DCA-GM-AGA 04

Guideline for the preparation of an Aerodrome Manual

First Edition

August, 2011

Department of Civil Aviation

Ministry of Transport, Myanmar

FOREWORD

This Manual is intended to provide guideline for aerodrome operators when they prepare their Aerodrome Manual. It is vital the prepared Aerodrome Manual to be complied with MCAR Part 139 and associated with applicable standards and procedures.

Aerodrome Manual is a fundamental requirement and essential document in implementing aerodrome certification process. The manual shows that the aerodrome conforms to the national regulations and ICAO SARPs. It is a reference document and an agreement between the regulator and the operator. It is also the reference guide for conducting site inspections.

As the aerodrome manual is a living document, the aerodrome operators require for the amendment of the manual to ensure its accuracy and content from time to time. It is essential that the contents and procedures of aerodrome operator's manual are an accurate reflection of current practices.

If the aerodrome operators become aware of a divergence from these procedures, or if compliance with these procedures is impossible or impracticable for any reason, they must advise to the Director, Aerodrome Standards and Safety Division, immediately.

Tin Naing Tun

Director General

AMENDMENT RECORD

The amendments listed have been incorporated into the following amendments.

Edition	Subject	Contents of Amendments	Signature	Issued Date

[Enter Name of Airport]

AERODROME MANUAL

[Enter Date for current version]

FOREWORD

The *{Insert Airport name*} Aerodrome Manual has been prepared pursuant to MCAR Part 139, Aerodrome Certification.

This Manual is designed to serves as the basic reference to the DCA's Aerodrome Safety Inspector for conducting inspections for purposes granting an aerodrome License and certificate and for subsequent safety inspections and Audits.

The documents such as (Airport Emergency Plan, Safety Management System, etc..) have been prepared separately but should be regarded as Annexes to, but components of, the Aerodrome Manual.

The Department of Civil Aviation requires the Aerodrome Operator to operate and maintain *{Insert name}* Airport in accordance with the procedures set out in the Aerodrome Manual.

Therefore staff acting in accordance with the procedures are largely indemnified against personal liability claims, should their actions for some reason endanger the safety of aircraft operations.

It is essential that the procedures documented in this manual are an accurate reflection of current practices. If staff become 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 {*Airside Safety Manager*} immediately. Additionally staff are encouraged to query these procedures if the intended results can be achieved in a safer, more cost effective, efficient or reliable manner.

The Management of the aerodrome is committed to a safe, secure and efficient operation of the aerodrome and shall comply with all the applicable regulations, standards and procedures.

Supervisors should ensure they have a copy of each relevant publication available for reference by staff who are responsible for implementing a procedure.

(Signature)

(Airport Manager (or) Airport In-Charge) dd/mm/yy

TABLE OF CONTENTS

Part 1 - General

1.1 Purpose and Scope

The purpose of the Aerodrome Manual is to provide

- Confirmation of an aerodrome operator's ability comply with the aviation legislation applicable to aerodrome operations;
  - It contains detail information regarding the aerodrome site, facilities, services, equipment, operating procedures, organisation and management for *{Insert name}* Airport.

- A reference document for
  - Use by staff of an aerodrome operator in their activities to operate and manage the activities and business of the Airport: and
  - Use by officers of the DCA in audit and inspection activities related to *{Insert name}* Airport.

1.2 Legal Requirement

As the operator of an aerodrome serving air transport operations, *{Insert name*} Airport is required by Myanmar Civil Aviation Requirements Part 139 to hold an Aerodrome Certificate.
The requirement for an Aerodrome Manual for {*Insert name*} Airport is prescribed in Myanmar Civil Aviation Requirements Part 139,139.77. A copy of this Manual has been provided to the DCA.

1.3 Conditions of Use

{Insert name} Airport operates {*24 hours per day*} for take-off and landing of aircraft and when it is so available it shall be so under equal terms and conditions to all persons and operators.

1.4 Aeronautical Information

All data relating to the aeronautical aspect of this aerodrome are published in the Myanmar Aeronautical Information Publication.
The {*Insert Person Name*} is responsible for complete and correct promulgation of data to AIS section of the DCA and maintain currency aerodrome information in the AIS system.

1.5 Recording Aircraft Movements

All data relating to the recording of aircraft movements is collected and recorded by Air Traffic Control.
The {*Tower team Leader*} is responsible for complete and correct collection recording and reporting to the Airport General Manager.

To insert Aircraft Movements Record Form

1.6 Obligation of the Aerodrome Operator

Under the regulations the operator of a certificated aerodrome is to:

- Comply with mandatory standards and practices;
- Employ an adequate number of qualified and skilled staff;
- Operate the aerodrome in accordance with the procedures set out in the Aerodrome Manual;
- No later than { *dd/mm/yy*} have established a safety management system;
- Arrange for audit of the safety management system and the management of airport organisations;
- Permit access to authorised DCA officers for inspection and testing purposes related to ensuring safety at the aerodrome;
- Make required notifications to the DCA, ATC or pilots;
- Conduct special inspections as necessary;and
- Remove obstructions on the aerodrome that are likely to be a hazard.

1.7 Procedure for amendment of the Aerodrome Manual

At least one complete and current copy of the approved Aerodrome Manual shall be maintained at the Aerodrome, and will be available for inspection by the Aerodrome Safety Inspector of the DCA. This copy will be maintained in the (*insert title*) office.
In order to maintain the accuracy of the information, the following procedure shall be followed to amend the Aerodrome Manual:

(1) The { *Airport Manager* } is responsible for maintaining the currency of the Aerodrome Manual and for the development, processing, issuance and control of amendments to this aerodrome manual. All copies of the aerodrome manual are numbered and issued in accordance with the distribution list.
(2) Proposed amendments to the Aerodrome Manual will be submitted to the DCA at least 30 days prior to the effective date.
(3) Upon approval by DCA, copies of the approved amendment/revision will be made and distributed to the holders of the Aerodrome Manual on the Distribution List.
(4) The Aerodrome Manual Amendment Pages will be completed and submitted with the amendment;
(5) Each page of the amendment will have the date of the amendment and the original approval date of the Aerodrome Manual.

1.8 Amendment Record

The amendment listed have been incorporated into the following amendments.

Edition	Subject	Contents of Amendments	Approved Date	Signature
----	--------	---------	dd/mm/yy	

1.9 Amendment Pages

The amendment pages have been incorporated into the following amendments.

Edition	Publication Date	Amendments pags	Inserted By
---	dd/mm/yy	xx	-----

1.10 List Of Effective Pages

Part	No. of pages	Version	Date of Issue
Foreword	x	---- Edition	dd/mm/yy
Table of Contents	x		
List of Effective Pages	x		
Amendment Record	x		
Part 1	xx		
Part 2	xx		
Part 3	xx		
Part 4	xx		
Part 5	xx		
Abbreviations	xx		
Exhibit	xx		
Annex	xx		
Total	xx		

1.11 Current Exemptions

The current exemptions granted to the aerodrome by the Authority are listed below:

a) *Insert any exemption(s)* that has been granted,
b) (insert effective date dd/mm/yy)
c) (Describe the conditions /restriction (if any) subject to which the exemption was granted)
d) (*Describe the procedures subject to which the exemption was granted)*
e) If no exemptions are in effect, state NONE.

1.12 Distribution List

Copies or portions of the Aerodrome Manual, including all revisions and amendments, shall be distributed to the following as appropriate:

1. The DCA
2. The Aerodrome standards & Safety Division
3. Airport Manager's Office;
4. Airport Maintenance Office(s);
5. Airport Operations/Safety Office;
6. Fixed Base Operators and Fueling Agents;
7. Air Navigation Safety Division
8. Aviation security Division
9. Flight Standards Division
10. Air Traffic Management Division
11. Communication Navigation and Surveillance Division
12. Apron Management Unit
13. Rescue and Fire Fighting
14. Aircraft Operator
15. Any other agencies with AEP responsibilities

Part 2 - Particulars of the aerodrome site

The details of aerodrome site to be included in the aerodrome manual.

2.1 (*Insert Aerodrome Name*) operates as a (international/domestic) Aerodrome with aircraft in service (*insert aircraft type*) with (*insert maximum take off weight*) stipulated under MCAR Part 139. The (*Aerodrome Name*) is operated by (*insert the name of the aerodrome operator*).

