) A checklist of valid AIP supplements shall be issued at intervals of not more than one month, as part of the checklist of NOTAM and also with distribution as for the AIP supplements.
- (f) Each AIP supplement page shall have a publication date. Each AIRAC AIP supplement page shall have both a publication and an effective date.

AIS.TR.320 Aeronautical information circular (AIC)

- (a) The AIC shall be provided as an electronic document and/or on paper.
- (b) The AIC shall be provided whenever it is desirable to promulgate:
 - (1) forecasts of important changes in the air navigation procedures, services and facilities;
 - (2) forecasts of implementation of new navigational systems;
 - (3) significant information derived from aircraft accident/incident investigation which has a bearing on flight safety;
 - (4) information on regulations related to the safeguarding of civil aviation against acts of unlawful interference that jeopardise the security of civil aviation;
 - (5) advice on medical matters of special interest to pilots;
 - (6) warnings to pilots concerning the avoidance of physical hazards;
 - (7) information on the effect of certain weather phenomena on aircraft operations;
 - (8) information on new hazards affecting aircraft handling techniques;
 - (9) information on regulations related to the carriage of restricted articles by air;
 - (10) references to the requirements of national and EU legislation and to the publication of changes therein;
 - (11) information on aircrew licensing arrangements;
 - (12) information on training of aviation personnel;
 - (13) information on the implementation of, or exemption from, requirements in national and EU legislation;
 - (14) advice on the use and maintenance of specific types of equipment;
 - (15) the actual or planned availability of new or revised editions of aeronautical charts;
 - (16) information on the carriage of communication equipment;
 - (17) explanatory information related to noise abatement;

- (18) selected airworthiness directives;
 - (19) information on changes in NOTAM series or distribution, new editions of AIP or major changes in their content, coverage or format;
 - (20) advance information on the snow plan; and
 - (21) other information of a similar nature.
- (c) The AIC shall not be used for information that qualifies for inclusion in AIP or NOTAM.
 - (d) The snow plan issued under AD 1.2.2 of the AIP shall be supplemented by seasonal information to be issued well in advance of the beginning of each winter — not less than one month before the normal onset of winter conditions.
 - (e) When the AIC is selected by the originating Member State for distribution beyond its territory, it shall have the same distribution as the AIP.
 - (f) Each AIC shall be allocated a serial number which shall be consecutive and based on the calendar year.
 - (g) In the event that an AIC is provided in more than one series, each series shall be separately identified by a letter.
 - (h) A checklist of AIC currently in force shall be issued at least once a year, with distribution as for the AIC.
 - (i) A checklist of AIC provided beyond the territory of a Member State shall be included in the NOTAM checklist.

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;
 - (3) establishment of, withdrawal of, and significant changes in, the operational capability of radio navigation and air-ground communication services;
 - (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;
 - (13) operational directives requiring immediate action or changes thereto;
 - (14) presence of hazards that affect air navigation;
 - (15) planned laser emissions, laser displays and search lights if pilots' night vision is likely to be impaired;
 - (16) 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;
 - (17) establishment or discontinuance of, including activation or deactivation, as applicable, or changes in, the status of prohibited, restricted or danger areas;
 - (18) 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 121.5 MHz is required;
 - (19) allocation, cancellation or change of location indicators;
 - (20) changes in aerodrome/heliport rescue and firefighting (RFF) category;
 - (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;
 - (22) outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;
 - (23) forecasts of solar cosmic radiation, where provided;
 - (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;
 - (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;
 - (26) establishment of operations of humanitarian relief missions, together with procedures and/or limitations that affect air navigation;
 - (27) implementation of short-term contingency measures in cases of disruption, or partial disruption, of ATS and related supporting services; and
 - (28) specific loss of integrity of satellite-based navigation systems.
- (b) A NOTAM shall not be issued to provide the following information:

- (1) routine maintenance work on aprons and taxiways that does not affect the safe movement of aircraft;
 - (2) runway marking work when aircraft operations can safely be conducted on other available runways or when the equipment used can be removed, when necessary;
 - (3) temporary obstructions in the vicinity of aerodromes/heliports that do not affect the safe operation of aircraft;
 - (4) partial failure of aerodrome/heliport lighting facilities where such failure does not directly affect aircraft operations;
 - (5) partial temporary failure of air-ground communications when suitable alternative frequencies are available and are operative;
 - (6) lack of apron marshalling services, road traffic closures, limitations and control;
 - (7) the unserviceability of location, destination or other instruction signs on the aerodrome movement area;
 - (8) parachuting when in uncontrolled airspace under visual flight rules (VFR), nor when in controlled airspace at promulgated sites or within danger or prohibited areas;
 - (9) training activities performed by ground units;
 - (10) unavailability of backup and secondary systems if these do not have an operational impact;
 - (11) limitations to airport facilities or general services, with no operational impact;
 - (12) national regulations not affecting general aviation;
 - (13) announcements or warnings about possible/potential limitations, with no operational impact;
 - (14) general reminders on already published information;
 - (15) availability of equipment for ground units, without information on the operational impact on airspace and facility users;
 - (16) information about laser emissions with no operational impact and about fireworks below the minimum flying heights;
 - (17) closure of parts of the movement area in connection with locally coordinated, planned work of duration of less than one hour;
 - (18) closure, changes, unavailability in the operation of aerodrome(s)/heliport(s) other than in the aerodrome(s)/heliport(s) operation hours; and
 - (19) other non-operational information of a similar temporary nature.
- (c) Except as provided for in AIS.TR.330(f) and AIS.TR.330(g), each NOTAM shall contain the information in the order shown in the NOTAM format of Appendix 2 to this Annex.

- (d) NOTAM text shall be composed of the significations/uniform abbreviated phraseology assigned to the ICAO NOTAM Code, complemented by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language.
- (e) All NOTAM shall be issued in English language. If necessary for domestic users, NOTAM may additionally be issued in national language.
- (f) Information concerning snow, slush, ice, frost, standing water or water associated with snow, slush, ice or frost on the movement area shall be disseminated by means of SNOWTAM and shall contain the information in the order shown in the SNOWTAM format of Appendix 3a to this Annex.
- (g) Information concerning an operationally significant change to volcanic activity, volcanic eruption and/or volcanic ash cloud shall, when reported by means of an ASHTAM, contain the information in the order shown in the ASHTAM format of Appendix 4 to this Annex.
- (h) When errors occur in a NOTAM, a NOTAM with a new number shall be issued to replace the erroneous NOTAM or the erroneous NOTAM shall be cancelled and a new NOTAM shall be issued.
- (i) When a NOTAM is issued that cancels or replaces a previous NOTAM:
 - (1) the series and number/year of the previous NOTAM shall be indicated; and
 - (2) the series, location indicator and subject of both NOTAM shall be the same.
- (j) Only one NOTAM shall be cancelled or replaced by a NOTAM.
- (k) Each NOTAM shall deal with only one subject and one condition of the subject.
- (l) Each NOTAM shall be as brief as possible and compiled so that its meaning is clear without the need to refer to another document.
- (m) A NOTAM containing permanent or temporary information of long duration shall include appropriate references to the AIP or AIP supplement.
- (n) Location indicators included in the text of a NOTAM shall be those contained in ICAO Doc 7910 'Location Indicators'. A curtailed form of such indicators shall not be used. Where no ICAO location indicator is assigned to the location, its place name shall be entered in plain language.
- (o) A series identified by a letter and a four-digit number followed by a stroke and a two-digit number for the year shall be allocated to each NOTAM. The four-digit number shall be consecutive and based on the calendar year.
- (p) All NOTAM shall be divided in series based on subject, traffic or location or a combination thereof, depending on end-user needs. NOTAM for aerodromes allowing international air traffic shall be issued in international NOTAM series.
- (q) If NOTAM are issued in both English and national language, the NOTAM series shall be organised so that the national language series are equivalent to the English language series in terms of content and numbering.

- (r) The content and geographical coverage of each NOTAM series shall be stated in detail in the AIP, GEN 3.
- (s) A checklist of valid NOTAM shall be regularly provided.
- (t) One checklist NOTAM shall be issued for each series.
- (u) A checklist NOTAM shall also refer to the latest AIP amendments, AIP supplements, data sets and, at least, to distributed AIC.
- (v) A checklist NOTAM shall have the same distribution as the actual message series to which it refers and shall be clearly identified as a checklist.
- (w) Series allocation shall be monitored and, if required, appropriate measures shall be taken to assure that no series reaches the maximum possible number of issued NOTAM before the end of a calendar year.

Chapter 2 — Digital data sets

AIS.TR.335 General— Digital data sets

- (a) A standard for geographic information shall be used as a reference framework.
- (b) A description of each available data set shall be provided in the form of a data product specification.
- (c) A checklist of the available data sets, including their effective and publication dates, shall be made available to users to ensure that current data is being used.
- (d) The checklist of data sets shall be made available through the same distribution mechanism as the one used for the data sets.

AIS.TR.340 Metadata requirements

The minimum metadata for each data set shall include:

- (a) the name of the organisations or entities providing the data set;
- (b) the date and time when the data set was provided;
- (c) the validity of the data set; and
- (d) any limitations on the use of the data set.

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
ATS airspace	Type, name, lateral limits, vertical limits, class of airspace
Special activity airspace	Type, name, lateral limits, vertical limits, restriction, activation
Route	Identifier prefix, flight rules, designator
Route segment	Navigation specification, start point, end point, track, distance, upper limit, lower limit, minimum en-route altitude (MEA), minimum obstacle clearance altitude (MOCA), direction of cruising level, reverse direction of cruising level, required navigation performance
Waypoint — en-route	Reporting requirement, identification, location, formation
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 reference point
Runway	Designator, nominal length, nominal width, surface type, strength
Runway direction	Designator, true bearing, threshold, take-off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA), landing distance available (LDA), rejected TODA (for helicopters)
Final approach and take-off area (FATO)	Designation, length, width, threshold point
Touchdown and lift-off area (TLOF)	Designator, centre point, length, width, surface type
Radio navigation aid	Type identification, name, aerodrome served, hours of operation, magnetic variation, frequency/channel, position, elevation, magnetic bearing, true bearing, zero bearing direction

- (b) When a property is not defined for a particular occurrence of the subjects listed in (a), the AIP data subset shall include an explicit indication: ‘not applicable’.

AIS.TR.350 Terrain and obstacle data — General requirements

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

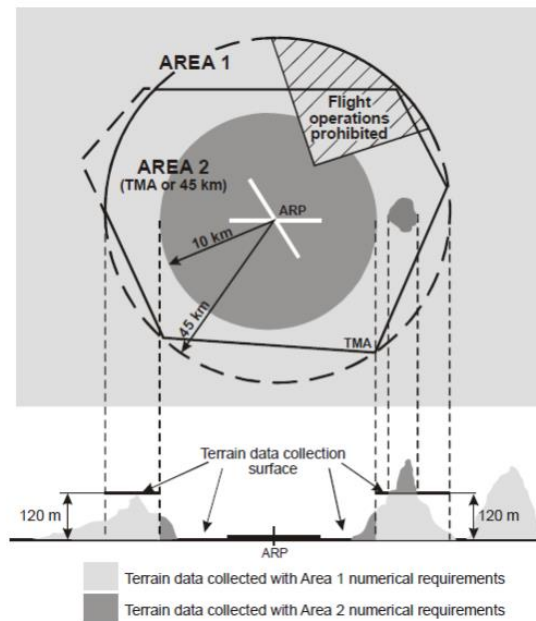
- (a) Area 1: the entire territory of a Member State;
- (b) Area 2: within the vicinity of an aerodrome, subdivided as follows:
 - (1) Area 2a: a rectangular area around a runway which comprises the runway strip plus any clearway that exists;
 - (2) Area 2b: an area extending from the ends of Area 2a 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.

AIS.TR.355 Terrain data sets

When terrain data sets are provided in accordance with AIS.OR.355:

- (a) terrain data sets shall contain the digital representation of the terrain surface in the form of continuous elevation values at all intersections of a defined grid, referenced to a common datum;
- (b) a terrain grid shall be angular or linear and shall be of a regular or irregular shape;
- (c) terrain data sets shall include spatial (position and elevation), thematic, and temporal aspects of the surface of the Earth, containing naturally occurring features, excluding obstacles;
- (d) only one feature type, i.e. terrain, shall be provided;
- (e) the following terrain feature attributes shall be recorded in the terrain data set:
 - (1) area of coverage;
 - (2) data originator identifier;
 - (3) data source identifier;
 - (4) acquisition method;
 - (5) post spacing;

- (6) horizontal reference system;
 - (7) horizontal resolution;
 - (8) horizontal accuracy;
 - (9) horizontal confidence level;
 - (10) horizontal position;
 - (11) elevation;
 - (12) elevation reference;
 - (13) vertical reference system;
 - (14) vertical resolution;
 - (15) vertical accuracy;
 - (16) vertical confidence level;
 - (17) recorded surface;
 - (18) integrity;
 - (19) date and time stamp; and
 - (20) unit of measurement used;
- (f) Within the area covered by a 10-km radius from the ARP, terrain data shall comply with the Area 2 numerical requirements;
 - (g) in the area between 10 km and the TMA boundary or a 45-km radius, whichever is smaller, data on terrain that penetrates the horizontal plane 120 m above the lowest runway elevation shall comply with the Area-2 numerical requirements;
 - (h) in the area between 10 km and the TMA boundary or a 45-km radius, whichever is smaller, data on terrain that does not penetrate the horizontal plane 120 m above the lowest runway elevation shall comply with the Area-1 numerical requirements; and
 - (i) in those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, terrain data shall comply with the Area-1 numerical requirements.



