MANUAL

ON

PREPARATION OF AERODRME MANUAL

FIRST EDITION

2009

CIVIL AVIATION AUTHORITY, BANGLADESH

LIST OF EFECTIVE PAGES

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FORWORD

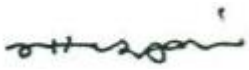
In exercise of the powers conferred by Rule 4 of Civil Aviation Rule 1984, the Chairman Civil Aviation authority, Bangladesh (CAAB) is pleased to issue this Air Navigation Order (ANO) as a Manual on Preparation of Aerodrome Manual.

An aerodrome manual, as specified under Rule 260B (2) of Civil Aviation Rules 1984 (CAR 84), shall be prepared and maintained by the aerodrome operators seeking an aerodrome certificate in accordance with the requirements of this ANO.

This ANO specifies the particulars and information to be contained in the aerodrome manual. The aerodrome manual should be comprehensive; it shall contain detailed operations policies, procedures of the aerodrome operator, stipulations of the mandatory requirement contained in ANO (AD) A.1 - Manual of Standards, Bangladesh and other instructions issued by the Chairman of Civil Aviation Authority, Bangladesh from time to time. Notwithstanding the requirement of this ANO, the aerodrome operator may include in the aerodrome manual additional procedures to be adopted by them to enhance surveillance and safety of operations.

The responsibility for the technical matters within this ANO is the responsibility of the Flight Safety and Regulations Division of CAAB.

This ANO is issued and amended under the authority of the Chairman of Civil Aviation Authority, Bangladesh.



Air Cdre. Mahmud Hussain, ndc, psc
Chairman
Civil Aviation Authority, Bangladesh

A. PURPOSE AND SCOPE OF THE AERODROME MANUAL

1 The information presented in the aerodrome manual shall demonstrate that the aerodrome conforms to the laid down standards and practices of ANO (AD) A.1 - Manual of Standards, Bangladesh and that there are no apparent shortcomings, which would adversely affect the safety of aircraft operations.

2 The aerodrome manual is a reference document and provides a checklist of aerodrome operator's standards to be maintained and the level of airside services at the aerodrome.

3 It shall contain all the pertinent information concerning the aerodrome site, facilities, services, and equipment, operating procedures, organization and management including the safety management system.

4 Information provided in the aerodrome manual will enable the Chairman to assess the suitability of the aerodrome for the aircraft operations proposed and to judge an applicant's fitness to hold an Aerodrome Certificate.

B. PREPARATION OF AN AERODROME MANUAL

Owner or operator responsible for operation of an international aerodrome shall prepare an aerodrome manual in respect of such aerodrome and submit 2 copies of the aerodrome manual along with the application for issue of Aerodrome Certificate.

Rule 260B (2) requires that an aerodrome manual shall:

1. be typewritten or printed and signed by the aerodrome operator;
2. be in a form that is easy to revise;
3. have a system for recording the currency of pages and amendments, thereto, and should include a page for logging; and
4. be organized in a manner that will facilitate the preparation and review processes.

C. PARTICULARS TO BE INCLUDED IN AN AERODROME MANUAL:

The aerodrome manual shall include at least the following elements:

- ❖ Front title page containing aerodrome name and year of issue/edition.
- ❖ List of effective pages.
- ❖ Record of amendments.
- ❖ Table of contents.
- ❖ Foreword
- ❖ Part 1 General
- ❖ Part 2 Aerodrome Site Details
- ❖ Part 3 Aerodrome Information Required to be Reported to AIS
- ❖ Part 4 Aerodrome Operating Procedures

- ❖ Part 5 Aerodrome Administration and Safety Management System
- ❖ Abbreviations
- ❖ Appendices
- ❖ Annexes

PART 1 – GENERAL

General information, including the following:

(1) Purpose and scope of the Aerodrome Manual
(2) The legal requirement for an Aerodrome Certificate and an Aerodrome Manual as prescribed in the regulation
(3) Conditions for use of the aerodrome shall at all times, when available for take-off and landing of aircraft, be so available to all persons on equal terms and conditions
(4) The available aeronautical information system and procedures for its promulgation
(5) The system for recording aircraft movements
(6) Obligation of aerodrome operator

PART 2 – AERODROME SITE DETAILS

(1) An aerodrome lay out plan showing the main aerodrome facilities including the location of each wind direction indicator and aerodrome boundaries.
(2) A plan showing the distance of the aerodrome from the nearest city, town or other populous area, and location of any aerodrome facilities and equipment outside the boundaries of the aerodrome, and
(3) Include documents that establish the legal status of the land and owner, and plan showing the boundaries of possession of the aerodrome.