2.2 [*insert the aerodrome location chart*] showing the location of the aerodrome;

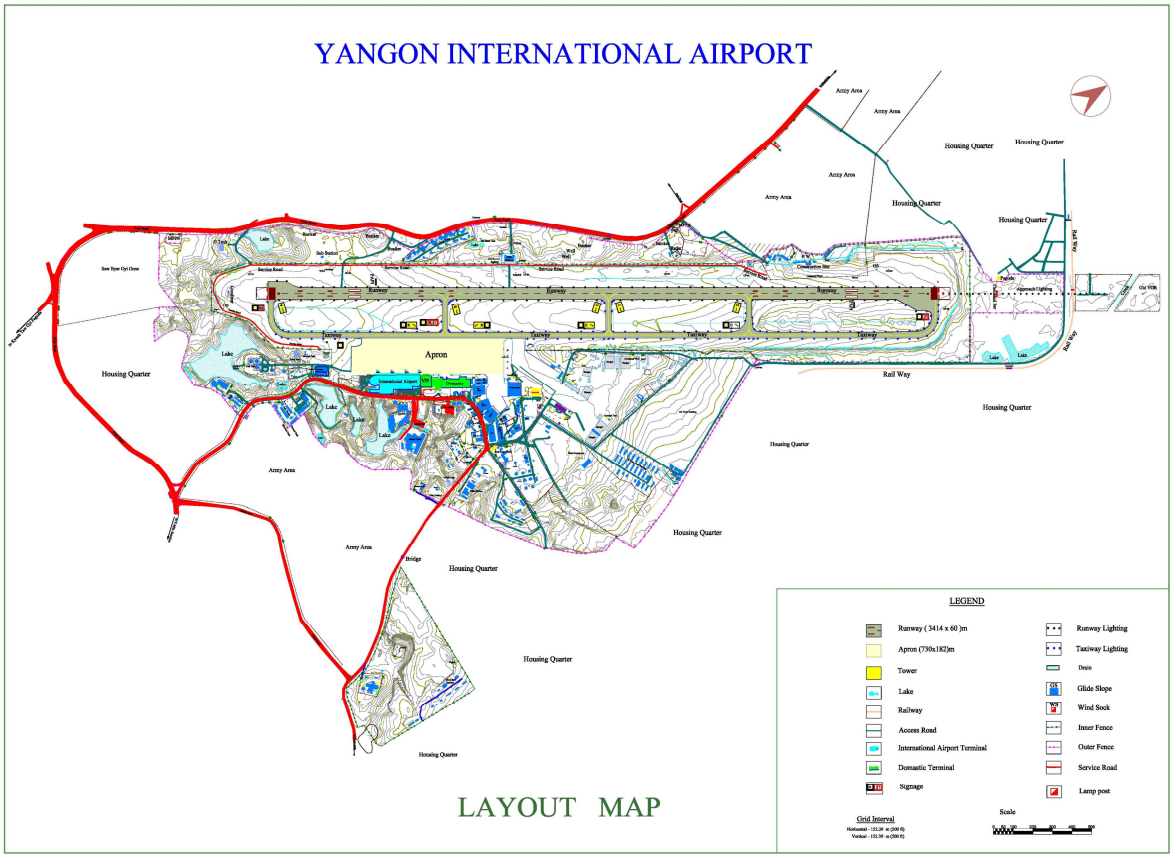
2.3 [*insert a plan/chart of the aerodrome*] showing the main aerodrome facilities for the operation of the aerodrome including, particularly, the location of each wind direction indicator;

2.4 [*insert a plan/chart of the aerodrome*] showing the aerodrome boundaries;

2.5 [*insert a Plan/chart of the aerodrome*] showing the distance of the aerodrome from the nearest city, town or other populous area, and the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome; and

2.6 *[insert particulars of land title of the aerodrome site]*

See Exhibit
Sample Aerodrome Plan



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

Land Description	Vol.	Folio

Part 3 – Particulars of the Aerodrome Required to be Reported to the Aeronautical Information Service – (AIS)

3.0 General

MCAR Part – 139.73 requires aerodrome operator to notify aerodrome data and information to AIS.

3.1 Address:

(Aerodrome Name)
Insert Mailing Address:
(City, State) Email

3.2 Location:

(a) the name of the aerodrome;
(b) the location of the aerodrome;
(c) the geographical coordinates of the aerodrome reference point determined in terms of the World Geodetic System - 1984 reference datum;
(d) the aerodrome elevation and Geoid undulation;
(e) the elevation of each threshold and Geoid undulation, the elevation of each runway end and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway;
(f) the aerodrome reference temperature;
(g) details of the aerodrome beacon;
(h) the name of the operator and the address, telephone and facsimile numbers at which the operator may be contacted at all times.

3.3 Aerodrome dimensions and related information

(a) runway – (insert) true bearing, (insert) designation number, (insert) length, (insert) width, (insert) displaced threshold location, (insert) slope, (insert) surface type, (insert) type of runway and, for a precision approach runway, the existence of an obstacle free zone;
(b) (insert) length, width and surface type of strip, runway end safety areas, stopways;
(c) (insert) length, width and surface type of taxiways;
(d) (Describe) apron surface type and aircraft stands;
(e) (Describe) clearway length and ground profile;
(f) (Describe) visual aids for approach procedures, i.e. Approach lighting type and visual approach slope indicator system (PAPI/APAPI and T-VASIS/AT-VASIS); marking and lighting of runways, taxiways, and aprons; other visual guidance and control aids on taxiways (including runway holding positions, intermediate holding positions and stop bars) and aprons, location and type of visual docking guidance system; availability of standby power for lighting;

(g) (insert) the location and radio frequency of VOR aerodrome checkpoints;

(h) (insert) the location and designation of standard taxi routes;

(i) (insert) the geographical coordinates of each threshold;

(j) (insert) the geographical coordinates of appropriate taxiway centre line points;

(k) (insert) the geographical coordinates of each aircraft stand;

(l) (insert) the geographical coordinates and the top elevation of significant obstacles in the approach and take-off area, in the circling area and in the vicinity of the aerodrome.

(m) (describe) pavement surface type and bearing strength using the Aircraft Classification Number – Pavement Classification Number method;

(n) (insert) one or more pre-flight altimeter check locations established on an apron and their elevation;

(o) (insert declared distances): take-off run available, take-off distances available, accelerate-stop distance available, landing distance available;

(p) (describe) disabled aircraft removal plan including the telephone/telex/ facsimile number and e-mail address of the aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the movement area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which the aerodrome is equipped to remove; and

(q) (describe) rescue and fire-fighting; the level of protection provided, expressed in terms of the category of the rescue and fire-fighting services, in accordance with the longest aircraft normally using the aerodrome and the type and amounts of extinguishing agents normally available at the aerodrome.

Part 4- Particulars of the Aerodrome Operating Procedures

4.1 Aerodrome Reporting

MCAR Part - 139.123 requires aerodrome operator to establish procedure to notify DCA and AIS for aerodrome operational condition or defect at the aerodrome that may affect the safe operation of aircraft.

4.1.1 Purpose

The aim of these procedures is to ensure that DCA 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.

4.1.2 Responsibilities

The *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.
Aerodrome personnel in the following positions are authorized to issue Aerodrome Condition Inspection Report to the Aerodrome Control Tower, ANSD, ATM, ASSD, AIS and Aircraft operators:

(i) *(Insert names, titles, and telephone number)* during normal working hours
(ii) (*Insert names, titles, and telephone number*) outside normal working hours

A copy of the Aerodrome Condition Inspection Report form is included in Annex--..

4.1.3 Aerodrome Conditions Reporting System

The following procedures will be used to report Aerodrome conditions and the operational status of associated navigational facilities

(a) Using Report Form

i) Specific NOTAM and Issued Date
ii) Print Out Form (*Annex*--)

(b) Notification Process

Aerodrome conditions: and the operational status of associated navigational facilities is to notify the location listed below by use of Telephone, AFTN, Fax or Email.

i) Aerodrome Control Tower
ii) Aerodrome Standard and Safety Division
iii) Air Navigation Safety Division
iv) Air Traffic Management Division
v) AIS
vi) Aircraft Operator

4.1.4 Conditions Requiring a Surface Condition Report

The following Aerodrome conditions and the operational status of associated facilities that may affect the safe operation of aircraft shall be disseminated;

(i) Construction or maintenance activity on movement areas, safety areas, or apron, ramps and parking areas;

(ii) Surface irregularities on movement areas, safety areas, aprons or ramps and parking areas;

(iii) water on movement areas aprons or ramps and parking areas;

(iv) Object on the movement area or safety areas contrary to MCAR Part 139, 139.102

(v) Malfunction of any required lighting system, holding position signs, or ILS critical area signs;

(vi) Unresolved wildlife hazards in accordance with MCAR Part 139, 139.71

(vii) Non-availability of any required rescue and firefighting capability required in MCAR Part 139, 139.59,61,63,65,67

(viii) Any other conditions that may otherwise adversely affect the safe air transport operations

(ix) Non-availability of navigational aids served at airport for aircraft landing and takeoff.

4.1.5 Issuing of NOTAM

The [*institution, department or organization*] that provides a service or facility at [*Insert Aerodrome Name*] shall be responsible for the origination of NOTAM relating to its changes in availability or characteristics.

(1) Requests for issuing of NOTAM will be addressed to the AIS. These requests must be made in written form according to AC AIS 02.
(2) The request for a NOTAM to be issued may be made in the NOTAM format or in plain language. In the later case AIS personnel will translate it into NOTAM format as needed.
(3) State instances when no NOTAM will be issued e.g.:-

a. When it is a dual system installation and it is a temporary failure of one of the systems only, e.g. Approach Radio Frequency.

b. Normal maintenance on runways or taxiways when workmen stay clear of the movement area during aircraft operations.

c. Withdrawal of a RFFS Fire Appliance for maintenance which will not degrade the fire category.

4.1.6 Records

(*Insert aerodrome name*) shall prepare and keep, for at least 12 consecutive calendar months, a record of each dissemination of Aerodrome condition information to aircraft operators.

4.1.7 Handling of Reports of Long Term or Permanent Changes to AIP Data

4.1.7.1 Reports, information or decisions to make permanent or long term changes to the data in the AIP may be the results of:

(a) Continuation of a status that had been expected to be temporary but had instead lived on for a longer time e.g. displacement of runway threshold.
(b) Introduction of a new facility, service procedure or limitation e.g. an instrument landing procedure, obstructions, revision of landing charges etc.
(c) Planned withdrawal or major change of existing service or facility e.g. immigration services at an aerodrome service international traffic.

4.1.7.2 Amendments or issuance of an AIP Supplement is a prerogative of the AIS and is therefore important that a proper assessment of the change shall be made before such information is passed to the Authority [*Director General*].

4.1.7.3 When an institution at the Airport has made a decision to make long term or permanent changes to the availability or the characteristics of the facility or service it provides, it shall formally advise the following in writing to:-

(a) The Director General of Civil Aviation, and give copy to:
(b) Director of ANS
(c) Director of ASSD
(d) The AIS

4.1.7.4 Requests to the AIS to make amendments to the AIP or issue AIP supplements will be sent to the AIS through either the Airport Manager.

