



CIVIL AVIATION GUIDANCE MATERIAL – 1100



# ATC INCIDENT INVESTIGATION

CIVIL AVIATION AUTHORITY OF MALAYSIA

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## Introduction

This Civil Aviation Guidance Material 1100 (CAGM - 1100) is issued by the Civil Aviation Authority of Malaysia (CAAM) to provide guidance to Air Traffic Services providers and personnel on conducting investigations of ATC incidents, pursuant to Civil Aviation Directive 11 – Air Traffic Services (CAD 11 – ATS), Civil Aviation Directive 1101 – Air Traffic Management (CAD 1101 – ATM) and CAD 1900 – Safety Reporting System (CAD 1900 – SRS).

Organisations may use these guidelines to demonstrate compliance with the provisions of the CADs. Without prejudice to Regulation 165 and 167 of the Civil Aviation Regulations 2016 (CAR 2016), when the CAGMs issued by the CAAM are used, the related requirements of the CADs are considered as met, and further demonstration may not be required.



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Chief Executive Officer  
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## Civil Aviation Guidance Material components and Editorial practices

This Civil Aviation Guidance Material 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 Guidance Material incorporates, by reference, other specifications having the status of Recommended Practices. In such cases the text of the Recommended Practices becomes part of the Standard.

The units of measurement used in this document 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 document, which is identified by a number and/or title, includes all subdivisions of that portion.

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





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## Summary of Changes

ISS/REV no.	Item no.	Revision Details
ISS02/ REV00	Throughout the document	<p>Major revision on the document due to:</p> <ul style="list-style-type: none"> <li>i) The organisational restructuring within CAAM, the Air Navigation Standard &amp; Services Division (ANSSD) has been restructured as the Air Navigation Services and Aerodrome Division (ANSA);</li> <li>ii) New addition to the definition of Accountable Manager, ANSA and ATSU;</li> <li>iii) Amendment to the definition of ATS Provider, Air Traffic Controller Licence, and ATCS;</li> <li>iv) Standardise on the use of term 'Air Traffic Services provider' as 'ATS provider' and the term 'Air Traffic Service Unit' as 'ATSU';</li> <li>v) Additional or revision to paragraphs to enhance clarity and consistency;</li> <li>vi) Additional or revision to paragraphs to align with CAD 11, CAD 1101 and CAD 1900;</li> <li>vii) Amendment to include the objective of this document (para 2.1.1);</li> <li>viii) The word 'shall' is replaced with 'should' to reflect the purpose of this document as guidance for ATS providers on conducting ATC incident investigations, emphasising recommendations rather than mandatory requirements;</li> <li>ix) Change in time frame from seven (7) to ten (10) working days of incident for report submission to ANSA;</li> <li>x) The generic term ATS provider is used to replace ANSD and MPOU to ensure the procedures are adaptable to current and potential future air traffic service providers;</li> <li>xi) The utilisation of CAAM Aviation Reporting System (CAREs) as a platform to report mandatory and voluntary occurrences;</li> <li>xii) The recommendation for ATS provider to establish Air Traffic Incident Report Form;</li> <li>xiii) New topic on Investigation and Documentation (Chapter 4); and New topic on Internal Incident Review Panel and Board of Inquiry (Chapter 5).</li> </ul>



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# 1 Definitions and Abbreviations

## 1.1 Definitions are amended as follows:

When the following terms are used in this Guidance Material, they have the following meanings:

**Accountable Manager** means an individual who has corporate authority for ensuring that all operations, safety performance and maintenance activities can be financed and carried out to the standard required by the Authority and any additional requirements defined by the service provider.

**Aerodrome** means a defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

**Aerodrome Control Service** means air traffic control service for aerodrome traffic.

**Aeronautical Information Publication** means a publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

**Air Navigation Services and Aerodrome Division (ANSA)** means Air Navigation Services and Aerodrome Division in the Civil Aviation Authority of Malaysia vested with the responsibility to regulate the air navigation services (ANS) and aerodrome and ground aids (AGA) provision.

