CIVIL AVIATION DIRECTIVE – 1102

AERODROME FLIGHT INFORMATION SERVICE

AFIS

CIVIL AVIATION AUTHORITY OF MALAYSIA

ISSUE 01
REVISION 01 – 15TH NOVEMBER 2022

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Introduction

In exercise of the powers conferred by section 24O of the Civil Aviation Act 1969 [*Act 3*], the Chief Executive Officer makes this Civil Aviation Directive 1102 – Aerodrome Flight Information Service (AFIS), pursuant to Regulation 76 of the Malaysian Civil Aviation Regulations (MCAR 2016).

This CAD contains the standards and requirements and procedures pertaining to Aerodrome Flight Information Service and is compliant with Malaysian Civil Aviation Regulations.

This Civil Aviation Directives 1102 – Aerodrome Flight Information Service (CAD 1102 – AFIS) is published by the Chief Executive Officer under Section 24O of the Civil Aviation Act 1969 [*Act 3*] and come into operation on 15 November 2022.

Non-compliance with this CAD

Any person who contravenes any provision in this CAD commits an offence and shall on conviction be liable to the punishments under Section 24O (2) of the Civil Aviation Act 1969 [*Act 3*] and/or under Malaysia Civil Aviation Regulation 2016.

(Datuk Captain Chester Voo Chee Soon)
Chief Executive Officer
Civil Aviation Authority of Malaysia

Civil Aviation Directive Components and Editorial Practices

This Civil Aviation Directive is made up of the following components and are defined as follows:

Standards: Usually preceded by words such as *"shall"* or *"must"*, are any specification for physical characteristics, configuration, performance, personnel or procedure, where uniform application is necessary for the safety or regularity of air navigation and to which Operators must conform. In the event of impossibility of compliance, notification to the CAAM is compulsory.

Recommended Practices: Usually preceded by the words such as "*should"* or "*may*", are any specification for physical characteristics, configuration, performance, personnel or procedure, where the uniform application is desirable in the interest of safety, regularity or efficiency of air navigation, and to which Operators will endeavour to conform.

Appendices: Material grouped separately for convenience but forms part of the Standards and Recommended Practices stipulated by the CAAM.

Definitions: Terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

Tables and Figures: These add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Notes: Included in the text, where appropriate, Notes give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;

Attachments: Material supplementary to the Standards and Recommended Practices or included as a guide to their application.

It is to be noted that some Standards in this Civil Aviation Directive incorporates, by reference, other specifications having the status of Recommended Practices. In such cases, the text of the Recommended Practice becomes part of the Standard.

The units of measurement used in this CAD are in accordance with the International System of Units (SI) as specified in CAD 5. Where CAD 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this CAD, which is identified by a number and/or title, includes all subdivisions of that portion.

Throughout this Civil Aviation Directive, the use of the male gender should be understood to include male and female persons.

Record of Revisions

Revisions to this CAD shall be made by authorised personnel only. After inserting the revision, enter the required data in the revision sheet below. The *'Initials'* has to be signed off by the personnel responsible for the change.

ISS/REV No.	Revision Date	Revision Details	Initials
ISS01/REV01	15th November 2022	Refer to summary of changes	CAAM

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Summary of Changes

ISS/REV No.	Item No.	Revision Details
ISS01/REV01	Para 2.1.5, 6, 6.1.3, 6.4, 6.4.1, 6.4.2, 6.4.3, 6.7, 6.7.1 and 6.7.2	Incorporated CAC 02/2022

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1 General

1.1 Citation

1.1.1 This Directive is the Civil Aviation Directive 1102 – Aerodrome Flight Information Service (CAD 1102 – AFIS), Issue 01/Revision 01, and comes into operation on 15 November 2022.

1.1.2 This Directive contains the standards, requirements and procedures pertaining to the provision of Aerodrome Flight Information Service. The standards and requirements in this Directive are referred to recommended practices stipulated in International Civil Aviation Organization (ICAO) Circular 211-AN/128.

1.2 Applicability

1.2.1 The standards specified in this Directive applies to aerodrome flight information service provider and operator, and aircraft operating in AFIS aerodrome.

1.3 Revocation

1.3.1 This CAD revokes Civil Aviation Directive 1102 – Aerodrome Flight Information Service (CAD 1102 – AFIS) Issue 01/Revision 00 dated, 15 October 2021 and Civil Aviation Circular (CAC) 02/2022 published on 10 June 2022.