4.1.8 Incident Reporting

Any significant object found on the movement area such as an aircraft component or bird carcass will be reported.

[*Operations Officers*] who find aircraft parts will immediately advise ATC, and then attempt to identify the part through various airline engineering sections. ATC may choose to alert the pilot of the aircraft that may have been involved.

All incidents are to be recorded in the *[insert Office]*. Where necessary an additional written *Incident Report* will be raised.

The [Airport *Manager or Airside Safety Manager*} will determine if an Air Safety Incident Report needs to be completed and submitted to Accident Investigation Bureau. The *Airport Manager* will initiate and coordinate internal investigations into aviation incidents of interest to the Airport.

4.2 Access to Aerodrome Movement Area

MCAR Part - 139.69 requires aerodrome operator to ensure prevention of inadvertent entry of unauthorized persons and animals to the movement area.

4.2.1 Purpose

The aim of these procedures is to assist the safety of aircraft operations by only permitting access onto the movement area to authorised persons, vehicles, equipment, plant or animals.

4.2.2 Responsibilities

4.2.2.1 Airport Manager

The *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.

4.2.2.2 Security Officer

The *Security Officer* 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 (i.e. modifications to fencing, buildings, new access doors etc).

4.2.2.3 Airport Operations Officers

The *Airport Operations Officers* are responsible for carrying out day-to-day security surveillance of airside areas.

4.2.2.5 Air Traffic Control

ATC has responsibility for control of vehicles on the manoeuvring area. No person or vehicle may enter this area without ATC approval. Any person entering the manoeuvring area must also hold, or be escorted by a person who holds Authority to Drive Airside.

4.2.2.6 Aircraft Operators and Airport Tenants

Aircraft operators and airport tenants are responsible for controlling access to restricted areas via any part of their building or leased areas (i.e. passenger terminals, aircraft hangars, workshops and licensed aprons). They are required to establish and enforce procedures to prevent unauthorised airside access via these areas.

4.2.3 Access Control to the Movement/Airside Area

4.2.3.1 The Civil Aviation Requirements Part 139, 139.205 requires the aerodrome operator to provide a fence (or suitable barrier) on the aerodrome:-

(a) to prevent the entrance into the movement area, of any animals likely to be a hazard to aircraft and
(b) to deter the inadvertent or premeditated access of an unauthorized person onto a non-public (restricted) area of the aerodrome.

4.2.3.2 Fencing at the Aerodrome *(insert, meets standards specified by the DCA*) shall prevent inadvertent entry to Aerodrome property by persons or vehicles.
Restricted access signs are located in buildings that provide direct airside access, at each access gate and at regular intervals along the boundary fence. The wording of these signs is in accordance with the *Airport Security Program*.

4.2.3.3 No person is permitted airside without lawful excuse. When within a security restricted area (SRA) or prohibited area they must display an acceptable form of identification. For these purposes the following are regarded as acceptable:

- Permanent valid Aviation Security Identification Card. (ASIC).
- Temporary valid ASIC.
- A visitor's pass. All visitors must be accompanied at all times by ASIC holder (temporary or permanent) whilst in the SRA.

4.2.3.4 Vehicle access airside is governed by the provisions of Part 4 Section 11 Airside Vehicle Control of this manual.The entire SRA is bounded by a security fence or buildings for prevention of unauthorised entry. Unmanned gates are padlocked at all times. Vehicular access gates are either manned or electronically controlled and monitored.
Pedestrian access gates and doors are controlled by *security persons*.

4.2.4 Inspection and Maintenance

Perimeter fencing, gates and signs are inspected during the daily self-inspection. Identified Gates shall be closed and locked if found open and recorded on the inspection form. The (function/title) shall follow up with the tenant with control responsibility. The (*department*) is responsible for maintaining the fence.

4.3 Aerodrome Emergency Plan

MCAR Part - 139.57 requires aerodrome operator to develop and maintain an aerodrome emergency plan.

The Airport Emergency Plan is published and distributed independently of the Aerodrome Manual. The AEP provides a formal record of the agreements reached between agencies that are expected to respond to an emergency at {Insert name} Airport.

4.3.1 Purpose

The aim of an AEP is to provide a timely and coordinated response for rescue and recovery from an emergency on airport. The purpose of the emergency plan is to set out in a manual form the responsibilities, and required action roles of the various personnel/agencies involved in dealing with emergencies affecting the airport..

4.3.2 Responsibilities

The *Airport Manager* has overall responsibility for establishing a plan to coordinate the response if an emergency occurs at the airport involving aircraft and/or airport facilities. The *Airport Emergency Planning Committee*, which is responsible for developing and maintaining the AEP, is chaired by the *Airport Manager*.
The *[Insert name and Title]* fulfils the position of executive officer for the *Airport Emergency Planning Committee*.

4.3.3 Type of Emergencies:

The airport emergency plan shall provide for the co-ordination of the action to be taken in an emergency occurring at an aerodrome/airport or its vicinity.
The different types of emergencies that can be anticipated are:-

(a) Emergencies involving aircraft:
   1. Accident - Aircraft on Airport
   2. Accident - Aircraft off airport
      i) land
      ii) water
   3. incident - aircraft in flight
   4. incident - aircraft on ground
   5. Contingencies incident - Sabotage including Bomb Threat / unlawful Seizure of aircraft (Hijack)

(b) Emergencies not involving aircraft which include:
   1. Fire – Structural
   2. Sabotage including bomb threat (Terminal Building, Cargo complex, etc.)
   3. Natural disaster.
   4. Dangerous goods (hazardous materials)

(c) Medical emergency:

i) Epidemiological control as a result of sudden out brake of communicable diseases,

ii) Clinic Control such as collective food poisoning, and sudden serious illness or injury beyond the capability of the airport first aid or Medical Clinic. These are important factors determining the nature and scale of the emergency plan and the activation.

4.3.4 Airport Emergency Committees

The Airport Emergency Planning Committee (AEC) is the main forum to develop, distribute and amend the Airport Emergency Plan for *{Insert name}* Airport. This committee will endorse any amendments to the AEP.

[*The Committee meets as often as is necessary to carry out its functions and will be comprised of a group of core members such as ;*

- *Airlines representatives*
- *ATC senior staff*
- *Chief, RFFS*
- *Department of Health senior officers*
- *Senior representatives of major hospitals*
- *State Emergency Service representatives*
- *Ambulance Service senior representatives*
- *Chief, Fire Brigade or Services*
- *Police Service senior staff*
- *Airport staff representatives*]

[*The Airport Emergency Planning Committee may form sub committees from time to time to deal with the detail of the planning processes such as;*

- *Welfare*
- *Media*
- *General Aviation*
- *Training*
- *Working Groups for special projects and exercise planning*]

4.3.5 Organization/Agency Responsible for Coordinating Emergency Services:

a) Aircraft Accident/Incident including Bomb threat and unlawful seizure.

(i) The [insert Name/Title] shall be responsible for Coordinating Emergency Services involving aircraft outside the vicinity of the airport. It is recommended that a room should be dedicated for search and rescue operation.

(ii) The *aerodrome operator* and [*Insert name*] shall draw up a Search and Rescue Plan, which is applicable to aircraft accident/incident beyond the response distance of airport authority.

4.3.6 Composition and Training Aerodrome

(1) An Aerodrome Emergency Plan is included as *Annex* ____.
The plan was developed and coordinated with rescue and firefighting agencies, medical personnel and organizations, law enforcement agencies, the principal tenants at the Aerodrome, and all other agencies/persons who have responsibilities under this plan. See Annex….

(2) Training of Aerodrome Personnel
All Aerodrome personnel that have duties and responsibilities under the AEP are properly trained and familiar with their assignments.

(3) Emergency Planning Committee
Requires the aerodrome operator to form an emergency planning committee to discuss, determine and implement emergency planning arrangements commensurate with the size and type of aircraft that use the aerodrome.

(4) Biannual Full-Scale Exercise of the AEP
A full-scale exercise of the AEP is conducted at least once every 24 months. The full scale exercise involves, to the extent practicable, all mutual aid participants and a reasonable amount of emergency equipment. The purpose of this exercise is to test the effectiveness of the AEP through a combined response of the Aerodrome and mutual aid agencies to an aircraft accident at the Aerodrome, and to familiarize emergency personnel with their responsibilities in the plan.

(5) Annual Review of the AEP
A review of the AEP is conducted at least once every 12 months to ensure the AEP is current and all parties with whom the plan is coordinated are familiar with their responsibilities. All of the agencies involved in the AEP shall participate in the annual review meeting.

(6) Emergency Operations Centre [EOC] and Command Post:
[*This regulations applies to International Airports*.]
The Aerodrome Operator is required to designate space as the Emergency Operations Centre [EOC] for the purpose of dealing with emergency situations at the aerodrome.

(i) Fixed Emergency Operation Centre (EOC):
The Aerodrome has fixed Emergency Operation Centre (EOC) located at (insert location) discribe range of communication equipment, map , lay out and function. It is the Command, Coordination and Communications Centre for unlawful seizure of aircraft and bomb threats, and it is operationally available 24 hours a day. It acts as the support post for on-the-scene Commander in the mobile command post for aircraft accident/incident.
EOC will be used by representatives of the various responding agencies for purposes of making important decisions during the emergency and coordinate with the COMMAND POST.