**Air Traffic** means all aircraft in flight or operating on the manoeuvring area of an aerodrome.

**Air Traffic Controller or Controller** is a variously used to mean all Air Traffic Control Officers (ATCOs), Assistant Air Traffic Control Officers and Trainee Air Traffic Controllers.

**Air Traffic Controller Licence** means an Air Traffic Controller Licence granted or renewed under regulations 149 of the Civil Aviation Regulations 2016.

**Air Traffic Control Instructions** means directions given by an air traffic controller or an ATS unit for an aircraft to conduct its flight in the manner specified in the directions.

**Air Traffic Control Service (ATCS)** means a service provided for the purpose of:

- a) preventing collisions
  - 1) between aircraft, and
  - 2) between aircraft and obstructions on the manoeuvring area, and
- b) expediting and maintaining an orderly flow of air traffic

**Air Traffic Service (ATS)** means a generic term meaning variously flight information service, alerting service, air traffic advisory service, aeronautical information service and air traffic control service.

**Air Traffic Service Unit (ATSU)** means a generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

**Air Traffic Services Provider (ATS Provider)** means the relevant provider designated by the Authority responsible for providing air traffic services in the airspace concerned.

**Approach Control Service** means air traffic control service for arriving or departing controlled flights.

**Approach Control Unit** means a unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

**Authority** means the Civil Aviation Authority of Malaysia established under the Civil Aviation Authority of Malaysia Act 2017 [Act 788].

**Area Control Centre** means a unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

**Area Control Service** means Air Traffic control service for controlled flights in control areas.

**Chief Executive Officer (CEO)** means the Chief Executive Officer of Civil Aviation Authority of Malaysia.

**Human Performance** means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

**Quality System** means documented organisational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.

**Rated Air Traffic Controller** means an Air Traffic Controller holding a licence and valid ratings appropriate to the privileges to be exercised.

**Rating** means an authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

**State Safety Programme (SSP)** means an integrated set of regulations and activities aimed at improving safety.

**Threat management** means the process of detecting threats and responding them with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

**1.2 Abbreviations and Acronyms are amended as follows:**

AFIS	Aerodrome Flight Information Service
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
ANS	Air Navigation Services
ANSA	Air Navigation Services
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATCC	Air Traffic Control Centre
ATCO	Air Traffic Control Officer
ATM	Air Traffic Management
ATS	Air Traffic Service
ATSM	Aerodrome Traffic Surveillance Monitor
ATSU	Air Traffic Service Unit
CAA	Civil Aviation Act
CAAM	Civil Aviation Authority of Malaysia
CAR	Civil Aviation Regulations
CEO	Chief Executive Officer
FIS	Flight Information Service
HOU	Head of Unit
ICAO	International Civil Aviation Organisation
MATS	Manual of Air Traffic Services
RMAF	Royal Malaysian Air Force
SARPs	Standard and Recommended Practices
SMS	Safety Management System
SOP	Standard Operating Procedure
SSP	State Safety Programme

