The Third Meeting of the Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG/3)

Video Teleconference, 23 to 26 March 2021

Agenda Item 7: AP-AA/WG Task List

GENERIC AERODROME MANUAL

(Presented by India)

SUMMARY

This paper presents an updated version of the generic aerodrome manual for the consideration of AP-AA/WG.

1. INTRODUCTION

1.1 This paper presents an updated version of the generic aerodrome manual for the consideration of AP-AA/WG.

2. DISCUSSION

2.1 With reference to AP-AA/WG Task 1/3 (e) and based on the draft generic aerodrome manual endorsed by AP-AA/WG/2 (Bangkok, Thailand, 27 to 30 January 2020) and adopted by AOP/SG/4 (Video Teleconference, 10 to 13 November 2020), India presents an updated version of the generic aerodrome inspector handbook.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) review and amend the generic aerodrome inspector handbook provided in **Appendix A** as appropriate; and

b) discuss any relevant matters as appropriate.

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GENERIC AERODROME MANUAL

DRAFT Version 0.2, March 2021

Introductory Notes

This is a draft generic document developed by the ICAO Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG) for **advance information** of States in the APAC Regions. When referring to this draft generic document, States are expected to customize the content in accordance to the States' own legislations, regulations and situations.

ICAO Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services and Guidance Material shall take prevalence in the event of any conflict between the aforementioned provisions and this generic document.

Enquiries and feedbacks regarding this draft generic document can be made to ICAO APAC Office at apac@icao.int.

In this document colour coded texts are used with following significance:

Black:	Standard text with no changes usually needed
Blue:	Guidelines related to the relevant section. Not to be included in the actual aerodrome manual.
Green:	Text specific to an individual aerodrome, should be modified.
Figures:	Only for illustration purpose, States may insert applicable figures.

(Insert Airport Name)

Aerodrome Manual

[Enter Date and Current Version no.]

TABLE OF CONTENTS

DRAFT VER.00

DRAFT VER.00

FOREWORD

This manual has been prepared in part to satisfy obligations imposed on an aerodrome operator under [Legislation and/or Regulation], and is to be regarded as the Aerodrome Manual for {Name} Airport.

It also contains details of essential operating procedures that may not be entirely safety related, but nevertheless are required to satisfy other legal, operational requirements, and common legal obligations.

The manual has been structured to allow other documents such as the Airside Vehicle Control Handbook and Airport Emergency Plan etc. to be directly incorporated. These will continue to be amended and published separately but should be regarded as annexes to, but components of, the Aerodrome Manual and should be read in conjunction with it.

The Civil Aviation Authority of (State) requires the Aerodrome Operator to operate and maintain (Name) Airport in accordance with the procedures set out in the Aerodrome Manual.

It is essential that the procedures documented in this manual are an accurate reflection of current practices. If staff becomes aware of a divergence from these procedures, or if compliance with these procedures is impossible or impracticable for any reason, they must advise their supervisor or the airport safety manager immediately. Additionally, staff is encouraged to query these procedures if the intended results can be achieved in a safer, more cost effective, efficient or reliable manner.

To avoid unnecessary duplication, most procedures make reference to other technical manuals and publications. Supervisors should ensure they have a copy of each relevant publication available for reference by staff that is responsible for implementing a procedure.

(Signature)

(Name) Airport Manager/CEO/Director DD//MM/YY

SEAL

CHECKLIST OF CURRENT PAGES

Page	Revision	Date

Page	Revision	Date

NOTIFICATION OF AMENDMENT TO THE AERODROME MANUAL:

The (Responsible Person) of the aerodrome shall:

1. Alter or amend the aerodrome manual, whenever necessary, in order to maintain the accuracy of the information in the manual.

2. If no amendment, review the contents of Aerodrome manual at least once a year to ensure that it is up-to-date.

3. Ensure that each copy of the manual is numbered and a list of Manual holders is maintained by person responsible for the issue of amendments.

4. An amendment page is made available for recording the amendments numbers, date of incorporation, signature of persons amending and affecting the changes, in the front of each volume along with reason for changes.

5. Make amendments by additional or replacement pages on which the amended material is clearly identified.

6. Submit the proposed amendments in the Aerodrome Manual to CAA for its acceptance/ approval at least (xxx) days prior to the effective date.

7. After acceptation/ approval from CAA, distribute the final copies of Aerodrome Manuals per the distribution list.

8. The replaced or pages no more required should be destroyed.

RECORD OF REVISION

Issue No.	Revision No.	Effective Date	Revised By	Reason

MASTER CONTACT LIST

This list must include at least all people involved with operational aspects of the aerodrome such as

CHIEF EXECUTIVE OFFICER

[Name] Work Hour: xxx xxx xxxx email
After Hour: xxx xxx xxxx

AIRPORT MANAGER

[Name] Work Hour: xxx xxx xxxx email
After Hour: xxx xxx xxxx

MANUAL CONTROLLER

[Name] Work Hour: xxx xxx xxxx email
After Hour: xxx xxx xxxx

REPORTING OFFICER

[Name] Work Hour: xxx xxx xxxx email
After Hour: xxx xxx xxxx

NOTAM OFFICE [NOF]

[Name] Work Hour: xxx xxx xxxx email
After Hour: xxx xxx xxxx

ELECTRICAL CONTRACTOR

[Name] Work Hour: xxx xxx xxxx email
After Hour: xxx xxx xxxx

SEARCH AND RESCUE (SAR)

Bangkok Search and Rescue Co-ordination Center
TEL: (+66) 2 285 5450 and (+66) 2 285 5451
FAX: (+66) 2 286 2925
email

AIRCRAFT ACCIDENT INVESTIGATION COMMITTEE OF (State)

AAIC TEL: (+66) 2 286 0594 and (+66) 2 285 5451
FAX: (+66) 2 287 3186 / EMAIL

DISTRIBUTION LIST

Control Number	Holder of Copy	Remarks

SUPPORTING OPERATIONAL DOCUMENTS

The Aerodrome Manual may consist of more than one document. If this applies, then list these documents in this section.

Example:

Supporting Documents

1. Airport Emergency Plan
2. Airport Safety Management Manual
3. Airport Security Programme
4. Airport Safety Self-Inspection
5. Airside Vehicle Handbook
6. Disabled Aircraft Removal Plan

ABBREVIATIONS AND SYMBOLS

Example: (Add as many as possible)

AAE	Above aerodrome elevation
AAS	Airport Advisory Service
ACN	Aircraft classification number
AIS	Aeronautical Information Services
ALR	Aircraft loading rating
APAPI	Abbreviated precision approach path indicator
Aprx.	Approximately
ARP	Aerodrome reference point
ASDA	Accelerate stop distance available
ATS	Air traffic services
C	Degrees Celsius
cd	Candela
DME	Distance measuring equipment
EWH	Eye to wheel height
FOD	Foreign object debris
ft	Foot
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GS	Glide slope
HIAL	High intensity approach lighting
ICAO	International Civil Aviation Organization
IFR	Instrument flight rules
ILS	Instrument landing system
MOWP	Method of Work Plan
PERCOW	Permit to commence work

AERODROME CERTIFICATE COPY

Insert current Aerodrome Certificate

Example:

SAMPLE AERODROME CERTIFICATE*

CIVIL AVIATION AIRPORT CERTIFICATE

_____

CERTIFICATE NO.

_____

NAME OF AIRPORT

_____

LATITUDE/LONGITUDE

This airport certificate is issued by the Minister pursuant to Part III of the *Canadian Aviation Regulations* under authority of the *Aeronautics Act* and authorizes the operator named in the approved Airport Operations Manual to operate this airport.

The Minister may suspend or cancel this airport certificate at any time where the airport operator fails to comply with the provisions set forth in the Act, the Regulations or for other grounds as set out in the Act.

This certificate is subject to any conditions established by the Minister pursuant to Section 302.03(3) of the Regulations and set out in the approved Airport Operations Manual.

This airport certificate is not transferable and shall remain in effect until transferred, suspended or cancelled.

_____

MINISTER OF TRANSPORT

_____

CERTIFICATE DATE OF ISSUE

Aerodrome Manual Approval Letter

{File reference} Date:

{Applicant's name}
{Aerodrome name}
{Aerodrome address}

Dear {Sir/ Madam},

Approval/ Acceptance of Aerodrome manual (Name of aerodrome)

This has reference to your letter {number} dated {dd/mm/yyyy} submitting application for aerodrome certificate to operate {name of aerodrome} along with Aerodrome Manual [Version / Edition number].

The submitted Aerodrome Manual is accepted / approved [use the word in local legislation / regulation] on the following conditions:

Body of the text along with conditions, if any.

Example of Conditions:

- All proposed amendments shall be submitted to CAA at least [XX] days prior to the intended effective date
- CAA may issue direction requiring an amendment to be made to the aerodrome manual as CAA sees fit. In such case, [Aerodrome] shall submit the amendment to CAA within [XX] days of the issue date of CAA's direction.

If you have any queries regarding this certificate or any other aerodrome-related matters please contact this Authority.

Yours faithfully,

{Signature}

{Name}
Director General
(The CAA Name)

Part 1 – General Information

1.1 Purpose and Scope

The purpose of the Aerodrome Manual is to provide

1.1.1 Confirmation of an aerodrome operator's ability to comply with the aviation legislation applicable to aerodrome operations. It contains detailed information regarding the aerodrome site, facilities, services, equipment, operating procedures, organization and management for (Name) Airport.

1.1.2 A reference document for:

a. Use by staff and contractors of an aerodrome operator in their activities to operate and manage the tasks and business of the airport.
b. Use by officers of CAA (State) in audit and inspection activities related to (Name) Airport.

1.2 Legal Requirement

1.2.1 As the operator of an aerodrome servicing air transport operations, (Name) Airport is required by (Regulation reference)to hold an Aerodrome License or Aerodrome Certificate.

1.2.2 The requirement for an Aerodrome Manual is prescribed in The Requirements of Civil Aviation Authority of (State) (Requirement reference). A copy of this manual shall be provided to the CAA (State).

1.3 Conditions of Use

(Name) Airport operates (Specify Operating Hours and conditions e.g. visibility) for take-off and landing of aircraft and when it is so available it shall be available under equal terms and conditions to all persons and operators (Requirement reference). The airport reference code is (Specify).

1.4 Aeronautical Information

All data relating to the aeronautical aspect of this aerodrome are published in the Aeronautical Information Publication (State Name). The (Position Holder) is responsible for complete and correct promulgation of data to Aeronautical Information Services Department (AIS) of the CAA in accordance with procedures described in this manual.

1.5 Recording Aircraft Movements

All data relating to the recording of aircraft movement is collected and recorded by (Name & Designation of Responsible Person). The (Airport Unit) is responsible for complete and correct collection recording and reporting to the (Airport Responsible Person) in accordance with procedures described in this Manual.

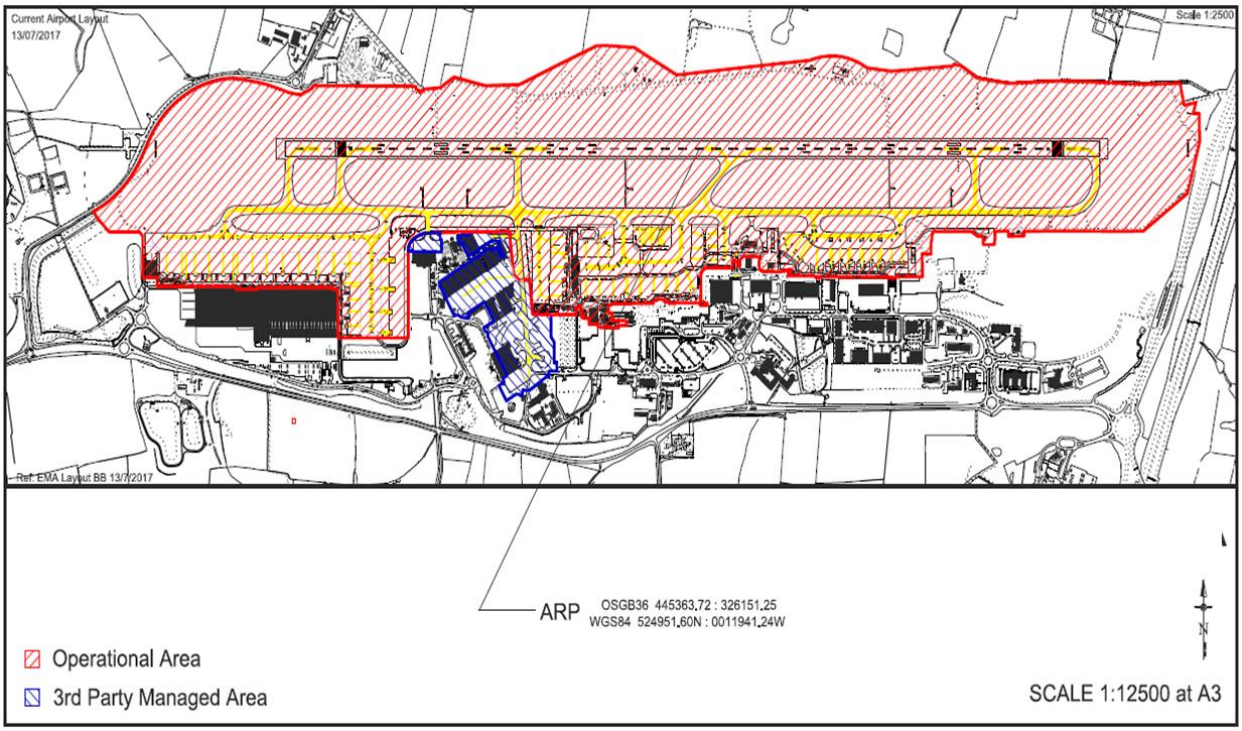
1.6 Obligation of the Aerodrome Operator

The operator of a certified/ licensed aerodrome is to comply with the Aerodrome Manual approved by the CAA (State).The area certified under the Public Aerodrome Operating Certificate is shown as (Figure X) below.

The owner or operator of an aerodrome shall ensure that all users of the aerodrome, including ground-handling agencies, fixed-base operators, and other organizations that perform activities independently at the aerodrome in relation to flight or aircraft handling, comply with the safety requirements of the aerodrome. The owner or operator of the aerodrome will monitor such compliance through the (Name) Airport Safety Management System.

Figure X: (Name) Airport Operational Area and 3rd Party Managed Area

Remarks: All figures may be organized together at the end of the Aerodrome Manual for easy reference and amendment



1.6.1 Compliance with standards and practices

The (xyz) aerodrome shall comply with the standards, and practices specified in regulation (Reference from state regulation) and with any conditions endorsed in the aerodrome certificate pursuant to regulations (Reference to applicable State requirement)

1.6.2 Competence of operational and maintenance personnel

The (xyz) aerodrome shall employ an adequate number of qualified, where required, certified and skilled personnel to perform all critical activities for aerodrome operation

and maintenance. The competency of these personnel shall be kept relevant at all times and enhanced by implementing an appropriate programme

1.6.3 Aerodrome operation and maintenance

The (xyz) airport shall operate and maintain the aerodrome in accordance with the procedures set out in the accepted/ approved aerodrome manual. (xyz) airport shall ensure proper and efficient maintenance of the aerodrome facilities and ensure the coordination to cover areas of aeronautical information service, air traffic services, designated meteorological authorities, and aviation security.

1.6.4 Aerodrome operator's safety management system

The (XYZ) aerodrome shall establish a safety management system for the aerodrome describing the structure of the organization and the duties, powers and responsibilities of the officials in the organizational structure.

1.6.5 Aerodrome operator's internal safety audits and safety reporting

The (XYZ) aerodrome shall arrange for internal as well as external audit of the safety management system, including an inspection of the aerodrome facilities and equipment and all its functions. These audits shall be carried out every [xx]months/ year or as agreed with the CAA and records/ reports shall be retained for a period of [xx] years.

1.6.6 Access to the aerodrome

In accordance with [regulation], some personnel may be authorized by the CAA to inspect and carry out tests on the aerodrome facilities, services and equipment, inspect the aerodrome operator's documents and records and verify the aerodrome operator's safety management system before the aerodrome certificate is granted or renewed and, subsequently, at any other time, for the purpose of ensuring safety at the aerodrome. (XYZ) aerodrome shall cooperate with the personnel so authorized by the CAA.

1.6.7 Notifying and reporting

(XYZ) aerodrome shall adhere to the requirement to notify and report to the CAA, air traffic control and pilots within the specified time limits required by the regulations.

a) Notification of inaccuracies in aeronautical information service (AIS) publications.

b) Notification of changes to the aerodrome facilities, equipment and level of service planned in advance.

c) Issues requiring immediate notification on obstacles, obstructions and hazards, level of service, closure of any part of the movement area of the aerodrome.

1.6.8 Removal of obstructions from the aerodrome surface

(XYZ) aerodrome operator shall remove from the aerodrome surface any vehicle or other obstruction that is likely to be hazardous.

1.6.9 Warning notices

The (XYZ) aerodrome shall post hazard warning on any public area that is adjacent to the manoeuvring area for low flying aircraft, at or near an aerodrome, or taxiing aircraft are likely to be hazardous to such people or vehicular traffic.