1.4 Definitions

1.4.1 The definition in this CAD shall be referred and be read together with CAD 11 – Air Traffic Services, Chapter 1 para 1.4.

2 Aerodrome Flight Information Service (AFIS)

2.1 Provision of AFIS

2.1.1 Aerodrome flight information service (AFIS) shall be provided for the safe and efficient conduct of aerodrome traffic that, the provision of aerodrome control service is not justified by the appropriate air traffic services (ATS) authority.

2.1.2 Aerodromes flight Information service (AFIS) shall be identified as "AFIS aerodromes" in order to distinguish them from controlled aerodromes. AFIS aerodromes classified as non-controlled aerodromes.

2.1.3 AFIS shall be provided by a unit located at the aerodrome and identified as an "AFIS unit", that responsible in the provision of flight information service and alerting service to aerodrome traffic.

2.1.4 AFIS unit is not an air traffic control unit, therefore the responsibility of pilots using the service provided by this unit to maintain proper separation in conformity with the rules of the air.

Note 1. — Aerodrome flight information service (AFIS) is the term used to describe the provision of information useful for the safe and efficient conduct of aerodrome traffic at those aerodromes designated for domestic and general aviation operation where the appropriate air traffic services (ATS) authority determines that the provision of aerodrome control service is not justified, or is not justified on a 24-hour basis. AFIS is not intended to be used at aerodromes designated as regular or alternate aerodromes for international commercial air transport operations.

Note 2. — In determining whether aerodrome control service or AFIS should be, the appropriate ATS authority is expected to give due consideration to the type(s) of air traffic involved, the density of air traffic, the topographical and meteorological conditions, and such other factors as may be pertinent to safety and efficiency, including the language or languages to be used in air-ground communications.

Note 3. — Non-controlled aerodromes at which it is determined that AFIS will be provided should be identified as "AFIS aerodromes" in order to distinguish them from controlled aerodromes.

2.1.5 Pursuant to the Civil Aviation Regulations 2016 Regulation 204, an AFIS station shall be subjected to safety regulatory oversight conducted by CAAM for the purpose of determining compliance with this CAD and relevant regulations of the Civil Aviation Regulations 2016.

2.2 Determination of the Need for ATS

2.2.1 Refer to CAD 11 – Air Traffic Services, Chapter 2 para 2.4.

2.3 Scope of AFIS

2.3.1 Aerodrome flight information service shall include the provision of the following:

2.3.1.1 Meteorological information for aircraft about to take off or to land, including SIGMET information. Such information should, to the extent possible, be the same as that provided to aerodrome traffic by aerodrome control towers, i.e.:

a) the current surface wind direction and speed, including significant variations;

b) the QNH altimeter setting and, either on a regular basis in accordance with local arrangements or if so requested by the aircraft, the QFE altimeter setting;

c) the air temperature for the runway to be used, in the case of take-off by turbine-engine aircraft;

d) the current visibility representative of the direction of take-off and initial climb, or in the approach and landing area, if less than 10 km, or, when available to the AFIS officer, the current runway visual range for the runway to be used;

e) significant meteorological conditions in the take-off and climb- out area, or in the approach and landing area. This includes the occurrence or expected occurrence of cumulonimbus or thunderstorm, moderate or severe turbulence, wind shear, hail, severe line squall, marked mountain waves, waterspout;

f) the present weather and the amount and height of base of low cloud, in the case of aircraft making an approach in instrument meteorological conditions.

2.3.1.2 Information enabling the pilot to select the most suitable runway for use, such information should include, in addition to the current surface wind direction and speed, the "preferred runaway" and traffic pattern and, on request by the pilot, the length of the runway(s) and/or the distance between an intersection and the end of the runway.

Note. — The term "preferred runway" is used to indicate the most suitable runway at a particular time, taking into account the current surface wind direction and speed and other relevant factors such as the traffic pattern and the runway used by other aircraft, with the intention of establishing and maintaining an orderly flow of aerodrome traffic.

2.3.1.3 Information on known aircraft, vehicles or personnel on or near the manoeuvring area or aircraft operating in the vicinity of the aerodrome, which may constitute a hazard to the aircraft concerned.