## **2 General**

### **2.1 Introduction**

- 2.1.1 This Civil Aviation Guidance Material 1100 – ATC Incident Investigation (CAGM 1100) is applicable to all ATS providers, aims to provide guidance and to standardise the procedures for investigating ATC incidents. This CAGM 1100 shall be read together with Civil Aviation Directive 11 – Air Traffic Services (CAD 11 – ATS), Civil Aviation Directive 1101 – Air Traffic Management (CAD 1101 – ATM) and CAD 1900 – Safety Reporting System (CAD 1900 – SRS).
- 2.1.2 An incident is any occurrence other than an accident associated with the operation of an aircraft which affects or could affect the safety of operation.
- 2.1.3 A safety report shall be submitted for any occurrence which is related to the provision of air traffic services involving such events as aircraft proximity (AIRPROX), or other serious difficulty resulting in a hazard to aircraft, caused by, among others, faulty procedures, non-compliance with procedures, or failure of ground facilities. A report may also be submitted on any occurrence that involves an unsatisfactory condition, behaviour or procedure, which did not immediately endanger an aircraft or person, but if allowed to continue uncorrected, or if repeated in other foreseeable circumstances, would create a hazard.
- 2.1.4 CAAM divides safety occurrence report relevant to ATC incidents into the following categories: -
- a) Mandatory Occurrence Report;
  - b) Voluntary Occurrence Report; and
  - c) Air Traffic Incident Report.
- 2.1.5 Investigation of safety occurrences is part of safety management as it supports the removal of systemic safety deficiencies by identifying ‘why it happened’ rather than ‘who did it’.
- 2.1.6 The infringement of safety, particularly ‘airmiss’ should be thoroughly investigated. The purpose of the investigation is to determine factors that caused the incident and not to apportion blame.
- 2.1.7 Findings of an investigation will indicate appropriate corrective measures to be taken to prevent recurrence of similar deficiencies.
- 2.1.8 Any controller involved in or aware of a safety occurrence is obliged to report the incident. The data analysed from the report are essential for the overall safety management and enhancing performance of the air traffic management system.
- 2.1.9 ATS provider should establish investigation process that includes internal incident review panel and internal board of inquiry. These processes should be conducted

in line with CAD 11, CAD 19 and CAD 1901 requirements for the reporting and investigating as well as reviewing of air traffic incidents to promote safety.

## **2.2 Degree of Risks**

2.2.1 Air traffic incidents will be classified under one of the following:

- a) Near Collision / Airprox (designation: Near Collision);
- b) Serious difficulty caused by faulty procedures or lack of compliance with applicable procedures (designation: Procedural); or
- c) Serious difficulty caused by failure or ground facilities (designation: Facilities).

2.2.2 AIRPROX is a situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that safety of the aircraft involved may have been compromised.

2.2.3 The degree of risk of an AIRPROX is classified as follows:

- a) Risk of collision - The risk classification of an aircraft proximity in which serious risk of collision has existed;
- b) Safety not assured - The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised;
- c) No risk of collision - The risk classification of an aircraft proximity in which no risk of collision has existed; or
- d) Risk not determined - The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

2.2.4 Each type of incident and related risk(s) must be thoroughly examined to identify all contributing factors towards the occurrence of the incident. It is imperative to note that more than one factor may have cumulatively or subsequently lead to the final incident.

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### **3 Reporting Procedure**

#### **3.1 Incident Reporting System**

3.1.1 In order to facilitate the collection of information on actual or potential safety hazards or deficiencies related to the provision of ANS, including route structures, procedures, communications, navigation and surveillance systems and other safety significant systems and equipment as well as controller workloads, personnel of the ATS provider should utilise an established incident reporting system.

*Note. 1 – CAAM is utilising the CAAM Aviation Reporting System (CAREs) as a platform for reporting both mandatory and voluntary occurrences, accessible to everyone in the aviation industry.*

*Note. 2 – Refer CAD 1900 Safety Reporting System (SRS) for further explanation.*

3.1.2 The main objective on the establishment of incident reporting system is to prevent accidents and incidents, however the existence of such system is not intended to replace or reduce the duties and responsibilities of ATS provider and its personnel. The primary responsibility for safety rests with the management of the ATS provider.

#### **3.2 Safety Reports**

3.2.1 Notwithstanding paragraph 2.1.3, safety reports shall be submitted for, but not limited to, the following:

- a) activation of alerts, such as STCA and MSAW, associated to degradation of safety/standard separation;
- b) notification of ACAS event by flight crew;
- c) non-compliance to ATC instructions;
- d) non-compliance to standard operating procedures;
- e) usage of non-standard phraseologies;
- f) faulty navigation aids that limits/hinders the provision of ATC service; and
- g) faulty equipment that limits/hinders the provision of ATC service.