(ii) Mobile Command post
[*Note: The Mobile Command Post is a point where operating Agency heads (Fire, Police, Medical and Airlines) assemble to receive and disseminate information and make decisions pertinent to rescue operations*.] The main features of this unit are:

a) It is a mobile facility capable of being rapidly deployed.
b) It serves as Command, Coordination and Communications Centre for airport accident/Incidents; and
c) It is operational during aircraft Accidents/Incidents.
At (*insert aerodrome name*) RFFS mobile command post is provided *(-----vehicles).*
Describe the means of communication it is equipped with eg. two-way voice radio communications equipment capable of communication with the Air Traffic Control Tower.
A Discrete Emergency Frequency has (or has not) been established at the EOC. (If a Discrete Emergency Frequency has been established give the frequency and any dedicated telephone lines.)

(iii) Commander and Coordinators of the Plan:
In the event of an accident, the direction and control of rescue and fire fighting operations are initially the responsibility of the (insert function/tile of the Airport Rescue and Fire Fighting Services).
Rescue and fire fighting personnel will be the first to arrive at the accident site and therefore for a certain period this Officer will be in Command until the arrival of a [*Police Officer*] who will take charge as the on-the-scene commander. The transition of authority and command will be established by the hand over/take-over of the appropriate identifying helmets.

4.3.7 Emergencies in Difficult Environment

Where the Aerodrome is located close to water or swampy area or difficult terrain and where a significant portion of approach or departure operations takes place over the area, the aerodrome emergence plan will provide special rescue services and co-ordination plan.

(1) List the specialized rescue equipment and personnel such as divers provided/maintained on the aerodrome as specified in _____. Reference specialized Equipment Log, Annex _____.
(2) Specify the number and training of personnel for special rescue operations on the aerodrome.
(3) Include, if applicable, exemption(s) of specialized rescue equipment such as speed boats, number of life rafts provided, communication radios etc.

4.3.8 Grid Map

A reasonably detailed grid map of the aerodrome and its vicinity (*insert date of revision*) is available in the Emergency Operations Centre, Control Tower, Rescue and Fire Services room and other agencies involved in the plan. The grid map depicts confines of airport access roads, water hydrants and crash gates (keys held by Rescue and Fire Services), nearest hospitals, rendezvous point, etc see Exhibit ….

4.3.9 Standard Operating Procedures

Procedures defining the aerodrome operator's 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.

4.4 Aircraft Rescue and Fire Fighting (RFF)

MCAR Part - 139.59, 139.61, 139.63, 139.65 and 139.67 require aerodrome operator to provide level of RFF protection, equipment, extinguishing agents, vehicles and personnel.

4.4.1 Purpose

The RFFS is provided with the objective of a rescue and fire fighting service to save lives. The facilities of the RFFS are to be directed at all times to attending at and dealing with an aircraft incident occurring on or in the immediate vicinity of the aerodrome.

4.4.2 Responsibilities

The Chief Fire Officer, or in his absence his delegate, 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 RFFS.

4.4.3 Category Determination

The RFFS Category at the [*insert Aerodrome Name*] is Category ____(*Insert number1 or2…or 10*), based on (*insert aircraft used to make category determination*).
The [*insert Aerodrome Name]* will provide at least Category ____ level RFFS capability during large aircraft operations at the Aerodrome. And/Or: Category ____ level RFFS equipment is available upon request and a remark is published in the [AIP or *Aerodrome Facility Directory]* for prior arrangements.

4.4.4 Equipment and Extinguishing Agents

(1) List the RFFS equipment and the type and quantities and agent provided/maintained on each vehicle used to meet your category. *See Exhibit*
(2) Specify the number and type of portable extinguishers the vehicles carry since they have a bearing on what category the Aerodrome can maintain if there is equipment that is unserviceable.
(3) Include, if applicable, exemption(s) to RFFS equipment requirements that has been granted by the DCA.

4.4.5 Operational Requirements

Include a description of the facilities, equipment, personnel and procedures necessary to meet your Aerodrome's aircraft rescue and firefighting requirements including names and roles of the persons responsible for dealing with the rescue and fire fighting service.

4.4.6 Vehicle Communications

The RFF vehicles are equipped with two-way voice radio communications equipment capable of communication with the Air Traffic Management.
A Discrete Emergency Frequency [--------] has (or has not) been established at the Aerodrome

4.4.7 Consistency with security regulations

Make a statement to the effect that the AEP contains instructions for response to bomb incidents, including designation of parking areas for the aircraft involved; and sabotage, hijack incidents, and other unlawful interference with operations; consistent with the approved *Aerodrome security program*.

4.4.8 Standard Operating Procedures

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 Aerodrome Inspection

MCAR Part - 139.117 and 193.120 requires aerodrome operator to conduct aerodrome self inspection program and to monitor the OLS for the presence of obstacles.

The aerodrome self inspection program is the basis of maintaining an aerodrome certificate.

4.5.1 Purpose

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 DCA safety standards are maintained.

4.5.2 Responsibilities

The *Airport Manager* has overall responsibility for ensuring that procedures are established and resources provided for airport inspections in order to ensure that DCA standards are met.

Describe the roles and (function/title/telephone numbers) of personnel responsible for carrying out inspections.

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.
The [*Senior Operations Officers*] are responsible for carrying out daily serviceability inspections of the movement area and the OLS. This responsibility may be delegated on a day-to-day basis by the duty [*Senior Operations Officer*] to on-shift Operations Officers.
The [*Airside Safety Manager*] is responsible for carrying out monthly inspections of airport facilities and OLS for the purposes of quality control. He is also responsible for ensuring that an Annual Safety Inspection is undertaken and the report submitted to DCA within the prescribed timeframe.
The [*Maintenance Supervisor*] has the responsibility for ensuring that lighting inspections are carried out in accordance with the inspection and maintenance schedules detailed in Part 4 Section 6 Aerodrome Lighting of this manual.
The [*Airport Lighting Supervisor*] and [*Lighting Officers*] are responsible for carrying out and recording the inspection and maintenance of all airport lighting systems.

4.5.3 Inspection Procedure and Frequency

(a) Serviceability inspections shall be carried out as follows:

- Two routine daily serviceability inspections at daytime [insert time] and midnight [insert time]
- After heavy rainfall, strong winds or other significant phenomenon which could reasonably be expected to effect the serviceability of the airport;
- When requested by ATC (i.e. after an abnormal landing); or
- If advised by a reliable source such as groundstaff, aircraft pilot, or airline representative, that there is a possible problem on the movement area.

See Inspection Checklists [Exhibit xx]

(b) Describe the means of communicating with air traffic control during an inspection;
(c) the inspection logbook are kept at the [*Insert location*] of the aerodrome and include (function/title/telephone number) of personnel responsible for keeping an inspection logbook;
(d) describe the procedure for reporting the results of inspections including specific report forms, time lines for reporting action triggering events for taking prompt follow-up actions to ensure correction of unsafe conditions and the hierarchy;

4.5.4 Communications

When driving a vehicle or on foot on the movement area all inspecting personnel shall keep a strict lookout and radio listening watch for aircraft.

For access to the manoeuvring area in a vehicle, all operations, maintenance and airline personnel will comply with the requirements of the Airside Vehicle Control Refer to Part 4 Section 11 of this Manual for details.

While operating on the manoeuvring area i.e. within taxiways, taxiway strips, runways, runway strips and approach areas, all personnel must maintain continuous communication with ATC.

4.5.5 Monthly Technical Inspections

Monthly inspections of airport facilities shall be performed by the [*Airside Safety Manager (or delegate)*] to assess the effectiveness of the daily inspections undertaken by the *Operations Officers*. These inspections shall use similar procedures and checklists as used for the daily inspections.

Copies of each monthly report shall be held by the [*Airside Safety Manager]* and will be forwarded to relevant officers for action where required and DCA.

4.6 Visual Aids and Aerodrome Electrical Systems

MCAR Part - 139.105 requires aerodrome operator to implement maintenance and checking of visual aids navigation and electrical systems for the safety of aircraft operations.

4.6.1 Purpose

The aim of these procedures is to detail the arrangements for the inspection and maintenance of airport lighting and the supply of stand-by power.

4.6.2 Responsibilities

The *Airport Manager* has the overall responsibility for the provision of airport lighting facilities and associated stand-by power generating equipment.

Describe the roles and (function/title/telephone numbers) of personnel responsible for carrying out inspections.

The *Maintenance Supervisor* 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 requirementsof this manual.
The *Airport Lighting Supervisor* is responsible for carrying out and recording the inspection and maintenance of all airport lighting systems.
The *Lighting* Officer responsible for carrying out and recording the inspection and maintenance of on-airport emergency power generation facilities associated with airport lighting.
The *Airport Operations Supervisor* is responsible for ensuring that the *Senior Operations Officers (or staff delegated by the Senior Operations Officers)* carry out and record daily serviceability inspections of airport lighting in accordance with the requirements of this manual.
The *Senior Operations Officers* are responsible for carrying out visual inspections of airport lighting to monitor serviceability and reporting any defects detected to the *Airport Lighting Supervisor*. The *Senior Operations Officer* may delegate this task on a day-to-day basis to a suitably *qualified Operations Officer*.

4.6.3 Inspection Procedure

Describe the particulars of procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers and aerodrome electrical systems, including the following -

(a) arrangements for carrying out inspections during and outside the normal hours of aerodrome operation, and the checklist for such inspections;
(b) arrangements for recording the result of inspections and for taking follow-up action to correct deficiencies;
(c) arrangements for carrying out routine maintenance and emergency maintenance;
(d) arrangements for secondary power supplies and, if applicable, the particulars of any other method of dealing with partial or total system failure; and
(e) personnel responsible for the inspection and maintenance of the lighting,

4.6.4 Standby Generation

Stand-by generation equipment is provided to ensure continuity of power should there be a failure in the main external supply. The objective in providing stand-by power is to enable all operational lighting including runway, taxiway, apron, fire stations and TVASIS and docking guidance systems to continue operation at an acceptable level of service and efficiency while maintaining safety standards and providing adequate security.
(*kW*) are available to support for the [-------system] when normal power is unavailable.