2.3.1.4 Information on aerodrome conditions which is essential to the safe operation of aircraft. Such information should, to the extent possible, be the same as that provided to aerodrome traffic by aerodrome control towers, i.e., information relating to the following:

a) construction or maintenance work on, or immediately adjacent to the manoeuvring area;

b) rough or broken surfaces on a runway or a taxiway, whether marked or not;

c) water on a runway;

d) other temporary hazards, including parked aircraft and birds on the ground or in the air;

e) failure or irregular operation of part or all of the aerodrome lighting system;

f) any other pertinent information;

2.3.1.5 Information on changes in the operational status of non-visual navigation aids and visual aids essential for aerodrome traffic.

2.3.1.6 Radio bearings or direction-finding information, when equipment is available and when prescribed by the appropriate ATS authority.

2.3.1.7 Messages, including clearances, received from other ATS units for relay to aircraft (e.g., from the associated flight information centre (FIC) or area control centre (ACC).

2.3.1.8 Any other information contributing to safety.

3 AFIS Requirements for Information

3.1 Meteorological Information

3.1.1 AFIS units shall:

a) be equipped with surface wind indicator(s). The indicator(s) shall be related to the same location(s) of observation and be fed from the same anemometer(s) as the corresponding indicator(s) in the meteorological station, where such a station exists. Where multiple anemometers are used, the indicators to which they are related shall be clearly marked to identify the runway and section of the runway monitored by each anemometer. The location of the anemometer shall comply with requirement established in CAD 3.

b) be provided with available current information on runway visual range as determined by instruments or by qualified observer. AFIS units at aerodromes where runway visual range values are measured by instrumental means shall be equipped with indicator(s) permitting read-out of the current runway visual range value(s). The indicator(s) shall be related to the same location(s) of observation and be fed from the same runway visual range measuring device(s) as the corresponding indicator(s) in the meteorological station, where such a station exists. The location of the runway visual range sensor(s) shall comply with requirement established in CAD 3.

3.1.2 Where the meteorological station is available at the aerodrome, AFIS units shall, be supplied with the same information as that provided to aerodrome control towers:

a) up-to-date information on existing and forecast meteorological conditions as necessary for the performance of their functions. The information should be supplied in such a form as to require a minimum of interpretation on the part of AFIS personnel, and with a frequency which satisfies the requirements of the AFIS units concerned.

b) current meteorological reports and forecasts for the aerodrome with which they are concerned. Special reports and amendments to forecasts should be communicated to the AFIS units as soon as they are necessary in accordance with established criteria, without waiting for the next routine report or forecast.

c) current pressure data for setting altimeters for the aerodrome concerned.

3.2 Information On Aerodrome Conditions and The Operational Status of Associated Facilities

3.2.1 AFIS units shall be kept currently informed of the conditions of the manoeuvring area, including the existence of temporary hazards, and the operational status of any associated facilities at the aerodrome with which they are concerned.

3.3 Information On the Operational Status of Navigation Aids

3.3.1 AFIS units shall be kept currently informed of the operational status of non-visual navigation aids, and those visual aids essential for surface movement, take-off, departure, approach and landing procedures within their area of responsibility.

3.4 Information On Unmanned Free Balloons and Aviation Activities

3.4.1 AFIS units shall be kept informed of details of flights of unmanned free balloons and any aviation activities in accordance with the provisions contained in CAD 2.

4 AFIS Requirements for Communications

4.1 Aeronautical Mobile Service (Air-Ground Communications)

4.1.1 Air-ground communication facilities shall enable direct, rapid, continuous and static-free two-way communications to take place between an AFIS unit and appropriately equipped aircraft operating at any distance within 45 km (25 NM) of the AFIS aerodrome concerned, or within a range as specified in the AIP Malaysia.

4.1.2 When direct two-way radiotelephony is used for the provision of aerodrome flight information service, recording facilities shall be provided on all such air-ground communication channels.

4.1.3 Aircraft shall, unless exempted by the appropriate ATS authority, be capable of two-way communication with the AFIS unit on the prescribed frequency or frequencies.

4.2 Aeronautical Fixed Service

4.2.1 Where aeronautical fix service is available, AFIS unit shall be connected with the associated flight information centre (FIC) or area control centre (ACC) and, as appropriate, with the approach control office serving an adjacent or overlying terminal control area or with the aerodrome control tower at an adjacent aerodrome and with the following:

a) meteorological office serving the aerodrome; and

b) aeronautical telecommunications station serving the aerodrome.

4.2.2 Where aeronautical fix service is not available, AFIS unit shall have means of immediate communications with the approach control office serving an adjacent or overlying terminal control area or with the aerodrome control tower at an adjacent aerodrome for coordination and information.