3.2.2 To facilitate the investigation of the incidents described above, the following information are essential and should be included in a safety report:

- a) date and time of incident;
- b) callsign, position and altitude of all involved aircraft;
- c) name of navigational aids or equipment that were implicated; and
- d) brief description of the incident.



- 3.2.3 The ATS provider, while maintaining the confidentiality of the reporter's identity, should proceed to investigate the alleged ATC incident as per paragraph 4.1.
- 3.2.4 If the reporter requires feedback, the identity and contact numbers can be included in the confidential report submitted.
- 3.2.5 All such reports shall be forwarded immediately to the Accountable Manager of the ATS provider and the Director of ANSA as appropriate, while maintaining the strictest confidentiality.

### **3.3 The Air Traffic Incident Report Form**

- 3.3.1 ATS provider should establish standardised form(s), available in paper or digital format, to be used by its personnel for recording without delay an air traffic incident observed on surveillance system or received by radio, telephone or teleprinter. The forms may be differentiated specifically in accordance to the types of ATC incidents being reported, i.e. Infringement Report Form, Runway Incursion Form, and Large Height Deviation Form.
- 3.3.2 For the purpose of standardisation and systematic review, ATS provider is required to complete the Air Traffic Incident Report Form CAAM/ANS/INC 01, provided in Attachment A of this document. This form should accompany any reports of incidents as described in 3.3.1 when submitted to ANSA.

### **3.4 ATS Provider's Responsibilities**

- 3.4.1 Duty Air Traffic Controller(s)
  - 3.4.1.1 In the event of an occurrence of an ATC incident (e.g. airmis, infringement, complaint from pilot / neighbouring ATC unit, or other related matters), the controller(s) should:
    - a) immediately make a verbal report of the incident to the Duty Watch Supervisor / SATCO (as applicable) giving as much details as possible;
    - b) log in the details of the incident in the Log Book provided at the operational position; and
    - c) submit report to the ATSU Head, on the events leading to the incident including all actions taken by the controller. The report must be completed and submitted before the end of the shift duty.
- 3.4.2 Watch Supervisor / SATCO (as applicable)
  - 3.4.2.1 Upon being notified of an ATC incident, these actions should be taken;
    - a) review the radar and/or radio tape recordings playback;
    - b) retain flight progress strips and obtain the relevant weather reports;

- c) use discretion to relieve the controller(s) involved from operational ATC duties and arrange for a relief officer;
- d) as soon as possible (irrespective of whether the incident happens during, before or after office hours) make an official report to the ATSU Head (Manager / Director / RMAF Commanding Officer, as applicable);
- e) make a record of all actions taken in chronological order, pertaining to the incident; and
- f) submit a written report, in chronological order, to the ATSU Head, on the events leading to the incident including all actions taken by the controller. The report must be completed and submitted before the end of the shift duty.

3.4.3 The Head of ATSU, upon receipt of a preliminary ATC incident report, shall ensure that:

3.4.3.1 A copy of the report is forwarded to the Accountable Manager of the ATS provider and the Director of ANSA together with Form CAAM/ANS/INC 01 within ten (10) working days of the incident, inclusive of the following information;

- a) the controller's & Watch Supervisor's written reports;
- b) copy of log book entries;
- c) weather reports;
- d) flight progress strips;
- e) R/T transcripts;
- f) radar plotting (if relevant);
- g) audio and video recording (if available); and
- h) any other relevant information (e.g. NOTAM).

3.4.3.2 The report should include comments regarding measures taken or possible measures to be taken to prevent a recurrence of the situation.

### **3.5 Pilot / Airline Safety Officer occurrence reports**

3.5.1 All mandatory and voluntary occurrence reports should be submitted through the CAAM Aviation Reporting System (CAREs), a platform accessible to everyone, including airlines. Upon receiving a report involving air traffic services, ANSA will initiate an investigation and may request relevant ATSU's, through the ATS provider, to submit information as specified in paragraph 3.4.3 above.