4.6.5 Serviceability Inspections

Senior Operations Officers or Operations Officers carry out daily serviceability inspections of the airport lighting facilities as part of their normal serviceability inspections at night.
The *inspection officer* will submit a *Works Order Form* to *the Lighting Officer* detailing lighting unserviceabilities that exceed those specified in MOAS Chapter 9.

4.6.6 Technical Inspections

Airport Lighting Maintenance Schedules and *Airport Lighting Logbooks* record details of routine technical inspections and maintenance of the airport lighting system. These records are held by the *Airport Lighting Supervisor*.

4.6.7 Fault Reporting System

The fault reporting and recording system comprises the following documents:

- *Fault Reporting Register*
- *Airport Lighting Logbook*
- *Works Orders* by the Operations Safety

4.6.8 Airport Lighting and Visual Aids Facilities

4.6.8.1 An inventory of airport lighting facilities is contained in TABLE 1 below.

TABLE 1 - INVENTORY OF AIRPORT LIGHTING

Equipment	**Runway 03/21**	**Taxiway**	
Low intensity edge lighting (3 stage)	*White omni-directional elevated edge light at 60 m intervals*		

4.6.8.2 Describe the **Airport Lighting** specification

1. Runway Lighting (Approach, Centre line, Edge, Threshold, Stop bars, Touch down, etc.)
2. Taxiway Lighting (Centre line, Edge,etc)
3. Apron floodlighting
4. VASIS/ PAPI
5. Visual Docking Guidance System
6. Road-holding position light

Sample

Runway holding points are 3 inset uni-directional yellow lights placed symmetrically about the taxiway centreline.
Taxiway lighting consists of inset bi-directional green centreline lighting. Apron floodlighting is provided on the international, domestic and apron.

4.6.8.3 **Wind Direction Indicator**:

(1) The Aerodrome provides and maintains a wind direction indicator (insert runway designation or specific location)

(2) The characteristics of the wind direction indicator, the method and procedures for installation and maintenance are in accordance with the specification in the Manual of Aerodrome Standards (MOAS).

4.6.8.4 **Marking**

The Aerodrome will provide and maintain marking systems for aircraft operation in accordance with MOAS.

(1) Runway/Taxiways/Apron

(2) Holding Position Markings

(3) Instrument Landing System (ILS) critical area markings

4.6.8.5 **Signs**

The Aerodrome will provide and maintain signs system for aircraft operation in accordance with MOAS.

[*Mandatory instruction signs, Information signs, VOR aerodrome checkpoint sign, Road-holding position sign*]

4.7 Maintenance of the Movement Area

MCAR Part - 139.102 and 139.103 require aerodrome operator to maintain safety area and establish maintenance program including paved, unpaved area and drainage system.

4.7.1 Purpose

The aim of these procedures is to ensure aerodrome is maintain satisfactory conditions of the Movement Area.

4.8.2 Responsibilities

The Airport Manager has overall responsibility for the maintenance of the aerodrome movement area.

Describe Responsibilities for any other Officers

4.7.3 Maintenance of Paved and unpaved Areas

(1) Corrective action shall be initiated by (Insert *Office*) personnel as soon as practical when any unsatisfactory conditions are found in the paved areas. (Insert *Office*) personnel are responsible for the correction of any unsatisfactory conditions on paved areas. If (title) determines that an uncorrected condition in a paved area is unsafe for aircraft operations, which portion of the Aerodrome shall be closed to air transport operations until the unsafe condition is corrected.

Include a description of movement areas that are available to air transport.

(2) Maintenance of Paved Areas Unpaved Areas (runways, taxiways and apron)

There are no unpaved areas available for aircraft operations at (Insert Aerodrome name). If there are ----------[*state* so].

4.7.4 Maintenance of Safety Areas (runways and taxiways shoulder/strips)

(a) Safety Area Dimensions

(i) Runway (designation) – (insert meters/feet) from centerline and (insert) feet off each end;

(ii) Runway (designation) – (insert meters/feet) from centerline and (insert meters/feet) off each end;

(iii) Taxiway [designation(s)] – (number) meters/feet from the centerline.

Include a map or diagram as an exhibit

(b) Required Conditions of Safety Areas

Safety area conditions are maintained as follows:

(i) Each safety area shall be cleared and graded, and shall be maintained free of potentially hazardous ruts, humps, depressions, or other surface variations;

(ii) Each safety area shall be capable under dry conditions of supporting, aircraft rescue and firefighting equipment and the occasional passage of aircraft without causing major damage. Manhole or duct access covers are constructed of material of sufficient thickness and strength to support equipment and aircraft;

(iii) No object shall be located in any safety area, except for objects that need to be located in the safety area because of their function. These objects shall be constructed, to the extent practical, on frangible mounted structures of the lowest practical height and maintained so the frangible point is no higher than 3 inches above grade;

(iv) Safety areas shall conform to dimensions acceptable to the Aerodrome Standards and Safety Division of DCA if any runways or taxiways are constructed, reconstructed, or extended.

4.7.5 Maintenance of aerodrome drainage

The drainage system at the aerodrome shall be kept free of debris to prevent clogging.

4.8 Aerodrome Works Safety

MCAR Part - 139.107 requires aerodrome operator to establish procedure to ensure of any works carried out on the aerodrome do not endanger aircraft operation.

4.8.1 Purpose

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.

4.8.2 Responsibilities

The Airport Manager has overall responsibility for operational safety aspects of aerodrome work and for the formal approval of Method of Working Plans (MOWP).

The *Airside Safety Manager* will determine if a MOWP is required, and will also check the MOWP for accuracy and endorse the proposed staging of works.

The *Airport Operations Supervisor* is responsible for tasking of Works Safety Officers (WSO) appropriate to the level and complexity of the work.

The WSO is responsible for ensuring that works are executed in accordance with standard operating procedures and the arrangements notified by means of a MOWP.

4.8.3 Time Limited Works

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, pavement rolling and sweeping, minor repairs to pavements, maintenance of markings, markers and lights, surveys and inspections.

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

- At all times except during air transport jet operations.
- At all times for gable marker maintenance including grass mowing (operations must be within 2 metres of the markers when inside the runway strip).
- Ground surveys associated with navaid flight calibration flights (navaid calibration).

Personnel must remain in radio contact and ATC may vacate them if they consider it warranted to any operation.

Sufficient training will be given to persons working on the movement area who are not under the direct control of an Operations Officer.

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 minimise disruption to aircraft flight planning. Unserviceability markings/ markers will be displayed if required.

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

Annual take-off and approach surveys conducted from base lines established outside the runway strip are not subject to these constraints. Following notification to ATC, these surveys may be carried out at any time and in any location on the baseline at the discretion of the WSO/surveyor.

4.8.4 Method of Working Plan

A MOWP will be prepared for works that will have a major operational impact, or cause disturbance to operations over an extended period.
Each MOWP is to be signed as approved by the Airport General Manager (or in his absence by the Airside Safety Manager).
The MOWP format will be as specified in the DCA Advisory AGA-02 relating to Aerodrome Works Safety.
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.
.

4.8.5 Works Safety Officer (WSO)

The Airport Operations Supervisor will nominate a WSO for each project, ensuring that the WSO skills and competencies are matched to the complexity of the MOWP.
In many cases the WSO will be an Airport Operations Officer but other officers may be nominated, particularly for routine maintenance tasks. Trained officers such as grounds maintenance and airport lighting personnel may serve as their own WSO in some cases.

4.8.6 Marking and Identification of Vehicles and Plant

Vehicles or plant that are regularly used on the movement area by day should be a conspicuous colour. Vehicle warning beacons (where fitted) will be amber, yellow or orange flashing or rotating dome lights, of a type commercially available as an automobile accessory.
Vehicles and plant used infrequently on aerodrome works, e.g. contractor's plant and equipment, are not required to meet the colour or lighting standards, or to be fitted with radio transceivers. They must be escorted at all times by a Works Safety Officer.

4.8.7 Conduct of Aerodrome Works

Only vehicles, plant, equipment, materials and personnel actually engaged on Works are permitted on the movement area. All other vehicles, plant, equipment and materials will be parked or stored in an area designated by the Works Safety Officer.
Temporary buildings and structures, and all materials and equipment associated with the works, will be sited or restrained so that they cannot be disturbed by jet blast or strong winds.
Personnel associated with the works will not be permitted to enter the movement area, whether on foot or while operating vehicles or plant, unless authorised and escorted by the Works Safety Officer.

4.8.8 Works Security Arrangements

The Contractors access to airside will be through a controlled gate and escorted to the work site if this gate is remote from the work site.
Temporary security passes will be issued to the contractor's supervisor or foreman and he will be responsible for the persons under his control.
In some circumstances, the Chief Security Officer may arrange for the work site and its associated access route to be temporily excised form from the Security Restricted Area, so easing the security requirements for access by staff and contractors.

4.8.9 Method of Working Plan Distribution

AIRLINES – Domestic and International
FIXED BASE OPERATORS
ATC Tower Team Leader
Chief, RFFS
Aerodrome Inspector, DCA
Aerodrome Operator staff

Note: Details of the Aerodrome Work Safety are set out in MOAS and Advisory Circular AGA-02.

4.9 Apron Management

MCAR Part - 139.115 requires aerodrome operator to establish apron management program and procedure.

4.9.1 Purpose

This aim of these procedures is to provide for the orderly and safe allocation of aircraft parking bays and safety and security of all apron users [*such as vehicles, airport employees, and passengers*] at *{Insert name}* Airport. Parking bays have been designed and marked to ensure that appropriate separation distances are maintained and that aircraft refuelling and servicing activities can be undertaken without interference to adjacent parked aircraft.