Terrain data collection surfaces — Area 1 and Area 2

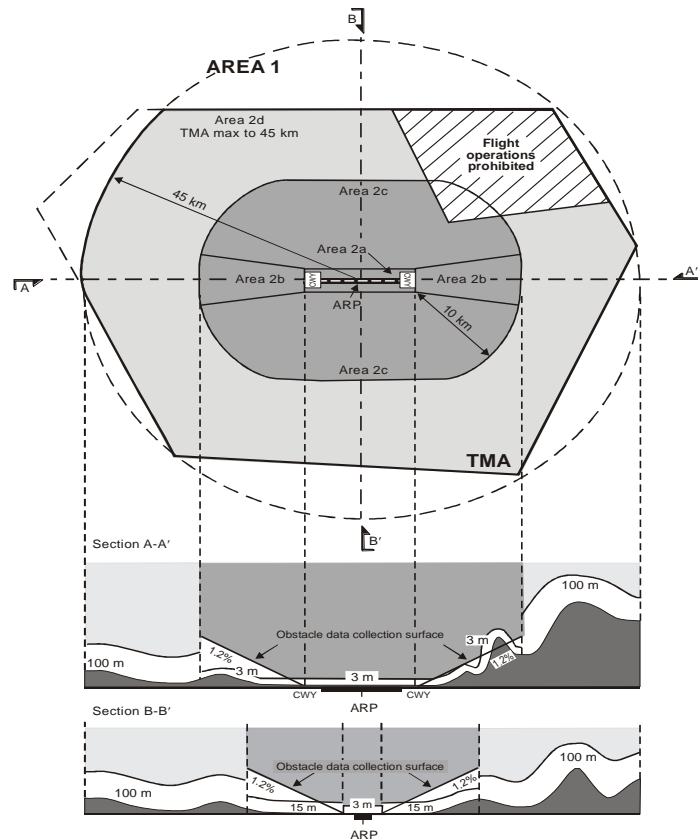
AIS.TR.360 Obstacle data sets

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

- (a) obstacle data elements are features that shall be represented in the data sets by points, lines or polygons;
- (b) all defined obstacle feature types shall be provided and each of them shall be described according to the following list of attributes:
 - (1) area of coverage;
 - (2) data originator identifier;
 - (3) data source identifier;
 - (4) obstacle identifier;
 - (5) horizontal accuracy;
 - (6) horizontal confidence level;
 - (7) horizontal position;
 - (8) horizontal resolution;
 - (9) horizontal extent;
 - (10) horizontal reference system;
 - (11) elevation;
 - (12) vertical accuracy;
 - (13) vertical confidence level;

- (14) vertical resolution;
 - (15) vertical reference system;
 - (16) obstacle type;
 - (17) geometry type;
 - (18) integrity;
 - (19) date and time stamp;
 - (20) unit of measurement used;
 - (21) lighting; and
 - (22) marking;
- (c) obstacle data for Areas 2 and 3 shall be collected in accordance with the following obstacle collection surfaces:
- (1) the Area 2a obstacle collection surface has a height of 3 m above the nearest runway elevation measured along the runway centre line, and for those portions related to a clearway, if one exists, at the elevation of the nearest runway end;
 - (2) the Area 2b obstacle collection surface has a 1.2% slope extending from the ends of Area 2a at the elevation of the runway end in the direction of departure, with a length of 10 km and a splay of 15% to each side; obstacles less than 3 m in height above the ground need not be collected;
 - (3) the Area 2c obstacle collection surface has a 1.2 % slope extending outside Areas 2a and 2b at a distance of not more than 10 km from the boundary of Area 2a; the initial elevation of Area 2c shall be the elevation of the point of Area 2a at which it commences; obstacles less than 15 m in height above the ground need not be collected;
 - (4) the Area 2d obstacle collection surface has a height of 100 m above the ground; and
 - (5) the Area 3 obstacle collection surface extends 0.5 m above the horizontal plane passing through the nearest point on the aerodrome movement area;
- (d) in those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, obstacle data shall be collected and recorded in accordance with the Area 1 numerical requirements;
- (e) the obstacle data product specification, supported by geographical coordinates for each aerodrome included within the dataset, shall describe the following areas:
- (1) Areas 2a, 2b, 2c and 2d;
 - (2) the take-off flight path area; and
 - (3) the obstacle limitation surfaces;
- (f) obstacle data sets shall contain the digital representation of the vertical and horizontal extent of the obstacles; and

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



Obstacle data collection surfaces — Area 1 and Area 2

AIS.TR.365 Aerodrome mapping data sets

- Aerodrome mapping data sets shall contain the digital representation of aerodrome features.
- ISO standards for geographic information shall be used as a reference framework.
- Aerodrome mapping data products shall be described following the relevant data product specification standard.
- The content and structure of aerodrome mapping data sets shall be defined in terms of an application schema and a feature catalogue.

AIS.TR.370 Instrument flight procedure data sets

- Instrument flight procedure data sets shall contain the digital representation of instrument flight procedures.
- The instrument flight procedure data sets shall include data about the following subjects, including all of their properties:
 - procedure;
 - procedure segment;

- (3) final approach segment;
- (4) procedure fix;
- (5) procedure holding; and
- (6) helicopter procedure specifics.

SECTION 4 — DISTRIBUTION AND PREFLIGHT INFORMATION SERVICES

AIS.TR.400 Distribution services

- (a) A predetermined distribution system for NOTAM transmitted on the AFS shall be used whenever possible.
- (b) Distribution of NOTAM series other than those distributed internationally shall be granted upon request.
- (c) NOTAM shall be prepared in conformity with ICAO communication procedures laid down in ICAO Annex 10, Volume II.
- (d) Each NOTAM shall be transmitted as a single telecommunication message.
- (e) The exchange of ASHTAM beyond the territory of a Member State, and NOTAM where Member States use NOTAM for distribution of information on volcanic activity, shall include volcanic ash advisory centres and the world area forecast centres, and take account of the requirements of long-range operations.

AIS.TR.405 Pre-flight information services

- (a) Automated pre-flight information systems shall be used to make aeronautical data and aeronautical information available to operations personnel, including flight crew members, for self-briefing, flight planning and flight information service purposes.
- (b) The human machine interface of the pre-flight information services facilities shall ensure easy access to all relevant information/data in a guided manner.
- (c) Self-briefing facilities of an automated pre-flight information system shall provide access, as necessary, to the aeronautical information service for consultation by telephone or other suitable telecommunication means.
- (d) Automated pre-flight information systems for the supply of aeronautical data and aeronautical information for self-briefing, flight planning and flight information service shall:
 - (1) provide for continuous and timely updating of the system database and monitoring of the validity and quality of the aeronautical data stored;
 - (2) permit access to the system by operations personnel, including flight crew members, aeronautical personnel concerned and other aeronautical users, through suitable telecommunications means;

- (3) ensure the provision of the aeronautical data and aeronautical information accessed, in paper form, as required;
 - (4) use access and interrogation procedures based on abbreviated plain language and ICAO location indicators laid down in ICAO Doc 7910, as appropriate, or based on a menu-driven user interface or other appropriate mechanism; and
 - (5) provide a timely response to a user request for information.
- (e) All NOTAM shall be made available for briefing by default, and content reduction shall be at user's discretion.

SECTION 5 — AERONAUTICAL INFORMATION PRODUCTS UPDATES

AIS.TR.500 General — Aeronautical information products updates

The same AIRAC cycle update shall be applied to the AIP amendments, AIP supplements, AIP data set and the instrument flight procedure data sets in order to ensure consistency of the data items that appear in multiple aeronautical information products.

AIS.TR.505 AIRAC

- (a) Information concerning the following circumstances shall be distributed under the AIRAC system:
 - (1) horizontal and vertical limits, regulations and procedures applicable to:
 - (i) flight information regions (FIRs);
 - (ii) control areas (CTAs);
 - (iii) control zones;
 - (iv) advisory areas;
 - (v) ATS routes;
 - (vi) permanent danger, prohibited and restricted areas (including type and periods of activity, when known) and air defence identification zones (ADIZs); and
 - (vii) permanent areas or routes, or portions thereof, where the possibility of interception exists;
 - (2) positions, frequencies, call signs, identifiers, known irregularities and maintenance periods of radio navigation aids, and communication and surveillance facilities;
 - (3) holding and approach procedures, arrival and departure procedures, noise abatement procedures and any other pertinent ATS procedures;
 - (4) transition levels, transition altitudes and minimum sector altitudes;
 - (5) meteorological facilities (including broadcasts) and procedures;
 - (6) runways and stopways;
 - (7) taxiways and aprons;

- (8) aerodrome ground operating procedures (including low-visibility procedures);
 - (9) approach and runway lighting; and
 - (10) aerodrome operating minima, if published by a Member State.
- (b) Special arrangements shall be made whenever major changes are planned and where advance notice is desirable and practicable.
 - (c) When information has not been submitted by the AIRAC date, a NIL notification shall be distributed through a NOTAM or other suitable means, not later than one cycle before the AIRAC effective date concerned.

AIS.TR.510 NOTAM

- (a) NOTAM shall be published with sufficient lead time for the affected parties to take any required action, except in the case of unserviceability, volcanic activity, release of radioactive material, toxic chemicals and other events that cannot be foreseen.
- (b) NOTAM notifying unserviceability of aids to air navigation, facilities or communication services shall provide an estimate of the unserviceability period or of the time at which restoration of service is expected.
- (c) Within three months from the issuing of a permanent NOTAM, the information contained in the NOTAM shall be included in the aeronautical information products affected.
- (d) Within three months from the issuing of a temporary NOTAM of long duration, the information contained in the NOTAM shall be included in an AIP supplement.
- (e) When a NOTAM with an estimated end of validity unexpectedly exceeds the three-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.
- (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.
- (g) A 'trigger NOTAM' shall come into force on the same effective date and time as the AIP amendment or supplement.
- (h) In case of an AIP amendment, a 'trigger NOTAM' shall remain valid for a period of 14 days.
- (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.
- (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.

AIS.TR.515 Data set updates

- (a) The update interval for the AIP data set and the instrument flight procedure data sets shall be specified in the data product specification.

- (b) Data sets that have been made available in advance, according to the AIRAC cycle, shall be updated with the non-AIRAC changes that occurred between the publication and the effective date.

Appendix 1

CONTENTS OF THE AERONAUTICAL INFORMATION PUBLICATION (AIP)

PART 1 — GENERAL (GEN)

When the AIP is produced as one volume, the preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments appear only in Part 1 — GEN, and the annotation “not applicable” shall be entered against each of these subsections in Parts 2 and 3.

If an AIP is produced and made available in more than one volume with each having a separate amendment and supplement service, a separate preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments shall be included in each volume.

GEN 0.1 Preface

Brief description of the AIP, including:

- 1) name of the publishing authority;
- 2) applicable ICAO documents;
- 3) publication media (i.e. printed, online or other electronic media);
- 4) the AIP structure and established regular amendment interval;
- 5) copyright policy, if applicable; and
- 6) service to contact in case of detected AIP errors or omissions.

GEN 0.2 Record of AIP Amendments

A record of AIP Amendments and AIRAC AIP Amendments (published in accordance with the AIRAC system) containing:

- 1) amendment number;
- 2) publication date;
- 3) date inserted (for the AIRAC AIP Amendments, effective date); and
- 4) initials of officer who inserted the amendment.

GEN 0.3 Record of AIP Supplements

A record of issued AIP Supplements containing:

- 1) Supplement number;
- 2) Supplement subject;
- 3) AIP section(s) affected;
- 4) period of validity; and
- 5) cancellation record.

GEN 0.4 Checklist of AIP pages

A checklist of AIP pages containing:

- 1) page number/chart title; and
- 2) publication or effective date (day, month by name and year) of the aeronautical information.

GEN 0.5 List of hand amendments to the AIP

A list of current hand amendments to the AIP containing:

- 1) AIP page(s) affected;
- 2) amendment text; and
- 3) AIP Amendment number by which a hand amendment was introduced.

GEN 0.6 Table of contents to Part 1

A list of sections and subsections contained in Part 1 — General (GEN).

GEN 1. NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 Designated authorities

The addresses of designated authorities concerned with the facilitation of international air navigation (civil aviation, meteorology, customs, immigration, health, en-route and aerodrome/heliport charges, agricultural quarantine and aircraft accident investigation) containing, for each authority:

- 1) designated authority;
- 2) name of the authority;

- 3) postal address;
- 4) telephone number;
- 5) telefax number;
- 6) e-mail address;
- 7) aeronautical fixed service (AFS) address; and
- 8) website address, if available.

GEN 1.2 Entry, transit and departure of aircraft

Regulations and requirements for advance notification and applications for permission concerning entry, transit and departure of aircraft on international flights.

GEN 1.3 Entry, transit and departure of passengers and crew

Regulations (including customs, immigration and quarantine, and requirements for advance notification and applications for permission) concerning entry, transit and departure of non-immigrant passengers and crew.

GEN 1.4 Entry, transit and departure of cargo

Regulations (including customs, and requirements for advance notification and applications for permission) concerning entry, transit and departure of cargo.

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 CAT.IDE 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 CAT.IDE.A.280 of Annex IV (Part-CAT) and 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.

GEN 1.6 Summary of national regulations and international agreements/conventions

A list of titles and references and, where applicable, summaries of national regulations affecting air navigation, together with a list of international agreements/conventions ratified by Member State.

GEN 1.7 Differences from ICAO Standards, Recommended Practices and Procedures

A list of significant differences between national regulations and practices of the Member State and related ICAO provisions, including:

- 1) provision affected (Annex and edition number, paragraph); and
- 2) difference in full text.

All significant differences shall be listed under this subsection. All Annexes shall be listed in numerical order even if there is no difference to an ICAO Annex, in which case a NIL notification shall be provided. National differences or the degree of non-application of the regional supplementary procedures (SUPPs) shall be notified immediately following the Annex to which the supplementary procedure relates.

GEN 2. TABLES AND CODES

GEN 2.1 Measuring system, aircraft markings, holidays

GEN 2.1.1 Units of measurement

Description of units of measurement used including table of units of measurement.

GEN 2.1.2 Temporal reference system

Description of the temporal reference system (calendar and time system) employed, together with an indication of whether or not daylight saving hours are employed and how the temporal reference system is presented throughout the AIP.

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 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; and
- 3) an explanation, if applicable, of the asterisk used to identify those elevations/geoid undulations that do not meet ICAO Annex 14 accuracy requirements.

GEN 2.1.5 Aircraft nationality and registration marks

Indication of aircraft nationality and registration marks adopted by the Member State.

GEN 2.1.6 Public holidays

A list of public holidays with an indication of services being affected.

GEN 2.2 Abbreviations used in AIS publications

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)'.

GEN 2.3 Chart symbols

A list of chart symbols arranged according to the chart series where symbols are applied.