## **4 Investigation and Documentation**

### **4.1 Initial Investigation by ATSU**

- 4.1.1 It is essential to determine the cause of an air traffic incident, with the minimum delay so that action can be taken to prevent a recurrence.
- 4.1.2 Immediately following an air traffic incident all documents and tapes relating to the incident should be impounded. Controllers, supervisors and officers-in-charge of the ATS unit concerned should take all necessary measures to preserve relevant documents and to record as many details as possible while they are still fresh in their minds.
- 4.1.3 The initial investigation is normally carried out by the ATS unit to which the incident has been reported or which noted it. The ATS unit should obtain the following information:
- a) statements by personnel involved;
  - b) tape transcripts of relevant radio and telephone communications;
  - c) copies of flight progress strips and other relevant data, including recorded radar data, if available;
  - d) copies of the meteorological reports and forecasts relevant to the time of the incident;
  - e) technical statements concerning the operating status of equipment, if applicable;
  - f) unit findings and recommendations for corrective actions, if appropriate.

### **4.2 Safety Investigation by ATS Provider**

- 4.2.1 The Setup
- 4.2.1.1 Upon receipt of information of the occurrence of an ATC incident from ANSA, ATSU or by other reliable platform, ATS provider should assign qualified investigator(s) to commence an immediate safety investigation.
- 4.2.1.2 To give effect to the air traffic incident investigating process, an investigating team should be established by the ATS provider. The team should include the officer-in-charge of the ATS unit or a senior ATS officer as team chief and ATS experts, other specialist officers from flight operations, flight calibration, telecommunications engineering or other fields, if required.
- 4.2.1.3 In addition and when necessary, the controller(s) involved in the incident should be given the opportunity to nominate as a member of the team an experienced controller of equal grade to represent him during the investigation.

- 4.2.1.4 When two (2) units are involved, the unit in whose area the incident has taken place should initiate action to convene the incident investigation team and include an offer for officers of the other's unit participate.
- 4.2.2 The Process
- 4.2.2.1 All activities, as well as notes and records used by the investigation team or personnel should be treated as confidential material.
- 4.2.2.2 Specific facts and information required by the investigation team or personnel should be prepared by the ATSU or requested from reliable external sources, and should include, as appropriate:
- a) names and operating positions of involved ATS personnel;
  - b) full details of the sequence of events in narrative form;
  - c) details of aircraft involved;
  - d) reports from controllers involved as prepared before leaving the unit on the day of the occurrence;
  - e) reports from pilots involved, if possible as prepared at the next point of touch-down, preferably in pen script but acceptable by AFTN signal and, if necessary, through the operator's office; and
  - f) the marking and impounding of relevant voice recording tapes, flight progress strips and other flight data including recorded radar data if available.
- 4.2.2.3 In some cases, additional information may be required from third parties outside the organisation. Should any aviation personnel or organisation refuse to provide information necessary for the proper investigation of an air traffic incident, the State conducting the investigation may proceed with the investigation using available information and inform the ICAO Regional Office of the difficulties encountered.
- 4.2.3 The Analysis
- 4.2.3.1 All available evidence and relevant material submitted should be scrutinised, including playback of audio and radar recordings to ascertain the contributing factors leading to the incident.
- 4.2.3.2 The investigating team or personnel should request for additional information if material submitted is insufficient to complete the investigation.
- 4.2.3.3 A combination of investigative techniques that include interviews, playback of recordings and discussion with appropriate operational personnel may be employed to determine the causes of the incident.