PART 3 – AERODROME INFORMATION REQUIRED TO BE REPORTED TO THE AIS

3.1 GENERAL INFORMATION

(1) The name of aerodrome;
(2) The location of the aerodrome;
(3) Aerodrome working hours;
(4) The geographical coordinates of the aerodrome reference point determined in terms of the Word Geodetic System – 1984 (WGS-84) reference datum;
(5) The aerodrome elevation;

(6) The elevation of each threshold and runway end, and elevation of any significant high or low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway;
(7) The aerodrome reference temperature;
(8) Details of the aerodrome beacons; and
(9) The name of aerodrome operator and the address, telephone, fax, and email addresses at which the aerodrome operator may be contacted at all times.

3.2 AERODROME PHISICAL CHARACTERISTIC AND RELATED INFORMATION

(1) RUNWAY: true bearing, designation numbers, length, width, displaced threshold location, slope, surface type and type of the runway.
(2) Length, width and surface type of runway strip, stopway and runway end safety areas
(3) Length, width and surface type of taxiways and aprons
(4) Clearways length and ground profile
(5) Visual aids for approach procedures, approach lighting type and approach slope indicator system (PAPI/APAPI, T-VASIS/AT-VASIS), marking and lighting of runways, taxiways and aprons; other visual guidance and control aids on taxiways (including runway holding positions and stop bars) and aprons, location and type of visual docking guidance system, back up power availability.
(6) The location and radio frequency of VOR or DVOR aerodrome check points
(7) The geographical coordinates for each threshold
(8) The geographical coordinates for each aircraft stand
(9) The geographical coordinates and elevation of significant obstacles in the approach and take-off areas, in the circling area and in vicinity of the aerodrome. This information must be presented in the form of charts such as those required for AIP publication, as prescribed in Annex 4 and Annex 15 to the Chicago Convention
(10) Pavement surface type and bearing strength using ACN – PCN method
(11) Altimeter pre-flight check locations established and their elevation
(12) Declared distances: take-off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA) and landing distance available (LDA)
(13) Disabled aircraft location plan: the telephone and fax numbers, email address of the aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the removal area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which aerodrome is equipped to remove
(14) Rescue and fire fighting: the level of protection provided, expressed in terms of the category of the rescue and fire fighting services which should be in accordance with the longest aircraft normally using the aerodrome and the type and amounts of extinguishing agents normally available at the aerodrome.
(15) Information about the availability of the fuel and types of fuel, and information for contact.

NOTE:- *The accuracy of the information which shall be presented in PART 3 is critical to aircraft safety. Information requiring engineering survey and assessment shall be produced (or verified) by qualified and approved technical persons.*

PART 4 – AERODROME OPERATING PROCEDURES AND SAFETY MEASURES

4.1 AERODROME REPORTING

The procedures for reporting any changes to the aerodrome information set out in the AIP and procedures for requesting the issue of NOTAMs, including following:

(1) Arrangement for reporting any changes to the Director and recording the reporting of change during and outside the normal hours of aerodrome operation.
(2) The names and roles of persons responsible for notifying the changes and their telephone numbers during and outside the normal hours of aerodrome operation.
(3) The address and telephone numbers as provided by the Director of the changes are to be reported to the Director.

4.2 ACCESS TO THE AERODROME MOVEMENT AREA

The procedures that have been developed and are to be followed in coordination with agencies responsible for preventing unlawful interference at the aerodrome and for preventing unauthorized entry of persons, vehicles, equipment, animals and other things into the aerodrome movement area, including following:

(1) The role of the aerodrome operator, the aircraft operator, aerodrome fix-based operators, the aerodrome security entity, Civil Aviation and other government department, as applicable.
(2) The names and roles of the personnel responsible for controlling access to the aerodrome with telephone numbers to contact them.
(3) Aerodrome operator policy on issuing airport passes for persons and vehicles and system of recording the data.