Part 2 – Aerodrome Site Details

2.1 Aerodrome Site Details

2.1.1 Aerodrome Plan

The Aerodrome Plan indicates

- The main aerodrome operational facilities and location of wind direction indicators; (Picture 1, 2 & 3)

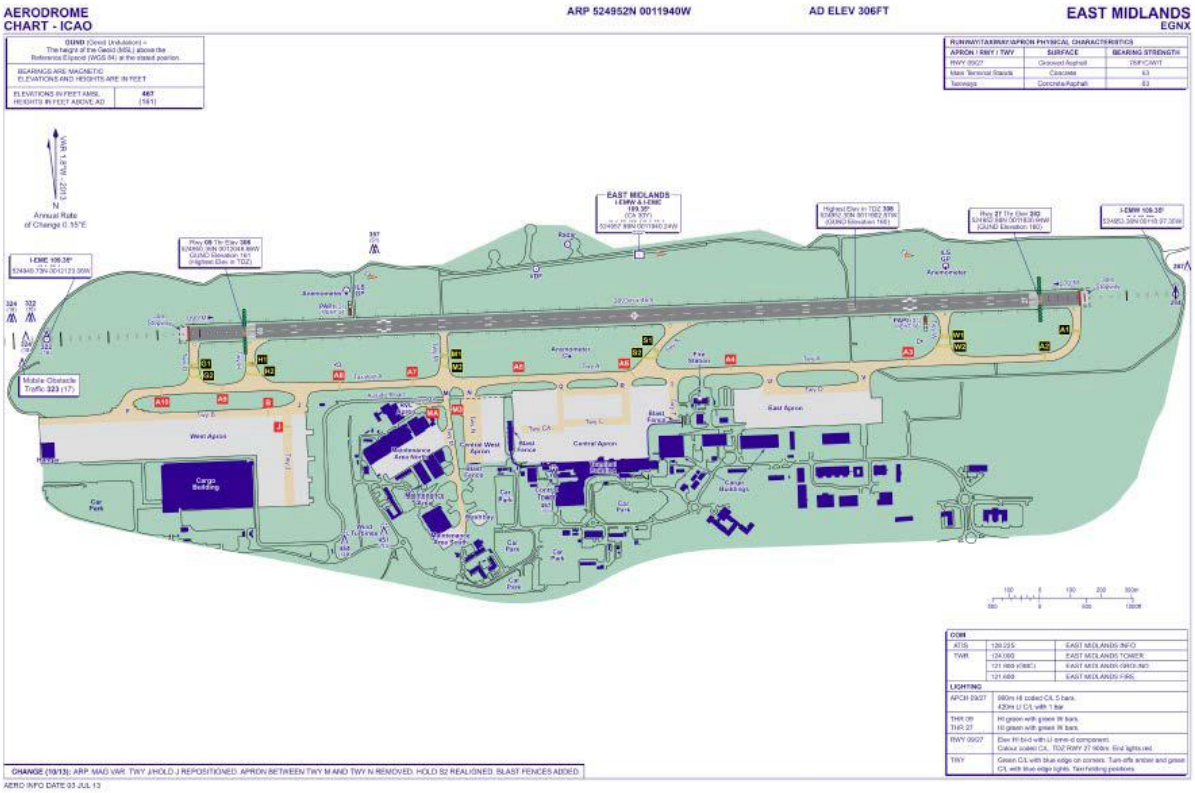
- The distance of the aerodrome to the nearest city, town, and the location of off-airport facilities (Picture 5)

- The airport boundaries (Picture 4)

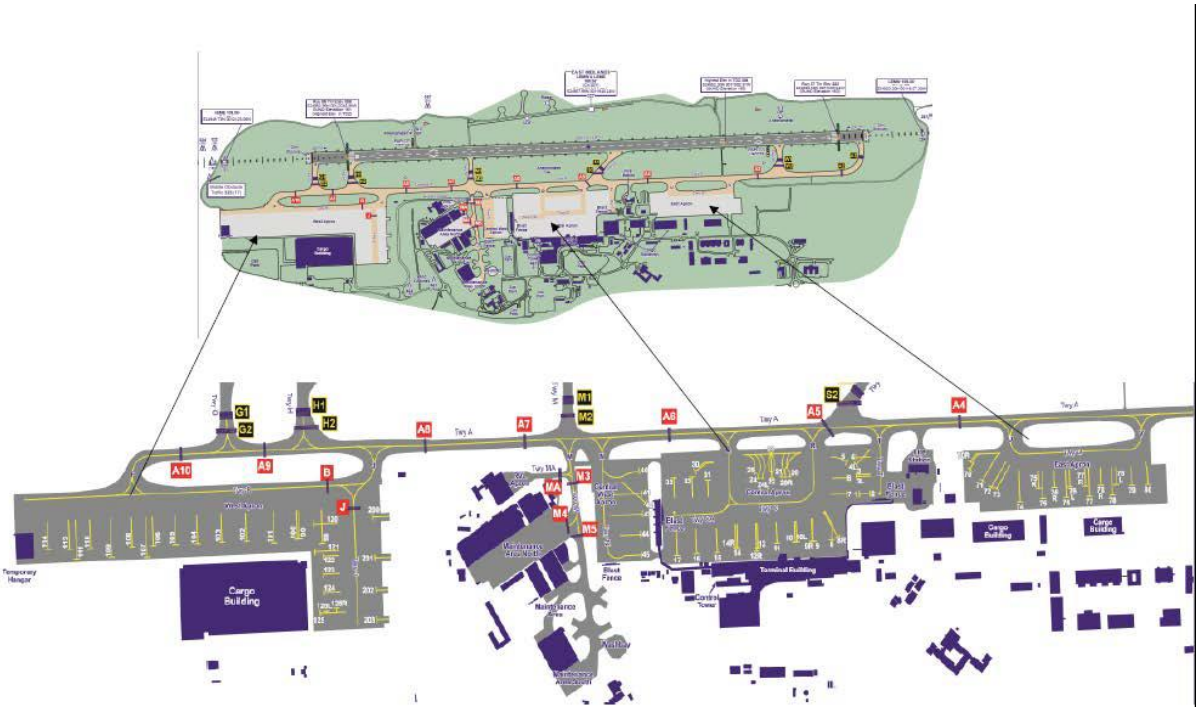
The following pictures are examples. Your airport plans may be more or less than the examples. It depends on the actual physical characteristics of your airport.

Picture 1: Facilities, Visual & Non-Visual Aids, and Wind Direction Indicators

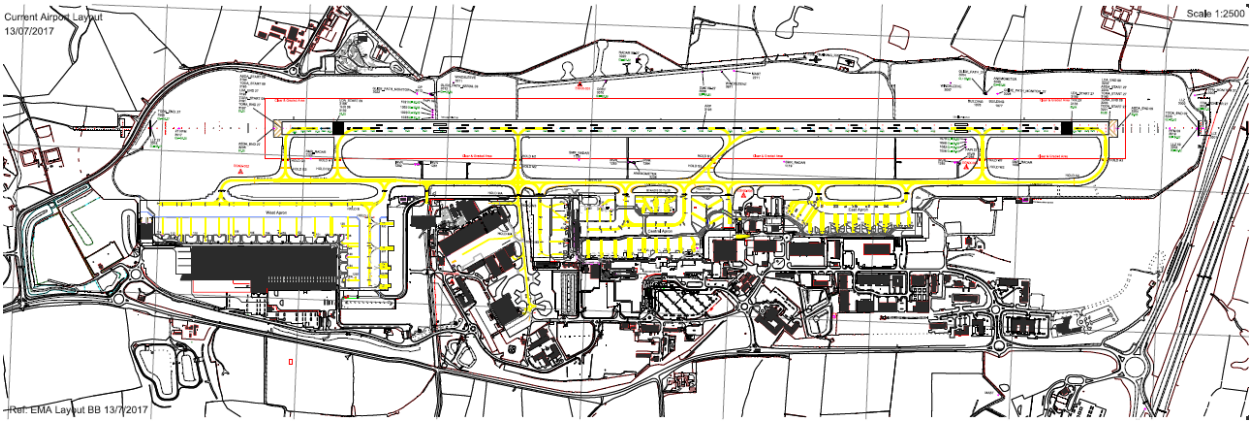
Remarks: All pictures may be organized together at the end of the Aerodrome Manual for easy reference and amendment


AERODROME CHART - ICAO
ARP 524952N 0011940W
AD ELEV 306FT
EAST MIDLANDS
EGNX
Annual Rate of Change 0.15°E
Cargo Building
Car Park
West Apron
East Apron
Central Apron
Central West Apron
Maintenance Area North
Maintenance Area South
Middle Obstacle Traffic 323 (17)
CHANGE (10/13): ARP, MAG VAR, TWY J/HOLD J REPOSITIONED, APRON BETWEEN TWY M AND TWY N REMOVED, HOLD S2 REALIGNED, BLAST FENCES ADDED
AERO INFO DATE 03 JUL 13

Picture 2: Layout of Runways, Taxiways, and Aprons



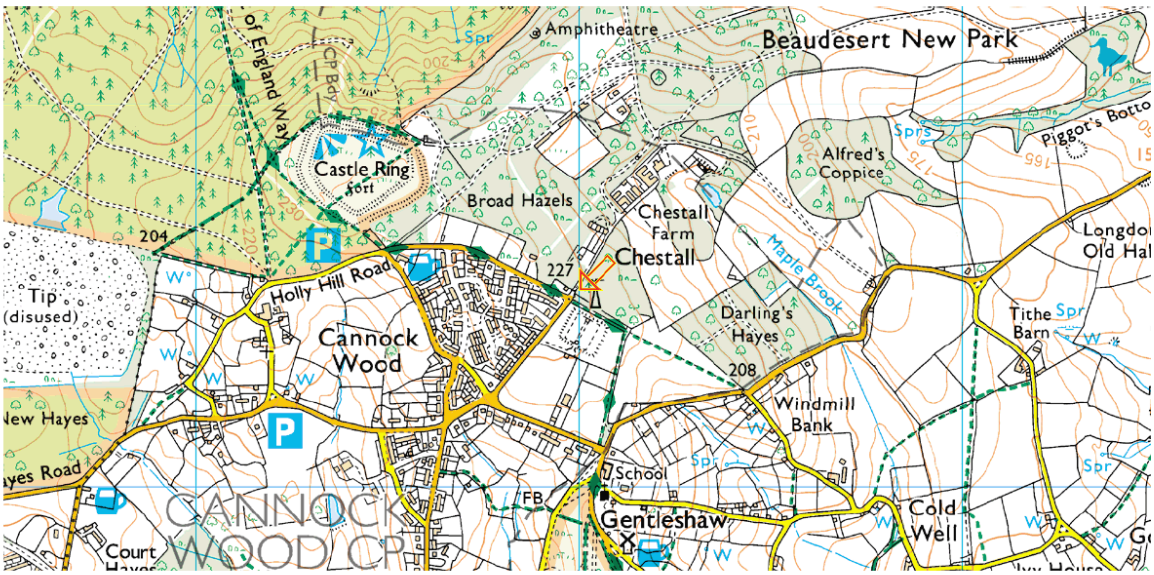
Picture 3: Details of the Physical Characteristics of the Runway Environment



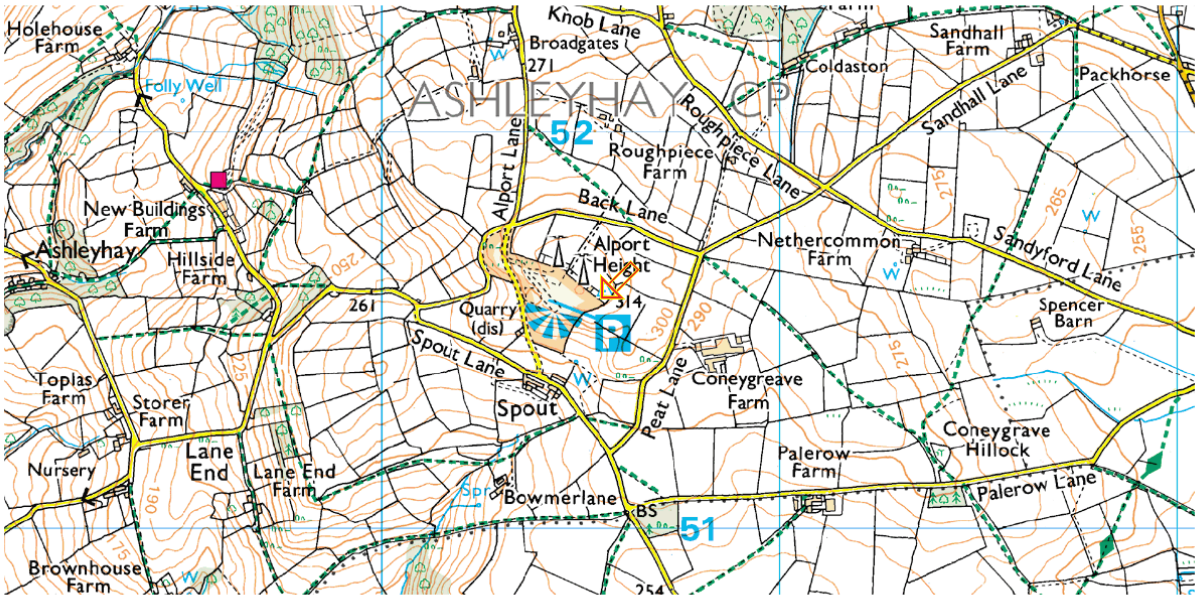
Picture 4: Plan Showing the Distance from Nearest Town/Populous Area

Picture 5: Plan Showing the Location of EMA Aerodrome Facilities and Equipment outside the Boundaries of the Aerodrome

Gentleshaw N52:42:36.9000 W1:55:38.8000



Alport N53:03:38.1000 W1:32:44.2000



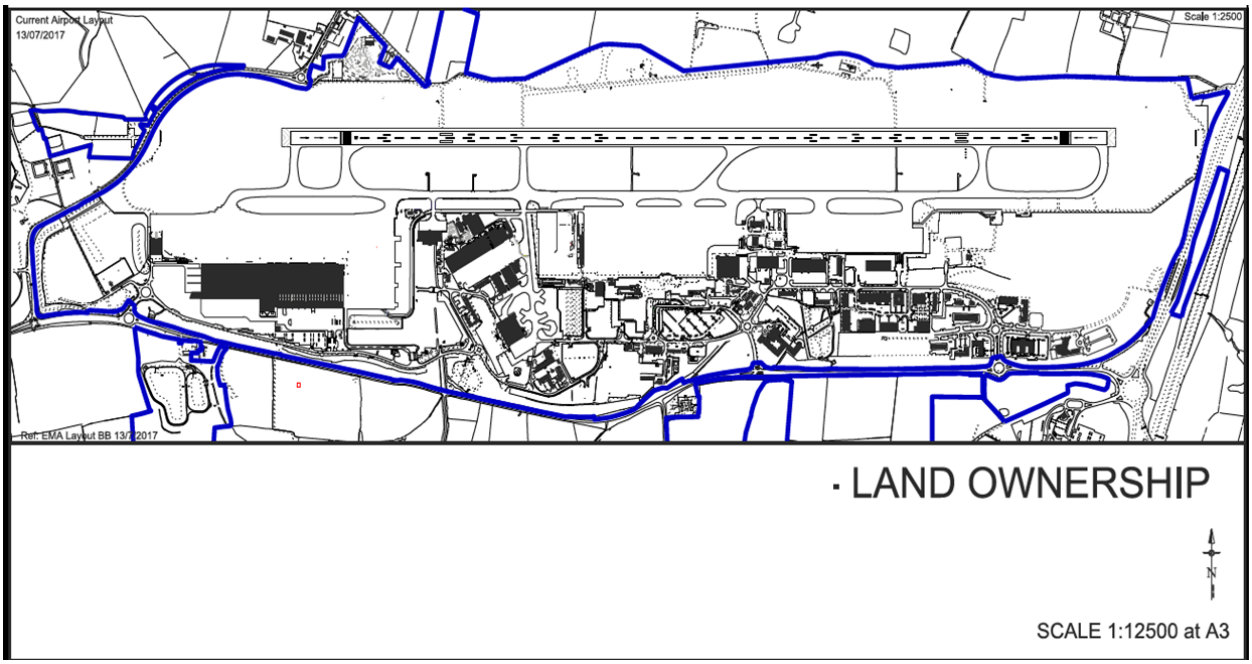
2.1.2 **Aerodrome Land Titles**

Title to properties associated with the aerodrome site are as shown in the table below.

Title Deed No.	Map Sheet No.	Province

Title Deed No.	Map Sheet No.	Province

Figure X: Boundary and Land Ownership



Part 3 – Aerodrome Dimensions &AIS Information

The accuracy of the information in this part is critical to aircraft safety. Therefore, the information published in this section requires engineering survey and assessment. The information should be gathered or verified by qualified technical persons.