4.9.2 Responsibilities

The *Airport Manager* has overall responsibility for implementing procedures for aircraft parking control. [*Domestic Airport*]

The Airport Manager (*Insert name of aerodrome*) is responsible for the provision of Apron Management Services at the airport. At each Terminal the Airport Manager provides this service directly through the (*Insert name title of responsible officer e.g. Manager Operations)*

Sample

The *Airside Safety Manager* has responsibility for approving the design of aircraft parking areas.

The *Senior Operations Officer* is responsible for the day-to-day allocation of aircraft parking bays, including stand-off bays, on the international apron and allocation of remote parking on the taxiway system and for parking on the domestic block-paved area.

[In the General Aviation area separate parking is provided for fixed and rotary wing aircraft. [*Insert personnel*] is responsible for controlling aircraft parking within those areas.

4.9.3 Available Apron and Aircraft Stands

(*Insert name of aerodrome*) has the following aprons available:

a) Terminal [insert number] Apron
b) Terminal [insert number] Apron
c) Cargo Apron.

-----*Remote Parking / General Aviation (If available)*

(*Insert name of aerodrome*) has the following Aircraft Stands available:

a) [Insert number and designation] docking stands.
b) [Describe the capability of the apron].

4.9.4 Aircraft Parking Areas

There are ---------- areas at *{Insert name}* Airport designated for aircraft parking- International, Domestic, General Aviation and Helicopters. Plans detailing these areas are issued to the person/organisation having day-to-day management responsibility for the area (i.e. airline, Duty Manager, Senior Operations Officer).

Air Traffic Control Surface Movement Controller (SMC) will provide guidance to aircraft if required. Signs or pavement markings indicate pavements that are weight and/or size restricted.

Day-to-day aircraft parking on the international terminal, remote taxiway parking and the domestic parking is controlled by the [*Apron Management Unit (or) aerodrome operator].*

4.9.5 International Apron

The Duty Manager issues a daily parking bay allocation plan to the [*Insert location*]. The [Insert operator inputs the bay allocations into the flight information displays, which are then broadcast to all relevant areas.

The airline operator or agent passes relevant aircraft parking bay information to inbound aircraft via company VHF frequency radio.

Engine start and push back procedures are controlled by the [*Insert Title*].

4.9.6 Domestic Apron

The [*Insert Title*] control aircraft parking on the domestic aprons.

The airline operator passes relevant parking bay information to inbound aircraft via company VHF frequency radio.

Engine start and push back procedures are controlled by the [*Insert Title*].

4.9.7 General Aviation Aircraft Parking

General Aviation aircraft parking at *{Insert name}* Airport is provided. [*If available*] Parking areas with hangar frontage are generally under the day-to-day management of the *hangar tenants*.

4.9.8 Helicopter Parking

Helicopter parking is available on the apron area and is marked by ---------.[*If available*]

4.9.10 Parking in Emergencies

During an emergency, if normal parking positions are not available, the Airport Manager may establish alternative positions and procedures in consultation with affected operators.

This may include parking on runways or taxiways or in areas where pavement strengths would normally preclude frequent operations of larger aircraft.

4.9.11 Co-Ordination with Air Traffic Services

(a) Specify the transfer points of responsibility between TWR and Apron Management. The following may be used as guidance:
   (i) For arriving aircraft the TWR controller shall release the aircraft to apron control before it enters the Apron. However he may release the aircraft earlier once the pilot reports that he has the marshaller in sight.
   (ii) For departing aircraft the marshaller shall release the aircraft to TWR before it exits the apron. However he may release the aircraft earlier once it is definitely heading to the taxiway and is clear of all obstacles.

(b) TWR or the AIS Unit shall inform *Apron Management Services* the ETA of each arriving aircraft. The TWR Controller shall in addition advise the Apron Control the landing of each aircraft as soon as it touches down.

(c) Apron Management shall advise the TWR of the aircraft stand that it has allocated to an arriving aircraft as early as possible and before it reaches the point of transfer of control.

(d) Apron Control will keep a listening watch on the radiotelephony conducted between TWR and aircraft so as to keep itself aware of the progress of air traffic.

(e) TWR shall provide Apron Management updates of statistics on aircraft movements periodically.

4.9.12 Allocation of Aircraft Stands

(a) Allocation of Aircraft Stands or parking bays is the responsibility of the [*Insert Officer*] for the area under his charge

(b) Describe the criteria for assessing the demand and allocation of aircraft stands on daily basis.

4.9.13 Procedures for Marshalling

a) Describe the procedure for marshalling of aircraft at (*Insert name of aerodrome*)

b) Marshallers shall ensure that aircraft are guided and parked clear of other aircraft, vehicles, and fixed or stationery objects by at least the following margins: -

i) *Light aircraft - 3 meters*

ii) Mid size aircraft -4.5 meters

iii) Large aircraft - 7.5 meters

c) When on the Apron, the Marshaller must wear distinctive reflective jacket at all times.

4.9.14 Procedures for Engine Start - Up And Pushback

a) In order to confirm that there will be no Air traffic Control delays on his intended time of departure and route of flight, the pilot of a jet aircraft normally seeks from the control tower a clearance to start up engines. When the TWR gives such clearance it is an indication that when the aircraft has started and taxied to the runway holding point, there will be little or no delay in obtaining his departure and en route clearances.

b) At (*Insert name of aerodrome*) **International Airport**, TWR has no control over traffic on the apron. Therefore it issues start clearance with the proviso that the actual switching and powering of the aircraft engines will be at the discretion of the pilot and subject to the arrangements made with his *ground crew and Apron Management services.*

c) Before allowing an aircraft to start engines, the marshaller will ensure that the aircraft is in a state in which it can safely do so in relation to people and equipment around and behind the aircraft.

d) Pushback may be commenced before or after engine start up.

e) In all cases, each start-up of engines and each pushback shall be coordinated and supervised by *aircraft operator's engineer/ ground handling agent and the Apron marshaller*. This is to ensure that: -

I. All safety instructions and other airline regulations have been observed.

II. Obstacles have been cleared e.g. vehicles, equipment, gangways, or anything that can be struck by the aircraft by its jet blast.

III. Anti collision lights have been turned on some few minutes before engine start up.

IV. Pushback or towing is done by a qualified, competent and *authorized operator's/handling agent driver* and is guided by *engineers and wingmen*.

4.9.15 Follow Me Services [Lead Van]:

Follow me services may be provided when, there are incidences of low visibility where:

i) There are extremely few incidences of low visibility that will justify the aircraft pilot to taxi under the guidance of an external agent

ii) The layout of the aerodrome is comparatively simple making it unlikely for an experienced pilot to lose his way even when taxing in imperfect visibility condition.

iii) If *it is a normal practice at the Aerodrome*.

4.10 Apron Safety Management

4.10.1 Purpose

This aim of these procedures is for the prevention of incidence of accidents that are likely to be anticipated on the apron.

4.10.2 Responsibilities

The *Airport Manager* has overall responsibility for the safe and security of the apron. [*Domestic Airport*] The Airport Manager (*Insert name of aerodrome*) is responsible for the management of the Apron Safety.

Safety on the apron is the responsibility of every user of that facility. All the major users of the Aprons at (*Insert name of aerodrome*) e.g. Ground handling companies, FBO, Re-fuelling companies etc. must each:

(a) Have in their operating procedures of the service it renders on the apron provisions that ensure the safety of its object of service, the person providing the service and other users of apron.

(b) Ensure that all its employees that are required to work on the apron are indoctrinated in the principles and practices of safety on the apron and tested on that knowledge before working on the apron.

(c) Have a Programme of periodically reviewing and checking:
   1. Its safety record on the apron
   2. The validity of the safety procedures practiced
   3. Safety awareness and practices of each employee working on the apron.

(d) Access to the aprons of each Terminal shall be limited to only those persons who have been specifically and individually cleared to work on the apron, hence:
   (i) Identity cards issued to airport employees will be color coded to enable instant recognition of a person straying in the restricted area.
   (ii) Identity cards that are valid for the apron on temporary terms must be counter signed by [*Insert Office*].
   (iii) Temporary vehicle passes for the movement area and aprons will be issued only after the drivers have received [*Apron Driver Lincense*]
   (iv) As much as possible, the major users shall assist each other in training of personnel working on the apron and in running seminars and refresher courses on safety.

(e) Each person working on the apron has the responsibility of reporting any incidence of unsafe practice that he has observed. He may report this directly to the [*Airport Manager*] or indirectly via his employer.

4.10.3 Apron sweeping

The *(insert name of Operations)* is responsible for overseeing sweeping of the apron and ensuring that the apron is kept clean. *In this respect the Airport has contracted the task of sweeping the apron to an external firm under the following conditions:*

i) The apron will be swept regularly as necessary both during day and night

ii) The contractor shall pick up all debris, paper, plastics bags, cups and bottles, and other waste materials found on the apron.

iii) The sweepings and waste collected will be placed in special waste bins with lids and appropriately disposed.

vi) The contractor shall ensure that waste food is carefully and safely stored so as not to attract birds and other scavenging animals.

v) The contractor's employees must wear distinctive clothes, be knowledgeable of apron safety procedures and be strictly supervised.

4.10.4 Apron Cleaning

i) The *(insert name of Operations)* responsible for the overseeing cleaning of apron stands. It may also be necessary to clean the stands prior to repainting stand marking.

ii) In spite of

a. above FBOs and fuelling companies should ensure no oil or fuel spillage on the Apron during Aircraft has been serviced. In the event there is spillage the firm responsible for such spillage shall be liable.

b. Vehicles and Equipment used on the apron must be in good conditions and that they do not leak oil, fuel or hydraulic fluid on the apron.