4.3 AERODROME EMERGENCY PLAN

Emergency plan developed and maintained by aerodrome operator and designed to minimize the possibility and extent of personal injury and property damage in an emergency, shall include:

(1) Plans for dealing with emergency occurring at the aerodrome or in its vicinity, including the malfunction of aircraft in flight; structural fires; sabotage, including bomb threats and unlawful seizure of aircraft.
(2) Procedures for prompt response to the emergencies planned for.
(3) Sufficient details to provide adequate guidance to each person who must carry out the plan.
(4) A description of available equipment including medical equipment and the location of the equipment.
(5) A grid map of the aerodrome and its immediate vicinity.

(6) Details of tests for aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests.
(7) Details of exercises to test emergency plan, including the frequency of those tests.
(8) A list of organizations, agencies and persons of authority, both on – and off- airport, which have responsibilities in the plan; their telephones and fax numbers, email address and radio frequencies of their offices.
(9) Information regarding establishment of an aerodrome emergency committee to organize training and other preparations for dealing with emergencies.
(10) Name and contact details for appointed person as commander for overall emergency operation.

4.4 RESCUE AND FIRE FIGHTING

Aerodrome operator shall determine the rescue and fire fighting category of the aerodrome based on the largest aeroplane type regularly using the aerodrome and in according to information provided in Manual of Aerodrome Standards (MAS), CAAB. Aerodrome operator shall have the minimum numbers of rescue and fire fighting vehicles and minimum extinguishing agents required for the determined category, in according to MAS, CAAB.

Information regarding facilities, equipment, personnel and procedures for meeting the rescue and fire-fighting requirements, including the names and roles of the persons responsible for dealing with rescue and fire-fighting services at the aerodrome.

Note: This subject shall also be covered in appropriate detail in the aerodrome emergency plan.

4.5 INSPECTION OF THE AERODROME MOVEMENT AREA AND OBSTACLE LIMITATION SURFACES BY THE AERODROM OPERATOR

The procedures for the inspection of aerodrome movement area and obstacle limitation surfaces including:

(1) Inspection plan and details regarding inspection time and intervals.
(2) Arrangements for carrying out inspections, including RWY friction and water-depth measurements when needed.
(3) Arrangements and means of communication with aerodrome air traffic control during inspection.
(4) Inspection check list.
(5) Procedure for reporting the results of inspections and for taking prompt follow-up corrective action if needed.
(6) The name, role and contact details of persons responsible for carrying out inspections (with hierarchy).

4.6 VISUAL AIDS AND AERODROME ELECTRICAL SYSTEM

The procedures for inspection and maintenance of aeronautical lights (including PAL system and obstacle lights), signs, markers and aerodrome electrical system including:

(1) Inspection plan and programme.
(2) Procedure for recording the inspection data and for taking corrective action if needed.
(3) Programme for carrying out routine maintenance and for emergency maintenance.
(4) Information regarding secondary power supply or of any other method of dealing with partial of total system failure.
(5) The name, role and contact details of persons responsible for carrying out inspection (with hierarchy).

4. 7 MAINTENANCE OF THE AERODROME MOVEMENT AREA

(1) Plan and programme for regular maintenance of all airside paved and unpaved areas including runway, taxiway with associated strips, aprons service roads with name, role and contact details of responsible persons.
(2) Plan and programme for regular maintenance of aerodrome drainage system, with name, role and contact details of responsible persons.
(3) Plan and programme for regular maintenance of aerodrome boundary fence, with name, role and contact details of responsible persons.
(4) Procedure for emergency maintenance with name, role and contact details of responsible persons.