4.2.3.4 The analysis of an incident should be considered in relation to system operation and have regard to factors such as the following:

- a) *Procedures* - Were the procedures and separation standards applied, correct for the situation?
- b) *Data and display* - Was the displayed data correct and complete in terms of local unit instructions? Was the displayed information properly interpreted and utilised?
- c) *Co-ordination* - Were the prescribed co-ordination procedures adequate and correct and were they correctly and fully applied?
- d) *Communication* - Was correct phraseology used by all personnel involved? Was there any failure to communicate clearly and concisely which may have given rise to error or misunderstanding? Was there any failure to note and correct any incorrect read back of information? Was there any failure to obtain acknowledgement of the receipt of information?
- e) *Equipment* - Was the performance of relevant technical equipment adequate?

*Note.– If any failure or malfunction of equipment caused or contributed to the incident, specialised technical advice or evidence should be sought.*

- f) *Personnel performance* - Were any factors present which may have affected an individual's performance, e.g. fatigue, illness, personal problems, etc.?

*Note.– While personnel errors may be established by the committee, degrees of negligence, carelessness or blame are not to be specified.*

- g) *Task environment* - All aspects of the working environment should be considered which may have affected the performance of personnel, e.g. background noise, heating, ventilation, ambient light levels, etc.
- h) *General operations* - Were all personnel familiar with the traffic situation and pertinent data before assuming responsibility for an operating position? Were the duties and responsibilities for the operating position(s) clearly defined? The adequacy of staffing in relation to traffic density should be considered as well as relief, and adequate rest periods. If applicable, was the level of supervision satisfactory?

4.2.4 The Final Report on the Incident Investigation

4.2.4.1 Once the analysis of an ATC incident has been completed, information on the results, including conclusions and recommendations reached, should be organised in a Final Report and be made available to all concerned so that corrective action, etc. may be taken and all concerned are fully aware of the final results.

*Note – Refer paragraph 4.3 for further information on Final Report*

- 4.2.4.2 If an investigation determines that the incident was caused by negligence or significantly contributed to by the actions of an Air Traffic Controller, the Accountable Manager of the ATS provider shall ensure that the controller is temporarily relieved from operational duties, unless this action has already been taken during the preliminary stages at the operational unit.
- 4.2.4.3 Should evidence conclusively demonstrate that the incident did not result from ATC error, the Accountable Manager of the ATS provider may reinstate any controller who had been previously relieved from operational duties during the initial phase of the investigation.
- 4.2.4.4 Should there be immediate actions that are deemed appropriate to prevent similar safety occurrences, the ATS provider should forward recommendations to relevant ATSU's.
- 4.2.4.5 The ATS provider should compile a Final Report, within 21 working days after the incident is notified and all relevant material submitted.
- 4.2.4.6 The Final Report, including documentation of any actions taken to relieve or reinstate personnel, shall be submitted to the Director of ANSA.

### **4.3 Final Report Documentation**

- 4.3.1 The objective of the Final Report is to comprehensively document the incident, noting the contributory factors, discrepancies in procedures and other relevant factors that will allow it to be used as learning material in operational and safety training.
- 4.3.2 The Final Report should include a summary of the incident and the cause. The report should contain all relevant information, in chronological sequence where appropriate, and concluding with a list of findings, conclusions, causes and safety recommendations for the purpose of accident/incident prevention. Recommended corrective actions should also be included in the report.
- 4.3.3 The investigation team or personnel should not make recommendations on personnel or disciplinary action in the event of controller error because the fundamental objective of the investigation is prevention of accidents, not to apportion blame or liability.
- 4.3.4 In addition, the following information should be submitted as appendices to the report:
- a) statements by personnel involved, including copies of personal reports (by controller, Watch Supervisor, etc);
  - b) tape transcripts of relevant air-ground and telephone communications;
  - c) copies of meteorological reports or forecasts relevant to the incident;

- d) copies of flight progress strips and other data relevant to the incident, including recorded radar data, if available; and
- e) any technical statements concerning the operating status of equipment, if applicable.