GEN 2.4 Location indicators

A list of alphabetically arranged ICAO location indicators assigned to the locations of aeronautical fixed stations to be used for encoding and decoding purposes. An annotation to locations not connected to the aeronautical fixed service (AFS) shall be provided.

GEN 2.5 List of radio navigation aids

A list of radio navigation aids arranged alphabetically, containing:

- 1) identifier;
- 2) name of the station;
- 3) type of facility/aid; and
- 4) indication whether the aid serves en-route (E), aerodrome (A) or dual (AE) purposes.

GEN 2.6 Conversion of units of measurement

Tables for conversion or, alternatively, conversion formulae between:

- 1) nautical miles and kilometres and vice versa;
- 2) feet and metres and vice versa;
- 3) decimal minutes of arc and seconds of arc and vice versa; and
- 4) other conversions as appropriate.

GEN 2.7 Sunrise/sunset

Information on the time of sunrise and sunset including a brief description of criteria used for determination of the times given and either a simple formulae or table from which times may be calculated for any location within its territory/area of responsibility, or an alphabetical list of locations for which the times are given in a table with a reference to the related page in the table and the sunrise/sunset tables for the selected stations/locations, including:

- 1) station name;
- 2) ICAO location indicator;
- 3) geographical coordinates in degrees and minutes;
- 4) date(s) for which times are given;
- 5) time for the beginning of morning civil twilight;
- 6) time for sunrise;
- 7) time for sunset; and
- 8) time for the end of evening civil twilight.

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) e-mail 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, if any, are listed.

GEN 3.1.2 Area of responsibility

The area of responsibility for the AIS.

GEN 3.1.3 Aeronautical publications

Description of the elements of the aeronautical information products, including:

- 1) AIP and related amendment service;
- 2) AIP Supplements;
- 3) AIC;
- 4) NOTAM and pre-flight information bulletins (PIB);
- 5) checklists and lists of valid NOTAM; and
- 6) how they may be obtained.

When an AIC is used to promulgate publication prices, that shall be indicated in this section of the AIP.

GEN 3.1.4 AIRAC system

Brief description of the AIRAC system provided including a table of present and near future AIRAC dates.

GEN 3.1.5 Pre-flight information service at aerodromes/heliports

A list of aerodromes/heliports at which pre-flight information is routinely available, including an indication of relevant:

- 1) elements of the aeronautical information products held;
- 2) maps and charts held; and
- 3) general area of coverage of such data.

GEN 3.1.6 Digital data sets

- 1) Description of the available data sets, including:
 - a) data set title;
 - b) short description;
 - c) data subjects included;
 - d) geographical scope; and
 - e) if applicable, limitations related to its usage.
- 2) Contact details of how data sets may be obtained, containing:
 - a) name of the individual, service or organisation responsible;
 - b) street address and e-mail address of the individual, service or organisation responsible;
 - c) telefax number of the individual, service or organisation responsible;
 - d) contact telephone number of the individual, service or organisation responsible;
 - e) hours of service (time period including time zone when contact can be made);
 - f) online information that can be used to contact the individual, service or organisation; and
 - g) supplemental information, if necessary, on how and when to contact the individual, service or organisation.

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) e-mail 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.

GEN 3.2.2 Maintenance of charts

Brief description of how aeronautical charts are revised and amended.

GEN 3.2.3 Purchase arrangements

Details of how charts may be obtained, containing:

- 1) service/sales agency(ies);
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address; and
- 7) website address, if available.

GEN 3.2.4 Aeronautical chart series available

A list of aeronautical chart series available followed by a general description of each series and an indication of the intended use.

GEN 3.2.5 List of aeronautical charts available

A list of aeronautical charts available, including:

- 1) title of series;
- 2) scale of series;
- 3) name and/or number of each chart or each sheet in a series;
- 4) price per sheet; and
- 5) date of latest revision.

GEN 3.2.6 Index to the World Aeronautical Chart (WAC) — ICAO 1:1 000 000

An index chart showing coverage and sheet layout for the WAC 1:1 000 000 produced by a Member State. If an Aeronautical Chart — ICAO 1:500 000 is produced instead of WAC 1:1 000 000, index charts shall be used to indicate coverage and sheet layout for the Aeronautical Chart — ICAO 1:500 000.

GEN 3.2.7 Topographical charts

Details of how topographical charts may be obtained, containing:

- 1) name of service/agency(ies);
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address; and
- 7) website address, if available.

GEN 3.2.8 Corrections to charts not contained in the AIP

A list of corrections to aeronautical charts not contained in the AIP, or an indication where such information can be obtained.

GEN 3.3 Air traffic services (ATS)

GEN 3.3.1 Responsible service

Description of the air traffic service and its major components, including:

- 1) service name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail 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 from ICAO, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.3.2 Area of responsibility

Brief description of area of responsibility for which ATS are provided.

GEN 3.3.3 Types of services

Brief description of main types of air traffic services provided.

GEN 3.3.4 Coordination between the operator and ATS

General conditions under which coordination between the operator and air traffic services is affected.

GEN 3.3.5 Minimum flight altitude

The criteria used to determine minimum flight altitudes.

GEN 3.3.6 ATS units address list

A list of ATS units and their addresses arranged alphabetically, containing:

- 1) unit name;

- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address; and
- 7) website address, if available.

GEN 3.4 Communication services

GEN 3.4.1 Responsible service

Description of the service responsible for the provision of telecommunication and navigation facilities, including:

- 1) service name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail 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 from ICAO, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.4.2 Area of responsibility

Brief description of area of responsibility for which telecommunication service is provided.

GEN 3.4.3 Types of service

Brief description of the main types of service and facilities provided, including:

- 1) radio navigation services;
- 2) voice and/or data link services;

- 3) broadcasting service;
- 4) language(s) used; and
- 5) an indication of where detailed information can be obtained.

GEN 3.4.4 Requirements and conditions

Brief description concerning the requirements and conditions under which the communication service is available.

GEN 3.4.5 Miscellaneous

Any additional information (e.g. selected radio broadcasting stations, telecommunications diagram).

GEN 3.5 Meteorological services

GEN 3.5.1 Responsible service

Brief description of the meteorological service responsible for the provision of meteorological information, including:

- 1) service name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail 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 service is not H24.

GEN 3.5.2 Area of responsibility

Brief description of area and/or air routes for which meteorological service is provided.

GEN 3.5.3 Meteorological observations and reports

Detailed description of the meteorological observations and reports provided for international air navigation, including:

- 1) name of the station and the ICAO location indicator;
- 2) type and frequency of observation including an indication of automatic observing equipment;
- 3) types of meteorological reports and availability of a TREND forecast;
- 4) 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, transmissometers next to touchdown zone, etc.);
- 5) hours of operation; and
- 6) indication of aeronautical climatological information available.

GEN 3.5.4 Types of services

Brief description of the main types of service provided, including details of briefing, consultation, display of meteorological information, flight documentation available for operators and flight crew members, and of the methods and means used for supplying the meteorological information.

GEN 3.5.5 Notification required from operators

Minimum amount of advance notice required by the meteorological service provider from operators in respect of briefing, consultation and flight documentation and other meteorological information they require or change.

GEN 3.5.6 Aircraft reports

As necessary, requirements of the meteorological service provider for the making and transmission of aircraft reports.

GEN 3.5.7 VOLMET service

Description of VOLMET and/or D-VOLMET service, including:

- 1) name of transmitting station;
- 2) call sign or identification and abbreviation for the radio communication emission;
- 3) frequency or frequencies used for broadcast;
- 4) broadcasting period;
- 5) hours of service;

- 6) list of aerodromes/heliports for which reports and/or forecasts are included; and
- 7) reports, forecasts and SIGMET information included and remarks.

GEN 3.5.8 SIGMET and AIRMET service

Description of the 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:

- 1) name of the meteorological watch office, ICAO location indicator;
- 2) hours of service;
- 3) flight information region(s) or control area(s) served;
- 4) SIGMET validity periods;
- 5) specific procedures applied to SIGMET information (e.g. for volcanic ash and tropical cyclones);
- 6) procedures applied to AIRMET information (in accordance with relevant regional air navigation agreements);
- 7) the ATS unit(s) provided with SIGMET and AIRMET information; and
- 8) additional information, such as any limitation of service, etc.

GEN 3.5.9 Other automated meteorological services

Description of available automated services for the provision of meteorological information (e.g. automated pre-flight information service accessible by telephone and/or computer modem) including:

- 1) service name;
- 2) information available;
- 3) areas, routes and aerodromes covered; and
- 4) telephone and telefax number(s), e-mail address, and, if available, website address.

GEN 3.6 Search and rescue (SAR)

GEN 3.6.1 Responsible service(s)

Brief description of service(s) responsible for the provision of search and rescue (SAR), including:

- 1) service/unit name;
- 2) postal address;
- 3) telephone number;

- 4) telefax number;
- 5) e-mail 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.

GEN 3.6.2 Area of responsibility

Brief description of area of responsibility within which SAR services are provided.

GEN 3.6.3 Types of service

Brief description and geographical portrayal, where appropriate, of the type of service and facilities provided including indications where SAR aerial coverage is dependent upon significant deployment of aircraft.

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.

GEN 3.6.5 Conditions of availability

Brief description of provisions for SAR, including the general conditions under which the service and facilities are available for international use, including an indication of whether a facility available for SAR is specialised in SAR techniques and functions, or is specially used for other purposes but adapted for SAR purposes by training and equipment, or is only occasionally available and has no particular training or preparation for SAR work.

GEN 3.6.6 Procedures and signals used

Brief description of the procedures and signals used by rescue aircraft and a table showing the signals to be used by survivors.

GEN 4. CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES (ANS)

Reference may be made to where details of actual charges may be found, if not itemised in this chapter.

GEN 4.1 Aerodrome/heliport charges

Brief description of type of charges which may be applicable at aerodromes/heliports available for international use, including:

- 1) landing of aircraft;
- 2) parking, hangarage and long-term storage of aircraft;
- 3) passenger service;
- 4) security;
- 5) noise-related items;
- 6) other (customs, health, immigration, etc.);
- 7) exemptions/reductions; and
- 8) methods of payment.

GEN 4.2 Air navigation services charges

Brief description of charges that may be applicable to ANS provided for international use, including:

- 1) approach control;
- 2) ANS route;
- 3) cost basis for ANS and exemptions/reductions; and
- 4) methods of payment.

PART 2 — EN-ROUTE (ENR)

If an AIP is produced and made available in more than one volume with each having a separate amendment and supplement service, a separate preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments shall be included in each volume. In the case of an AIP being published as one volume, the annotation 'not applicable' shall be entered against each of the above subsections.

ENR 0.6 Table of contents to Part 2

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

ENR 1. GENERAL RULES AND PROCEDURES

ENR 1.1 General rules

The general rules shall be published as applied within the Member State.

ENR 1.2 Visual flight rules

The visual flight rules shall be published as applied within the Member State.

ENR 1.3 Instrument flight rules

The instrument flight rules shall be published as applied within the Member State.

ENR 1.3.1 Rules applicable to all IFR flights

ENR 1.3.2 Rules applicable to IFR flights within controlled airspace

ENR 1.3.3 Rules applicable to IFR flights outside controlled airspace

ENR 1.3.4 Free route airspace (FRA) general procedures

Procedures related to the free route airspace, including explanation and definitions of applied FRA relevant points. In case of cross-border FRA implementation, the involved FIRs/UIRs or CTAs/UTAs shall be indicated in ENR 1.3.

ENR 1.4 ATS airspace classification and description

ENR 1.4.1 ATS airspace classification

The description of ATS airspace classes in the form of the ATS airspace classification table in Appendix 4 to SERA.6001 of Regulation (EU) No 923/2012, appropriately annotated to indicate those airspace classes not used by the Member State.

ENR 1.4.2 ATS airspace description

Other ATS airspace descriptions, as applicable, including general textual descriptions.

ENR 1.5 Holding, approach and departure procedures

ENR 1.5.1 General

The requirement is for a statement concerning the criteria on which holding, approach and departure procedures are established.

ENR 1.5.2 Arriving flights

Procedures (conventional or area navigation or both) for arriving flights which are common to flights into or within the same type of airspace shall be presented. If different procedures apply within a terminal airspace, a note to this effect shall be given together with a reference to where the specific procedures can be found.

ENR 1.5.3 Departing flights

Procedures (conventional or area navigation or both) for departing flights which are common to flights departing from any aerodrome/heliport shall be presented.

ENR 1.5.4 Other relevant information and procedures

Brief description of additional information, e.g. entry procedures, final approach alignment, holding procedures and patterns.

ENR 1.6 ATS surveillance services and procedures

ENR 1.6.1 Primary radar

Description of primary radar services and procedures, including:

- 1) supplementary services;
- 2) the application of radar control service;
- 3) radar and air-ground communication failure procedures;
- 4) voice and controller pilot data link communications (CPDLC) position reporting requirements; and
- 5) graphic portrayal of the area of radar coverage.

ENR 1.6.2 Secondary surveillance radar (SSR)

Description of secondary surveillance radar (SSR) operating procedures, including:

- 1) emergency procedures;
- 2) air-ground communication failure and unlawful interference procedures;
- 3) the system of SSR code assignment;
- 4) voice and CPDLC position reporting requirements; and
- 5) graphic portrayal of the area of SSR coverage.

ENR 1.6.3 Automatic dependent surveillance — broadcast (ADS-B)

Description of automatic dependent surveillance — broadcast (ADS-B) operating procedures, including:

- 1) emergency procedures;
- 2) air-ground communication failure and unlawful interference procedures;
- 3) aircraft identification requirements;
- 4) voice and CPDLC position reporting requirements; and
- 5) graphic portrayal of the area of ADS-B coverage.

ENR 1.6.4 Other relevant information and procedures

Brief description of additional information and procedures, e.g. radar failure procedures and transponder failure procedures.

ENR 1.7 Altimeter setting procedures

A statement of altimeter setting procedures in use shall be published, containing:

- 1) brief introduction with a statement concerning the ICAO documents on which the procedures are based together with differences to ICAO provisions, if any;
- 2) basic altimeter setting procedures;
- 3) description of altimeter setting region(s);
- 4) procedures applicable to operators (including pilots); and
- 5) table of cruising levels.

ENR 1.8 ICAO regional supplementary procedures

Regional supplementary procedures (SUPPs) affecting the entire area of responsibility shall be presented.