4.8 AERODROME WORKS

The procedures for planning and carrying out construction and maintenance works on or in vicinity of the aerodrome movement areas which may extend above an obstacle limitation surface and be potential safety hazard for aircraft operation:

(1) Planning and organization of the works, coordination with ATS and AIS. Name, roles and contact details of responsible persons
(2) Safety issues including obligation to inform Contractor about aerodrome safety rules and regulation. Name, role and contact details of responsible persons.
(3) Arrangements for communication with aerodrome air traffic control during the progress of such work
(4) List and contact details of all aerodrome fix based operator, ground handling agent, aircraft operator and other aerodrome users who are to be notified of the works

4.9 APRON MANAGEMENT

Particulars of the apron management procedures:

(1) Procedure for coordination between airport operation/apron management and aerodrome air traffic control.
(2) Procedure for allocation aircraft parking position.

(3) Procedure for "engine start" and safety clearances.
(4) Marshaling services.
(5) Follow-Me service.

4.10 APRON SAFETY MANAGEMENT

Procedures to ensure apron safety, including:

(1) Protection from jet blasts.
(2) Enforcement of safety precautions during aircraft refueling operations.
(3) Apron sweeping.
(4) Apron cleaning.
(5) Arrangements for reporting incidents/accidents on an apron.
(6) Plan and programme for auditing safety compliance of all personnel working on the apron.

4.11 AIRSIDE VEHICLE CONTROL

Clear and precise information on procedures for the control of vehicles operating on or in the vicinity of the movement area, including following:

(1) Applicable traffic rules, including speed limits and the action of enforcing the rules.
(2) The process of issuing driving permits for operating vehicles in the movement area and power of control.
(3) Programme and procedure in place for assessing the roadworthiness of vehicles operating in the movement area and monitoring.

4.12 WILDLIFE HAZARD MENAGEMENT

Measures and applicable procedures to deal with the danger posed to aircraft operation by the presence of birds or animals in the aerodrome flight pattern or movement area, including following:

(1) Procedure for assessing wildlife hazards.
(2) Procedures and measures for implementing wildlife control programmes.
(3) The name, role and contact details of the persons responsible for dealing with wildlife hazards.

4.13 OBSTACLE CONTROL

Setting out procedures for:

(1) Monitoring the aerodrome obstacles limitation surfaces and Type A Chart for obstacles in the take-off surfaces.
(2) Controlling obstacles within the authority of the aerodrome operator.
(3) Monitoring the height of buildings and structures within the aerodrome boundaries of the obstacle limitation surfaces.
(4) Controlling new developments in the vicinity of aerodrome.
(5) Notifying the Director of nature and location of obstacles and action for AIS amendment if needed.

4.14 REMOVAL OF DISABLED AIRCRAFT

Procedures for removing a disabled aircraft on or adjacent to the movement area including the following:

(1) The roles of the aerodrome operator and the holder of aircraft registration certificate.
(2) Procedure for notifying the holder of aircraft registration certificate.
(3) Procedure for liaising with air traffic control unit.
(4) Procedure for obtaining equipment and personnel to remove the disabled aircraft.
(5) The name, role and contact details of responsible persons.

4.15 HANDLING OF HAZARDOUS MATERIALS

Hazardous materials include inflammable liquids and solids, corrosive liquids, compressed gases and magnetized or radioactive materials. The arrangement to deal with an accidental spillage of hazardous material should be included in the aerodrome emergency plan.

Clear and precise information of the procedures for safe handling and storage of hazardous materials on the aerodrome including:

(1) Procedure for creation special areas on the aerodrome for storage of inflammable liquids (including aviation fuel) and other hazardous materials.
(2) The Procedure to be followed for the delivery, storage, dispensing and handling of hazardous materials.
(3) Requirements for the persons which have to deal or be in contact with hazardous materials.

4.16 LOW VISIBILTY OPERATION

The procedures introduced for low visibility operation, including the measurement and reporting of runway visual range as and when required.

4.17 PROTECTION OF SITES FOR RADAR AND NAVIGATIONAL AIDS

Particulars of the procedure for the protection of radar and radio navigational aids located on the aerodrome to ensure that their performance will not be degraded, including the following:

(1) The arrangement for the control of activities in the vicinity of radar and Nav. Aids installations.
(2) The arrangement for ground maintenance in the vicinity of these installations.
(3) The supply and installations of signs warning of hazardous microwave radiation.