3.1 General Information

1	Name of Aerodrome	(Insert Name: ICAO Code)
2	Aerodrome Location	
3	Geographical Coordinates of the Aerodrome Reference Point (WGS-84)	
4	Aerodrome Elevation and Geoid Undulation	
5	Elevation of Each Threshold and Geoid Undulation	
6	Elevation of the Runway End and Significant High and Low Points along the Runway	
7	Highest Elevation of the Touchdown Zone of a Precision Approach Runway	
8	Aerodrome Reference Temperature	
9	Details of the Aerodrome Beacon	
10	Name of Aerodrome Operator, the Address, and the Telephone Number of the Airport that may be Contacted at All Time	

3.2 Aerodrome Dimensions and Related Information

Runway							
Designation No.	**True Bearing**	**Dimension (Length x Width)**	**Displaced Threshold Location**	**Slope**	**Surface Type**	**Type of RWY**	**OFZ**

Runway				
	Designation	**Length**	**Width**	**Strength (PCN)**
Strip				
RESA				
Stopway				

Taxiway			
Designation	**Dimension**	**Surface Type**	**Strength (PCN)**

Apron					
Names	**Width**	**Length**	**Surface Type**	**No. of Aircraft Stands**	
				With Aerobridge	**Without Aerobridge**

Clearway			
RWY Designation	**Length (m)**	**Width (m)**	**Ground Profile**

Stopway			
RWY Designation	**Length (m)**	**Width (m)**	**Ground Profile**

Approach and Runway Lighting									
RWY Designation	**APCH LGT Type LEN INTST**	**THR LGT Color WBAR**	**VASIS (MEHT) PAPI**	**TDZ LGT LEN**	**RWY Center Line LGT Length, Spacing, Color, INTST**	**RWY Edge LGT LEN, Spacing Color INTST**	**RWY End LGT Color WBAR**	**SWY LGT Length Colour**	**Remarks**

Other Lighting, Secondary Power Supply		
1	Use of Aircraft Stand ID Signs, TWY Guide Lines and Visual Docking/Parking Guidance System of Aircraft Stand	
2	ABN/IBN Location, Characteristics, and Hours of Operation	ABN:(Aerodrome Beacon) IBN: (Identification Beacon)
3	LDI Location and LGT Anemometer Location and LGT	Wind Cone:
4	TWY Edge and Center Line Lighting	Edge: Center Line:
5	Secondary Power/Switch-Over Time	
6	Remarks	

VOR Aerodrome Checkpoints	
Location	**Radio Frequency**

Location and Designation of Standard Taxi Routes

Please depict the airport taxiway system, locations, and taxiway number. The airfield layout may be included in this part or other part of the manual.

Example:
The airfield layout, depicting the (Name) Airport Taxiway System (location and designation) is contained in (Please Specify location) of this manual.

Geographical Coordinates

Runway Threshold	LAT.	LONG.	ELEV.
Taxiway Centerline Points	**LAT.**	**LONG.**	
Aircraft Stands	**LAT.**	**LONG.**	

Obstacles					
In Approach/Take-off Areas			**In Circling Areas and at AD**		**Remarks**
RWY/Area Affected	Obstacle Type Elevation Marking/LGT	Coordinates	Obstacle Type Elevation Marking/LGT	Coordinates	

Obstacles are best depicted by chart.

Pre-Flight Altimeter Check	
Locations	**Elevation**
Please specify apron and coordinates of the apron in WGS-84.	Please specify the elevation of Pre-Flight Altimeter Check in WGS-84.

At least one point in the airport.

Declared Distances				
RWY Designation No.	**TORA**	**TODA**	**ASDA**	**LDA**

Please make a note that NOTAM and ATIS will be promulgated in case of temporary reduction in available declared distances. The reduction in available declared distances should be assessed by a competent and qualified personnel such as an airport engineer or an airport operations personnel. The qualified personnel shall be trained or educated in the area related to declared distances such as airport design or other courses.

Example:

Any temporary reduction in available declared distances will be assessed by (Competent Qualified Personnel) and promulgated via NOTAM and ATIS.

Disabled Aircraft Removal Plan		
Name of Coordinator	**Telephone/Telex/Facsimile Numbers and E-mail Address**	**Capability for Removal of Disabled Aircraft**
		Specify types of aircraft

Procedures relating to disabled aircraft removal are contained within (Please Specify).

Rescue and Fire Fighting
Category of Rescue and Fire-Fighting Services
(Specify ARFF Category) The level of staffing requirement post TRA carried out on (date)is (Insert No.) Other details of Rescue and Fire-Fighting are contained within document(Please Specify).

Part 4 – Aerodrome Operating Procedures

4.1 Aerodrome Reporting

Particulars of the procedures for reporting any changes to the aerodrome information set out in AIP and procedures for requesting the issue of NOTAMs according to CAA(State) (Requirements) and reporting of accident or incidents to (Authority name) as per (Requirement).

4.1.1 Purpose

Explain the purpose of aerodrome data and reporting. The main purpose of this section is to ensure that the aerodrome data are reported in time and accurately.

Example:

The aim of these procedures is to ensure that CAA (State) and AIS are notified of any changes in the physical condition of the airport and of new obstacles that may affect the safety of aircraft operations. With the timely notification, the information can be disseminated to airmen in a timely manner.

4.1.2 Responsibility

Specify responsibility of personnel related to aerodrome reporting. These persons may be included but not limited to the airport manager and aerodrome reporting officer or any other post delegated with this responsibility.

Example:

a. (Airport Manager) has overall responsibility for ensuring that procedures are established and resources provided to report changes to aerodrome physical characteristics, the OLS, or any other change that may affect the safety of aircraft operations are adequate.
b. (Airside Operations Supervisor) is responsible for documenting reporting procedures and for advising AIS of permanent changes to airport information. He is also responsible for advising CAA of any significant changes to aerodrome information that may occur and for reporting the day-to-day serviceability of the airport and notifying temporary changes to published aeronautical information to ATC and the NOF.
c. (Airside Operations Officer) is responsible for implementing the reporting procedures documented in this manual.

4.1.3 Reporting Procedures

Specify aerodrome reporting procedures. The procedures should start when a hazard is identified and include the consideration of the types of promulgation. The NOTAM issuance, AIP supplement and AIP amendment procedures shall follow the current CAA requirements. The established procedures must show that the airport can promulgate the information accurately in a timely manner.

Example:

a. Any situation that may have an immediate effect on the safety of aircraft operations will be reported in the first instance to ATC by radio or telephone. The designated ATC responsible for verbal reports is:

   (Insert the responsible contact person and details of communication methods)

   Such situation then will be reported to (Designated Person) to consider whether it needs to be issued as NOTAM or AIP.
   (Insert the designated person responsible for issuing NOTAM of the airport and his/her contact details e.g. radio or telephone number)

b. The (Designated Person) considers the given information using the procedures specified in (Specify SOPs). If it is required to issue NOTAM or AIP Supplement, the designated person will do so.

4.1.4 NOTAM and SNOWTAM

Specify NOTAM procedures. The procedures shall clearly specify the responsible persons of the aerodrome and others. The aerodrome operator shall include the address and telephone numbers of people responsible for NOTAM. The name and contact list can either be referred to *Master Contact List* or specified in this section.

[Applicable with effect from 4 November 2021]

Specify SNOWTAM procedures for issuing runway condition report when the runway is wholly or partly contaminated by standing water, snow, slush, ice or frost, or is wet associated with the clearing or treatment of snow, slush, ice or frost.

Example:

a. The information about matters of an urgent nature affecting the safety of aircraft operations according to (NOTAM Regulations reference) will be issued as a NOTAM.

b. The criteria for issuing SNOWTAM to disseminate a runway condition report
c. The (Designated Person) will fill a NOTAM/SNOWTAM Requisition Form attached in Annex (N). The form is submitted to:
(Insert Responsible Person, Address, and Contact Details)
d. The (Designated Person) checks the NOTAM/SNOWTAM once it is issued.
e. If the information in the NOTAM/SNOWTAM is correct, make a record in NOTAM Logbook. If the information in the NOTAM/SNOWTAM is incorrect, contact (Responsible Person) to make a correction.

4.1.5 AIP

Specify AIP Supplement and procedures. The procedures shall clearly specify the responsible persons of the aerodrome and other. The aerodrome shall include the address and telephone number whose AIP Supplement and AIP Amendment are submitted to. The contact information can either be referred to *Master Contact List* or specified in this section.

Example:

AIP constitutes the basic information source for permanent information and long duration temporary changes. The (Designated Person)is responsible for AIP Supplement and Amendment. If there is a temporary change for duration of at least 90 days but not exceeding one year, the (Designated Person) requests for AIP Supplement. The AIP Supplement also can be used to promulgate the temporary change for duration less than 90 days but requires supplement texts or pictures. AIP Amendment Requisition and AIP Supplement Requisition are contained as Annex (N) and Annex (N) in this Aerodrome Manual. The requisition form will be submitted to:

(Insert Responsible Person, Address, and Contact Details)

4.1.6 Incident Reporting

Specify accident/incident reporting procedures to pilots and air traffic service providers as well as Search and Rescue Coordination Center and Accident/ Serious incidents investigating authority (XYZ) in case of accident/serious incident. The reporting procedures shall be inconsistent with the reporting procedures in the aerodrome safety management system.

Example:

a. Any significant object found on the movement area will be immediately reported to:

(Insert Designated Person and Contact Information)

b. (Designated Person or the Founder of the Object) will immediately advise(ATC),and then attempt to identify the object through various operators in airside. (ATC) may choose to alert the pilot of the aircraft or the station manager that may have involved.

c. All incidents are to be recorded in the (Name of Record). Where necessary an addition written Incident Report will be raised. (Airport Responsible Person) gathers accident and incident information. The information shall be reported to the (Airport Manager).

d. The (Airport Manager) will determine if an (Accident/Incident Report) needs to be submitted to (CAA and/or AAIC) in accordance with [legislation / regulations / mandatory occurrence reporting scheme]. The (Airport Manager) will initiate and coordinate internal investigations into aviation incidents relevant to the Airport.

4.1.7 Records of Aerodrome Reporting

Specify the method the aerodrome operator checks and records the changes to the aerodrome data.

Example:

All actions regarding the issuance of NOTAM and changes in AIP will be recorded in NOTAM and AIP Logbook. The log books are available with (Responsible person)in AIS section and is maintained by his staff.

4.2 Control of Airside Access

Particulars of the procedures that have been developed and are to be followed to prevent unauthorized entry into the airside.

4.2.1 Purpose

Explain the purpose of this section. The main purpose of this section is to prevent unauthorized entry into the airside.

Example:

The aim of these procedures is to assist the safety of aircraft operations by only permitting access onto the airside to authorized and certified person, vehicles, and equipment.

4.2.2 Responsibility

Explain responsibility of personnel related to the control of airside access including airport manager, aerodrome security entity, air traffic service provider, airport operations, airport tenants, aerodrome fixed-based operator, and government agencies.

Example:

a. (Airport Manager) has overall responsibility for ensuring that procedures are established and resources are provided for aviation security and for the control of airside access to the airport.
b. (Airport Security Supervisor) is responsible for developing an Airport Security Program He is also responsible for obtaining approval prior to any physical change of the airside/landside barrier.
c. (Airport Operations Officers) are responsible for carrying out day-to-day surveillance of airside areas.
d. (Air Traffic Service Provider) has responsibility for control of vehicles on the manoeuvring area by giving clearances. No person or vehicle may enter this area without ATC approval.
e. (Security Service)are contracted by (Name) Airport. They are responsible for guarding the airside access gate and patrol the airside perimeter. They are also responsible to satisfy security regulations required by the Aerodrome.
f. (Aircraft Operators and Airport Tenants) are responsible for controlling access to restricted areas via any part of their building or leased areas. They are required to establish and enforce procedures to prevent unauthorized airside access via these areas.

4.2.3 Security Restricted Area and Access Points

Describe the aerodrome security restricted area and access points. The security restricted area and access points shall be depicted in pictures. The access gates for pedestrians and vehicles, as well as any emergency access gates, shall be identified.

Example:
(Describe the aerodrome security restricted area and access points)

4.2.4 Preventing Unauthorized Entry of Persons, Vehicles, Equipment, Animals, and Other Things into the Movement Area

Describe methods used by the aerodrome to prevent unauthorized entry of persons, vehicles, equipment, animals, and other things into the movement area in normal and emergency situations. The methods used can be physical deterrents or measurement. Physical deterrents may include fence and padlock. Measurement may include security pass. Information in this section can be referred to the Airport Security Program.

Example:

a. The aerodrome is fenced with (chain link security fencing/ security wall). The airport security will inspect for unauthorized entry into the movement area.
b. All gates are to be manned, kept closed and locked at all times except for authorized entry. In case the security guard is not present, the gate shall be locked. The key to the gate will be kept with (Responsible person).
c. Floodlighting and security cameras are installed on the fence to allow detection of unauthorized access during night time or low visibility condition.
d. A joint force of airport personnel and local police will patrol aerodrome surroundings.

Note: Airport Security Programme (Name, Version, date) contains all the details regarding the Control of Airside Access.

Method of Monitoring and Recording Unauthorized Entry

Describe the method of monitoring and recording of unauthorized entry. The designated entity at aerodrome shall keep record of all unauthorized entry, root causes and recommended mitigation.

Example:

e. The aerodrome will ensure that only trained, qualified and authorized persons, vehicles and equipment are allowed to acquire airport security pass. The procedures to acquire a security pass are specified in the (Specify document such as Airport Security Programme or SOPs for Airport Security Pass Issuance).

f. (Name) Airport has a test programme to ensure that all security ID holders will aware of unauthorized persons in the security restricted area. In case unauthorized person, vehicle or equipment is detected, the security ID holder shall inform an airport security officer without delay.

g. Security guards are assigned to every security access points. All accesses to the airport movement area are recorded. If an unauthorized person, vehicle or equipment remains in the movement area, an airport security guard will find and lead them out of the airport movement area. The incident will be reported to (Responsible Person / Police)for investigation.

4.2.5 Coordination with the Agency Responsible for Preventing Unlawful Interference in Civil Aviation at the Aerodrome

Please specify the coordination with the agency responsible for preventing unlawful interference in civil aviation at the aerodrome when an act of unlawful interference is detected.

Example:

a. The aerodrome has established the Airport Security Committee. The members include:

(Specify Committee Members)

The responsibility of the committee is defined in the Airport Security Committee.

b. In case an airport security guard detects an unlawful act, the security guard will inform a local police, an immigration officer or a custom officer via (Specify Communication Method) for law enforcement.

4.3 Aerodrome Emergency Plan

Specify particulars of Aerodrome Emergency Plan (AEP) both on and off airport to ensure that the airport is well prepared to response to an emergency involving aircraft, not involving aircraft, and compound emergency.

Remarks: The AEP could be a part of the Aerodrome Manual, or it could form a separate document. If designed to be a separate document, it is still subject to acceptance/approval by CAA and any other control as CAA would exercise on an Aerodrome Manual.

4.3.1 Purpose

Explain the objectives of aerodrome emergency plan. The main purpose of the emergency plan is to minimize the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations. The aerodrome emergency plan sets forth the procedures for coordinating the response of different aerodrome agencies (or services) and of those agencies in the surrounding community that could be of assistance in responding to the emergency.

Example:

The aim of an AEP is minimize the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations by providing a timely and coordinated response for rescue and operation recovery from an airport emergency. The primary purpose of this section is to document the responsibilities of all responding parties and background information in relation to the AEP.

4.3.2 Responsibility

Explain responsibility of personnel responsible to plan, maintain, revise, and implement the Aerodrome Emergency Plan.

Example:

a. The Airport Manager has overall responsibility for establishing a plan to coordinate the response if an emergency occurs at the airport. He is responsible to chair AEP Committee.

b. The AEP Committee is responsible for developing and maintaining the AEP.
c. The Aerodrome Safety Manager is responsible for coordinating the activities in AEP.

4.3.3 Plans for Dealing with Emergencies Occurring at the Aerodrome

Define emergency plans for each emergency that may occur in the airport. The emergency plan shall consider physical characteristics and environment in vicinity of the airport. The plans shall include actions to be taken by all responding parties, e.g. airport, RFFS, off-airport fire services, civil defence agency, ATC, airlines, aircraft maintenance organizations, police, accident investigator, etc.

Example:

The (Name) Aerodrome Emergency Plan involves the emergencies that may occur at the airport. It includes accidents involving aircraft, accident not involving aircraft and other accidents/incidents. The plan contains these following scenarios:

a. Aircraft Accident on the Airport
b. Aircraft Accident off the Airport
c. Incident - Aircraft in Flight
d. Incident – Aircraft on Ground
e. Structural Fires
f. Sabotage
    i) Aircraft
    ii) Structure
g. Unlawful Seizure of Aircraft
h. Natural Disaster
i. Dangerous Goods
j. Medical Emergencies
k. Other scenarios as required e.g. aircraft accident at difficult environment (water, swampy areas, etc.) in the immediate vicinity of the airport, land transport disruption, etc.

The details of each scenario are contained within the AEP.

4.3.4 Tests for Aerodrome Facilities and Equipment to be Used in Emergencies

Explain how the aerodrome conduct tests for facilities and equipment to be used in emergencies. This section also covers the handling centers established during an emergency and frequencies of the tests. The airport may use checklists for tests for facilities and equipment. The tests need to be done using proper techniques. The result of the tests shall be recorded. The checklists can either be a part of AEP or in a separate document. (In case it is already included in other section, delete this para)

Example:

a. Procedures and checklists for testing of aerodrome facilities and equipment are contained within "(Name of a manual or procedures)"
b. Frequencies of tests
c. Testing of physical areas of the emergency plan are included within the Airport's exercise regime, detailed within the AEP. (N0)

4.3.5 A List of Organizations, Agencies and Persons of Authority, both on- and off-airport, and Their Contact Information

Lists all organizations and authorities involved in an emergency response both on and off airport and details of contacts. The lists can be referred to the Airport Emergency Plan. The details of contacts must be up to date.

Example:

The AEP contains a list of organizations, agencies and persons of authority, both on- and off-airport, and their contact information. The contact information will be checked and updated once every (Frequency).