ENR 1.9 Air traffic flow management (ATFM) and airspace management

Brief description of ATFM system and airspace management, including:

- 1) ATFM structure, service area, service provided, location of unit(s) and hours of operation;
- 2) types of flow messages and descriptions of the formats; and
- 3) procedures applicable to departing flights, containing:
 - a) service responsible for provision of information on applied ATFM measures;
 - b) flight plan requirements; and
 - c) slot allocations.
- 4) information on overall responsibility regarding airspace management within FIR(s), details of civil/military airspace allocation and management coordination, structure of manageable airspace (allocation and changes to allocation) and general operating procedures.

ENR 1.10 Flight planning

Any restriction, limitation or advisory information related to the flight planning stage which may assist the user in the presentation of the intended flight operation shall be indicated, including:

- 1) procedures for the submission of a flight plan;
- 2) repetitive flight plan system; and
- 3) changes to the submitted flight plan.

ENR 1.11 Addressing of flight plan messages

An indication, in tabular form, of the addresses allocated to flight plans shall be included, showing:

- 1) category of flight (IFR, VFR or both);
- 2) route (into or via FIR and/or TMA); and
- 3) message address.

ENR 1.12 Interception of civil aircraft

A complete statement of interception procedures and visual signals to be used shall be indicated with a clear indication of whether ICAO provisions are applied and, if not, that differences exist.

ENR 1.13 Unlawful interference

Appropriate procedures to be applied in case of unlawful interference shall be presented.

ENR 1.14 Air traffic incidents

Description of air traffic incidents reporting system, including:

- 1) definition of air traffic incidents;
- 2) use of the 'Air Traffic Incident Reporting Form';
- 3) reporting procedures (including in-flight procedures); and
- 4) purpose of reporting and handling of the form.

ENR 2. AIR TRAFFIC SERVICES AIRSPACE

ENR 2.1 FIR, UIR, TMA AND CTA

Detailed description of flight information regions (FIRs), upper flight information regions (UIRs), and control areas (CTAs) (including specific CTAs such as TMAs), including:

- 1) name, geographical coordinates in degrees and minutes of the FIR/UIR lateral limits and in degrees, minutes and seconds of the CTA lateral limits, vertical limits and class of airspace;
- 2) identification of unit providing the service;
- 3) call sign of aeronautical station serving the unit and language(s) used, specifying the area and conditions, when and where to be used, if applicable;
- 4) frequencies, and if applicable SATVOICE number, supplemented by indications for specific purposes; and
- 5) remarks.

Control zones around military air bases not otherwise described in the AIP shall be included in this subsection. Where the requirements of Regulation (EU) No 923/2012 concerning flight plans, two-way communications and position reporting apply to all flights in order to eliminate or reduce the need for interceptions and/or where the possibility of interception exists and the maintenance of guard on the VHF emergency channel 121.5 MHz is required, a statement to this effect shall be included for the relevant area(s) or portion(s) thereof.

A description of designated areas over which the carriage of an emergency locator transmitter (ELT) is required and where aircraft shall continuously guard the VHF emergency frequency 121.5 MHz, except for those periods when aircraft are carrying out communications on other VHF channels or when airborne equipment limitations or cockpit duties do not permit simultaneous guarding of two channels.

ENR 2.2 Other regulated airspace

Detailed description of radio mandatory zones (RMZs) and transponder mandatory zones (TMZs), including:

- 1) name, geographical coordinates in degrees and minutes of the RMZ/TMZ lateral limits;
- 2) flight levels, feet in vertical limits;
- 3) time of activity; and
- 4) remarks.

Where established, a detailed description of other types of regulated airspace and airspace classification.

ENR 3. ATS ROUTES

ENR 3.1 Lower ATS routes

Detailed description of lower ATS routes, including:

- 1) route designator, designation of the required communication performance (RCP) specification(s), navigation specification(s) and/or required surveillance performance (RSP) specification(s) applicable to a specified segment(s), names, coded designators or name-codes and the geographical coordinates in degrees, minutes and seconds of all significant points defining the route including 'compulsory' or 'on-request' reporting points;
- 2) tracks or VOR radials to the nearest degree, geodesic distance to the nearest tenth of a kilometre or tenth of a nautical mile between each successive designated significant point and, in the case of VOR radials, changeover points;
- 3) upper and lower limits or minimum en-route altitudes, to the nearest higher 50 m or 100 ft, and airspace classification;
- 4) lateral limits and minimum obstacle clearance altitudes;
- 5) direction of cruising levels;
- 6) the navigation accuracy requirement for each performance-based navigation (PBN) (RNAV or RNP) route segment; and
- 7) remarks, including an indication of the controlling unit, its operating channel and, if applicable, its logon address, SATVOICE number, and any limitations to navigation, RCP and RSP specification(s).

ENR 3.2 Upper ATS routes

Detailed description of upper ATS routes, including:

- 1) route designator, designation of the required communication performance (RCP) specification(s),

navigation specification(s) and/or required surveillance performance (RSP) specification(s) applicable to a specified segment(s), names, coded designators or name-codes and the geographical coordinates in degrees, minutes and seconds of all significant points defining the route including 'compulsory' or 'on-request' reporting points;

- 2) tracks or VOR radials to the nearest degree, geodesic distance to the nearest tenth of a kilometre or tenth of a nautical mile between each successive designated significant point and, in the case of VOR radials, changeover points;
- 3) upper and lower limits and airspace classification;
- 4) lateral limits;
- 5) direction of cruising levels;
- 6) the navigation accuracy requirement for each PBN (RNAV or RNP) route segment; and
- 7) remarks, including an indication of the controlling unit, its operating channel and, if applicable, its logon address, SATVOICE number, and any navigation, RCP and RSP specification(s) limitations.

ENR 3.3 Area navigation routes

Detailed description of PBN (RNAV and RNP) routes, including:

- 1) route designator, designation of the required communication performance (RCP) specification(s), navigation specification(s) and/or required surveillance performance (RSP) specification(s) applicable to a specified segment(s), names, coded designators or name-codes and the geographical coordinates in degrees, minutes and seconds of all significant points defining the route including 'compulsory' or 'on-request' reporting points;
- 2) in respect of waypoints defining an area navigation route, additionally as applicable:
 - a) station identification of the reference VOR/DME;
 - b) bearing to the nearest degree and the distance to the nearest tenth of a kilometre or tenth of a nautical mile from the reference VOR/DME if the waypoint is not collocated with it; and
 - c) elevation of the transmitting antenna of DME to the nearest 30 m (100 ft);
- 3) magnetic bearing to the nearest degree, geodesic distance to the nearest tenth of a kilometre or tenth of a nautical mile between defined end points and distance between each successive designated significant point;
- 4) upper and lower limits and airspace classification;
- 5) direction of cruising levels;
- 6) the navigation accuracy requirement for each PBN (RNAV or RNP) route segment; and
- 7) remarks, including an indication of the controlling unit, its operating channel and, if applicable, its logon address, SATVOICE number and any navigation, RCP and RSP specification(s) limitations.

ENR 3.4 Helicopter routes

Detailed description of helicopter routes, including:

- 1) route designator, designation of the required communication performance (RCP) specification(s), navigation specification(s) and/or required surveillance performance (RSP) specification(s) applicable to a specified segment(s), names, coded designators or name-codes and the geographical coordinates in degrees, minutes and seconds of all significant points defining the route including 'compulsory' or 'on-request' reporting points;
- 2) tracks or VOR radials to the nearest degree, geodesic distance to the nearest tenth of a kilometre or tenth of a nautical mile between each successive designated significant point and, in the case of VOR radials, changeover points;
- 3) upper and lower limits and airspace classification;
- 4) minimum flight altitudes to the nearest higher 50 m or 100 ft;
- 5) the navigation accuracy requirement for each PBN (RNAV or RNP) route segment; and
- 6) remarks, including an indication of the controlling unit, its operating channel, and, if applicable, its logon address, SATVOICE number, and any navigation, RCP and RSP specification(s) limitations.

ENR 3.5 Other routes

The requirement is to describe other specifically designated routes which are compulsory within specified area(s).

Description of free route airspace (FRA), as specified airspace within which users may freely plan direct routes between a defined entry point and a defined exit point, including information on the direct routing, the restrictions on the use of waypoints for direct routings and the indication in the flight plan (item 15). The prerequisites for the issuance of ATC clearances shall be described.

ENR 3.6 En-route holding

The requirement is for a detailed description of en-route holding procedures, containing:

- 1) holding identification (if any) and holding fix (navigation aid) or waypoint with geographical coordinates in degrees, minutes and seconds;
- 2) inbound track;
- 3) direction of the procedure turn;
- 4) maximum indicated airspeed;
- 5) minimum and maximum holding level;
- 6) time/distance outbound; and
- 7) indication of the controlling unit and its operating frequency.

ENR 4. RADIO NAVIGATION AIDS/SYSTEMS

ENR 4.1 Radio navigation aids — en-route

A list of stations providing radio navigation services established for en-route purposes and arranged alphabetically by name of the station, including:

- 1) name of the station and magnetic variation to the nearest degree and for VOR, station declination to the nearest degree, used for technical line-up of the aid;
- 2) identification;
- 3) frequency/channel for each element;
- 4) hours of operation;
- 5) geographical coordinates in degrees, minutes and seconds of the position of the transmitting antenna;
- 6) elevation of the transmitting antenna of DME to the nearest 30 m (100 ft); and
- 7) remarks.

If the operating authority of the facility is other than the designated authority, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

ENR 4.2 Special navigation systems

Description of stations associated with special navigation systems, including:

- 1) name of station or chain;
- 2) type of service available (master signal, slave signal, colour);
- 3) frequency (channel number, basic pulse rate, recurrence rate, as applicable);
- 4) hours of operation;
- 5) geographical coordinates in degrees, minutes and seconds of the position of the transmitting station; and
- 6) remarks.

If the operating authority of the facility is other than the designated authority, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

ENR 4.3 Global navigation satellite system (GNSS)

A list and description of elements of the global navigation satellite system (GNSS) providing the navigation service established for en-route purposes and arranged alphabetically by name of the element, including:

- 1) the name of the GNSS element (GPS, GLONASS, EGNOS, MSAS, WAAS, etc.);
- 2) frequency(ies), as appropriate;
- 3) geographical coordinates in degrees, minutes and seconds of the nominal service area and coverage area; and
- 4) remarks.

If the operating authority of the facility is other than the designated authority, the name of the operating authority shall be indicated in the remarks column.

ENR 4.4 Name-code designators for significant points

An alphabetically arranged list of name-code designators (five-letter pronounceable 'name-code') established for significant points at positions not marked by the site of radio navigation aids, including:

- 1) name-code designator;
- 2) geographical coordinates of the position in degrees, minutes and seconds;
- 3) reference to ATS or other routes where the point is located; and
- 4) remarks, including a supplementary definition of positions, where required.

ENR 4.5 Aeronautical ground lights — en-route

A list of aeronautical ground lights and other light beacons designating geographical positions that are selected by the Member State as being significant, including:

- 1) name of the city or town or other identification of the beacon;
- 2) type of beacon and intensity of the light in thousands of candelas;
- 3) characteristics of the signal;
- 4) operational hours; and
- 5) remarks.

ENR 5. NAVIGATION WARNINGS

ENR 5.1 Prohibited, restricted and danger areas

Description, supplemented by graphic portrayal, where appropriate, of prohibited, restricted and danger areas together with information regarding their establishment and activation, including:

- 1) identification, name and geographical coordinates of the lateral limits in degrees, minutes and seconds, if inside, and in degrees and minutes, if outside control area/control zone boundaries;
- 2) upper and lower limits; and
- 3) remarks, including time of activity.

Type of restriction or nature of hazard and risk of interception in the event of penetration shall be indicated in the remarks column.

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

Description, supplemented by graphic portrayal, where appropriate, of established military training areas and military exercises taking place at regular intervals, and established air defence identification zone (ADIZ), including:

- 1) geographical coordinates of the lateral limits in degrees, minutes and seconds, if inside, and in degrees and minutes, if outside control area/control zone boundaries;
- 2) upper and lower limits, and system and means of activation announcements together with information pertinent to civil flights and applicable ADIZ procedures; and
- 3) remarks, including time of activity and risk of interception in the event of penetration of ADIZ.

ENR 5.3 Other activities of a dangerous nature and other potential hazards

ENR 5.3.1 Other activities of a dangerous nature

Description, supplemented by charts where appropriate, of activities that constitute a specific or obvious danger to aircraft operation and could affect flights, including:

- 1) geographical coordinates in degrees and minutes of centre of area and range of influence;
- 2) vertical limits;
- 3) advisory measures;
- 4) authority responsible for the provision of information; and
- 5) remarks, including time of activity.

ENR 5.3.2 Other potential hazards

Description, supplemented by charts where appropriate, of other potential hazards that could affect flights (e.g. active volcanoes, nuclear power stations, etc.), including:

- 1) geographical coordinates in degrees and minutes of location of potential hazard;
- 2) vertical limits;
- 3) advisory measures;
- 4) authority responsible for the provision of information; and
- 5) remarks.

ENR 5.4 Air navigation obstacles

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 GEN 3.1.6.

ENR 5.5 Aerial sporting and recreational activities

Brief description, supplemented by graphic portrayal where appropriate, of intensive aerial sporting and recreational activities together with conditions under which they are carried out, including:

- 1) designation and geographical coordinates of the lateral limits in degrees, minutes and seconds, if inside, and in degrees and minutes, if outside, control area/control zone boundaries;
- 2) vertical limits;
- 3) operator/user telephone number; and
- 4) remarks, including time of activity.

ENR 5.6 Bird migration and areas with sensitive fauna

Description, supplemented by charts where practicable, of movements of birds associated with migration, including migration routes and permanent resting areas and areas with sensitive fauna.

ENR 6. EN-ROUTE CHARTS

The ICAO En-route Chart and index charts shall be included in this section.

PART 3 — AERODROMES (AD)

If an AIP is produced and made available in more than one volume with each having a separate amendment and supplement service, a separate preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments shall be included in each volume. In the case of an AIP being published as one volume, the annotation 'not applicable' shall be entered against each of the above subsections.