4.2.3 All facilities for direct-speech communication between an AFIS unit and air traffic services units indicated in paragraph 4.2.1 and 4.2.2 above shall be provided with recording facilities.

5 AFIS Operational Requirements

5.1 Airspace Designation

5.1.1 AFIS shall be provided to all traffic on the manoeuvring area and to all aircraft flying in the vicinity of the aerodrome. The airspace within which AFIS will be provided shall be designated as a flight information zone (FIZ) and its lateral and vertical limits specified by the appropriate ATS authority.

5.2 Status of Service and Radiotelephony Phraseology

5.2.1 In order that pilots may readily identify the status of the service they are receiving, the call sign "AERODROME INFORMATION" following the name of the aerodrome shall be used in the aeronautical mobile communications to identify a unit providing AFIS, e.g., TIOMAN AERODROME INFORMATION. This will avoid any possible confusion with a unit providing aerodrome control service which is identified by the call sign "TOWER". The word "aerodrome" may be deleted after initial contact has been established. (If at any time it is apparent that the pilot is not aware that aerodrome control service is not provided, AFIS unit shall immediately informed the pilot by using the following phraseology:

"Aerodrome Control Service Not, Repeat, Not Provided."

5.2.2 The existing phraseology in the CAD 1101 – Air Traffic Management, Chapter 12, shall be used by an AFIS unit, where appropriate, to pass information to an aircraft.

5.3 Hours of Availability of AFIS

5.3.1 The hours of availability of AFIS shall be published in AIP Malaysia.

5.4 Location and Equipment

5.4.1 AFIS shall be provided from a location which ensures the best possible view of the aerodrome, the surrounding area and, in particular, the manoeuvring area, e.g., a control tower, or a room facing the aerodrome and at least the approach ends of the runway, with large, unobstructed windows.

5.4.2 The equipment in the AFIS unit shall, to the extent possible, be similar to the equipment required for the aerodrome control tower at an aerodrome with low traffic density.

5.5 Visual Ground Signals

5.5.1 Visual ground signals listed in CAD 2 – Rules of the Air, Appendix A, 4.2 may be displayed by AFIS unit as specified by the appropriate ATS authority.

5.6 Flight Plans

5.6.1 The requirements of flight plans are established in CAD 1101 – Air Traffic Management Chapter 4 para 4.4.

5.7 Coordination Between an AFIS Unit and The Associated FIC or ACC

5.7.1 As prescribed by the appropriate ATS authority, AFIS units shall ensure that the relevant FIC and/or ACC is informed regarding departures and arrivals at the AFIS aerodrome. Information to be made available shall comprise the identification of aircraft, the departure or destination aerodrome, the take-off or landing time, the expected time of communications transfer and, where necessary, request for en-route clearance.

5.7.2 The relevant FIC or ACC shall ensure that an AFIS unit is informed regarding aircraft proceeding to the AFIS aerodrome. The information to be provided shall consist of relevant items of the current flight plan, the estimated time of arrival and the expected time of communications transfer.

5.8 Alerting Service

5.8.1 Alerting service shall be provided in accordance with the provisions of CAD 11 – Air Traffic Services, Chapter 5.

5.9 Responsibilities and Procedures for Pilots

5.9.1 When operating on or in the vicinity of an aerodrome where AFIS is provided, pilots shall, on the basis of the information received from the AFIS unit combined with their own knowledge and observations, decide on the course of action to be taken to ensure separation from other aircraft, ground vehicles and obstacles.

5.9.2 Pilots shall establish and maintain two-way radio communication with the AFIS unit and that they report their positions, levels and all significant manoeuvres and intentions to the AFIS unit, since the efficiency of the AFIS is dependent on the information received.

5.10 Promulgation of Information

5.10.1 Information regarding the availability of AFIS and related procedures shall be included in the relevant parts of the Aeronautical Information Publication (AIP) in the same manner as in the case of aerodromes provided with air traffic control service. The information shall include the following:

a) identification of the aerodrome;

b) location and identification of the AFIS unit;

c) hours of operation of the AFIS unit;

d) lateral and vertical limits of the flight information zone (FIZ);

e) ATS communication facilities;

f) detailed description of the services provided, including alerting service and, if applicable, direction-finding service;

g) special procedures for application by pilots;

h) any other pertinent information.