4.10.5 Aircraft Fuelling

(a) *Airlines and fuel companies* are responsible for the observation of safety procedures during the fuelling of aircraft. Each company may have set procedures slightly different from others. But all must include the following:-

i) Smoking or naked lights will not be allowed within the fuelling zone.

ii) Aircraft and the fuel supply sources shall be correctly bonded and the correct earthling procedures employed.

iii) Aircraft fuelling vehicles shall be positioned such that a cleared way is maintained to permit rapid removal of the vehicles from the aircraft in an emergency; accessibility by rescue fire-fighting equipment is not interrupted; and they do not obstruct the evacuation of the aircraft in the event of a fire.

iv) The fuelling vehicle may not be placed with its engines under the wings.

v) Auxiliary and ground power units shall not be started during the fuelling operation.

vi) Fire extinguisher of appropriate type must be readily available.

vii) Fuel spillage must be immediately notified to the *fuelling supervisor* who must have detailed instructions on its handling.

(b) When passengers are allowed to stay on board the aircraft during fuelling the following additional procedures shall be taken:

i) Passengers shall be warned that fuelling is in progress and that they shall not smoke, operate switches or otherwise produce sources of ignition.

ii) If aircraft stairways are used, these shall be positioned at each of the main doors normally used for passenger's embarkation or disembarkation, which shall be open or ajar and free from obstruction. Where it is found desirable to close the main door for climatic or other operational reason, these doors shall never be locked, and a cabin attendant shall all the times be stationed at each door during any fuelling operation with passengers on board.

(c) All persons working on aprons especially those from *Apron Management and handling agency* must be aware of the major safety precautions and must report any apparent breach to the *fuelling supervisor and Apron Management Services*.

4.10.6 Protection from Jet Blasts

a) In the construction of the airport, the parking stands were designed in such a way that the Terminal Building will not be exposed to jet blast when an aircraft is taxing in or out of the any of the stands. This protects the building and its occupants from jet blast.

b) In addition to the above the following precautions must be taken:
   i) All vehicles and wheeled equipment must be left on hand brakes to minimize the risk of movement when subjected to jet blast.
   ii) Prior to engine start up, all obstacles that are likely to be struck by jet blast must be cleared e.g. vehicles, equipment, gangways etc.
   iii) Apron employees and passengers are not allowed to pass behind or near an aircraft with running engines
   iv) *Reverse thrust is forbidden on the apron.*

4.10.7 Guiding of Passengers on the Apron

Airlines and handling agents must ensure that when taking their passengers from the aircraft to the Terminal Building and vice versa they are guided safely by taking the following precautions:

i) Passengers are taken into or out of the aircraft only when its engines are off power and, if applicable, propellers have stopped spinning
ii) When there is another aircraft with engines on, passengers must be led at a sufficient distance from the aircraft so as not to be exposed to jet blast or air intake area of the engines.
iii) Passengers must not be led to cut across the route of a moving aircraft.
iv) In spite of the fact that vehicles must give way to passengers on the apron the leading passengers must be ready to stop when crossing vehicles corridor.
v) Special case passengers should preferably not be led on foot across the apron.
vi) As far as is practical use the aerobridge (if available) to minimize the chance for passengers inadvertent contact with apron equipment.

4.10.8 Use of Vehicles and Equipment on the Apron.

Describe particulars of the procedure for the control of surface vehicles operating on or in the vicinity of the movement area, including the following:

(a) details of the applicable traffic rules (including speed limits and the means of enforcing the rules);
(b) the method of issuing driving permits for operating vehicles in the movement area.

4.10.9 Reporting of Accidents and Incidents on the Apron

Accidents and Incidents that happen on the apron may be graded into the following hierarchy:

a) Those which involves an aircraft
   i) A notifiable accident
   ii) A non-notifiable accident or incident

b) Those which involves a vehicle on its own; or with another vehicle, person, building or other property.
c) Those which involves a person or persons only.

4.10.10 Safety of Personnel Working on the Apron.

While it may not be a totally hostile environment, the apron is not completely benign place for the personnel working there. Therefore each person must take precautions to ensure his or her own safety while working on the apron. This she/he may do by: -

i) Being conversant with safety rules applicable to his job; first aid, location and use of firefighting equipment nearest to the particular moment/place of work.
ii) Wearing protective clothes appropriate to his employment and specifically proper working shoes to protect feet from injury.
iii) *Wearing ear protection to protect himself or herself from the noise level of GPU, air starter and aircraft engines.* [If applicable]
iv) Staying away from jet engine intakes and exhaust units.
v) By being continuously aware what other people on the apron are doing so as to recognize early any unsafe situation and thus take action to correct it or, as a last resort, move away from it.

4.10.11 Auditing the Safety Compliance

(a) Describe for the safety compliance

To ensure that the standard of safety on the apron is kept at a high level as possible all the time, the Airport Manager, (*insert name of aerodrome*) shall consider introducing has introduced a system of auditing the safety compliance of all personnel working on the apron as follows: -

i) Each institution that has personnel working on the apron must present to the *Apron Safety Committee* and the Airport Manager, a programme of checking the capacity of each employee to comply with apron safety regulations.
ii) The programme shall provide, the safety procedures or concepts that will be checked for each type of personnel e.g. ground stewardesses, marshaller, and aircraft engineers etc.

(b) The Airport Manager shall audit the implementation of the programme of each institution. This auditing would include the following areas: -

i) Records of individual employees
ii) Methodology of checking
iii) Corrective measures taken, if any
iv) Safety refresher training and seminars.

(c) For vehicle drivers, the Airport Manager, (*insert name of aerodrome*) shall promulgate a programme of directly checking and auditing the performance and safety compliance of each driver. The Airport Manager may extend these arrangements to other cadres.

4.10.12 Apron Safety Committee

(a) In order to have a forum for discussion of the quality of apron service and Apron Safely Committee, the following organizations at the airport have been considered.

- Airport Manager – Chairman
- Manager Operations
- Ground Handling Agent
- Fixed Base Operators;
- Airlines Chairman;
- Airport Safety Officer;
- Head, Apron Management Services – Secretary
- Air Catering Company
- Fuel Supplier,
- Airport Police,
- Manager, Air Navigation Services; and
- Manager Security.

(b) The functions of the committee may include: -

i) To reviews regularly all aspects of safety and security on (*insert name of aerodrome*) aprons.

ii) To propose, or consider proposals of, changes to the system of apron safety and security.

iii) To consider the *Apron Safety Programme* of each institution using the aprons at (*insert name of aerodrome*).

iv) To issue reports, recommendations and advices to the Airport Manager, (*insert name of aerodrome*) on apron safety and security.

(c) The committee may invite other institutions to join it on temporary basis when considering a specific issue.

(d) The committee may form from its members subcommittees for specific purposes. Persons from institutions other those listed above may be co-opted as members of the sub – committee.

4.11 Airside vehicle control

MCAR Part - 139.119 requires aerodrome operator to ensure for the control of vehicles operating on or in the vicinity of the movement area.

4.11.1 Purpose

The purpose of the Ground Vehicle Operation (AC 06/09) is to ensure the safe airside operation of vehicles on *{Insert name}* Airport. The Advisory Circular is compiled as Annex *{n}* to this Manual and forms part of it. However it is issued as a separate document to this manual.

4.11.2 Responsibilities

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 *{Insert name}* Airport.

Sample

The *Airport Operations Supervisor* is responsible for ensuring that the provisions of the Advisory Circular is implemented.

The *Senior Operations Officers* and approved *Operations Officers* are responsible for carrying out instruction, testing and maintaining records of persons approved for an Authority to Drive Airside (ADA).

The *Senior Operations Officers* and *Operations Officers* have day-to-day responsibility for ensuring that the movement of persons and vehicles airside are in accordance with the Advisory Circular 06/09.

If authorised by the Airport Manager, a [*Airlines/companies*] accept responsibility for issuing the relevant Permit/Authority for their own vehicles and employees as an Approved Issuing Authority. [*Airlines/companies*] are responsible for maintaining an acceptable standard of driver training and testing.

4.11.3 Application of Procedures

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

Each driver must be approved to operate a vehicle airside on *{Insert name}* Airport by the issue of an Authority to Drive Airside/*Driver license*.

Approved Issuing Authorities *[Insert Title*] are required to nominate Approved Training Officers for endorsement by the *Airport Operations Supervisor or Airport Manager*. Applicants for an Authority to Drive Airside are to be trained and tested by Approved Training Officers for their knowledge of:

- Rules for Drivers Operating Airside;
- Geography of [*Insert Airport*]
- Airport markings;

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 undertake company and equipment/plant specific training and other items such as aircraft towing and pushback procedures.
RFFS personnel is also required to hold Authority to Drive Airside.

4.11.4 Enforcement

Note: the information in this section is provided as a guide as to how an enforcement policy may be implemented.
The Airports Regulations permit withdrawal or suspension of an Airside Vehicle Permit or an Authority To Drive Airside, or an authorisation for a company to be an Approved Issuing Authority.
Operations Officers will log any breaches of the airside driving rules, and report them to the *Airport Operations Supervisor* so that appropriate action may be initiated against offending drivers. The Airport Manager will be the arbiter in dispute situations.
Breaches that constitute an incident require submission of an *Incident Report* form.

4.12 Wildlife hazard management

MCAR Part - 139.71 requires aerodrome operator to establish wildlife hazards management program.

4.12.1 Purpose

The aim of these procedures is to minimise the hazard to aircraft operations created by the presence of birds and/or animals on or in the vicinity of the airport.