AD 0.6 Table of contents to Part 3

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

AD 1. AERODROMES/HELIPORTS — INTRODUCTION

AD 1.1 Aerodrome/heliport availability and conditions of use

AD 1.1.1 General conditions

Brief description of the competent authority responsible for aerodromes and heliports, including:

- 1) the general conditions under which aerodromes/heliports and associated facilities are available for use; and
- 2) a statement concerning the provisions on which the services are based and a reference to the AIP location where differences from ICAO, if any, are listed.

AD 1.1.2 Use of military air bases

Regulations and procedures, if any, concerning civil use of military air bases.

AD 1.1.3 Low visibility procedures (LVP)

The general conditions under which the LVP applicable to Category II/III operations at aerodromes, if any, are applied.

AD 1.1.4 Aerodrome operating minima

Details of aerodrome operating minima applied by the Member State.

AD 1.1.5 Other information

If applicable, other information of a similar nature.

AD 1.2 Rescue and firefighting services (RFFSs) and snow plan

AD 1.2.1 Rescue and firefighting services

Brief description of rules governing the establishment of RFFSs at aerodromes/heliports available for public use together with an indication of rescue and firefighting categories established by a Member State.

AD 1.2.2 Snow plan

Brief description of general snow plan considerations for aerodromes/heliports available for public use at which snow conditions are normally liable to occur, including:

- 1) organisation of the winter service;
- 2) surveillance of movement areas;
- 3) measuring methods and measurements taken;
- 4) actions taken to maintain the usability of movement areas;
- 5) system and means of reporting;
- 6) the cases of runway closure; and
- 7) distribution of information about snow conditions.

AD 1.3 Index of aerodromes and heliports

A list, supplemented by graphic portrayal, of aerodromes/heliports within a Member State, including:

- 1) aerodrome/heliport name and ICAO location indicator;
- 2) type of traffic permitted to use the aerodrome/heliport (international/national, IFR/VFR, scheduled/non-scheduled, general aviation, military and other); and
- 3) reference to AIP, Part 3 subsection in which aerodrome/heliport details are presented.

AD 1.4 Grouping of aerodromes/heliports

Brief description of the criteria applied by the Member State in grouping aerodromes/heliports for production/distribution/provision of information purposes.

AD 1.5 Status of certification of aerodromes

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

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

AD 2. AERODROMES

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

****** AD 2.1 Aerodrome location indicator and name**

The ICAO location indicator allocated to the aerodrome and the name of aerodrome shall be indicated. An ICAO location indicator shall be an integral part of the referencing system applicable to all subsections in section AD 2.

****** 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;
- 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, e-mail address, AFS address and, if available, website address;
- 7) types of traffic permitted to use the aerodrome (IFR/VFR); and

8) remarks.

****** 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) fuelling;
- 9) handling;
- 10) security;
- 11) de-icing; and
- 12) remarks.

****** AD 2.4 Handling services and facilities**

Detailed description of the handling services and facilities available at the aerodrome, including:

- 1) cargo-handling facilities;
- 2) fuel and oil types;
- 3) fuelling facilities and capacity;
- 4) de-icing facilities;
- 5) hangar space for visiting aircraft;
- 6) repair facilities for visiting aircraft; and
- 7) remarks.

****** AD 2.5 Passenger facilities**

Passenger facilities available at the aerodrome, provided as a brief description or a reference to other information sources such as a website, including:

- 1) hotel(s) at or in the vicinity of the aerodrome;
- 2) restaurant(s) at or in the vicinity of the aerodrome;
- 3) transportation possibilities;
- 4) medical facilities;
- 5) bank and post office at or in the vicinity of the aerodrome;
- 6) tourist office; and
- 7) remarks.

****** AD 2.6 Rescue and firefighting services**

Detailed description of the RFFSs and equipment available at the aerodrome, including:

- 1) aerodrome category for firefighting;
- 2) rescue equipment;
- 3) capability for removal of disabled aircraft; and
- 4) remarks.

****** AD 2.7 Seasonal availability — clearing**

Detailed description of the equipment and operational priorities established for the clearance of aerodrome movement areas, including:

- 1) type(s) of clearing equipment;
- 2) clearance priorities; and
- 3) remarks.

****** 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 of aprons;
- 2) designation, width, surface and strength 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; and
- 6) remarks.

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

****** 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 (if any); and
- 4) remarks.

****** AD 2.10 Aerodrome obstacles**

Detailed description of obstacles, including:

- 1) obstacles in Area 2:
 - a) obstacle identification or designation;
 - b) type of obstacle;
 - c) obstacle position, represented by geographical coordinates in degrees, minutes, seconds and tenths of seconds;
 - d) obstacle elevation and height to the nearest metre or foot;
 - e) obstacle marking, and type and colour of obstacle lighting (if any);
 - f) if appropriate, an indication that the list of obstacles is available in electronic form, and a reference to GEN 3.1.6; and
 - g) 'NIL' indication, if appropriate.
- 2) the absence of an Area 2 data set for the aerodrome is to be clearly stated and obstacle data are to be provided for:
 - a) obstacles that penetrate the obstacle limitation surfaces;
 - b) obstacles that penetrate the take-off flight path area obstacle identification surface; and

- c) other obstacles assessed as being hazardous to air navigation.
- 3) indication that information on obstacles in Area 3 is not provided, or if provided:
 - a) obstacle identification or designation;
 - b) type of obstacle;
 - c) obstacle position, represented by geographical coordinates in degrees, minutes, seconds and tenths of seconds;
 - d) obstacle elevation and height to the nearest tenth of a metre or tenth of a foot;
 - e) obstacle marking, and type and colour of obstacle lighting (if any);
 - f) if appropriate, an indication that the list of obstacles is available in electronic form, and a reference to GEN 3.1.6; and
 - g) 'NIL' indication, if appropriate.

****** AD 2.11 Meteorological information provided**

Detailed description of meteorological information provided at the aerodrome and an indication of which meteorological office is responsible for the service enumerated, including:

- 1) name of the associated meteorological office;
- 2) hours of service and, where applicable, the designation of the responsible meteorological office outside these hours;
- 3) office responsible for preparation of TAFs and periods of validity and interval of issuance of the forecasts;
- 4) availability of the TREND forecasts for the aerodrome, and interval of issuance;
- 5) information on how briefing and/or consultation is provided;
- 6) types of flight documentation supplied and language(s) used in flight documentation;
- 7) charts and other information displayed or available for briefing or consultation;
- 8) supplementary equipment available for providing information on meteorological conditions, such as weather radar and receiver for satellite images;
- 9) the ATS unit(s) provided with meteorological information; and
- 10) additional information such as any limitation of service, etc.

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

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

- 1) designations;

- 2) true bearings to one-hundredth of a degree;
- 3) dimensions of runways to the nearest metre or foot;
- 4) strength of pavement (pavement classification number (PCN) and associated data) and surface of each runway and associated stopways;
- 5) geographical coordinates in degrees, minutes, seconds and hundredths of seconds for each threshold and runway end and, where appropriate, geoid undulation of:
 - thresholds of a non-precision approach runway to the nearest metre or foot; and
 - thresholds of a precision approach runway to the nearest tenth of a metre or tenth of a foot;
- 6) elevations of:
 - thresholds of a non-precision approach runway to the nearest metre or foot; and
 - thresholds and the highest elevation of the touchdown zone of a precision approach runway to the nearest tenth of a metre or tenth of a foot;
- 7) slope of each runway and associated stopways;
- 8) dimensions of stopway (if any) to the nearest metre or foot;
- 9) dimensions of clearway (if any) to the nearest metre or foot;
- 10) dimensions of strips;
- 11) dimensions of runway end safety areas;
- 12) location (which runway end) and description of arresting system (if any);
- 13) the existence of an obstacle-free zone; and
- 14) remarks.

****** AD 2.13 Declared distances**

Detailed description of declared distances to the nearest metre or foot for each direction of each runway, including:

- 1) runway designator;
- 2) take-off run available;
- 3) take-off distance available and, if applicable, alternative reduced declared distances;
- 4) accelerate-stop distance available;
- 5) landing distance available; and
- 6) remarks, including runway entry or start point where alternative reduced declared distances have been declared.

If a runway direction cannot be used for take-off or landing, or both because it is operationally forbidden, then this shall be declared and the words 'not usable' or the abbreviation 'NU' entered.

****** AD 2.14 Approach and runway lighting**

Detailed description of approach and runway lighting, including:

- 1) runway designator;
- 2) type, length and intensity of approach lighting system;
- 3) runway threshold lights, colour and wing bars;
- 4) type of visual approach slope indicator system;
- 5) length of runway touchdown zone lights;
- 6) length, spacing, colour and intensity of runway centre line lights;
- 7) length, spacing, colour and intensity of runway edge lights;
- 8) colour of runway end lights and wing bars;
- 9) length and colour of stopway lights; and
- 10) remarks.

****** 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;
- 3) taxiway edge and taxiway centre line lights;
- 4) secondary power supply including switchover time; and
- 5) remarks.

****** AD 2.16 Helicopter landing area**

Detailed description of helicopter landing area provided at the aerodrome, including:

- 1) geographical coordinates in degrees, minutes, seconds and hundredths of seconds and, where appropriate, geoid undulation of the geometric centre of touchdown and lift-off (TLOF) or of each threshold of final approach and take-off (FATO) area:
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;

- 2) TLOF and/or FATO area elevation:
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 3) TLOF and FATO area dimensions to the nearest metre or foot, surface type, bearing strength and marking;
- 4) true bearings to one-hundredth of a degree of FATO;
- 5) declared distances available, to the nearest metre or foot;
- 6) approach and FATO lighting; and
- 7) remarks.

****** AD 2.17 Air traffic services airspace**

Detailed description of ATS airspace organised at the aerodrome, including:

- 1) airspace designation and geographical coordinates in degrees, minutes and seconds of the lateral limits;
- 2) vertical limits;
- 3) airspace classification;
- 4) call sign and language(s) of the ATS unit providing service;
- 5) transition altitude;
- 6) hours of applicability; and
- 7) remarks.

****** AD 2.18 Air traffic services communication facilities**

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

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

****** AD 2.19 Radio navigation and landing aids**

Detailed description of radio navigation and landing aids associated with the instrument approach and the terminal area procedures at the aerodrome, including:

- 1) type of aids, magnetic variation to the nearest degree, as appropriate, and type of supported operation for instrument landing system (ILS)/ microwave landing system (MLS), basic GNSS, satellite-based augmentation system (SBAS), and ground-based augmentation system (GBAS) and for VOR/ILS/MLS also station declination to the nearest degree, used for technical line-up of the aid;
- 2) identification, if required;
- 3) frequency(ies), channel number(s), service provider and reference path identifier(s) (RPI(s)), as appropriate;
- 4) hours of operation, as appropriate;
- 5) geographical coordinates in degrees, minutes, seconds and tenths of seconds of the position of the transmitting antenna, as appropriate;
- 6) elevation of the DME transmitting antenna to the nearest 30 m (100 ft) and of the distance-measuring equipment precision (DME/P) to the nearest 3 m (10 ft), elevation of GBAS reference point to the nearest metre or foot, and the ellipsoid height of the point to the nearest metre or foot; for SBAS, the ellipsoid height of the landing threshold point (LTP) or the fictitious threshold point (FTP) to the nearest metre or foot;
- 7) service volume radius from the GBAS reference point to the nearest kilometre or nautical mile; and
- 8) remarks.

When the same aid is used for both en-route and aerodrome purposes, a description shall also be given in section ENR 4. If the ground-based augmentation system (GBAS) serves more than one aerodrome, a description of the aid shall be provided under each aerodrome. If the operating authority of the facility is other than the designated authority, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

****** AD 2.20 Local aerodrome regulations**

Detailed description of regulations 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.

****** AD 2.21 Noise abatement procedures**

Detailed description of noise abatement procedures established at the aerodrome.

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

Detailed description of the conditions and flight procedures, including radar and/or ADS-B procedures, established on the basis of airspace organisation at the aerodrome. When established, detailed description of the low visibility procedures at the aerodrome, including:

- 1) runway(s) and associated equipment authorised for use under low visibility procedures;
- 2) defined meteorological conditions under which initiation, use and termination of low visibility procedures would be made;
- 3) description of ground marking/lighting for use under low visibility procedures; and
- 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 AD 2.22 ‘Flight Procedures’); and
- 5) description of the interdependencies of service 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.

****** 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 Terrain and Obstacle Chart — ICAO (Electronic);

- 6) Precision Approach Terrain Chart — ICAO (precision approach Category II and III runways);
- 7) Area Chart — ICAO (departure and transit routes);
- 8) Standard Departure Chart — Instrument — ICAO;
- 9) Area Chart — ICAO (arrival and transit routes);
- 10) Standard Arrival Chart — Instrument — ICAO;
- 11) ATC Surveillance Minimum Altitude Chart — ICAO;
- 12) Instrument Approach Chart — ICAO (for each runway and procedure type);
- 13) Visual Approach Chart — ICAO; and
- 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’.

AD 3. HELIPORTS

When a helicopter landing area is provided at the aerodrome, associated data shall be listed only under **** AD 2.16.

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

****** AD 3.1 Heliport location indicator and name**

The ICAO location indicator assigned to the heliport and to the names of the heliport shall be included in AIP. An ICAO location indicator shall be an integral part of the referencing system applicable to all subsections in section AD 3.

****** 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;
- 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, e-mail address, AFS address and, if available, website address;
- 7) types of traffic permitted to use the heliport (IFR/VFR); and
- 8) remarks.

****** AD 3.3 Operational hours**

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

- 1) heliport 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) fuelling;
- 9) handling;
- 10) security;
- 11) de-icing; and
- 12) remarks.

****** AD 3.4 Handling services and facilities**

Detailed description of the handling services and facilities available at the heliport, including:

- 1) cargo-handling facilities;
- 2) fuel and oil types;
- 3) fuelling facilities and capacity;
- 4) de-icing facilities;
- 5) hangar space for visiting helicopter;
- 6) repair facilities for visiting helicopter; and
- 7) remarks.

****** AD 3.5 Passenger facilities**

Passenger facilities available at the heliport, provided as a brief description or as a reference to other information sources such as a website, including:

- 1) hotel(s) at or in the vicinity of the heliport;
- 2) restaurant(s) at or in the vicinity of the heliport;
- 3) transportation possibilities;
- 4) medical facilities;
- 5) bank and post office at or in the vicinity of the heliport;
- 6) tourist office; and
- 7) remarks.