4.3.6 Aerodrome Emergency Committee

An airport shall establish an Aerodrome Emergency Committee. The committee should have both internal and external stakeholders. Each airport should consider the members of this committee based on a local management.

Example:

The Aerodrome Emergency Committee is the main forum to develop, distribute, review and amend the Airport Emergency Plan (AEP) for (Name) Airport. This committee will endorse any amendments to the AEP.

The Committee meets every [X] months and as soon as possible after the activation of AEP or a full scale / partial emergency exercise to carry out its functions and will be comprised of a group of core member such as;

a. Aerodrome operator
b. Airlines representatives
c. ATC Senior Staff
d. Chief of RFFS
e. Department of Health Senior Officer
f. Senior representatives from major hospitals
g. State Emergency Service Representatives
h. Ambulance Service senior representatives
i. Chief of Metropolitan Fire Brigade or Services

j. Police Service senior staff
k. Representatives of other responding parties, as required

4.3.7 Appointment of an On-Scene Commander

The airport shall appoint an on-scene commander when an emergency occurs. Each type of emergency may have a different on-scene commander. For example, an airport rescue and firefighting commander may be appointed to be an on-scene commander in the event of fire. An airport security may be appointed to be an on-scene commander in the event of unlawful interference, or airport medical services may be appointed to be an on-scene commander in medical emergency.

Example:

Safety-Related Emergency

Once an accident has occurred, the initial direction and control of rescue and firefighting operations are the responsibility of the airport rescue and firefighting service officer in charge. Rescue and Fire Fighting personnel will be the first to arrive at the accident site; therefore, for a certain period of time this officer will be in command. Once the on-scene commander arrives, the on-scene commander will assume command as outlined in the airport emergency plan. The transition of authority and command responsibility needs to be established previously in the emergency plan and exercised accordingly.

Security-Related Emergency

In case the incident/accident is security-related, the initial direction and control of the situation is the responsible of the airport security service officer in charge. The airport security service officer will be the first to response and in command until the on-scene commander assume command as outlined in the airport emergency plan. The transition of authority and command responsibility needs to be established previously in the emergency plan and exercised accordingly.

4.3.8 Airport Emergency Exercises

Details types and frequencies of airport emergency exercises. The exercises may include but not limited to daily exercise, tabletop exercise, partial emergency exercise, and full-emergency exercise.

Example:

To ensure that the plan is functional and that all agencies are familiar with their roles and responsibilities, and exercise program will be developed by the Airport Emergency Planning Committee. The airport emergency exercise comprises of:

a. Initial Training on the AEP for New Employees
b. Recurrent Training on the AEP for Current Employees
c. Full Scale Emergency Exercise – At least once every two years
d. Partial Emergency Exercise – At least once every year that a full-scale exercise is not held
e. Tabletop Exercise – At least every six months, except during that six-month period when a full-scale exercise is held

.

4.4 Rescue and Fire Fighting

4.4.1 Purpose

This section should cover particulars of aerodrome rescue and firefighting including facilities, personnel, and procedures of the airport operator. The facilities, personnel, and procedures should be prepared based on the aerodrome category specified in (State Regulation Reference). This aerodrome manual should define a responsible person for rescue and firefighting of the airport. The airport can also refer to the *Master Contact List*.

Example:

The rescue and firefighting services is provided with the objective to save lives in the event of accident or incident occurring at, or in the immediate vicinity of, the aerodrome. The facilities of the rescue and firefighting are to be directed at all times for attending at and dealing with an aircraft incident occurring on, or in the immediate vicinity of, the aerodrome.

4.4.2 Responsibility

Explain responsibility of persons who are responsible for ensuring all equipment is available and the appropriate level of protection is available, including the requisite amount of extinguishing agents, to achieve the rated category of the RFF.

Example:

a. Airport Manager is responsible for providing resources for rescue and firefighting to meet the CAA standard.
b. The Chief of RFFS is solely responsible for ensuring all equipment is available and the appropriate level of protection is available, including the requisite amount of extinguishing agents, to achieve the rated category of the RFF.

4.4.3 ICAO Aircraft Rescue and Fire Fighting Category

Explain the aircraft rescue and firefighting category of the aerodrome. The criteria for determining the ARFF Category is in (State Regulation Reference)

Example:

The Rescue and Fire Fighting Service assessed category for the aerodrome shall be Category (#) as determined from Requirements of Civil Aviation Authority of (Country) specification.

4.4.4 Reduction of Category

Explain the airport procedures for the reduction of category if the airport cannot maintain the level of protection.

Example:

In case that the facilities and inventory of the rescue and fire fighting fell below Category (#), the Aerodrome will take the following measures:

ARFF Vehicles: The Aerodrome has a mutual aid agreement with (Name). (Name) will lend an ARFF vehicle to (Name) Airport. The specification of the ARFF vehicle shall meet [national requirements on aerodrome certification / ICAO Annex 14].

Consumables: The Aerodrome has an agreement with (Name) to supply the fire extinguisher agent when the airport runs out of the required stock level. According to the agreement, the (Name) will supply the agent within (#) days.

In the event that category cannot be maintained, the matter is to be referred immediately to the Airport Manager and a NOTAM raised to indicate the varied level of coverage available.

4.4.5 Facilities and Inventory

Explain the facilities that the airport prepares for aircraft rescue and fire fighting. The airport should prepare these facilities based on the ARFF Category specified in (State Regulation Reference). The facilities include at least a fire fighting station, ARFF vehicles, tools, equipment, and fire extinguishing agents. These facilities can either be listed in this section or in an aerodrome emergency plan.

Example:

An inventory of all equipment and extinguishing agents held by the Rescue and Fire Fighting Service are included:

a. Response Time

The response time of RFFS is not exceeding [two / three] minutes to any point of each operational runway, and [three] minutes to any other part of the movement area, in optimum visibility and surface conditions. The response time meets the requirement specified in [CAA Requirements].

b. Fire Fighting Station

(Name) Airport has (No. of Stations) stations located at (Specify) to ensure the rescue and fire fighting vehicles meets the response time as specified in paragraph 4.4.5 a.

(Describe the Fire Station including the characteristic of fire station, number of parking space for RFF vehicles, storerooms for RFF equipment and stock amount of water and extinguishing agents)

c. Aircraft Rescue and Fire Fighting Vehicles

(Name) Airport has(No. of ARFF Vehicles) ARFF vehicles. The ARFF vehicles stationed in the airport is to Requirement of Civil Aviation Authority of (Country name & regulation). The specifications of each vehicle are in (Specify) which forms a part of this manual.

d. Tools and Equipment

(Name) Airport provides aircraft rescue and fire fighting tools and equipment for (ARFF category) as the following;

The table below shows ARFF tools and equipment for each ARFF category.

Remarks: Similar to plans, long tables may be organized in the Appendices for easy document control.

Equipment scope	*Equipment item*	*Airport category*			
		1-2	3-5	6-7	8-10
Forcible entry tools	Prying tool (hooligan, biel type)	1	1	1	2
	Crowbar 95 cm	1	1	1	2
	Crowbar 1.65 m	1	1	1	2
	Axe, rescue large non wedge type	1	1	1	2
	Axe, rescue small non wedge or aircraft type	1	2	2	4
	Cutter bolt 61 cm	1	1	2	2
	Hammer 1.8 kg – lump or club type	1	1	2	2
	Chisel cold 2.5 cm	1	1	2	2
A suitable range of rescue/cut-in equipment including powered rescue tools	Hydraulic/electrical (or combination) portable rescue equipment	1	1	1	2
	Powered rescue saw complete with minimum 406 mm diameter spare blades	1	1	1	2
	Reciprocating/oscillating saw	1	1	1	2
A range of equipment for the delivery of firefighting agent	Delivery hoses 30 m lengths x 50 and 64 mm diameters	6	10	16	22
	Foam branches (nozzles)	1	1	2	3
	Water branches (nozzles)	1	2	4	6
	Coupling adaptors	1	1	2	3
	Portable fire extinguishers				
	CO^2	1	1	2	3
	DCP	1	1	2	3
Self-contained breathing apparatus – *sufficient to maintain prolonged internal operations* *Note: Ideally one BA set per crew member.*	Breathing apparatus (BA) set complete with facemask and air cylinder				
	BA spare air cylinder				
	BA spare facemask				
Respirators	Full faced respirators complete with filters	One per responding firefighter			

Equipment scope	*Equipment item*	*Airport category*			
		1-2	3-5	6-7	8-10
A range of ladders	Extension ladder, rescue and suitable for critical aircraft	-	1	2	3
	Ladder general purpose – rescue capable	1	1	1	2
Protective clothing	Firefighting helmet, coats, over trousers (complete with braces), boots and gloves as a minimum	One set per operational firefighter plus a percentage of reserve stock			
Additional items for personal protection	Protective goggles	1	1	2	3
	Flash hoods	One per operational firefighter			
	Surgical gloves	1 box	1 box	1 box	1 box
	Blanket fire resisting	1	1	2	2
Rope lines	Rope line rescue 45 m	1	1	2	2
	Rope line general use 30 m	1	1	2	2
	Rope line pocket 6 m	One per operational firefighter			
Communication equipment	Portable transceivers (hand held and intrinsically safe)	1	2	2	3
	Mobile transceivers (vehicle)	One for each fire vehicle			
A range of hand-held/portable lighting equipment	Hand-held flashlight (intrinsically safe)	1	2	4	4
	Portable lighting – spot or flood (intrinsically safe)	1	1	2	3
A range of general hand tools	Shovel overhaul	1	1	2	2
Rescue tool box and contents		1	1	2	3
	Hammer, claw 0.6 kg				
	Cutters, cable 1.6 cm				
	Socket set				
	Hacksaw, heavy duty complete with spare blades				
	Wrecking bar 30 cm				
	Screwdriver set – slotted and Phillips heads				
	Pliers, insulated Combination 20 cm Side cutting 20 cm Slip joint – multi-grip 25 cm				
	Seat belt/harness cutting tool				
	Wrench, adjustable 30 cm				

Equipment scope	*Equipment item*	*Airport category*			
		1-2	3-5	6-7	8-10
	Spanners, combination 10 mm – 21 mm				
First aid equipment	Medical first-aid kit	1	1	2	3
	Automated External Defibrillator (AED)	1	1	2	3
	Oxygen Resuscitation Equipment (ORE)	1	1	2	3
Miscellaneous equipment	Chocks and wedges – various sizes				
	Tarpaulin – lightweight	1	1	2	3
	Thermal imaging camera	-	-	1	2

e. Fire Extinguishing Agent

(Name) Airport prepares the following fire extinguishing agent.

Fire Extinguishing Agent	Quantity

4.4.6 Personnel

Details about ARFF personnel including administration and minimum training requirements.

Example:

ARFF response is available for all scheduled air carrier operations only during (Specify Operating Hours). There are (No. of Shifts) shifts including (Specify Shifts) each shift has (No. of ARFF Personnel) people. ARFF personnel have completed training and keep currency in the topics required by Requirement of Civil Aviation Authority of (Country name & regulation).

4.4.7 Procedures for Meeting the Rescue and Fire-Fighting Requirements

Specify procedures related to rescue and fire fighting. The details of this section can be referred to the Airport Emergency Plan or related SOPs.

Example:

Procedures defining the RFF response to an emergency on the airport have been issued as Standard Operating Procedures (SOP). These are published separately to the Aerodrome Manual as Annex (N) and comprise a part of this Manual.

4.5 Inspection of Movement Area

Particulars for Inspection of Movement Area by an aerodrome operator or aerodrome owner.

4.5.1 Purpose

Define the objectives of aerodrome inspection of movement area. The objective should focus on ensuring the aerodrome standards are met. Therefore, the airport can operate safely.

Example:

The aim of these procedures is to ensure that the movement area, related facilities, and the obstacle limitation surfaces (OLS) are regularly inspected to ensure CAA safety standards are maintained.

4.5.2 Responsibility

Explain responsibility of persons who have roles and responsibilities in aerodrome inspection. These persons may include, but not limited to, an airport manager, an airport operations services, an airport maintenance services, and etc.

Example:

a. (The Airport Manager) has overall responsibility for ensuring that procedures are established and resources provided for the airport inspections in order to ensure that CAA standards are met.
b. (The Airport Operations Supervisor) has responsibility for ensuring that daily serviceability inspections are satisfactorily carried out and that appropriate actions/reporting takes place as a result of those inspections.
c. (The Operations Officers) are responsible for carrying out daily serviceability inspections of the movement area and the OLS.
d. (The Maintenance Supervisor) has the responsibility for ensuring that signs and lighting inspections are carried out in accordance with the inspection and maintenance schedules as well as supervise the maintenance works for corrections.
e. (The Airport Maintenance Officer) is responsible for carrying out and recording the inspection and maintenance of all airport lighting systems.

4.5.3 Inspection of Movement Area

Specify types and period of movement area inspection. The inspections should include Regularly Scheduled Inspection, Periodic Condition Inspection, and Special Inspection.

Example:

(Name Airport) has three types of inspection including Regularly Scheduled Inspection, Periodic Condition Inspection, and Special Inspection.

a. Regularly Scheduled Inspection

The airport conducts daily visual inspection. The inspector observes the general conditions of facilities in movement area and their functionality.

b. Periodic Condition Inspection

Periodic condition inspection has similar topics as regularly scheduled inspection but in a more detail. The inspection may require tools or equipment. The inspection is conducted every [X] days/weeks.

c. Special Inspection

Special inspection will be conducted after receipt of the complaint or when unusual condition or unusual event occurs.

4.5.4 Inspection Procedures and Communicating with Air Traffic Control during Aerodrome Inspection

Define the communication procedures between an inspector and the air traffic controller to ensure the quick communication and safe operations. The airport should show the inspection procedures to ensure the safety of a movement area inspection as well.

Example:

For safety of the inspector and aircraft operations, (Name Airport) establishes communication and inspection procedures. The communication procedures between the inspector and air traffic control include:

a. Before inspection, the inspector will contact ATC for clearance. The inspector will only conduct an inspection in compliance with ATC clearance and when it is safe to conduct the inspection.
b. When driving a vehicle or on foot on the movement area all inspecting personnel shall keep a continuous lookout and radio listening watch for aircraft. While operating on the manoeuvring area, all persons must maintain continuous two-way communication with ATC.
c. Driving vehicle in the airside requires training. The driver must pass the test before the airside driving license is grated. Keep caution and give way to aircraft at all time.
d. When the ATC informs the driver to clear the runway, the driver will leave the runway without delay and stay outside a runway strip.

e. The inspector will immediately inform the ATC once the inspection is finished and the inspection left the runway.

For inspection of other area beside the runway, refer to procedures a to c above.

4.5.5 Particulars, Frequencies, and Time of Aerodrome Inspection

Specify details and criteria for inspection of movement area including Regularly Scheduled Inspection, Periodic Condition Inspection, and Special Inspection.

a. Regularly Scheduled Inspection

Regularly Scheduled Inspection should cover pavement, runway strip, RESA, marking, signs, airfield lights, navigational aids, obstacles, fueling station, construction, public protection, and wildlife hazards.

Example:

The Aerodrome Operations Service inspects the airport at least (Times) a day when aircraft activity is minimal in order to minimize the impact on airport operations. At least one inspection will be done during the hours of darkness.

(Please specify inspection schedule)

i) Pavement Areas
The pavement areas shall be smooth. There shall be no cracks, scaling, bumps, low spots, debris and any other abnormality. No holes or pavement lips/ curb that exceed 3 inches in depth. No vegetation growth that may impede drainage.

ii) Runway Strip and Runway End Safety Areas
(Explain runway strip and RESA dimensions). Runway strip and RESA must be smooth, no ruts, no humps and no object except equipment or installation for air navigation or for aircraft safety purposes which must be at that location. The objects in runway strip and RESA must be frangible.

iii) Markings
Marking in airside shall be correct and clearly visible. The airport will check marking for peeling, blistering, chipping, fading, and obscured. Obsolete marking shall be properly removed although masking by black paint may be accepted as a temporary measure.

iv) Signs
Signs provide important information to pilots while taxiing. Signs shall not cause confusion to pilots. Signs should not be blocked by objects or vegetation.

v) Lighting

The airport conducts a visual inspection to ensure that the airfield lighting is operable and vegetation or deposits of foreign material do not obscure the light fixture. The lights shall be the proper color and are oriented correctly.

vi) Navigational Aids

(Name) Airport navigational aids include aerodrome beacon, wind direction indicator and PAPIs [include those aids in your airport]. The airport safety inspector will check the aerodrome beacon is visible and working properly, wind direction indicator swings freely, the cone is not faded, properly lighted at night and PAPIs are operable.

vii) Obstructions

(Name) Airport concentrates on a visual check of manmade and natural obstacles. The airport also determines if obstructions are properly marked and lighted. If the airport finds an obstacle, the airport shall inform CAA and AIS immediately.

viii) Fueling Operations

The daily inspection on aircraft fueling operations should concentrate on a quick inspection for the most common problems concerning compliance with local fire safety codes. In (Name) Airport, this responsibility lies with the aircraft fueling operator. The airport will randomly inspect the fueling operator from time to time.

ix) Construction

During a construction, the airport safety inspector will check the construction area that

- Stockpiled materials and construction materials are properly stored
- Construction areas are marked and lighted but without causing glare or confusion to pilots and air traffic controllers
- Barricades are installed
- No FODs
- No dangerous condition created by construction activity
- No attraction to wildlife is caused

x) Public Protection(Remarks: It could be the responsibility of security officers instead depending on the aerodrome.)