6 Qualifications and Training of AFIS

6.1 AFIS Personnel

6.1.1 AFIS shall be provided by suitably qualified and trained personnel, authorised by CAAM.

6.1.2 AFIS personnel shall meet requirements of age, knowledge, language proficiency, experience and skill as required in this chapter.

6.1.3 In the event of AFIS personnel does not performed AFIS duty for more than six (6) months, he/she shall be required to undergo refresher training for four (4) days.

6.2 Age

6.2.1 Not less than 18 years of age.

6.3 Knowledge

6.3.1 AFIS personnel shall demonstrate basic general knowledge of the following:

a) the language or languages nationally designated for use in air traffic services and ability to speak such language or languages without accent or impediment which would adversely affect radio communication;

b) rules of the air and air traffic procedures pertinent to aerodrome operations;

c) procedures and practices pertaining to flight information service and alerting service;

d) terms used in the aeronautical mobile service, procedure words and phrases, the spelling alphabet;

e) communication codes and abbreviations used;

f) radiotelephony phraseologies and operating procedures;

g) the general air traffic services and airspace organisation within Malaysia;

h) local aerodrome rules;

i) characteristics of local traffic;

j) local terrain and prominent landmarks;

k) local air navigation facilities;

l) procedures for co-ordination between the AFIS unit and the associated FIC or ACC;

m) pertinent data regarding meteorological reports and effect of significant local weather characteristics; and

n) local procedures for alerting of emergency services.

6.3.2 The AFIS personnel shall have demonstrated a level of basic air traffic control knowledge, in at least the following subjects:

a) Air law – rules and regulations relevant to the air traffic control;

b) Air traffic control equipment – principles, use and limitations of equipment used in air traffic control;

c) General knowledge – until 2 November 2022, principles of flight; principles of operation and functioning of aircraft, engines and systems; aircraft performance relevant to air traffic control operations;

Note. — as of 3 November 2022, principles of flight; principles of operation and functioning of aircraft and RPAS, engines and systems; aircraft performance relevant to air traffic control operations;

d) Human performance – human performance including principles of TEM;

e) Meteorology – aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;

f) Navigation – principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and

g) Operational procedures – air traffic control, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

6.3.3 The AFIS personnel shall have demonstrated a level of knowledge in aerodrome control, as far as they affect the area of responsibility:

a) aerodrome layout; physical characteristics and visual aids;

b) airspace structure;

c) applicable rules, procedures and source of information;

d) air navigation facilities;

e) air traffic control equipment and its use;

f) terrain and prominent landmarks;

g) characteristics of air traffic;

h) weather phenomena; and

i) emergency and search and rescue plans.

6.4 Training and Experience

6.4.1 For newly established AFIS station, a training proposal shall be submitted to CAAM for approval.

6.4.2 AFIS personnel who does not hold any valid Air Traffic Controller Licence shall have satisfactory experience required by fulfilling the following:

a) completion of an approved basic ATC and aerodrome control course; and

b) On-The-Job Training (OJT) under a qualified AFIS officer for not less than two months.

6.4.3 AFIS personnel who holds a valid Air Traffic Controller licence shall have satisfactory experience required by fulfilling the following:

a) Hold or have held a rating / validation in Aerodrome Control for a period of at least two (2) months; and

b) On-The-Job Training (OJT) under a qualified AFIS officer for not less than two weeks.

6.5 Skill

6.5.1 AFIS personnel shall demonstrate skill and competency in the following area:

a) the manipulation and operation of typical transmit/receiver equipment and controls, including ancillary facilities, and radio direction-finding apparatus in use;

b) the visual inspection and daily operational check of the radio equipment in use;

c) the transmission of telephony messages, including radio-telephony technique, enunciation and speech quality; and

d) the reception of telephony messages and the ability to relay messages correctly.

6.6 Language Proficiency Requirement

6.6.1 AFIS personnel shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements established in CAD 1 Chapter 1 para 1.2.9.

6.6.2 AFIS personnel shall demonstrate the ability to speak and understand the language used for radiotelephony communications and attain an ELP Level 4 or higher.

6.6.3 AFIS personnel demonstrating language proficiency below Operational Level (Level 4) shall not be allowed to provide AFIS.

6.7 Training Report

6.7.1 The training log shall be forwarded to the ANSA every two (2) weeks until the completion of the training.

6.7.2 The training log shall be recorded in the record-keeping system to ensure all requirements of the training have been met.