****** AD 3.6 Rescue and firefighting services**

Detailed description of the RFFSs and equipment available at the heliport, including:

- 1) heliport category for firefighting;
- 2) rescue equipment;
- 3) capability for removal of disabled helicopter; and
- 4) remarks.

****** AD 3.7 Seasonal availability — clearing**

Detailed description of the equipment and operational priorities established for the clearance of heliport movement areas, including:

- 1) type(s) of clearing equipment;
- 2) clearance priorities; and
- 3) remarks.

****** AD 3.8 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 of aprons, helicopter stands;
- 2) designation, width, and surface type of helicopter ground taxiways;
- 3) width and designation of helicopter air taxiway and air transit route;

- 4) location and elevation to the nearest metre or foot of altimeter checkpoints;
- 5) location of VOR checkpoints;
- 6) position of INS checkpoints in degrees, minutes, seconds and hundredths of seconds; and
- 7) remarks.

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

****** AD 3.9 Markings and markers**

Brief description of final approach and take-off area and taxiway markings and markers, including:

- 1) final approach and take-off markings;
- 2) taxiway markings, air taxiway markers and air transit route markers; and
- 3) remarks.

****** AD 3.10 Heliport obstacles**

Detailed description of obstacles, including:

- 1) obstacle identification or designation;
- 2) type of obstacle;
- 3) obstacle position, represented by geographical coordinates in degrees, minutes, seconds and tenths of seconds;
- 4) obstacle elevation and height to the nearest metre or foot;
- 5) obstacle marking, and type and colour of obstacle lighting (if any);
- 6) if appropriate, an indication that the list of obstacles is available in electronic form, and a reference to GEN 3.1.6; and
- 7) 'NIL' indication, if appropriate.

****** AD 3.11 Meteorological information provided**

Detailed description of meteorological information provided at the heliport and an indication of which meteorological office is responsible for the service enumerated, including:

- 1) name of the associated meteorological office;
- 2) hours of service and, where applicable, the designation of the responsible meteorological office outside these hours;
- 3) office responsible for preparation of TAFs, and periods of validity of the forecasts;

- 4) availability of the TREND forecasts for the heliport, and interval of issuance;
- 5) information on how briefing and/or consultation is provided;
- 6) type of flight documentation supplied and language(s) used in flight documentation;
- 7) charts and other information displayed or available for briefing or consultation;
- 8) supplementary equipment available for providing information on meteorological conditions, such as weather radar and receiver for satellite images;
- 9) the ATS unit(s) provided with meteorological information; and
- 10) additional information such as any limitation of service, etc.

****** AD 3.12 Heliport data**

Detailed description of heliport dimensions and related information, including:

- 1) heliport type — surface-level, elevated or helideck;
- 2) touchdown and lift-off (TLOF) area dimensions to the nearest metre or foot;
- 3) true bearings to one-hundredth of a degree of final approach and take-off (FATO) area;
- 4) dimensions to the nearest metre or foot of FATO, and surface type;
- 5) surface and bearing strength in tonnes (1 000 kg) of TLOF;
- 6) geographical coordinates in degrees, minutes, seconds and hundredths of seconds and, where appropriate, geoid undulation of the geometric centre of TLOF or of each threshold of FATO:
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 7) TLOF and/or FATO slope and elevation:
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 8) dimensions of safety area;
- 9) dimensions to the nearest metre or foot of helicopter clearway;
- 10) the existence of an obstacle-free sector; and
- 11) remarks.

****** AD 3.13 Declared distances**

Detailed description of declared distances to the nearest metre or foot, where relevant for a heliport, including:

- 1) take-off distance available, and if applicable, alternative reduced declared distances;
- 2) rejected take-off distance available;
- 3) landing distance available; and
- 4) remarks, including entry or start point where alternative reduced declared distances have been declared.

****** AD 3.14 Approach and FATO lighting**

Detailed description of approach and FATO lighting, including:

- 1) type, length and intensity of approach lighting system;
- 2) type of visual approach slope indicator system;
- 3) characteristics and location of FATO area lights;
- 4) characteristics and location of aiming point lights;
- 5) characteristics and location of TLOF lighting system; and
- 6) remarks.

****** 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);
- 3) taxiway edge and taxiway centre line lights;
- 4) secondary power supply including switchover time; and
- 5) remarks.

****** AD 3.16 Air traffic services airspace**

Detailed description of ATS airspace organised at the heliport, including:

- 1) airspace designation and geographical coordinates in degrees, minutes and seconds of the lateral limits;
- 2) vertical limits;

- 3) airspace classification;
- 4) call sign and language(s) of ATS unit providing service;
- 5) transition altitude;
- 6) hours of applicability; and
- 7) remarks.

****** 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) frequency(ies);
- 4) hours of operation; and
- 5) remarks.

****** AD 3.18 Radio navigation and landing aids**

Detailed description of radio navigation and landing aids associated with the instrument approach and the terminal area procedures at the heliport, including:

- 1) type of aids, magnetic variation (for VOR, station declination used for technical line-up of the aid) to the nearest degree, and type of operation for ILS, MLS, basic GNSS, SBAS and GBAS;
- 2) identification, if required;
- 3) frequency(ies), as appropriate;
- 4) hours of operation, as appropriate;
- 5) geographical coordinates in degrees, minutes, seconds and tenths of seconds of the position of the transmitting antenna, as appropriate;
- 6) elevation of the DME transmitting antenna to the nearest 30 m (100 ft) and of DME/P to the nearest 3 m (10 ft); and
- 7) remarks.

When the same aid is used for both en-route and heliport purposes, a description shall also be given in section ENR 4. If the GBAS serves more than one heliport, a description of the aid shall be provided under each heliport. If the operating authority of the facility is other than the designated authority, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

****** AD 3.19 Local heliport regulations**

Detailed description of regulations applicable to the use of the heliport, including the acceptability of training flights, non-radio and microlight aircraft and similar, and to ground manoeuvring and parking but excluding flight procedures.

****** AD 3.20 Noise abatement procedures**

Detailed description of noise abatement procedures established at the heliport.

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

Detailed description of the conditions and flight procedures, including radar and/or ADS-B procedures, established on the basis of airspace organisation established at the heliport. When established, detailed description of the low visibility procedures at the heliport, including:

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

****** AD 3.22 Additional information**

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

****** AD 3.23 Charts related to a heliport**

Aeronautical charts related to a heliport shall be included in the following order:

- 1) Aerodrome/Heliport Chart — ICAO;
- 2) Area Chart — ICAO (departure and transit routes);
- 3) Standard Departure Chart — Instrument — ICAO;
- 4) Area Chart — ICAO (arrival and transit routes);
- 5) Standard Arrival Chart — Instrument — ICAO;
- 6) ATC Surveillance Minimum Altitude Chart — ICAO;
- 7) Instrument Approach Chart — ICAO (for each procedure type);

- 8) Visual Approach Chart — ICAO; and
- 9) bird concentrations in the vicinity of the heliport.

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

Appendix 2

NOTAM FORMAT

Priority Indicator	→															
Address																
≡																
Date and time of filing	→															
Originator's Indicator	≡(
Message Series, Number and Identifier																
NOTAM containing new information NOTAMN (series and number/year)															
NOTAM replacing a previous NOTAM NOTAMR (series and number/year) (series and number/year of NOTAM to be replaced)															
NOTAM cancelling a previous NOTAM NOTAMC (series and number/year) (series and number/year of NOTAM to be cancelled)															
≡																
Qualifiers																
	FIR	NOTAM Code	Traffic	Purpose	Scope	Lower Limit	Upper Limit	Coordinates, Radius								
Q)																≡
Identification of ICAO location indicator in which the facility, airspace or condition reported on is located								A) →								
Period of Validity																
From (date-time group)				B)												→
To (PERM or date-time group)				C)												EST* PERM* ≡
Time Schedule (if applicable)				D)											→	
															≡	
Text of NOTAM; Plain-language Entry (using ICAO Abbreviations)																
E)																
≡																
Lower Limit		F) →														
Upper Limit		G)) ≡														
Signature																

*Delete as appropriate

INSTRUCTIONS FOR THE COMPLETION OF THE NOTAM FORMAT

1. General

The qualifier line (Item Q) and all identifiers (Items A to G inclusive) each followed by a closing parenthesis, as shown in the format, shall be transmitted unless there is no entry to be made against a particular identifier.

2. NOTAM numbering

Each NOTAM shall be allocated a series identified by a letter and a four-digit number followed by a stroke and a two-digit number for the year (e.g. A0023/03). Each series shall start on 1 January with the number 0001.

3. Qualifiers (Item Q)

Item Q is divided into eight fields, each separated by a stroke. An entry shall be made in each field. Examples of how fields are to be filled in are shown in the *Aeronautical Information Services Manual* (ICAO Doc 8126). The definition of the field is as follows:

1) FIR

- a) If the subject of the information is geographically located within one FIR, the ICAO location indicator shall be that of the FIR concerned. When an aerodrome is situated within the overlying FIR of another Member State, the first field of Item Q shall contain the code for that overlying FIR (e.g. Q) LFRR/...A) EGJJ);

or,

if the subject of the information is geographically located within more than one FIR, the FIR field shall be composed of the ICAO nationality letters of the Member State originating the NOTAM followed by 'XX'. The location indicator of the overlying UIR shall not be used. The ICAO location indicators of the FIRs concerned shall then be listed in Item A or the indicator of the Member State or the delegated entity which is responsible for provision of a navigation service in more than one Member State.

- b) If one Member State issues a NOTAM affecting FIRs in a group of Member States, the first two letters of the ICAO location indicator of the issuing Member State plus 'XX' shall be included. The location indicators of the FIRs concerned shall then be listed in Item A or the indicator of the Member State or the delegated entity which is responsible for provision of a navigation service in more than one Member State.

2) NOTAM CODE

All NOTAM Code groups contain a total of five letters, the first of which is always the letter 'Q'. The second and third letters identify the subject, and the fourth and fifth letters denote the status or condition of the subject reported upon. The two-letter codes for subjects and conditions are those contained in ICAO Doc 8400 'Procedures for Air Navigation Services – ICAO Abbreviations and Codes (PANS-ABC)'. For combinations of second and third, and fourth and fifth letters, refer to the 'NOTAM Selection Criteria' contained in ICAO Doc 8126 or insert one of the following combinations, as appropriate:

- a) if the subject is not listed in the NOTAM Code (ICAO Doc 8400) or in the NOTAM Selection Criteria (ICAO Doc 8126), insert 'XX' as the second and third letters (e.g. QXXAK); if the subject is 'XX', use 'XX' also for condition (e.g. QXXXX).
- b) if the condition of the subject is not listed in the NOTAM Code (ICAO Doc 8400) or in the NOTAM Selection Criteria (ICAO Doc 8126), insert 'XX' as the fourth and fifth letters (e.g. QFAXX);
- c) when a NOTAM containing operationally significant information is issued and when it is used to announce the existence of AIRAC AIP Amendments or Supplements, insert 'TT' as the fourth and fifth letters of the NOTAM

Code;

- d) when a NOTAM is issued containing a checklist of valid NOTAM, insert 'KKKK' as the second, third, fourth and fifth letters; and
- e) the following fourth and fifth letters of the NOTAM Code shall be used in NOTAM cancellations:

AK = RESUMED NORMAL OPERATION
AL = OPERATIVE (OR RE-OPERATIVE) SUBJECT TO PREVIOUSLY PUBLISHED LIMITATIONS/CONDITIONS
AO = OPERATIONAL
CC = COMPLETED
CN = CANCELLED
HV = WORK COMPLETED
XX = PLAIN LANGUAGE

As Q - - AO = Operational shall be used for NOTAM cancellation and NOTAM promulgating new equipment or services, use the following fourth and fifth letters Q - - CS = Installed.

Q - - CN = CANCELLED shall be used to cancel planned activities, e.g. navigation warnings; Q - - HV = WORK COMPLETED shall be used to cancel work in progress.

3) TRAFFIC

I = IFR
V = VFR
K = NOTAM is a checklist

Depending on the NOTAM subject and content, the qualifier field TRAFFIC may contain combined qualifiers.

4) PURPOSE

N = NOTAM selected for the immediate attention of flight crew members
B = NOTAM of operational significance selected for PIB entry
O = NOTAM concerning flight operations
M = Miscellaneous NOTAM; not subject for a briefing, but available on request
K = NOTAM is a checklist

.Depending on the NOTAM subject and content, the qualifier field PURPOSE may contain the combined qualifiers BO or NBO.

5) SCOPE

A = Aerodrome
E = En-route
W = Nav Warning
K = NOTAM is a checklist

Depending on the NOTAM subject and content, the qualifier field SCOPE may contain combined qualifiers.

6) and 7) LOWER/UPPER

LOWER and UPPER limits shall only be expressed in flight levels (FL) and shall express the actual vertical limits of the area of influence without the addition of buffers. In the case of navigation warnings and airspace restrictions, values entered shall be consistent with those provided under Items F and G.

If the subject does not contain specific height information, insert '000' for LOWER and '999' for UPPER as default values.

8) COORDINATES, RADIUS

The latitude and longitude accurate to one minute, as well as a three-digit distance figure giving the radius of influence in NM (e.g. 4700N01140E043). Coordinates present the approximate centre of circle whose radius encompasses the whole area of influence, and if the NOTAM affects the entire FIR/UIR or more than one FIR/UIR, enter the default value '999' for radius.

4. Item A

Insert the ICAO location indicator as contained in ICAO Doc 7910 of the aerodrome or FIR in which the facility, airspace, or condition being reported on is located. More than one FIR/UIR may be indicated, when appropriate. If there is no available ICAO location indicator, use the ICAO nationality letter as given in ICAO Doc 7910, Part 2, plus 'XX' and followed up in Item E by the name, in plain language.

If information concerns GNSS, insert the appropriate ICAO location indicator allocated for a GNSS element or the common location indicator allocated for all elements of the GNSS (except GBAS).

In the case of GNSS, the location indicator may be used when identifying a GNSS element outage such as KNMH for a GPS satellite outage.