#### **4.4 Securing of Documentation and Recording Media**

- 4.4.1 All documents and records related to an incident or accident hold legal status if subject to a formal inquiry by the courts. As such, these materials must be carefully handled, secured and preserved until the investigation process is completed.
- 4.4.2 When an accident or incident has occurred that may be the subject of an official inquiry, the ATSU Head should secure all related documents and records (voice tapes, radar data tapes, flight plan, flight progress strips, weather reports, logbook entries, R/T transcripts and radar plotting – whichever applicable), seal and forwarded to the Accountable Manager of the ATS provider and Director of ANSA together with the report within the required stipulated time.
- 4.4.3 The receipt and handover of the documents and records should be formally recorded and acknowledged.
- 4.4.4 All material associated with safety investigation should not be released to any interested parties. Any request for relevant material such as radiotelephony transcript, should be re-directed to the Accountable Manager of the ATS provider.
- 4.4.5 Usage of these materials for training purposes should be on a case-to-case basis. A formal request should be submitted to the Accountable Manager of the ATS provider for consideration and approval.
- 4.4.6 The materials that are approved for training purposes, in general, should:
  - a) de-identify names of controllers involved, aircraft callsign, location of ATSU etc; and
  - b) ensure hard and soft copies of the safety case, including audio visual recordings be returned and/or destroyed at the end of the training session.

## **5 Internal Incident Review Panel and Board of Inquiry**

### **5.1 Internal Incident Review Panel**

- 5.1.1 The ATS providers should establish internal incident review panel as a means to determine the cause including the assessment of human factor.
- 5.1.2 This review panel is to enable analysis on actual or potential safety deficiencies and to determine any preventive measures required.
- 5.1.3 The terms of reference for the internal incident review panel are as follows:
- a) discuss the incident case by scrutinising all available evidence;
  - b) ascertain and conclude the contributing factors leading to the incident;
  - c) provide relevant input to complete the incident investigation report as appropriate;
  - d) record findings and propose appropriate safety recommendations; and
  - e) when required, recommend the convening of the internal board of inquiry.
- 5.1.4 The internal incident review panel should consider the following circumstances, but not limited to, in considering a recommendation for an internal board of inquiry:
- a) All cases of risk of collision or safety not assured (i.e. serious risk of collision existed or safety of aircraft may have been compromised);
  - b) Violations by Air Traffic Controllers (i.e. deliberate departures from established rules, procedures, regulations, separation standards, etc.); or
  - c) In cases of serious incidents (i.e. an incident involving circumstances indicating that an accident nearly occurred); Examples include:
    - 1) Near collisions requiring an avoidance manoeuvre to avoid a collision / unsafe situation or when an avoidance action would have been appropriate;
    - 2) Controlled flight into terrain (CFIT) only marginally avoided;
    - 3) Aborted take-off on a closed or engaged runway;
    - 4) Landings or attempted landings on a closed or engaged runway; or
    - 5) Cases of separation breakdown during overshoot or missed approach.
  - d) Deficient ATC procedures to blame for the incident; or
  - e) Errors in which the good intention or plan was incorrectly carried out resulting in risk of collision.

### **5.2 Internal Board of Inquiry**

- 5.2.1 The ATS provider should establish internal board of inquiry as a means to determine the actions to be taken following an internal incident review.

- 5.2.2 The functions and jurisdiction of the internal board of inquiry are as follows:
- a) examine the investigation report, evidence and/or any other related documents;
  - b) review the findings; and
  - c) interview the controller(s) to clarify information related to the incident.
- 5.2.3 The findings and recommendations by the internal board of inquiry should be recorded and disseminated by the secretary within seven (7) working days after the sitting.
- 5.2.4 The internal board of inquiry should decide on the reinstatement of the controller(s) involved, depending on the findings of the board.
- 5.2.5 Any controller, relieved from performing operational ATC duties due to involvement in an incident, should be allowed to resume normal duties once the condition(s), if any, imposed by the internal board of inquiry is fulfilled.
- Note. – The activity indicated in paragraph 5.2.5 is based on Safety Management System (SMS) requirement as per CAD 19 and CAGM1902. Concurrently, investigation on the same incident conducted by ANSA as the regulator is to determine whether a violation has occurred based on CAPM 5 – Enforcement Policy.*
- 5.2.6 The internal board of inquiry report shall be submitted to the Director of ANSA as soon as possible.