During the public protection inspection, check gates, fencing, locks, and other safeguards are in place and functioning properly to prevent inadvertent entry to movement areas by unauthorized persons and vehicles.

xi) Wildlife Hazard Management

(Name) Airport inspects the areas on airport and the areas in its vicinity to minimize and manage the attractions to wildlife. The

airport will check for evidence of birds and animals that may have developed. All dead wildlife found and all wildlife aircraft strikes should be investigated and reported to CAA. The airport records the area that birds and animals present, routes, and other information specified in wildlife reporting form.

b. Continuous Condition Inspection

Continuous Condition Inspection should cover ground vehicles, fueling operations, construction, public protection, wildlife hazard management, and foreign object debris.

Example:

The airport users in the movement area can inspect the movement area any time. Hazardous conditions can be reported to (Position) for immediate actions. The continuous condition inspection includes;

i) Ground Vehicles

Vehicle drivers shall follow the airport's procedures and arrangements for the orderly operations of ground vehicles. Vehicles in movement area shall be properly painted. The drivers of vehicles shall be trained properly.

ii) Fueling Operations

Fueling operations shall be observed to ensure that the service provider follows the procedures approved by the airport.

iii) Construction

Unauthorized access to airside and FOD shall be inspected to ensure safety of aircraft.

iv) Public Protection

Gates and fences shall be inspected to prevent unauthorized entry.

v) Wildlife Hazard Management

People in the airside shall monitor wildlife activity. Wildlife activity shall be reported wildlife activity to the airport operations immediately.

vi) Foreign Object Debris

FOD shall be clear of the movement area as soon as it is found. A person who finds aircraft parts will immediately inform(Responsible Person).

c. Periodic Condition Inspection

Periodic Condition Inspection should cover pavement areas, markings, signs, quarterly fuel storage area and loading/unloading stations, mobile fuelers, navigation aids, lightings, and obstructions.

Example:

The Aerodrome Operations conducts a Periodic Condition Inspection of activities and facilities on a regularly scheduled basis but less than daily. The time interval can be weekly, monthly, or quarterly, depending on the activity or facility.

i) Pavement Areas

(Name) Airport measures runway friction by self-wetting continuous friction measuring equipment. The CAA's runway friction standard will be referenced.

(Airport Operations) will report (Airport Operations Supervisor) when rubber buildup at the touchdown zone makes the friction fall below the maintenance planning level. The (Airport Operations Supervisor) will initiate runway cleaning. In case the friction fall below the minimum friction level, (Airport Operations Supervisor) shall immediately report to (Airport Manager), who shall then report the issue to CAA and AIS without delay.

ii) Markings

(Airport Operations) Check pavement markings to ensure they are correct and clearly visible. Markings on concrete and faded asphalt should be outlined with a black border. The marking shall remain visible at night.

iii) Signs

(Airport Operations) should check signs face for peeling and for fading or faded colors. Contacts and electrical circuit shall be inspected to ensure that the signs are still functional.

iv) Quarterly Fuel Storage Areas and Loading/Unloading Stations

(Airport Operations) will inspect fuel storage area and loading/unloading stations for fire safety. Tools and equipment shall be in good and safe conditions. Signs and placards shall be installed as required by hazardous material standards.

v) Mobile Fuelers

(Airport Operations) will inspect conditions of the fuelers, warning signs and placards and parking area as well as signs and placards on the vehicles.

vi) Navigational Aids

(Responsible Person) will arrange a flight check every [X] months for PAPI, NDB and DME to ensure their serviceability.

vii) Lighting

(Name) Airport conducts power generator and circuit resistance tests every [X] weeks / months. The airfield lights are checked for proper functions every [X] days / weeks.

viii) Obstructions

(Name) Airport will conduct an obstacle survey on airport and in vicinity of airport. The airport will take immediate actions when an obstacle is found.

ix) Aircraft Rescue and Fire Fighting

(Name) Airport determines every [X] weeks/months if the aircraft rescue and firefighting equipment is capable of meeting response times and live-fire drills are being conducted every [X] months. Fire fighting and rescue tools are available and in good conditions.

d. Special Inspection

An airport should conduct a special inspection after receiving a complaint or unusual event such as a heavy rain or an aircraft accident occurs.

Example:

The Aerodrome Operator will conduct a special inspection after receipt of a complaint or when an unusual condition or event occurs on the airport, such as a significant meteorological event, incident, or accident. Special inspections will also be conducted at the end of construction activity. Each

special inspection will be documented in (Log).The checklists will be different based on each special inspection. (Airport Operations Supervisors) will determine the items in the checklist.

4.5.6 Inspection Checklist

(Develop inspection checklists as appropriate for your airport)

4.5.7 Reporting the Results of Inspections

Specify an airport procedure for reporting the results of inspections to related parties such as ATC, airport operations supervisor, airport manager, etc. The reporting procedures should consider the urgency of the results. The airport should track the corrective actions.

Example:

a. In case there is a non-compliance that has a serious effect on safety of aircraft and it cannot be fixed, the (position) will immediately report to (ATC) and his/her supervisor. (Airport Operations) will request issuing NOTAM if needed. Some parts of the airport may be closed when necessary.
b. If there is a hazard that does not have an effect on safety of aircraft, the (position) will report to (position) for corrections.
c. Hazards and noncompliance items shall be recorded and marked on airport grid map. If the hazards or noncompliance items cannot be removed immediately, the (Airport Operations) shall properly mark the hazard for follow up actions by (Airport Maintenance).
d. Inspection findings shall be reported to (Airport Operations Supervisors) for corrections.
e. (Airport Operations Supervisor) shall record the results in Airport Inspection Results and Monitoring Form contained in Annex[X].
f. (Airport Operations Supervisor) monitors and tracks correctives actions until the hazards or noncompliance items are removed.

4.5.8 Keeping an Inspection Logbook, and the Location of the Logbook

Details on how the airport keeps record of the inspection, duration of the record keeping, and storage place.

Example:

The results of the airport inspection will be maintained at (Specify Place) for [XX e.g.12] months from the date of inspection. (Responsible Person) is responsible for maintaining the record.

4.6 Movement Area Maintenance

Particulars about the maintenance of paved area, unpaved runway and taxiway, (if any), runway and taxiway strips, RESA, and drainage system.

4.6.1 Purpose

Explain the purpose of movement area maintenance. The main objective is to ensure that airport facilities are well maintained for safe operations of aircraft. If the airport is not well maintained, it may cause hazard to aircraft.

Example:

The aim of movement area maintenance is to maintain paved area, unpaved area and drainage system in a good condition to ensure safety of aircraft operations.

4.6.2 Responsibility

Define responsibility of each person related to movement area maintenance including airport manager, airport maintenance, and airport operations.

Example:

a. The Airport Manager is responsible for overseeing movement area maintenance to ensure the safe conditions of airport facilities and the safety of aircraft operations. The Airport Manager also has a responsibility to provide an adequate number of personnel, tools and equipment.
b. (Airport Maintenance) is responsible for supervising maintenance staffs to ensure that preventive maintenance and corrective maintenance are completed and in the conditions required by the [Requirement of Civil Aviation Authority of (Country name)].
c. (Airport Operations) is responsible for movement area and OLS inspection and coordination with (Airport Maintenance).

4.6.3 Maintenance of Paved Area

Explain the characteristics of airport paved area, pavement standards, and maintenance procedures. The area can be depicted by pictures or lists.

Example:

(Name) Airport (Specify Paved Area) are paved by [asphalt /concrete]. Aprons are paved by [Portland Concrete]. The airport will maintain paved areas to meet the following conditions:

- Pavement lips/ curb shall not exceed three inches

- No holes that cannot be covered by a 5-inch circle, and the side slope at any point in the hole that exceeds 3 inches in depth and is 45 degrees or greater
- No cracks wide enough to cause directional control problems for an aircraft
- No contaminations or FOD
- No vegetation growth in cracks or along the runway

Non-standard conditions and hazardous conditions shall be recorded and reported to ATS. NOTAM may be issued if needed. Pavement maintenance methods and procedures are contained in (Specify) which comprised a part of this manual.

4.6.4 Maintenance of Unpaved Runway or Taxiway

An airport with unpaved runway or unpaved taxiway is required to specify a method to maintain unpaved runway or unpaved taxiway. In case there is no unpaved runway or taxiway, the airport shall define “The airport does not have unpaved runway and taxiway”.

Example:

(Name) Airport does not have unpaved runway and taxiway.

4.6.5 Maintenance of Runway and Taxiway Strip

Specify the methods used to maintain the runway strip, taxiway strip, landscape area, and cut grass in the airport.

Example:

a. Runway and Taxiway Strips Maintenance

Grasses in runway and taxiway strips shall not exceed [10] centimeters in height. The airport will mow grasses in the strip according to landscape maintenance programme.

b. Unpaved Areas outside Runway and Taxiway Strips

Grasses outside runway and taxiway strips shall be maintained at [10-20] centimeters in height to make it less attractive to wildlife. Trees in the vicinity of the airport shall not become obstacles.

c. Cut Grass

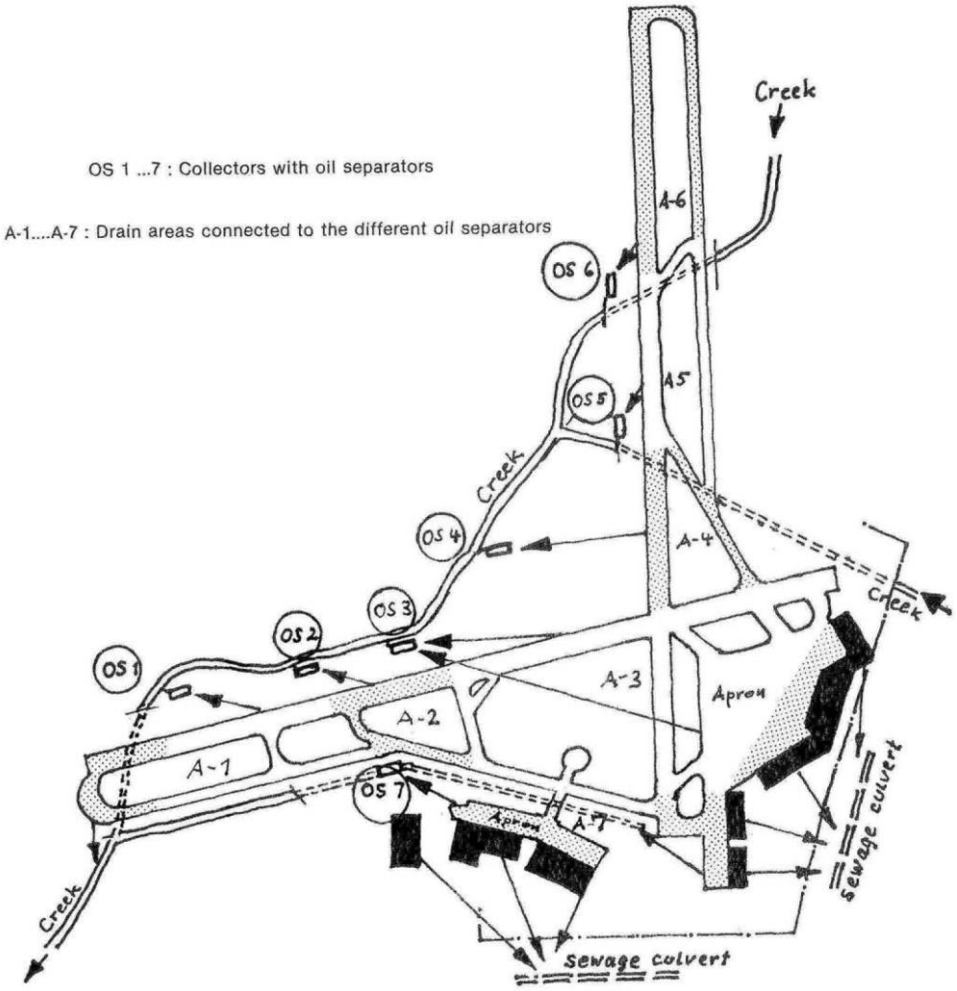
Cut grasses shall be collected and move away from runway strip and composted.

4.6.6 Maintenance of Aerodrome Drainage

Describe an aerodrome drainage system either in texts or by pictures. Explain procedures for maintenance of aerodrome drainage system. The maintenance procedures should cover cleaning, inspecting, and clearing of drainage, fuel separation, and tap water if applicable.

Example:

(Name) Airport has a drainage system and water flow as shown in the picture.



Drainage System Maintenance

a. The airport regularly patrols drainage systems in the airport especially before rainy season and in rainy season. Vegetation and object impeding water flow will be clear immediately.
b. The airport will mow grasses in the drainage system to facilitate flow of water.

c. The airport dredges the drainage ever two years.
d. The airport tests water pumps in the airport to ensure they are functional all the times.

4.7 Hazardous Meteorological Conditions

Airport operations can be disrupted by adverse weather. Therefore, an airport need to prepare to prevent and mitigate harmful consequences of adverse weather conditions. Adverse weather conditions are categorized into seven groups including ice, frost, freezing rain, strong winds, rain, snow, and fog or low visibility. An airport shall set up procedures in this part according to its local geography and atmosphere.

4.7.1 Purpose

Define the purpose the airport establishes procedures for hazardous meteorological conditions. The purpose of the procedures should focus on safeguarding an airport and aircraft operations.

Example:

The aim of these procedures is to ensure that the aircraft using the (Name) Airport can be operated safely during adverse weather conditions.

4.7.2 Responsibility

Define responsibility of each person related to adverse weather operations. Responsible persons may include but not limited to an airport manager, an airport operation, a meteorological service provider, an air traffic service provider, a fixed-base operator and a ground handling agent.

Example:

a. The Airport Manager has overall responsibility to provides procedures related to hazardous meteorological conditions for the airport and ensures that the procedures are implemented.
b. (Airport Operations) is responsible for inspecting other tenants in airside to ensure the compliance to the rules. The airport operations also conduct runway friction measurement, runway condition report, runway safety inspection and aircraft tie-down and GSE tie-down inspection.
c. (Meteorological Service Provider) is responsible to report hazardous meteorological conditions including the start and the end of the conditions to ATS unit as stated in the agreement between the ATS unit and meteorological service provider.
d. (Air Traffic Service Provider) is responsible to warn all operators in airside about hazardous meteorological conditions. The ATS unit also is responsible to initiate hazardous meteorological procedures.
e. A Fixed-Base Operator and a Ground Handling Agent are responsible for carrying out hazardous meteorological procedures required by the airport and tying down aircraft and GSE in its responsibility.

4.7.3 Procedures and Criteria for Suspension of Operations on the Runway

a. Disseminating Hazardous Meteorological Warning

i) Meteorological Service Provider informs ATS unit, both in verbal and writing, when forecasting or detecting hazardous meteorological conditions. The hazardous meteorological conditions are in an agreement between (Name) Airport and the meteorological service provider.

ii) ATS unit informs pilots via (Communication Channel) and the operators in airside via (Communication Channel).

iii) All operators received hazardous meteorological warning shall follow hazardous meteorological condition procedures.

b. Strong Winds

i) When there is a strong wind warning, the airport maintenance and contractors will cover material stack and tie down GSE to ensure that there are no loose objects.

ii) (Aircraft Owners) shall tie down their aircraft and position aircraft heading to a safe direction.

iii) (GSE Owners) ties their GSE to ensure that GSEs are safe.

iv) (Airport Responsible Person) is responsible for patrolling the airside especially the areas with high risk to have FODs. In case an FOD is found, a corrective action shall be done immediately. If a corrective action is not possible, the (Responsible Person) will inform ATS unit immediately. GSE accidents and incidents shall be reported to the owners of the GSEs and to an airport safety officer.

c. Thunder Storms

i) When there is a thunder storm warning on or in vicinity of the airport, (Airport Responsible Person) assesses the risk to airport operations. If the result of risk assessment is high, ceases all airport operations and finds shelters.

ii) ATS unit reports the latest runway condition report and friction to pilots. ATS unit may request (Airport Responsible Person) to measure the depth of standing water center. The results will be reported to the ATS unit.

4.7.4 Coordination with the Meteorological Service Provider in order to be Advised of Any Significant Meteorological Conditions

(Name Airport) has an agreement with (Meteorological Service Provider). The agreement comprises a part of this manual (Annex).

4.8 Visual Aids and Aerodrome Electrical System

Particulars for aerodrome visual aids and electrical system. The details in this section should include visual inspection as outlined in para 4.5.5 and maintenance of aviation lights, obstacle lights, signs, markings, and aerodrome electrical system.

4.8.1 Purpose

Define the purpose of this section. The main purpose of visual aids and aerodrome electrical system should be to ensure an availability of the system. The details in this section should show the capability of an airport to maintain visual aids and electrical system.

Example:

The aim of these procedures is to detail the arrangements for the inspection and maintenance of airport lighting, signs, markers and electrical systems.

4.8.2 Responsibility

Explain responsibility of persons who have roles and responsibilities in the maintenance of visual aids and aerodrome electrical system. These persons may include, but not limited to, an airport manager, an airport maintenance services, and etc.