5. Item B

For date-time group, use a ten-figure group, giving year, month, day, hours and minutes in UTC. This entry is the date-time at which the NOTAMN comes into force. In the cases of NOTAMR and NOTAMC, the date-time group is the actual date and time of the NOTAM origination. The start of a day shall be indicated by '0000'.

6. Item C

With the exception of NOTAMC, a date-time group (a ten-figure group giving year, month, day, hours and minutes in UTC) indicating duration of information shall be used unless the information is of a permanent nature in which case the abbreviation 'PERM' is inserted instead. The end of a day shall be indicated by '2359', '2400' shall not be used. If the information on timing is uncertain, the approximate duration shall be indicated using a date-time group followed by the abbreviation 'EST'. Any NOTAM which includes an 'EST' shall be cancelled or replaced before the date-time specified in Item C.

7. Item D

If the hazard, status of operation or condition of facilities being reported on will be active in accordance with a specific time and date schedule between the dates-times indicated in Items B and C, insert such information under Item D. If Item D exceeds 200 characters, consideration shall be given to providing such information in a separate, consecutive NOTAM.

8. Item E

Use decoded NOTAM Code complemented, where necessary, by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language. When NOTAM is selected for international distribution, English text shall be included for those parts expressed in plain language. This entry shall be clear and concise in order to provide a suitable PIB entry. In the case of NOTAMC, a subject reference and status message shall be included to enable accurate plausibility checks.

9. Items F and G

These items are normally applicable to navigation warnings or airspace restrictions and are usually part of the PIB entry. Insert both lower and upper height limits of activities or restrictions, clearly indicating only one reference datum and unit of

measurement. The abbreviations 'GND' or 'SFC' shall be used in Item F to designate 'ground' and 'surface' respectively. The abbreviation 'UNL' shall be used in Item G to designate 'unlimited'.

Appendix 3

SNOWTAM FORMAT

(applicable until 4 November 2020)

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)														<≡
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)														<≡
(Abbreviated heading)	(SWAA* SERIAL NUMBER)	(LOCATION INDICATOR)	DATE-TIME OF OBSERVATION										(OPTIONAL GROUP)			
	S W * *															<<≡(

SNOWTAM	(Serial number)	<≡
(AERODROME LOCATION INDICATOR)	A)	<≡
(DATE-TIME OF OBSERVATION (<i>Time of completion of measurement in UTC</i>))	B)	→
(RUNWAY DESIGNATOR)	C)	→
(CLEARED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (m))	D)	→
(CLEARED RUNWAY WIDTH, IF LESS THAN PUBLISHED WIDTH (m; if offset left or right of centre line add 'L' or 'R'))	E)	→
(DEPOSITS OVER TOTAL RUNWAY LENGTH (Observed on each third of the runway, starting from threshold having the lower runway designation number) NIL — CLEAR AND DRY 1 — DAMP 2 — WET 3 — RIME OR FROST COVERED (depth normally less than 1 mm) 4 — DRY SNOW 5 — WET SNOW 6 — SLUSH 7 — ICE 8 — COMPACTED OR ROLLED SNOW 9 — FROZEN RUTS OR RIDGES)	F) / /	→
(MEAN DEPTH (mm) FOR EACH THIRD OF TOTAL RUNWAY LENGTH)	G) / /	→
(ESTIMATED SURFACE FRICTION ON EACH THIRD OF RUNWAY) ESTIMATED SURFACE FRICTION GOOD — 5 MEDIUM/GOOD — 4 MEDIUM — 3 MEDIUM/POOR — 2 POOR — 1 (The intermediate values of 'MEDIUM/GOOD' and 'MEDIUM/POOR' provide for more precise information in the estimate when conditions are found to be between medium and either good or poor.)	H) / /	
(CRITICAL SNOWBANKS (If present, insert height (cm)/distance from the edge of runway (m) followed by 'L', 'R' or 'LR', if applicable))	J)	→
(RUNWAY LIGHTS (If obscured, insert 'YES' followed by 'L', 'R' or both 'LR', if applicable))	K)	→
(FURTHER CLEARANCE (If planned, insert length (m)/width (m) to be cleared or if to full dimensions, insert 'TOTAL'))	L)	→
(FURTHER CLEARANCE EXPECTED TO BE COMPLETED BY . . . (UTC))	M)	→
(TAXIWAY (If no appropriate taxiway is available, insert 'NO'))	N)	→
(TAXIWAY SNOWBANKS (If higher than 60 cm, insert 'YES' followed by the lateral distance apart, m))	P)	<≡
(APRON (If unusable, insert 'NO'))	R)	→
(NEXT PLANNED OBSERVATION/MEASUREMENT IS FOR) (month/day/hour in UTC)	S)	→
(PLAIN-LANGUAGE REMARKS (Including contaminant coverage and other operationally significant information, e.g. sanding, de-icing, chemicals))	T)) <≡
NOTES: 1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2. 2. *Information on other runways, repeat from B to P. 3. *Words in brackets () not to be transmitted.		

SIGNATURE OF ORIGINATOR
(not for transmission)

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

1. General

- a) When reporting on more than one runway, repeat Items B to P inclusive.
- b) Items together with their indicator shall be removed completely, where no information is to be included.
- c) Metric units shall be used and the unit of measurement shall not be reported.
- d) The maximum period of validity of SNOWTAM is 24 hours. New SNOWTAM shall be issued whenever there is a significant change in conditions. The following changes relating to runway conditions are considered as significant:
 - 1) a change in the coefficient of friction of about 0.05;
 - 2) changes in depth of deposit greater than the following: 20 mm for dry snow, 10 mm for wet snow, 3 mm for slush;
 - 3) a change in the available length or width of a runway of 10 per cent or more;
 - 4) any change in the type of deposit or extent of coverage, which requires reclassification in Items F or T of the SNOWTAM;
 - 5) when critical snow banks exist on one or both sides of the runway, any change in the height or distance from centre line;
 - 6) any change in the conspicuity of runway lighting caused by obscuring of the lights;
 - 7) any other conditions known to be significant according to experience or local circumstances.
- e) The abbreviated heading 'TTAAiiii CCCC MMYYGgg (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, EG = United Kingdom

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

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

MMYYGgg = date/time of observation/measurement, whereby:

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

YY = day of the month;

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

(BBB) = optional group for:

Correction to 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/measurement are indicated by repeated Item B, the latest date/time of observation/measuring shall be inserted in the abbreviated heading (MMYYGgg).

The information groups shall be separated by a space, as illustrated above.

f) The text 'SNOWTAM' in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, e.g. SNOWTAM 0124.

g) For readability purposes for the SNOWTAM message, a linefeed shall be included after the SNOWTAM serial number, after Item A, after the last item referring to the runway (e.g. Item P) and after Item S.

2. *Item A* — Aerodrome location indicator (four-letter location indicator).
 3. *Item B* — Eight-figure date/time group — giving time of observation as month, day, hour and minute in UTC; this item shall always be completed.
 4. *Item C* — Lower runway designator number.
 5. *Item D* — Cleared runway length in metres, if less than published length (see Item T on reporting on part of runway not cleared).
 6. *Item E* — Cleared runway width in metres, if less than published width; if offset left or right of centre line, add (without space) 'L' or 'R', as viewed from the threshold having the lower runway designation number.
 7. *Item F* — Deposit over total runway length as explained in SNOWTAM Format. Suitable combinations of these numbers may be used to indicate varying conditions over runway segments. If more than one deposit is present on the same portion of the runway, they should be reported in sequence from the top (closest to the sky) to the bottom (closest to the runway). Drifts, depths of deposit appreciably greater than the average values or other significant characteristics of the deposits may be reported under Item T in plain language. The values for each third of the runway shall be separated by an oblique stroke (/), without space between the deposit values and the oblique stroke, e.g.: 47/47/47.
 8. *Item G* — Mean depth in millimetres deposit for each third of total runway length, or 'XX' if not measurable or operationally not significant; the assessment to be made to an accuracy of 20 mm for dry snow, 10 mm for wet snow and 3 mm for slush. The values for each third of the runway shall be separated by an oblique stroke (/), without space between the values and the oblique stroke, e.g.: 20/20/20.
 9. *Item H* — Estimated surface friction on each third of the runway (single digit) in the order from the threshold having the lower runway designation number.
- Friction measurement devices can be used as part of the overall runway surface assessment. Some Member States may have developed procedures for runway surface assessment which may include the use of information obtained from friction measuring devices and the reporting of quantitative values. In such cases, these procedures shall be published in the AIP and the reporting made in Item T of the SNOWTAM format.
- The values for each third of the runway are separated by an oblique stroke (/), without space between the values and the oblique stroke, e.g.: 5/5/5.
10. *Item J* — Critical snow banks. If present, insert height in centimetres and distance from edge of runway in metres, followed (without space) by left ('L') or right ('R') side or both sides ('LR'), as viewed from the threshold having the lower runway designation number.
 11. *Item K* — If runway lights are obscured, insert 'YES' followed (without space) by 'L', 'R' or both 'LR', as viewed from the threshold having the lower runway designation number.
 12. *Item L* — When further clearance will be undertaken, enter length and width of runway or 'TOTAL' if runway will be cleared to full dimensions.
 13. *Item M* — Enter the anticipated time of completion in UTC.
 14. *Item N* — The code (and combination of codes) for Item F may be used to describe taxiway conditions; enter 'NO' if no taxiways serving the associated runway are available.
 15. *Item P* — If snow banks are higher than 60 cm, 'YES' followed by the lateral distance parting the snow banks (the distance between) in metres shall be entered.

16. *Item R* — The code (and combination of codes) for Item F may be used to describe apron conditions; enter ‘NO’ if the apron is unusable.
17. *Item S* — The anticipated time of next observation/measurement in UTC shall be entered.
18. *Item T* — Describe in plain language any operationally significant information but always report on length of uncleared runway (Item D) and extent of runway contamination (Item F) for each third of the runway (if appropriate) in accordance with the following scale:

RWY CONTAMINATION 10 PER CENT — if 10% or less of runway contaminated
 RWY CONTAMINATION 25 PER CENT — if 11–25% of runway contaminated
 RWY CONTAMINATION 50 PER CENT — if 26–50% of runway contaminated
 RWY CONTAMINATION 100 PER CENT — if 51–100% of runway contaminated.

EXAMPLE OF A COMPLETED SNOWTAM FORMAT

GG EHAMZQZX EDDFZQZX EKCHZQZX
 070645 LSZHYNXX
 SWLS0149 LSZH 11070700
 (SNOWTAM 0149
 A) LSZH
 B) 11070620 C) 02 D)...P)
 B) 11070600 C) 09 D)...P)
 B) 11070700 C) 12 D)...P)
 R) NO S) 11070920
 T) DEICING

Definitions of the various types of snow

Slush. Water-saturated snow that with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

Snow (on the ground).

- a) *Dry snow.* Snow that can be blown if loose or, if compacted by hand, will fall apart again upon release; specific gravity: up to but not including 0.35.
- b) *Wet snow.* Snow that, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) *Compacted snow.* Snow that has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.
-

Appendix 3a

SNOWTAM FORMAT

(applicable as from 5 November 2020)

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)							<≡						
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)							<≡						
(Abbreviated heading)	(SWAA* SERIAL NUMBER)			(LOCATION INDICATOR)			DATE-TIME OF ASSESSMENT						(OPTIONAL GROUP)		
	S	W	*	*) <≡(
SNOWTAM →		(Serial number) <≡													
Aeroplane performance calculation section															
(AERODROME LOCATION INDICATOR)							M	A)	<≡						
(DATE/TIME OF ASSESSMENT (<i>Time of completion of assessment in UTC</i>))							M	B)	→						
(LOWER RUNWAY DESIGNATION NUMBER)							M	C)	→						
(RUNWAY CONDITION CODE (RWYCC) ON EACH RUNWAY THIRD) (From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)							M	D)	//	→					
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)							C	E)	//	→					
(DEPTH (mm) OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)							C	F)	//	→					
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH (Observed on each runway third, starting from threshold having the lower runway designation number) COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE							M	G)	//	→					
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITIONS CODES APPLY, IF LESS THAN PUBLISHED WIDTH)							O	H)	<≡						
Situational awareness section															
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (m))							O	I)	→						
(DRIFTING SNOW ON THE RUNWAY)							O	J)	→						
(LOOSE SAND ON THE RUNWAY)							O	K)	→						
(CHEMICAL TREATMENT ON RUNWAY)							O	L)	→						
(SNOWBANKS ON THE RUNWAY (If present, distance from runway centreline (m) followed by ‘L’, ‘R’ or ‘LR’ as applicable))							O	M)	→						
(SNOWBANKS ON A TAXIWAY (If present, distance from the centreline (m) followed by ‘L’, ‘R’ or ‘LR’ as applicable))							O	N)	→						
(SNOWBANKS ADJACENT TO THE RUNWAY)							O	O)	→						
(TAXIWAY CONDITIONS)							O	P)	→						
(APRON CONDITIONS)							O	R)	→						
(MEASURED FRICTION COEFFICIENT)							O	S)	→						
(PLAIN-LANGUAGE REMARKS)							O	T)) <<≡						
NOTES:															

- | | |
|---|--|
| 1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier.
2. Information on other runways, repeat from B to H.
3. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable, when reported.
4. Words in brackets () not to be transmitted.
5. For letters A) to T) refer to the <i>Instructions for the completion of the SNOWTAM format, paragraph 1, item b)</i> . | |
|---|--|

SIGNATURE OF ORIGINATOR (*not for transmission*)

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

1. General

- a) When reporting on more than one runway, repeat Items B to H (aeroplane performance calculation section).
- b) The letters used to indicate items are only used for reference purpose and should not be included in the messages. The letters, M (mandatory), C (conditional) and O (optional) mark the usage and information and shall be included as explained below.
- c) Metric units shall be used and the unit of measurement shall not be reported.
- d) The maximum validity of SNOWTAM is 8 hours. New SNOWTAM shall be issued whenever a new runway condition report is received.
- e) A SNOWTAM cancels the previous SNOWTAM.
- f) The abbreviated heading ‘TTAAiiii CCCC MMYGGgg (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, EG = United Kingdom;

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

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

MMYYGGgg = date/time of observation/measurement, whereby:

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

YY = 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 (MMYYGGgg).