## 6 Appendices

### 6.1 Appendix 1 – ATS Incident Investigation Flowchart



No.	Activities	Actions	Timeline
1	Receive incident report	ANSA	1 day
2	Forward to service provider with instruction to conduct initial investigation	ANSA	
3	Conduct incident initial investigation	ATS Provider	10 days
4	Prepare preliminary incident investigation report using form CAAM/ANS/INC 01, and submit to ANSA	ATS Provider	
5	Review preliminary report and recommendations Satisfactory – Proceed for full incident investigation Not Satisfactory – Back to preliminary investigation	ANSA	1 day
6	Execute the mitigation measure/plan (if any)	ATS Provider	ASAP
7	Conduct internal incident review panel (where applicable)	ATS Provider	Subject to service provider's internal process and timeline
8	Conduct internal board of inquiry (where applicable)	ATS Provider	
9	Submit report of internal review panel / board of inquiry	ATS Provider	7 days





# 7 Attachments

## 7.1 Attachment A – ATC Incident Report Form



**CIVIL AVIATION AUTHORITY OF MALAYSIA**  
(PIHAK BERKUASA PENERBANGAN AWAM MALAYSIA)

### ATC INCIDENT REPORT

This form is to be completed by the officer conducting the preliminary incident investigation at the ATS Provider concerned. All material secured must be indicated in Part 6 and immediately submitted to Air Navigation Services and Aerodrome Division (ANSA).

#### 1. GENERAL INFORMATION

Reference	<input type="text"/>	Reportee	<input type="text"/>
Date	<input type="text"/>	Time (UTC)	<input type="text"/>
ATS Unit	<input type="text"/>	ATC Position	<input type="text"/>

#### AIRCRAFT 1

Callsign	<input type="text"/>	Type	<input type="text"/>
Departure	<input type="text"/>	Destination	<input type="text"/>
FL / Altitude	<input type="text"/>	Flight Phase	<input type="text"/>

#### AIRCRAFT 2

Callsign	<input type="text"/>	Type	<input type="text"/>
Departure	<input type="text"/>	Destination	<input type="text"/>
FL / Altitude	<input type="text"/>	Flight Phase	<input type="text"/>

#### 2. SHORT DESCRIPTION OF OCCURRENCE

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#### 3. FACTUAL INFORMATION

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**4. PRELIMINARY FINDINGS AND CAUSES**

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**5. ACTION TAKEN** (ATCO/pilot/procedures/ navaid, as relevant)

List immediate action(s) taken after initial investigation to ensure non-recurrence

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**6. MATERIAL EVIDENCE SECURED** (Please tick and add as necessary)

<input type="checkbox"/>	Audio (recording)
<input type="checkbox"/>	Radar (video)
<input type="checkbox"/>	Logbook
<input type="checkbox"/>	Controller's report
<input type="checkbox"/>	.....
<input type="checkbox"/>	.....
<input type="checkbox"/>	.....

<input type="checkbox"/>	NOTAM
<input type="checkbox"/>	UOI
<input type="checkbox"/>	Shift Roster
<input type="checkbox"/>	METAR
<input type="checkbox"/>	.....
<input type="checkbox"/>	.....
<input type="checkbox"/>	.....

**7. ADDITIONAL INFORMATION (Other info not covered by Parts 1 to 6)**

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This report is completed by:

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Note:

1. Only signed reports shall be faxed or emailed (scanned copy).
2. Please save large audio/video files in CD and despatch to ANSA.