Example:

a. The Airport Manager has overall responsibility for the provision of airport lighting facilities and electrical equipment.
b. (The Airport Lighting Team Leader) is responsible for ensuring that appropriate maintenance and technical inspections of airport lighting facilities are carried out and recorded in accordance with the standards and the requirements of this manual.
c. (Airport Maintenance Officer) is responsible for preventive and corrective maintenance of visual aids and aerodrome electrical system.

4.8.3 Visual Aids and Aerodrome Inspections

Visual Aids Operating Manual contains information in this section. An aerodrome operator may refer to the manual.

Example:

Visual aids and aerodrome inspections in business hours and outside business hours are detailed in approved Visual Aids Operating Manual as specify in (Annex).

The checklists for visual aids and aerodrome inspections has been set up according to the manufacturer's manual and modified to suit with the airport circumstances. The checklists for visual aids and aerodrome inspections are contained in (Annex).

4.8.4 Standby Generation

Visual Aids Operating Manual contains information in this section. An aerodrome operator may refer to the manual.

Example:

Standby generation inspections and maintenance methods are contained in Visual Aids Operating Manual as specify in (Annex).

The checklists for standby generation inspections and maintenance methods have been set up according to the manufacturer's manual and modified to suit with the airport circumstances. The checklists for visual aids and aerodrome inspections are contained in (Annex).

4.8.5 Maintenance Procedures

Visual Aids Operating Manual contains information in this section. An aerodrome operator may refer to the manual.

Example:

The maintenance of visual aids and electrical system procedures comprises of preventive and corrective maintenance. The details of the maintenance procedures are in compliance with approved Visual Aids Operating Manualas contained in (Annex).

4.8.6 Fault Reporting System and Record Keeping

Visual Aids Operating Manual contains information in this section. An aerodrome operator may refer to the manual.

Example:

Fault Reporting System and Record Keeping are detailed in approved Visual Aids Operating Manual as contained in (Annex).

4.9 Aerodrome Works Safety

Particulars for aerodrome work safety including working plan, method of working plan, conduct of aerodrome work, and commence of work. This should also cover an urgent work on maneuvering area and area in adjacent.

4.9.1 Purpose

The purpose of Aerodrome Work Safety is to demonstrate that an aerodrome can safely manage work in progress in airside. Works in the airside should have a minimum impact on aircraft operations and functions of navigation aids.

Example:

The aim of these procedures is to describe the arrangements for the planning and safe conduct of works that affect the movement area or OLS.

4.9.2 Responsibility

Explain responsibility of persons who have roles and responsibilities in aerodrome work safety. These persons may include, but not limited to, an airport manager, an airport maintenance services, and etc.

a. (The Airport Manager)has overall responsibility to ensure operational safety aspects of aerodrome works meet the Requirement of Civil Aviation Authority of (Country name & regulation).
b. (Airport Maintenance) has a responsibility to ensure that Method of Working Plan (MOWP) is provided and executed.
c. (Airport Operations) has responsibility to supervise safety of airside especially during construction. The (Airport Operations) also checks Method of Working Plan and ensure the safety of aircraft operations.
d. (The Project Manager) is responsible for detailed works planning and coordination and ensuring that works are carried out in accordance with the MOWP.

4.9.3 Works Planning

Aerodrome Works can be divided into works that requires a working plan and works that do not require a working plan. A working plan should include movement area closure, markings, issuance of airport circular (to advise the airport community) and issuance of NOTAM (if needed).

Example:

(Name) Airport divides works into two categories.

a. Airport works that do not require a Method of work plan (MOWP)

i) Works that can be completed within 10 minutes and will not disrupt normal aircraft operations are permitted without a NOTAM. Time limited works in this category include grass mowing outside runway / taxiway strip, pavement rolling and sweeping, minor repairs to pavements, maintenance of markings, markers and lights, surveys and inspections.

With ATC agreement, only personnel with hand tools are allowed to work inside the runway strip during aircraft operations under any of the following conditions;

1) At all times except during air transport jet operations.
2) At all times for maintenance including grass mowing (operations must be within 2 meters of the markers when inside the runway strip).
3) Ground surveys associated with Navaid flight calibration flights (Navaid calibration).

ii) Time limited works requiring more than 10 minutes but no more than 30 minutes, are advised by NOTAM which states the nature of the unserviceability, and the length of time required to terminate work and restore the works area to normal safety standards. The NOTAM is issued at least 24 hours prior to the proposed work to minimize disruption to aircraft flight planning. Unserviceability markings/ markers will be displayed if required.

iii) Works that require more than 30 minutes to restore to normal safety standards will be subject of a MOWP except for emergency repairs.

b. Airport works that require a MOWP.

All scheduled airport works, other than time limited or emergency works, will require a MOWP, and an appropriate NOTAM. In general, these are works that require partial or complete runway or taxiway closures, or will cause significant disruption to aircraft parking arrangements on aprons.

4.9.4 Method of Working Plan

Explain method of working plan, NOTAM issuance, coordination meeting, and distribution of working plan.

Explain construction management including ground vehicles, access route, and stock piles to avoid hazardous condition.

Explain site security and security control of a contractor.

Example:

a. The MOWP document provides formal advice to the aviation industry and other involved parties of the planned arrangements for the conduct of airport works. In particular, it advises of restrictions placed on aircraft operations and the works organizer as a consequence of the works.

A MOWP will be prepared for works that will have a major operational impact, or cause disturbance to operations over an extended period.

In planning the works, the Project Officer/Manager must consult with organizations that may be affected. The extent and formality of the consultation process will depend on factors such as the complexity and physical scope of the work and likely extent of disruption to normal aircraft operations.

The Project Officer/Manager will consult with CAA when necessary to identify operational impacts and the measures necessary to ensure an acceptable level of aviation safety.

After consultation the Project Officer/Manager will determine the restrictions to works and to aircraft operations. The draft MOWP is referred to the Operations Section for final comment.

Each MOWP is to be signed as approved by the Airport Manager (or in his absence by the Airside Safety Manager).

The MOWP format will be as specified in the CAA Directions Relating to Aerodrome Works. The topics in MOWP are included;

1. Works Information
2. Restrictions to Aircraft Operations
3. Restrictions to Works Organization
4. Administration
5. Drawing
6. Distribution Lists
7. Signature of Approval Person

The MOWP is to be issued at least two weeks prior to the scheduled commencement of work, using the standard distribution list included at the end of this Section.

b. Conduct of Aerodrome Work

i) Airport works that do not require a MOWP.

1) Maintenance staffs or contractors accessing to the movement area shall be granted a permit to work in a movement area. The work permit will show times of works, precise areas in which work may be done, the routes to be followed, the R/T procedures, and the reporting procedure to be followed on completion of work.
2) Personnel and vehicles associated with the works in the airside shall have a permit from the airport. The airport rules shall be followed while working and driving in the airside.
3) Personnel and vehicles shall receive a clearance from ATC before accessing into the movement area.
4) The airport does not allow construction or maintenance during low visibility operations. During low visibility operations, maintenance staffs and contractors shall stop works and exit from the airside.

ii) Airport works that require a MOWP.

The airport will ensure that people associated with works requiring a MOWP follow the 4.9.4 (b) i) and also implement these followings;

1) Contractors shall submit MOWP and execute the approved MOWP.
2) Personnel and vehicles in the airside shall have permits from the airport.
3) (Airport Responsible Person) has a responsibility to supervise aerodrome work safety. (Airport Responsible Person) shall:
   - Ensure the safety of aircraft operations and the day-to-day safe conduct of works in accordance with provisions of the MOWP.
   - Ensure that the Works are notified by NOTAM and that the text of each NOTAM is exactly as set out in the MOWP.
   - Supply ATC, on a daily basis, with all information necessary to ensure the safe conduct of Works.
   - Discuss with the Works Organizer, Project Manager on a daily basis (and if required with the Airport Operations Supervisor/ Airside Safety Manager also), any matters necessary to ensure the safe conduct of Works in relation to operational safety.
   - Ensure that unserviceable portions of the movement area, temporary obstructions, and the limits of the Works area are correctly marked and lit in accordance with the MOWP.
   - Ensure that vehicles and plant engaged on aerodrome works comply with the obstacle marking and lighting standards or alternatively are directly under escort.

- Ensure that vehicles, plant equipment and materials not directly in use on the Works, are parked or stored outside the movement area, and do not obstruct the approach, takeoff or transition OLS, or interfere with radio navigational and landing aids.
- Ensure that access routes are in accordance with the MOWP.
- Direct the immediate removal of vehicles, plant and personnel from the movement area where necessary to ensure the safety of aircraft operations.
- Ensure that the movement area is safe for normal aircraft operations following removal of markers, vehicles, plant equipment and personnel from the Works area.
- Ensure that floodlighting or any other lighting required for works is shielded so as not to cause glare or confusion to pilots and air traffic controllers.
- Immediately on completion of the works, the Works Safety Officer is to ensure that the Reporting Centre is advised formally of the date of completion and time of cancellation of any associated NOTAM.

4) The contractor shall nominate a work safety officer for each project to coordinate with the airport and ensure that MOWP is executed.
5) The work safety officer shall report any hot work and abnormality to the (Airport Responsible Person).
6) The (Airport Responsible Person) will record a daily log of the construction work.

4.9.5 Permit to Commence Work

Specify an airport permission to commence works that may have significant effects on airport serviceability such as airport electrical system or navigation aids.

Example:

In addition to a MOWP, some airport works may also cause disruption (or potential disruption) to the supply of essential engineering services. The Project Officer/Manager shall issue a PERCOW (Permit to commence work) that specifies conditions that must be observed to ensure the maintenance of essential services.

4.9.6 Communication with Air Traffic Service Unit

Workers in an airside shall be equipped with two-way radio communication. They shall be able to communicate with an ATC or airport operations at all time.

Example:

a. The contractors shall have two-way radio communication ready to communicate with ATC at all time.
b. The contractors shall establish a communication network to ensure that safety information from the ATC can be transmitted to all concerned contractor staff in a timely manner.
c. The contractors shall strictly follow ATC instructions at all times.

4.9.7 Working Plan Distribution

Aerodrome owner or aerodrome operator shall distribute a working plan to stakeholders in the airside. The stakeholders may include air carriers, ground handlers, air traffic service provider, airport rescue and firefighting, CAA, airport operations, or other related parties.

Example:

Organization	Telephone Number		Fax
	Operating Hours	Outside Operating Hours	

4.10 Apron Management

4.10.1 Purpose

Define the purpose of apron management focusing on efficiency of apron operations and safety of aircraft. Parked aircraft should have an adequate space as specified in [CAA regulation].

Example:

The aim of these procedures is to provide for the orderly and safe allocation of aircraft parking bays at (Name) Airport. Parking bays have been designed and marked to ensure that appropriate separation distances are maintained and that aircraft refueling and servicing activities can be undertaken without interference to adjacent parked aircraft.

4.10.2 Responsibility

Explain responsibility of persons who have roles and responsibilities in apron management. These persons may include, but not limited to, an airport manager, airport operations, and etc.

Example:

a. The Airport Manager has overall responsibility for implementing procedures for aircraft parking control and ensure that the airport standard meets the Requirement of Civil Aviation Authority of (Country name & regulation)
b. (Airport Operations Supervisor) is responsible for creating a manual and SOPs associated with apron management.
c. (Airport Operations) is responsible for the day-to-day allocation of aircraft parking bays, slot allocation, record aircraft parking information, coordination with other agencies, and supervision of parking procedures.
d. (Ground Handling Agent or Fixed-Base Operator) is responsible for apron services.
e. (Air Traffic Service Unit) is responsible for giving instruction to pilots and coordinating between pilots and airport staffs when airport services are requested.

4.10.3 Aircraft Parking Areas

Describe aircraft parking areas by texts or pictures. Define capability of each parking areas according to the largest aircraft that the parking areas can accommodate. Characteristics of each stand should be determined whether it is remote or contact parking.

Example:

(Name) Airport has parking areas with aerobridge and without aerobridge. The layout of apron has shown below.

(Insert apron layout)

Each stand can accommodate:

Apron No.	Size/Type of Aircraft	(Contact/Remote)	International/ Domestic	MARS Stand	Remarks

4.10.4 Communication between Air Traffic Control and the Apron Management Unit

Explain communication procedures between air traffic service provider and apron control.

Explain:

a. When an aircraft operator request to land or take off at (Name) Airport, the airport will check apron availability and inform the aircraft operator via (ATS Unit).
b. When an aircraft arrives, (Airport Responsible Person) assigns parking position via (Communication Method) and record in (Specify).
c. (ATS Unit) gives parking instruction to the pilot via (Specify). The Airport – Air Traffic Services Provider Agreement is contained in (Specify) which comprise a part of this manual.

4.10.5 Allocating Aircraft Parking Positions

Describe aircraft stand allocation and aerobridge services (if applicable). Describe procedures when there is a change in stand allocation.

Explain:

a. (Airport Responsible Person) prepares a daily allocation plan according to the Standard Times of Arrival and Departure, Flight No., and the intended aircraft type.
b. (Airport Responsible Person)requests the following real-time information from airline and/or ATC to fine tune the daily allocation plan:
   i) Estimated Time of Arrival and Estimated Time of Departure
   ii) Flight No.
   iii) Aircraft Type
c. (Airport Responsible Person) considers;
   i) If the parking bay can accommodate the aircraft, the aircraft can be parked in the stand.
   ii) If the parking bay cannot accommodate the aircraft, the airport operator will (Specify the Airport Procedures).
d. If there is an aerobridge, the airport will ensure that:
   i) A driver of an aerobridge shall be trained. The training program will be in accordance with the manufacturer manual.
   ii) The driver will be on position [15] minutes prior to ETA/Estimated In-bound Time (EIBT).
   iii) The marshaller gives signal to the aircraft for docking.
   iv) When the aircraft parked in position, aircraft technician will ensure the aircraft is properly chocked, then the aerobridge / passenger steps will be contacted to the aircraft.

4.10.6 Initiating Engine Start and Aircraft Push-back

Explain procedures for initiating engine start and aircraft push-back. It may include aircraft self-maneuvering in an aircraft stand.

Example:

a. When ground services are finished and aircraft is ready for pushback, the pilot shall contact a ATC ground control for a clearance to initiate engine start and pushback. Before engine start or pushback, the pilot shall turn on anti-collision lights.
b. If the aircraft need to be towed to another stand or other area, the mechanics will be responsible for coordinating with ATC ground control

for the clearance. The anti-collision lights shall be turned on from start of push-back / towing until chock in.

4.10.7 Marshalling Procedures

Define a marshalling method such as VDGS or marshaller. The procedures employed by an airport shall comply with (State Regulation Reference).

Example:

a. (Name) Airport has marshaling services. The airport (has/ does not have) VDGS.
b. A marshaller shall be trained, checked and qualified to ensure that the signal given to pilots is correct. A qualified marshaller shall have a valid license for operating an aerobridge ready to be inspected at all time.
c. A marshaller shall equipped with:
    i) Proper personal protective equipment (PPE) including ear protection, reflective vest and safety shoes.
    ii) Marshalling wands or marshalling paddles
d. A marshaller shall inspect the safety of the aircraft stand before aircraft parking.
e. A marshaller shall maintain eye contact with the pilot-in-command during docking.

4.10.8 Follow-me Procedures

Explain criteria and procedures of follow-me to ensure that the follow-me can operate safely.

Example:

a. (Name) Airport provides follow me services for low visibility operations, lost communication, pilots who are not familiar with the airport or other safety related matters.
b. The drivers shall be suitably trained and have a valid airside driving license. The vehicle used for follow me service shall be equipped with a two-way radio.
c. Procedures;
    i) When a follow-me vehicle is requested, the driver will drive the car to the aircraft.
    ii) The [pilot or mechanic / follow-me driver] requests a clearance to ATC.
    iii) After ATC provides the clearance, the follow-me vehicle will lead the aircraft to its stand. [Pilot or mechanic / follow-me driver] report ATC when the follow-me service is completed.

4.11 Apron Safety

Particulars for apron safety including protection from jet blasts, aircraft refueling operations, apron sweeping, apron cleaning, incident and accident reports, and safety compliance monitoring.

4.11.1 Purpose

The aim of apron safety is to ensure the safety of ground handling operations and minimize risks and hazards of ground operations accident and incident.

Explain:

(Name) Airport manages apron safety to minimize ground operations risks, injuries, loss of life and property and disruption to airport operations.

4.11.2 Responsibility

Define responsibility of persons involving in apron safety such as an airport manager, airport operations, ground handling operators, fixed-base operators, and etc.

Example:

a. The Airport Manager has overall responsibility to ensure safety in apron as required by CAA.
b. (Airport Operations) has responsibility to set up procedures relating to apron safety and supervise operations in apron to ensure the compliance of ground operations.
c. (Ground Handling Agents and Fixed-Base Operators) is responsible for establishment of company's operating manuals in compliance with the minimum standards specified by the airport.

4.11.3 Protection from Jet Blasts

Specify airport's procedures for protection from jet blasts.

Example:

To prevent jet blasts and propeller wash during take-off and landing of the aircraft, the airport set up (Procedures) as contained in (Specify).

Ground handling or fixed-base operator personnel shall be trained in apron safety and attain recurrent training every year.

4.11.4 Aircraft Refueling Operations

Specify airport's procedures aircraft refueling operations.

Example:

Air carriers, ground handling operators, fixed-base operator, and fuel handling agent have responsibility to comply with the airport refueling standards set forth by the airport, contained in [airport document / circular / notice].

4.11.5 Apron Sweeping

Specify airport's procedures for apron sweeping.