GENERAL FOR PART 4:

In each procedure, using clear and precise information, have to be shown:

- *When, or in what circumstances, respective operating procedure is to be activated,*
- *How an operating procedure is to be activated*
- *Actions to be taken*
- *The persons who carry out the actions, and*
- *The equipment necessary for carrying out the actions, and access to such equipment*

If any of the procedures specified and mentioned in this subpart of PART 4 are not applicable, the reason shall be given.

PART 5 – AERODROME ADMINISTRATION AND SAFETY MANAGEMENT SYSTEM (SMS)

5.1 AERODROME ADMINISTRATION

(1) An aerodrome operator organizational chart showing the names and positions of key personnel, including their responsibilities
(2) The name, position and contact details who has overall responsibility for aerodrome safety, and
(3) Airport committee

5.2 AERODROME SAFETY MANAGEMENT SYSTEM (SMS)

Particulars of aerodrome safety management system (SMS) established for ensuring compliance with all safety requirements and achieving continuous improvement in the safety performance.

(1) The safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process,
(2) The structure or organization of the aerodrome SMS, including staffing and the assignment of individual and group responsibilities for safety issues,
(3) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risk to as low a level as is reasonably practicable, keeping always in view the requirements of the Standards and Recommended Practices in Volume I of Annex 14 to the Convention on International Civil Aviation, and other safety regulation
(4) SMS implementation, including facilities, methods and procedures for the effective communication on safety requirements
(5) A system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures programme)
(6) Measures for safety promotion and accident prevention and system for risk control involving analysis and handling of accident, incident, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring
(7) The interim safety audit and review system
(8) The system for documenting all safety related airport facilities as well as airport operational and maintenance records, including information on design and

construction of aerodrome pavements and aerodrome lightings. The system should enable easy retrieval of records including charts.

(9) Staff training and competence, including the review and evaluation of the adequacy of training provided to staff on safety related duties and of the certification system for testing their competency, and

(10) The incorporation and enforcement of safety related clauses in the contract for construction work at the aerodrome.

D. EFECTIVITY

This ANO comes into effect on 02 March 2009. Aerodrome operators are advised to prepare the aerodrome manual in according to this ANO, and submit to the Chairman, CAAB along with the Aerodrome Certificate Application Form as per Appendix – 1.

Appendix – 1

Aerodrome Certification Application Form

Civil Aviation Authority.
Bangladesh

Application for Aerodrome Certificate

1. Particulars of the Applicant

Full Name:
……..

Address:
……..

……

…… Postcode: ……

Position:
……

Phone:…… Fax:……..…… Email ……..

2. Particulars of the Aerodrome Site

Aerodrome Name:
……

Real Property description:
……

……

……

Geographical Coordinates of the ARP: Lat:……Long: ……
(in degrees, minutes and tenths of minutes)

Bearing and Distances from nearest Town or Populous Area:
……..

……

3. Is the Applicant the Owner of the Aerodrome Site?

Yes ☐ No ☐

If "No", provide:

a) Details of rights held in relation to the site; and

b) Name and address of the owner of the site and written evidence to show that permission has been obtained for the site to be used by the applicant as an aerodrome.

4. Indicate the Largest Type of Aircraft Expected to Use the Aerodrome

……

……

……

……

5. Is the Aerodrome to be Used for Air Transport Operations?

Yes ☐ No ☐

6. Details to be shown on the Aerodrome Certificate

Aerodrome name: ..... ……

Aerodrome Operator:…….

[On behalf of the Aerodrome Operator shown above*],I hereby apply for a certificate to operate the aerodrome

*(*Delete if not applicable).*

.

Signed: ..... ……..

My authority to act on behalf of the applicant is:

.....

.....

.....

Name of person making the declaration: …….

Date: ……../……/……

INFORMATION:

1. Two copies of the Aerodrome Manual, prepared in accordance with the regulations and commensurate with the aircraft activities expected at the aerodrome, are required as part of the application.
2. The application should be submitted to the Chairman's CAAB Office.
3. CAAB will take no action to assess this application until payment is received (If applicable).
4. Documentary evidence in support of all matters in this application may be requested.