- g) The text ‘SNOWTAM’ in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, e.g. SNOWTAM 0124.
- h) For readability purposes for the SNOWTAM message, a linefeed shall be included after the SNOWTAM serial number, after Item A, and after the aeroplane performance calculation section.

i) When reporting on more than one runway, repeat the information in the aeroplane performance calculation section from the date and time of assessment for each runway before the information in the situational awareness section.

j) Mandatory information is:

- 1) AERODROME LOCATION INDICATOR;
- 2) DATE AND TIME OF ASSESSMENT;
- 3) LOWER RUNWAY DESIGNATOR NUMBER;
- 4) RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD; and
- 5) CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (when runway condition code (RWYCC) is reported 1–5)

2. Aeroplane performance calculation section

Item A — Aerodrome location indicator (four-letter location indicator).

Item B — Date and time of assessment (eight-figure date/time group giving time of observation as month, day, hour and minute in UTC).

Item C — Lower runway designator number (nn[L] or nn[C] or nn[R]).

Only one runway designator shall be inserted for each runway and always the lower number.

Item D — Runway condition code for each runway third. Only one digit (0, 1, 2, 3, 4, 5 or 6) is inserted for each runway third, separated by an oblique stroke (n/n/n).

Item E — Per cent coverage for each runway third. When provided, insert 25, 50, 75 or 100 for each runway third, separated by an oblique stroke ([n]nn/[n]nn/[n]nn).

This information shall be provided only when the runway condition for each runway third (Item D) has been reported as other than 6 and there is a condition description for each runway third (Item G) that has been reported other than 'DRY'.

When the conditions are not reported, this shall be signified by the insertion of 'NR' for the appropriate runway third(s).

Item F — Depth of loose contaminant for each runway third. When provided, insert in millimetres for each runway third, separated by an oblique stroke (nn/nn/nn or nnn/nnn/nnn).

This information shall only be provided for the following contamination types:

— standing water, values to be reported 04, then assessed value. Significant changes 3 mm up to and including 15 mm;

— slush, values to be reported 03, then assessed value. Significant changes 3 mm up to and including 15 mm;

— wet snow, values to be reported 03, then assessed value. Significant changes 5 mm; and

— dry snow, values to be reported 03, then assessed value. Significant changes 20 mm.

When the conditions are not reported, this shall be signified by the insertion of 'NR' for the appropriate runway

third(s).

Item G — Condition description for each runway third. Any of the following condition descriptions for each runway third, separated by an oblique stroke, shall be inserted.

COMPACTED SNOW
DRY SNOW
DRY SNOW ON TOP OF COMPACTED SNOW
DRY SNOW ON TOP OF ICE
FROST
ICE
SLUSH
STANDING WATER
WATER ON TOP OF COMPACTED SNOW
WET
WET ICE
WET SNOW
WET SNOW ON TOP OF COMPACTED SNOW
WET SNOW ON TOP OF ICE

DRY (only reported when there is no contaminant)

When the conditions are not reported, this shall be signified by the insertion of 'NR' for the appropriate runway third(s).

Item H — Width of runway to which the runway condition codes apply. The width in metres if less than the published runway width shall be inserted.

3. Situational awareness section

Elements in the situational awareness section shall end with a full stop.

Elements in the situational awareness section for which no information exists, or where the conditional circumstances for publication are not fulfilled, shall be left out completely.

Item I — Reduced runway length. The applicable runway designator and available length in meters shall be inserted (e.g. RWY nn [L] or nn [C] or nn [R] REDUCED TO [n]nnn).

This information is conditional when a NOTAM has been published with a new set of declared distances.

Item J — Drifting snow on the runway. When reported, 'DRIFTING SNOW' shall be inserted.

Item K — Loose sand on the runway. When loose sand is reported on the runway, the lower runway designator shall be inserted with a space 'LOOSE SAND' (RWY nn or RWY nn[L] or nn[C] or nn[R] LOOSE SAND).

Item L — Chemical treatment on the runway. When chemical treatment has been reported applied, the lower runway designator shall be inserted with a space 'CHEMICALLY TREATED' (RWY nn or RWY nn[L] or nn[C] or nn[R] CHEMICALLY TREATED).

Item M — Snow banks on the runway. When snow banks are reported present on the runway, the lower runway designator shall be inserted with a space 'SNOWBANK' and with a space left 'L' or right 'R' or both sides 'LR', followed by the distance in metres from centre line separated by a space 'FM CL' (RWY nn or RWY nn[L] or nn[C] or nn[R] SNOWBANK Lnn or Rnn or LRnn FM CL).

Item N — Snow banks on a taxiway. When snow banks are present on a taxiway, the taxiway designator shall be inserted with a space ‘SNOWBANK’ and with a space left ‘L’ or right ‘R’ or both sides ‘LR’, followed by the distance in metres from centre line separated by a space FM CL (TWY [nn]n SNOWBANK Lnn or Rnn or LRnn FM CL).

Item O — Snow banks adjacent to the runway. When snow banks are reported present, penetrating the height profile in the aerodrome snow plan, the lower runway designator and ‘ADJ SNOWBANKS’ shall be inserted (RWY nn or RWY nn[L] or nn[C] or nn[R] ADJ SNOWBANKS).

Item P — Taxiway conditions. When taxiway conditions are reported slippery or poor, the taxiway designator followed by a space ‘POOR’ shall be inserted (TWY [n or nn] POOR or ALL TWYS POOR).

Item R — Apron conditions. When apron conditions are reported slippery or poor, the apron designator followed by a space ‘POOR’ shall be inserted (APRON [nnnn] POOR or ALL APRONS POOR).

Item S — Measured friction coefficient. Where reported, the measured friction coefficient and friction measuring device shall be inserted.

This shall only be reported for Member States that have an established programme of runway friction measurement using a Member-State-approved friction measuring device.

Item T — Plain language remarks.

EXAMPLE OF COMPLETED SNOWTAM FORMAT

Example SNOWTAM 1

GG EADBZQZX EADNZQZX EADSZQZX
170100 EADDYNYX
SWEA0149 EADD 02170055
(SNOWTAM 0149
EADD
02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET SNOW
)

Example SNOWTAM 2

GG EADBZQZX EADNZQZX EADSZQZX
170140 EADDYNYX
SWEA0150 EADD 02170135
(SNOWTAM 0150
EADD
02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET SNOW
02170135 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH
)

Example SNOWTAM 3

GG EADBZQZX EADNZQZX EADSZQZX
170229 EADDYNYX
SWEA0151 EADD 02170225
(SNOWTAM 0151
EADD
02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET SNOW

02170135 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH
02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW

RWY 09L SNOWBANK R20 FM CL. RWY 09R ADJ SNOWBANKS. TWY B POOR. APRON NORTH POOR)

Example SNOWTAM 4

GG EADBZQZX EADNZQZX EADSZQZX

170350 EADDYNYX

SWEA0152 EADD 02170345

(SNOWTAM 0152

EADD

02170345 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/SLUSH

02170134 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH

02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW 35

DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)

Appendix 4
ASHTAM FORMAT

(COM heading)	(PRIORITY INDICATOR)		(ADDRESSEE INDICATOR(S)) ¹															
	(DATE AND TIME OF FILING)						(ORIGINATOR'S INDICATOR)											
(Abbreviated heading)	(VA* ² SERIAL NUMBER)						(LOCATION INDICATOR)			DATE/TIME OF ISSUANCE						(OPTIONAL GROUP)		
	V	A	*2	*2														

ASHTAM	(SERIAL NUMBER)	
(FLIGHT INFORMATION REGION AFFECTED)		A)
(DATE/TIME (UTC) OF ERUPTION)		B)
(VOLCANO NAME AND NUMBER)		C)
(VOLCANO LATITUDE/LONGITUDE OR VOLCANO RADIAL AND DISTANCE FROM NAVAID)		D)
(VOLCANO LEVEL OF ALERT COLOUR CODE, INCLUDING ANY PRIOR LEVEL OF ALERT COLOUR CODE) ³		E)
(EXISTENCE AND HORIZONTAL/VERTICAL EXTENT OF VOLCANIC ASH CLOUD) ⁴		F)
(DIRECTION OF MOVEMENT OF ASH CLOUD) ⁴		G)
(AIR ROUTES OR PORTIONS OF AIR ROUTES AND FLIGHT LEVELS AFFECTED)		H)
(CLOSURE OF AIRSPACE AND/OR AIR ROUTES OR PORTIONS OF AIR ROUTES, AND ALTERNATIVE AIR ROUTES AVAILABLE)		I)
(SOURCE OF INFORMATION)		J)
(PLAIN-LANGUAGE REMARKS)		K)
<p><i>NOTES:</i></p> <ol style="list-style-type: none"> 1. See also Appendix 5 regarding addressee indicators used in predetermined distribution systems. 2. *Enter ICAO nationality letter as given in ICAO Doc 7910, Part 2. 3. See paragraph 3.5 below. 4. Advice on the existence, extent and movement of volcanic ash cloud G) and H) may be obtained from the volcanic ash advisory centre(s) responsible for the FIR concerned. 5. Item titles in brackets () not to be transmitted. 		

SIGNATURE OF ORIGINATOR *(not for transmission)*

INSTRUCTIONS FOR THE COMPLETION OF THE ASHTAM FORMAT

1. *General*

1.1 The ASHTAM provides information on the status of activity of a volcano when a change in its activity is, or is expected to be of operational significance. This information is provided using the volcano level of alert colour code given in 3.5 below.

1.2 In the event of a volcanic eruption producing ash cloud of operational significance, the ASHTAM also provides information on the location, extent and movement of the ash cloud and the air routes and flight levels affected.

1.3 Issuance of an ASHTAM giving information on a volcanic eruption, in accordance with section 3 below, should **not** be delayed until complete information A to K is available but should be issued immediately following receipt of notification that an eruption has occurred or is expected to occur, or a change in the status of activity of a volcano of operational significance has occurred or is expected to occur, or an ash cloud is reported. In the case of an expected eruption, and hence no ash cloud evident at that time, items A to E should be completed and items F to I indicated as 'not applicable'. Similarly, if a volcanic ash cloud is reported, e.g. by special air-report, but the source volcano is not known at that time, the ASHTAM should be issued initially with items A to E indicated as 'unknown', and items F to K completed, as necessary, based on the special air-report, pending receipt of further information. In other circumstances, if information for a specific field A to K is not available indicate 'NIL'.

1.4 The maximum period of validity of ASHTAM is 24 hours. New ASHTAM shall be issued whenever there is a change in the level of alert.

2. *Abbreviated heading*

2.1 Following the usual 'Aeronautical fixed – telecommunications network (AFTN)' communications header, the abbreviated heading 'TT AAiiii CCCC MMYGGg (BBB)' shall be included to facilitate the automatic processing of ASHTAM messages in computer databanks. The explanation of these symbols is:

TT = data designator for ASHTAM = VA;

AA = geographical designator for States, e.g. NZ = New Zealand;

iiii = ASHTAM serial number in a four-figure group;

CCCC = four-letter location indicator of the flight information region concerned;

MMYYGGg = date/time of report, whereby:

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

YY = day of the month;

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

(BBB) = Optional group for correction to an ASHTAM message previously disseminated with the same serial number = COR.

Brackets in (BBB) shall be used to indicate that this group is optional.

3. Content of ASHTAM

3.1 *Item A* — Flight information region affected, plain-language equivalent of the location indicator given in the abbreviated heading, in this example: ‘Auckland Oceanic FIR’.

3.2 *Item B* — Date and time (UTC) of first eruption.

3.3 *Item C* — Name of volcano, and number of volcano as listed in ICAO Doc 9691 *Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds*, Appendix H, and on the World Map of Volcanoes and Principal Aeronautical Features.

3.4 *Item D* — Latitude/Longitude of the volcano in whole degrees or radial and distance of volcano from NAVAID, as listed in the ICAO Doc 9691 *Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds*, Appendix H, and on the World Map of Volcanoes and Principal Aeronautical Features.

3.5 *Item E* — Colour code for level of alert indicating volcanic activity, including any previous level of alert colour code as follows:

Level of alert colour code	Status of activity of volcano
GREEN ALERT	Volcano is in normal, non-eruptive state. <i>or, after a change from a higher alert level:</i> Volcanic activity considered to have ceased, and volcano reverted to its normal, non-eruptive state.
YELLOW ALERT	Volcano is experiencing signs of elevated unrest above known background levels. <i>or, after a change from higher alert level:</i> Volcanic activity has decreased significantly but continues to be closely monitored for possible renewed increase.
ORANGE ALERT	Volcano is exhibiting heightened unrest with increased likelihood of eruption. <i>or,</i> Volcanic eruption is underway with no or minor ash emission [<i>specify ash-plume height, if possible</i>].
RED ALERT	Eruption is forecasted to be imminent with significant emission of ash into the atmosphere likely. <i>or,</i> Eruption is underway with significant emission of ash into the atmosphere [<i>specify ash-plume height, if possible</i>].

The colour code for the level of alert indicating the status of activity of the volcano and any change from a previous status of activity shall be provided to the area control centre by the responsible vulcanological agency in the Member State concerned, e.g. ‘RED ALERT FOLLOWING YELLOW’ OR ‘GREEN ALERT FOLLOWING ORANGE’.

3.6 *Item F* — If volcanic ash cloud of operational significance is reported, the horizontal extent and base/top of the ash cloud shall be indicated using latitude/longitude (in whole degrees) and altitudes in

thousands of metres (feet) and/or radial and distance from source volcano. Information initially may be based only on special air-report, but subsequent information may be more detailed based on advice from the responsible meteorological watch office and/or volcanic ash advisory centre.

3.7 *Item G* — Forecast direction of movement of the ash cloud at selected levels shall be indicated based on advice from the responsible meteorological watch office and/or volcanic ash advisory centre.

3.8 *Item H* — Air routes and portions of air routes and flight levels affected, or expected to become affected, shall be indicated.

3.9 *Item I* — Closure of airspace, air routes or portions of air routes, and availability of alternative routes, shall be indicated.

3.10 *Item J* — Source of the information, e.g. ‘special air-report’ or ‘vulcanological agency’, etc. The source of information shall always be indicated, whether an eruption has actually occurred or ash cloud reported, or not.

3.11 *Item K* — Any operationally significant information, additional to the foregoing, shall be included in plain language.