Example:

Prior to take-off and landing of aircraft, (Airport Responsible Person) will inspect FOD.(Ground Handling or Fixed-Base Operator Responsible Person) shall inspect apron area prior to aircraft parking. In case there are FOD in large quantities, upon receiving the report,(Airport Responsible Person) will sweep the apron area. (Airport Responsible Person) and (Air Carrier Responsible Person) will joint inspect apron area once sweeping is finished.

4.11.6 Apron Cleaning

Specify airport's procedures for apron cleaning.

Example:

(Name) Airport will clean the apron when requested by users in airside or when a daily airport inspection results in the need of cleaning. The airport will use a proper cleaning agent suitable for types of contaminations.

An aircraft fueling agent is responsible for prevention of spillage and cleaning of such spillage. Spillage shall be contained in a limited area and not contaminate water drainage or water body. Cleaning shall be done immediately. If the fueling agent cannot clean the spillage, the airport will take over the action. The expenses caused by such spillage shall be charged to the fueling agent.

Ground handling agents, fixed-base operator, and air carriers using the airport shall make sure that the apron is clean from FODs or contaminations after the aircraft leave the apron.

4.11.7 Incident and Accident Reports

Specify airport's procedures for incident and accident reports.

Example:

Any accident and incident shall be reported through the airport safety management system. The person causing the incident and accident or the witness shall also report their supervisors immediately.

The Accident and Incident Reporting Form in Annex (#) shall be used. The person causing the incident and accident or the witness shall give detailed information to (Airport Responsible Person) without hesitation.

For immediate hazards or accident / incident requiring immediate follow-up actions, airport staff shall call [airport operation centre] at [phone number] without delay.

4.11.8 Safety Compliance Monitoring

Specify airport's procedures for safety compliance monitoring to ensure ground operations' safety and compliance to standard. An airport shall establish safety compliance monitoring period based on air traffic volume.

Example:

For safety operations in the apron, the airport will set up a minimum standard for ground handling operations. The airport randomly inspects the ground handling procedures to ensure the compliance to the safety standards.

Non-compliances shall be reported to (Airport Operations Officer) and via the airport safety report system. The airport may cease a non-compliance operation that may be harmful.

4.12 Airside Vehicle Control

Particulars for airside vehicle control including applicable traffic rules, driving permits, and enforcement.

4.12.1 Purpose

The aim of airside vehicle control is to prevent accident/incident involving vehicles / equipment, to ensure the safety of ground handling operations and minimize risks and hazards of ground operations.

Example:

The purpose of the Airside Vehicle Control Handbook (the Handbook) is to ensure the safe airside operation of vehicles on (Name) Airport. The Handbook is compiled as Annex (#) to this Manual and forms part of it. However, it is issued as a separate document to this manual.

4.12.2 Responsibility

Define responsibility for persons involving in airside vehicle control. This may include an airport manager, airside operations, airport security, airport safety and other related people.

Example:

a. The Airport Manager has overall responsibility for the development and implementation of procedures and provision of resources for the control of persons and vehicles entering and operating on the airside of (Name) Airport.
b. The Airport Operations Supervisor is responsible for ensuring that the provisions of the Handbook are implemented, for conducting audits of Approved Issuing Authorities, and authorizing in writing the appointment of Approved Issuing Officers. The Airport Operations Supervisor also is responsible for carrying out instruction, testing and maintaining records of persons approved for an Authority to Drive in Airside (ADA).
c. The Airport Security Officer is responsible for screening personnel entering and exiting airside.
d. Companies wishing to operate a vehicle airside on (Name) Airport are responsible for complying with the Handbook while driving in the airside.

4.12.3 Applicable Traffic Rules

Explain how an airport enforce driving rules. The enforcement may also include privilege to drive in airside, airside driving traffic rules, types of airside driving permits, and training topics.

Example:

Companies and persons requiring access to airside for aviation business purposes must obtain sufficient copies of the Airside Vehicle Control Handbook to provide one for each airside driver. This is the regulatory document for drivers and provides the basis for testing applicants for an Authority to Drive Airside.

The airside operation of each vehicle must be approved by the issue of an Authority for Use in Airside (AUA), which must be displayed on the vehicle. For this purpose, the term vehicle includes any motorized equipment used in aircraft servicing or maintenance.

Each driver must be approved to operate a vehicle airside on (Name) Airport by the issue of an Authority to Drive in Airside (ADA). The ADA will specify the areas where a driver is authorized to operate:

(Specify Categories of Permits)

Approved Issuing Authorities are required to nominate Approved Training Officers for endorsement by the Airport Operations Supervisor. Applicants for an Authority to Drive Airside are to be trained and tested by Approved Training Officers for their

knowledge of:

(Specify topics included in Airside Driving Training)

The Airport Operations Supervisor will audit each Approved Issuing Authority in relation to the above items to ensure that an adequate training course is provided and that records are maintained to demonstrate a uniform standard of training and testing is being provided.

In addition to the above, Approved Issuing Authorities are expected to provide company and equipment/plant specific training and other items such as aircraft towing and pushback procedures to the concerned drivers.

4.12.4 Enforcement

Explain how an airport inspect and enforce its traffic rules. Penalties for violations should be identified in this section.

Example:

a. (Airport Responsible Person) will randomly inspect vehicles and driving activities for noncompliance.
b. Operations Officers will log any breaches of the airside driving rules, and report them to the owner of vehicles so that appropriate action may be initiated against offending drivers. The (Airport Responsible Person) will report the breaches of the airside driving rules to the Airport Manager.
c. Breaches that constitute an incident require submission of an Incident Report form provided in the Airport Safety Management Manual.
d. A demerit point system is in place for breaches of the Airside Vehicle Control Handbook driver rules. Demerit points are held for a period of [two] years. An Authority to Drive in Airside will be withdrawn for a period of [one] month if a driver accumulates more than [12] demerit points. Subsequent accumulation of an additional [12] demerit points may result in permanent withdrawal of an Authority to Drive in Airside.
e. Demerit points scale

Violations	Points
Exceeding Speed Limit	
4 - 9 Km/h	2
10 - 14 Km/h	3
15 - 19 Km/h	4
More than20 Km/h	6
Failing to give way to an aircraft	4
Driving contrary to any other rules in the Airside Vehicle Control Handbook	3
Minor Accident[1]	3
Major Accident[1]	Immediate Suspension

[1] Regardless of driving history, the airport will consider the severity of an accident.

4.13 Wildlife Hazard Management

Particulars for wildlife hazard management including wildlife hazard mitigation, reporting wildlife hazard, wildlife hazard assessment, and wildlife control measurement.

4.13.1 Purpose

Define a purpose of wildlife hazard management. The purpose normally focuses on prevention and mitigation of wildlife hazards. However, the environment should be in mind when manage wildlife hazards.

Example:

The aim of this procedure is to minimize the hazard to aircraft operations created by the presence of birds and/or animals on or in the vicinity of the airport with the environment in mind.

4.13.2 Responsibility

Define responsibility for persons involving in wildlife hazard management. This may include an airport manager, airside operations, airport maintenance, and etc.

Example:

a. The Airport Manager has overall responsibility for the bird and animal hazard management program for (Name) Airport to minimize accident and incident rates.
b. (Airport Operations) is responsible for the implementation of the bird and animal hazard management program.
c. (Airport Maintenance) is responsible for wildlife habitat modification.

4.13.3 Reporting Wildlife Hazard

Define events requiring wildlife hazard report using CAA's wildlife hazard reporting form.

Example:

The airport will report wildlife hazard to the Civil Aviation Authority when these events occur.

a. A strike between wildlife and aircraft has been witnessed.
b. Evidence or damage from a strike has been identified on an aircraft.
c. Bird or other wildlife remains, whether in whole or in part, are found:
    i) Within 75 meters of a runway centerline or within 150 meters of a runway end unless another reason for the animal's death is identified or suspected.

ii) On a taxiway or anywhere else on or off the airport that there is reason to believe that it was the result of a strike with an aircraft.

d. The presence of birds or other wildlife on or off the airport had a significant negative effect on a flight

4.13.4 Wildlife Hazard Assessment

Explain wildlife hazard assessment methods. In case an airport has EIA or EIA Monitoring, an airport may use wildlife hazard management in the study. In addition, an airport shall collect statistics of wildlife control measurements for improvements. The expert advice from an ornithologist will be useful.

Example:

a. The airport collects wildlife data and wildlife attractants in vicinity of the airport. The data includes types, number, food sources, wildlife habitats, bodies of open water and reproduction sites.

b. A daily survey of wildlife is conducted during daily movement area inspection. The airport surveys the area in airport and its vicinity three times a year. The daily survey and seasonal survey results will be recorded and reported.

c. A yearly wildlife hazard assessment will be contained in EIA Monitoring. The details in the report will cover the followings:

i) Analysis of the event or circumstances that prompted the study.

ii) Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.

iii) Identification and location of features on and near the airport that attract wildlife.

iv) Description of the wildlife hazards to air carrier operations.

v) Recommended actions for reducing identified wildlife hazards to air carrier operations.

d. The results of the assessment will be passed to the airport ornithologist for analysis and presented in term of Risk Matrix.

e. The airport assesses the effectiveness of wildlife hazard management plan to improve the techniques used in wildlife hazard management plan.

4.13.5 Wildlife Hazard Management Program (WHMP)

An airport should establish Wildlife Hazard Management Program based on wildlife hazard management assessment. Wildlife Hazard Management Plan should include habitat modification, harassment, lethal method, and other measurements as necessary. The Plan shall take into account the expert advice from an ornithologist.

Example:

The airport establishes a wildlife hazard management plan based on wildlife hazard assessment derived from EIA Monitoring Report.

The airport has four wildlife hazard mitigation measurements which are habitat modification, harassment techniques, wildlife removal and aircraft flight schedule modification. The details of these techniques are contained in (Name) Airport Wildlife Hazard Management Plan.

4.14 Obstacles Control

Particulars for aerodrome obstacles control, obstacle monitoring, and obstacle reporting. Obstacles are both natural and manmade.

4.14.1 Purpose

Specify the purpose of obstacle control on airport and in vicinity. The control of obstacles protects an aircraft using an aerodrome.

Example:

The aim of these procedures is to ensure that suitable provision is made to monitor and control the erection of temporary and permanent structures that may adversely impact aircraft operations.

4.14.2 Responsibility

Define responsibilities of persons involving in obstacles control such as an airport manager and airport operations.

Example:

a. The Airport Manager has overall responsibility for establishing procedures to monitor and notify the presence of obstacles to CAA, and to control the erection of temporary and permanent structures in the vicinity of the airport.
b. (Airport Responsible Person) are responsible for day-to-day monitoring of the OLS and PANS-OPS to detect unapproved obstacles, report to the Airport Manager and to take measures to have them removed or lowered to a safe operational height.

4.14.3 Administration of Obstacle Control

Explain how an airport monitor and control obstacles on and in vicinity of airport, control of construction works, and report to CAA.

Example:

a. Visual inspections of obstacles will be conducted during daily airport inspection by (Responsible Person)
b. If a temporary obstacle is found, (Responsible Person) will:
    i) Immediately inform an air traffic service unit.
    ii) If the obstacle is in airport perimeter, the airport will immediately remove it. If not, (Responsible Person) will negotiate with the owner of the obstacle to lower or remove the obstacle.
    iii) If the negotiation fail, the airport will:
        1) Report to a local authority to help with negotiation

2) Inform and consult with air traffic service unit to find a mitigation method if the obstacle is in Take Off or Approach Surface, or the Obstacle Free Zone (for airports with precision CAT II or III approaches). The airport may reduce a declare distance if necessary.

3) If the obstacle is outside of Take Off or Approach Surface, or the Obstacle Free Zone (for airports with precision CAT II or III approaches), (Airport Responsible Person) issues NOTAM and liaise with ATC to limit certain types of operations.

iv) The airport will cancel the NOTAM and inform ATS when the obstacle is removed.

c. (Airport Responsible Person) will assess and inspect an object in OLS as soon as it is reported. If the object is an obstacle, the (Responsible Person) will issue NOTAM and report CAA immediately.

4.15 Removal of Disabled Aircraft

Details removal of disabled aircraft. Normally, an aircraft owner or air carrier has a responsibility to remove disabled aircraft. However, an airport may intervene when the aircraft owner cannot remove the disabled aircraft in a timely manner. Therefore, an airport should prepare tools, equipment, and materials necessary for removal of disabled aircraft. An airport may own or make a contract with another airport or suppliers in order to have a quick support. A disabled aircraft removal plan can be incorporated in an Aerodrome Emergency Plan.

An airport may also have the removal plan in this manual. The contents of the plan shall comprise of:

- Purpose
- Responsibility
- The roles of the aerodrome operator and the holder of the aircraft certificate or registration
- Arrangements for notifying the holder of the certificate of registration
- Arrangements for liaising with the air traffic control unit
- Arrangements for obtaining equipment and personnel to remove the disabled aircraft
- The names, role and telephone numbers of persons responsible for the removal of disabled aircraft

4.15.1 Purpose

Example:

The aim of the Disabled Aircraft Removal Plan is to provide for an efficient, coordinated response to quickly and safely remove a disabled aircraft that has caused temporary closure of a runway, taxiway, or affected the OLS.

The details of disabled aircraft removal are contained in the (Name) Airport Aircraft Disabled Removal Plan which comprise a part of the (Name) Airport Emergency Plan. The plan covers:

- The roles of the aerodrome operator and the holder of the aircraft certificate or registration
- Arrangements for notifying the holder of the certificate of registration
- Arrangements for liaising with the air traffic control unit
- Arrangements for obtaining equipment and personnel to remove the disabled aircraft
- The names, role and telephone numbers of persons responsible for the removal of disabled aircraft

4.16 Handling of Hazardous Materials

4.16.1 Purpose

Define the purpose of the procedures related to handling of hazardous materials to ensure safe delivering, handling, storing, and disposing of hazardous materials.

Example:

The aim of these procedures is to ensure the safe handling of hazardous materials or dangerous goods on airport, including:

- Explosives
- Gases
- Flammable Liquids
- Flammable Solids
- Oxidizing Substances and Organic Peroxides
- Toxic Substances and Infectious Substances
- Radioactive Materials
- Corrosive Substances
- Miscellaneous Dangerous Substances and Articles

The procedures are intended to ensure both public safety and the continued safety of aircraft operations.

4.16.2 Responsibility

Define responsibilities of persons involving in Handling of Hazardous Materials such as an airport manager, airport operations, air carriers, fueling operators, etc.

Example:

a. The Airport Manager has overall responsibility for establishing procedures to ensure the safe handling of hazardous materials at the Airport by providing appropriate storage area, qualified personnel, and resources for handling of hazardous materials.
b. The Chief of RFFS has the responsibility to provide immediate response to handle accidents and incidents involving hazardous materials that take place in the movement area.
c. The Senior Operations Officer is responsible for supervising overall procedures including storing, transporting, and disposing of hazardous materials.
d. Ground handling operators and fixed-base operators involving in fueling operations are responsible for safety inspection of their fueling facilities and equipment and establishment of their safety procedures for storing and dispensing of fuel.

4.16.3 Hazardous Materials Storage Area

An airport should designate a specific area to store flammable liquids, aviation fuel, and other hazardous materials. [Department of Industrial Works] has set up requirements for hazardous materials storage.

Example:

a. Flammable Liquids

Flammable Liquids shall be stored only in designated and approved storage units. No one shall store flammable liquids with in the airport property without a permission from the airport.

b. Any Other Hazardous Materials

Other hazardous materials shall be stored in the area approved by the airport. The storage area shall meet the requirements of the [Department of Industrial Works].

4.16.4 Methods to be Followed for the Delivery, Storage, Dispensing and Handling of Hazardous Materials

Explain methods to be followed for the delivery, storage, dispensing and handling of hazardous materials according to the requirements of the Department of Industrial Works. The methods should also include emergency procedures when there is a leakage.

Example:

a. Delivery of Hazardous Materials
   i) Drivers shall ensure that hazardous materials are properly secured and covers or tarps are securely lashed before moving off. Hazardous materials shall be delivered by a vehicle designed to safely deliver the specific types of hazardous materials.
   ii) Packages with orientation markings (i.e. arrows) must be secured in a manner that will keep the package in the correct position (arrows up) throughout the transportation process.
   iii) Sources of ignition, such as smoking and open flames, are prohibited where hazardous material is delivered.
   iv) The vehicle's parking brake must be engaged during the loading/unloading process.
b. Storage
   i) Hazardous materials shall be stored in the area approved by the airport.

ii) Hazardous materials shall be segregated as required by the [Department of Industrial Works].

c. Handling of Hazardous Materials

i) Hazardous Material Incident

1) Contact (Airport Rescue and Fire Fighting)
2) Do not come in contact with the substance
3) Identify the chemical/s and hazards involved – check Material Safety Data Sheet (MSDS). Use the information on the physical and chemical properties of the material to derive response and/or evacuation procedures.
4) Raise the alarm – evacuate non-contaminated persons from the area. Isolate contaminated individuals and treat as per MSDS. Isolate affected persons and keep on site.
5) Assist the emergency response personnel and provide the MSDS if the chemical is known.
6) Ensure that hazardous materials will not spill into water or drainage.
7) Clean up the area and refill the emergency kit.

ii) Disposal of Hazardous Materials

1) Hazardous chemical waste, absorbent materials, waste water, expired chemicals, contaminated containers, contaminated pallets, and other contaminated objects shall be disposed of properly. The disposal methods are specified in MSDS. The airport may contract a certified company for disposal of hazardous materials.
2) Contaminated containers can be disposed or reused if treated properly.

4.17 Low Visibility Operations

Particulars for low visibility operations, runway visual range measurement, runway visual range report, and low visibility procedures. Low visibility procedures only applicable for an airport with Cat II and III Approach and/or Low Visibility Take-off. An airport may state that this is not applicable in case an airport does not have Cat II and Cat III Approach and/or Low Visibility Take-off.

4.17.1 Purpose

Specify a purpose of low visibility operation procedures at an airport. The purpose should mainly focus on safeguarding of aircraft operations and people in the airside.

Example:

The aim of these procedures is to provide pilots with information relevant to aircraft departures / arrivals in conditions of low visibility at the Airport.

4.17.2 Responsibility

Define responsibilities of persons involving in low visibility operations such as an airport manager, airport operations, airport security, and etc.

Example:

a. The Airport Manager has overall responsibility for ensuring that low visibility procedures are developed and sufficient resources are available.
b. (Airport Operations) is responsible for carrying out Runway Visibility Range measurement when requested by ATS.
c. (Airport Security) is responsible for controlling the access to airside when low visibility procedure is activated. Unauthorized person shall not allow to access the airside under low visibility operations.

4.17.3 Measurement and Reporting of Runway Visual Range

Explain runway visual range measurement and reporting procedures.

Example:

a. Runway Visual Range Measurement
   i) (Airport Responsible Person) measures Runway Visual Range by counting the runway edge lights. (Airport Responsible Person) will park a truck at a designated point and stand on the truck.
   ii) (Airport Responsible Person) counts the runway edge lights and convert the number of runway edge lights to the Runway Visual Range.

iii) The airport will have two (Airport Responsible Persons) counting the runway edge light. The number used for conversion shall be the arithmetic mean of the results from the (Airport Responsible Persons).

iv) The airport may use a pilot report for the runway visual range conversion. The following table will be used to converse visibility to the runway visual range.

Lighting Elements in Operations	RVR/CMV = Reported Meteorological Visibility multiplied by:	
	Day	Night
High intensity approach and runway lighting	1.5	2.0
Any type of lighting installation other than above	1.0	1.5
Nolighting	1.0	N/A

A conversed runway visual range shall not be used if it is below 800 meters or if there is a more precise measurement method available at the airport at that time.

v) (Name) Airport will multiply meteorological visibility by 1.0 during the day and 1.5 during the night.

b. Runway Visual Range Report

i) The (Airport Responsible Person) will report runway visual range below (Specify) meters to ATS via telephone or radio.

ii) (Airport Responsible Person) will report the following conditions to ATS:

1) Low Visibility Condition Warning is a warning visibility before activating low visibility operations. RVR for Low Visibility Condition Warning is (Specify) meters but not below (Specify) meters.

2) Low Visibility Condition Phase A is a visibility that Low Visibility Procedure is activated. RVR for Low Visibility Condition Phase A is (Specify) meters but not below (Specify) meters.

3) Low Visibility Condition Phase B is a visibility below (Specify) meters.

iii) ATS will inform all operators in the airside the low visibility conditions via (Specify). The report includes the measured runway visual range.

iv) All operators in the airside shall activate their low visibility procedures when informed by the ATS.

4.17.4 Low Visibility Procedures

Explain low visibility procedures including low visibility warning, information distribution, Low Visibility Phase A, Low Visibility Phase B, and cancellation of low visibility procedures.

Example:

a. Low Visibility Warning

i) ATS informs all operators in the airside.

ii) (Airport Security) limits airside access to authorized person only.

iii) (Airport Operations)coordinates with contractors or airport maintenance staffs in maneuvering area for evacuation to safe area and secure the area.

iv) (Airport Rescue and Fire Fighting) prepares for emergency response.

v) (Airport Operations) inspects runway and runway lights. Any unserviceable lights or hazards shall be reported to (Airport Maintenance) or (Responsible Person) for corrective maintenance. The hazards shall be reported to ATS.

vi) (Airport Maintenance) shall fix the hazard conditions as soon as possible.

vii) Air carriers, ground operators and personnel associated with airside operations inform their subordinates about low visibility condition warning. They may continue their duties. Vehicles with siren lights may stay in the airside, but vehicles without siren lights shall not be in the airside. The drivers shall drive carefully, turn on low beam and siren at all times.

b. Low Visibility Phase A

i) ATS activates low visibility procedures and informs all operators in the manoeuvring area to cease operations and evacuate from the maneuvering area until the low visibility operation ends. Runway lights shall be turned on. Runway and taxiway crossing shall be limited.

ii) (Airport Security) limits the number of personnel accessing to the airside. Only personnel who has a duty in the airside during the low visibility operation is allowed to access.

iii) (Airport Operations) informs passengers in the terminal about low visibility operations and possibility of a delay. Follow-me vehicles shall be ready to operate when requested. (Airport Operations) shall inspect ground vehicles to ensure that the drivers turn on low beam and siren.

iv) (Airport Rescue and Fire Fighting) prepares for emergency response.

v) Air carriers, ground operators and personnel associated with airside operations inform their subordinates about low visibility condition warning. They may continue their duties. Vehicles with siren lights may stay in the airside, but vehicles without siren lights shall not be in the airside. The drivers shall drive carefully, turn on low beam and siren at all times. Runway and taxiway crossing shall be kept to a minimum, done with cautions and only when receive ATC clearance. Workers shall not remain in maneuvering area.

c. Low Visibility Phase B

i) ATS activates Low Visibility Procedures Phase B and informs all operators to evacuate from the maneuvering area. ATS may use the same procedures as Low Visibility Phase B.

ii) (Airport Security) limits the number of personnel accessing to the airside. The (Airport Security) will not allow anyone except people associated with aircraft operations to access the airside.

iii) (Airport Operations) informs passengers in the terminal about low visibility operations and possibility of a delay. Follow-me vehicles shall be ready to operate when requested. (Airport Operations) shall inspect ground vehicles to ensure that the drivers turn on low beam and siren. The (Airport Operations) will coordinate evacuation of all vehicles with no siren.

iv) (Airport Rescue and Fire Fighting) prepares for emergency response.

v) Air carriers, ground operators and personnel associated with airside operations inform their subordinates to ***ceases all operations***. Only allow vehicles with siren in the airside. Airside drivers shall turn on low beam and siren at all times. All operators shall limit their operations to minimum. All people in the maneuvering area shall be evacuate. Do not tow an aircraft except ATC clearance is granted and a follow me vehicle is available.

d. Cancellation of Low Visibility Operations

i) When meteorological service provider or (Airport Responsible Person) observe that RVR become normal or improve from Phase B to Phase A, inform the ATS.

ii) ATS announce cancellation or changes the level of Low Visibility Procedures to all operators.

4.18 Protection of Site for Navigation Aids

Particulars of the procedures should be provided for the protection of sites for radar and radio navigational aids located on aerodrome to ensure that their performance will not be degraded. The procedures should also include control of activities in the vicinity of radar and navigation aids installations, ground maintenance in the vicinity of these installations, and supply and installation of signs warning of hazardous microwave radiation.

4.18.1 Purpose

Define objectives of the procedures for the protection of sites for radar and radio navigational aids. The purpose should focus on controlling works in vicinity of navigation aids and protecting people and equipment from radiation.

Example:

The aim of these procedures is to ensure there will be no interference to the operation of navigation aids at the Airport caused by the erection of structures, or work activities within the vicinity of a navigation aid or associated cabling.

4.18.2 Responsibility

Define responsibilities of persons involving in protection of sites for navigation aids including an airport manager, airport maintenance, airport operations, and etc.

Example:

a. The Airport Manager has overall responsibility for establishing procedures to ensure that activities under his direct or indirect control do not have an adverse impact on the safe operation of radar and Navaids.
b. The Works Project Manager, or any other staff member controlling any work activity on the airport, is responsible for informing airport operations about effects on cables associated with the facilities.
c. Airport Operations is responsible for advising ATC of any works proposals that may affect the operation of radar or Navaids on the airport

4.18.3 Arrangements for the Control of Activities in the Vicinity of Radar and Navaids Installations

Explain arrangements for the control of activities in vicinity of radar and navigation aids including communicating with ATC and work safety in the area to ensure safety and performance of navigation aids.

Example:

a. The Airport Manager's nominees with responsibility for airport works are required to give prior notification to ATC of:
   i) Work activities in the vicinity of radar and Navaids on the Airport which might affect the signals to and from those facilities; and
   ii) Proposed excavation work within 3m of cables associated with the facilities.
b. This advice may be either verbal or provided formally during the planning stage of a MOWP or PERCOW.
c. The Airport Manager will prepare a Permit to Commence Work (PERCOW) or a Method of Works Plan MOWP) for any activity that may affect aircraft operations by causing interference with a radar or Navaid, or its signal to aircraft. Planning for such work will include input from ATC.
d. ATC is to establish any restrictions necessary. A copy of any MOWP or PERCOW issued for such works is to be forwarded to ATC for comment.
e. The Works Project Manager and WSO will ensure that all persons involved in works on the airport understand and comply with the restrictions imposed to protect the radar, Navaids, and their associated cables. This applies to staff, sub-contractors, and any other organization required to carry out work at the airport.
f. (Name) Airport installed fence and lock at VOR/DME and NDB stations to prevent unauthorized pedestrians interfering radio signal.

4.18.4 Arrangement for Ground Maintenance in the Vicinity of these Installations

Explain arrangement for ground maintenance in vicinity of radar and radio navigation aids to prevent hazards and degraded performance of navigation aids.

Example:

a. (Name) Airport maintains the area around navigational aids to ensure there is no obstacles to radio signal. The airport conducts the area inspection at the same time with daily inspection and periodic maintenance program.
b. (Airport Staffs) accessing the maintenance area shall follow airside access procedures.
c. (Airport Maintenance) is responsible for preventive and corrective maintenance of navigational aids and the surrounding areas.

4.18.5 Arrangements for Supply and Installation of Signs Warning of Hazardous Microwave Radiation

(Name) Airport inspects warning signs on the fences surrounding the navigational aids. The signs shall be visible and shall not be blocked by vegetation. (Name) Airport also installs markers for ILS critical area. The markers are made of a material that do not interfere with radio navigational aids.

SECTION 4.19 REPOERTING OF RUNWAY SURFACE CONDITION

Refer to Part 5 Section 1 of this Manual for the contact details of those persons identified as having responsibility for implementing the procedures detailed in this Section

4.19.1 Purpose

The aim of these procedures is to ensure that the aerodrome staff is equipped enough to meet the requirement of new global reporting system and format for assessing and reporting runway surface conditions applicable as of 05 November 2021.

4.19.2 Responsibilities

a) The (Airport Manager) has the overall responsibility for ensuring that procedures are established and trainings & resources are provided for assessment and reporting of percentage of coverage and depth of contaminant for each third of runways in order to ensure that CAA standards are met.

b) The (Airport Shift Supervisor) has the responsibility for ensuring that, when required, runway surface assessment are satisfactorily carried out and that appropriate actions/ reporting takes place as a result of those assessments and as per reporting protocol. He is also responsible for collection of data, production of RCR, dissemination of information to ATS/AIS, and timely updating of RCR. He is also responsible for coordination with other stakeholders such as ATS, Meteorology, airlines and aircraft operators.

c) The (AIS Officer) is responsible for publication and updating of RCR report in SNOWTAM format as given in Appendix A to this section.

4.19.3 Legislation, Standards and Technical References

Regulation (XYZ) requires the aerodrome operator to assess aerodrome surface conditions and disseminate such information through the relevant SNOWTAM/ATS/AIS.

As per Regulation (XYZ.1) the aerodrome operator is expected to Develop procedures for the collection of data, production of RCR, dissemination of information to ATS/AIS, and updating of RCR.

Regulation (XYZ.2) requires aerodrome operator has to identify personnel who would be responsible for GFR related tasks and these personnel are adequately trained.

This section is based on the CAA guidance material (Aerodrome Advisory Circular xx/yy dated --/--/2021)

4.19.4 Runway Surface Condition Reporting

4.19.4.1 (RCR assessor) evaluates the runway surface conditions whenever water, snow, slush, ice or frost are present on an operational runway and assigns a runway condition code

(RWYCC) along with a description of the runway surface for use by the flight crew for aeroplane performance calculations.

(RCR assessor) shall report RWYCC for each third of the runway assessed and shall ensure that the assessed information is provided to the AIS/ATS in the correct format and subsequently must report significant changes without any delay to AIS/ATS.

The information so reported shall be compliant with the RCR which consists of aeroplane performance calculation section and situational awareness section as outlined in CAA (Aerodrome Advisory Circular xx/yy dated --/--/2021)

(RCR assessor) shall initiate updating RCR when a change in the runway surface condition used in the runway condition report is considered significant. The significant change shall be considered whenever there is any change in the RWYCC, any change in contaminant type, any change in reportable contaminant coverage, any change in contaminant depth and any other information, for example a pilot report of runway braking action, which according to assessment techniques used, are known to be significant. Refer to CAA (Aerodrome Advisory Circular xx/yy dated --/--/2021) for coverage of contaminant and its depth.

Part 5 – Aerodrome Administration and Safety Management System

5.1 Organization Structure

Please Insert Aerodrome Organizational Chart here

5.2 Roles and Responsibility

Please specify roles and responsibility of each key positions in the aerodrome organizational chart. The positions may include an airport director, airport operations manager, building manager, aircraft rescue and fire fighting manager, etc.

Example:

5.2.1 Airport Director

a. Supervise and coordinates with airlines, general aviation, and military tenants use of airport facilities
b. Review airport tenant activities for compliance with terms of leases or other agreements
c. Supervises enforcement of aircraft air and ground traffic and other applicable regulations
d. Confer with airlines, tenants, the Myanmar DCA, and others regarding airport regulations, facilities, and related matters
e. Participates in planning for increased aircraft and passenger volume and facilities expansion
f. Determines and recommends airport staffing requirements
g. Coordinates airport activities with construction, maintenance, and other work done by departmental staff, tenants, public utilities and contractors
h. Manage safety and security of the airport to ensure the compliance with CAA standards
i. Promotes acceptance of airport oriented activities in surrounding communities
j. Promotes air traffic and other businesses to the airport

5.2.2 Airport Operations Manager

a. Enforcing operating and security rules, regulations, and procedures concerning aircraft operations and landside operations
b. Inspecting conditions of airfield lighting, runway, taxiway, and ramp area
c. Inspecting the airport for daily operations readiness
d. Correcting hazardous conditions

e. Coordinating airside and landside activities with maintenance and security personnel
f. Assisting in all emergency calls and disasters
g. Investigating and reporting on complaints and disputed airport operations

5.3 Airport Committees

Please describe all airport committees in this section. The committee(s) should be responsible for safety, security, emergency, facilitation or other committees as necessary. There may be one or more committees depending on the complexity of airport operations.

Example:

Airport committees include;

1. Airport Safety Committee
2. Airport Security Committee
3. Airport Emergency Committee
4. Airport Facilitation Committee
5. Runway Safety Team

The details of each committee are contained in (Specify) and comprise a part of this manual.

5.4 Aerodrome Personnel Qualifications & Procedures

5.4.1 Training Program

Please specify Airport Training Program or Training Methods for all positions involving in airport operations and key management such as airport manager, airport safety personnel, airport operations personnel, airport maintenance personnel, etc. The aerodrome operator may refer to the airport training program as a separate document.

Training program shall indicate that the airport personnel are qualified and be able to safely perform their duties.

5.4.2 Training and Checking Procedures

Please specify the airport training regime, procedures, and assessment processes. The methods used to ensure that continuous assessments and proficiency checks are to take place in roles that applicable.

The roles may include, but not limited to;

- Airport Manager
- Airport Operations

- Airport Maintenance
- Airport Safety
- Airport Security
- Airport Rescue and Fire Fighting

5.5 Exemptions and Deviations

5.5.1 Exemptions

The aerodrome operator shall summarize the current exemptions for the airport that have been issued by the CAA. The table below is an example:

Reference	Period	Description
####	4-May-2003 or until withdrawn	Embraer 120 operations on Taxiway Romeo – Exemption against non-standard width
####	Valid until varied or withdrawn	Dash-8 operations on Taxiway Romeo – Exemption against non-standard width

To have CAA issued exemptions, the aerodrome operator shall conduct an Aeronautical Study and it must be approved by the Director General of the Civil Aviation Authority.

5.5.2 Deviations

In emergency conditions requiring immediate action for the protection of life or property, the aerodrome may deviate from any requirement of CAA, or the Aerodrome Manual, to the extent required to meet that emergency. The aerodrome operator who deviates from a requirement under this section must, within 1 day after the emergency, notify the Civil Aviation Authority of the nature, extent, and duration of the deviation. When requested by the Civil Aviation Authority, the Aerodrome Operator must provide the details of such deviation in writing.

5.6 Safety Management System

Please specify airport safety management system in accordance with CAA's aerodrome manual standard. The particulars of safety management system in this section should be referred to the Airport Safety Management Manual which comprises a part of this manual.

Example:

(Name) Airport has a separated manual for airport safety management system. The details in (Name) Airport Safety Management Manual will be in accordance with the requirements of CAA.

ABBREVIATIONS

ATC - Air Traffic Control

ANNEX

1. Aerodrome Emergency Plan

EXHIBIT

1. Aerodrome Layout Plan