4.12.2 Responsibilities

The Airport Manager has overall responsibility for the bird and animal hazard management program for *{Insert name}* Airport.
The *Airport Operations Supervisor* is responsible for ensuring the bird and animal hazard management program is satisfactorily carried out and is also responsible for allocating a suitable area for the transfer of livestock to and from aircraft, and will provide safety procedure guidelines to airline companies as required.
Senior Operations Officers and Operations Officers are responsible for the day-to-day implementation of the bird and animal hazard management program. They are responsible for bird harassment and dispersal and are authorised to use firearms while operating within the airport boundary.

4.12.3 Bird Hazards

A bird strike as an air safety incident that must be reported to the DCA and MAIB. The [*Insert Officer*] have determined that Bird Strike reporting is only required if there is damage to aircraft. Aerodrome operator collects information about bird strikes on their on aerodromes for statistical purposes.

4.12.4 Monitoring Bird Activity

Bird activity on the airport will be monitored as follows:

- During routine daily serviceability inspections by *Operations Officers*
- By bird counts carried out [*3 times a week by Operations Officers*]
- As part of the annual safety inspection

Areas of high attraction or unusual bird activity in the airport vicinity, particularly in the approach and take-off areas, will be monitored separately as required.
A Bird Strike Report Form will be completed for each bird strike and the carcass collected if required. The report form will be held by the Airport Operations Supervisor for analytical purposes. Carcasses will be identified, usually by enclosing a copy of the bird strike report form.
All bird strikes or suspected strikes will be recorded, even if the carcass has not been recovered.

4.12.5 Bird Control

The *Senior Operations Officer or Operations Officers* carry out harassment and dispersal of birds. Any birds sighted adjacent to runways and runway strips and posing a threat to the safety of aircraft operations, will be immediately dispersed using [Insert -----].
The killing of protected birds will only be undertaken as a last resort.

Excessive bird activity on a particular runway or within the approach/take-off areas of that runway may require closure of the runway or raising a NOTAM to advice of increased bird activity.

4.12.6 Use of Firearms

Firearms must not be discharged on aprons, near public or airport staff amenity areas, over boundary fences or in the direction of an aircraft. They must be unloaded when carried in vehicles or stored in the locker.
Neither firearms nor ammunition will be taken outside the airport boundary (except for firearm maintenance).
Firearms must not be discharged from within vehicles at any time.

4.12.7 Environmental Management

Operations Officers who monitor wildlife activity will monitor any obvious environmental attractions to birds such as nearby rubbish dumps (either legal or illegal), wetland areas, etc. These will be reported to the *Airport Operations Supervisor* who will determine what action should be taken.
Contractors operate landside to routinely collect rubbish from public areas to help remove bird attractions.
As required recommendations and/or restrictions to new developments on or adjacent to the airport to prevent bird attraction will be made by staff as necessary.

4.12.8 Animal Hazards

Animals are normally prevented from entering airside by keeping gates shut and maintaining the integrity of the boundary fence. However, if animals do gain entry to airside, ATC will be advised immediately and the animals removed as soon as possible. Should the problem be beyond the scope of airport staff, then special assistance will be called e.g. staff of specialist animal organisations or an appropriate commercial organisation.
Airport staff pursuing animals adjacent to aircraft movement areas will take reasonable steps to ensure that their actions do not frighten animals into the path of an approaching aircraft.
Firearms will be used only as a last resort to harass animals away from the movement area. Public and airport staff sensitivities are always to be considered and animals will not be destroyed unless there is immediate danger to essential facilities or to the safety of an aircraft.

4.13 Obstacle control

MCAR Part - 139.120 requires aerodrome operator must take all reasonable measures to ensure that obstacles at and around the aerodrome are detected.

4.13.1 Purpose

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 upon operations.

4.13.2 Responsibilities

The Airport Manager has overall responsibility for establishing procedures to monitor and notify the presence of obstacles to DCA, and to control the erection of temporary and permanent structures in the vicinity of the airport.

The *Airport Operations Supervisor* is responsible for handling applications for temporary structures if the duration of the structure is likely to be less than three months. *This function is normally delegated to the Senior Operations Officer on a day-to-day basis and may require the issue of a NOTAM.*

The *Airside Safety Manager* has responsibility for monitoring published information relating to obstacles.

The *Operations Officers* are responsible for day-to-day monitoring of the OLS and PANS-OPS to detect unapproved obstacles and to take measures to have them removed or lowered to a safe operational height.

4.13.3 Administration of Obstacle Control

The process for assessing and approving an application to erect an obstacle is dependant on the whether it is temporary or permanent and whether it infringes the OLS or PANS-OPS.

4.13.4 Obstacle Monitoring

(a) Operations Officers will monitor the OLS and critical PANS-OPS surfaces daily during their airport serviceability *inspections*.

If a temporary obstacle is erected without approval and detected during the airport serviceability inspection, the Senior Operations Officer will:

- Immediately advise ATC of the obstacle;
- If the obstacle is on airport land have it removed immediately, if off airport land, attempt to negotiate its removal to below the OLS/PANS-OPS surfaces or to a reduced height so that published runway information is not affected;
- If negotiations fail;

o Advise the Airport Operations Supervisor or Airside Safety Manager who will contact the local council

- o If the obstacle is infringing a take-off or approach splay, discuss the issue with ATC. Determine the operational requirements for runway use and whether alternatives are available. If the runway is operationally required, calculate and mark off the reduced runway length available (displaced threshold) and raise a NOTAM
- o If the obstacle is infringing any other part of the OLS/PANS-OPS surfaces, raise a NOTAM with a description of the obstacle, height AMSL, magnetic bearing and distance from the ARP, and surface infringed.
- Once the obstacle is removed, advise ATC, remove temporary markings and cancel the NOTAM.

(b) Any apparently new permanent obstacles detected during daily inspections should be assessed and surveyed by the *Airside Safety Manager* as soon as possible to determine the extent of the infringements and changes to published information. If they exceed the limits specified in MOAS, the Airside Safety Manager will raise a NOTAM and advise AIS. If the changes are significant, a copy of this advice is to be forwarded to the DCA.

(c) The Aerodrome shall ensure that each object within the authority of the Aerodrome that has been determined by the *Aerodrome Safety Inspector of the DCA* to be an obstruction is removed, marked or lighted.

4.13.5 Type A Charts

Type A charts are produced for runways *00/00*. *The current editions of the charts are published in AIP*. [**need to check AIP**]

Generally, the charts are updated on a two-year cycle.

They are made available to operators on request. Currently the following operators and organisations are on the distribution list for updated type A charts and any amendments thereto;

- All operational Airlines
- ATC
- DCA

Note: Details of the Aerodrome Work Safety are set out in MOAS and Advisory Circular AGA-01.

4.14 Removal of disabled Aircraft

MCAR Part - 139.57(b) (10) requires aerodrome operators shall have procedure for the removal of a disabled aircraft on or near the movement area.

4.14.1 Purpose

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

These procedures are intended to deal solely with disabled aircraft within the airport boundary only after the requirements of the AEP relevant to the aircraft incident or accident have been completed.

4.14.2 Responsibilities

Airport Manager

The Airport Manager has overall responsibility for the Disabled Aircraft Removal Plan at the Airport.

The Airport Manager is responsible for controlling and coordinating the response for recovery of a disabled aircraft. This may require liaison with the airline or aircraft operator and the MAIB and/or Police (if involved) to obtain a clearance to remove the aircraft.

[In the event that the Airport Manager is not available the Airside Safety Manager, Chief Security Officer or Airport Operations Supervisor will undertake these responsibilities.]

The Senior Operations Officer is responsible for notifying ATC of disabled aircraft (if ATC are not already aware) and raising an appropriate NOTAM. He is also responsible for ensuring that any unserviceable portions of the manoeuvring area are correctly marked, in accordance with DCA standards, to provide for safe aircraft operation on the remaining usable areas.

Air Traffic Control

ATC will initiate activation of the Recovery Plan if advised of an immobilised aircraft by the pilot. RFFS may be required to remain on standby to assist with operations as required, especially when de-fuelling is required.

Aircraft Owner/Operator

The aircraft owner, defined as the holder of the certificate of registration, is responsible for the aircraft removal and disposal of fuel and other hazardous materials that have been spilt as a result of the incident/accident.

Prior approval for aircraft removal may be required from either accident/incident Investigation and/or Police for accidents of a more serious nature that require on-scene investigations.

Air Safety Investigation

The Air Safety Investigator is responsible for the investigation of all aircraft accidents and incidents involving civil aircraft operations. If he elects to conduct an on-scene investigation, a disabled aircraft cannot be removed from the movement area until authorised by him.

4.14.3 Immediate Operational Considerations and Actions

The following criteria are to be used for determining the availability of runways affected by a disabled aircraft:

Aerodrome Controller

- Notify the RFFS.
- Notify the Senior Operations Officer.
- Determine ETA of all aircraft requiring use of the closed runway.
- Determine latest time for affected aircraft to divert.
- Notify Air Safety of;
  - Aircraft identification and type.
  - Nature of aircraft unserviceability.
  - Location of aircraft.
  - Section of the manoeuvring area affected.
  - Persons On Board
  - Other aircraft likely to be affected by a prolonged unserviceability of the manoeuvring area.
- Advise aircraft owner.

Terminal Control Centre

- Confirm Senior Operations Officer is aware of the details.
- Notify Airport Manager.
- Notify Airside Safety Manager.

Senior Operations Officer

The Senior Operations Officer will;

- Complete AEP duties before becoming involved with the removal.
- Inform the Aerodrome Controller of the location, nature and extent of the accident with emphasis on the operational viability of the manoeuvring area.
- Arrange NOTAM action if applicable

4.14.4 Aircraft Removal

When a disabled aircraft is removed from the airport manoeuvring area it shall be taken to a location, and by a route, approved by the Airport Manager (or *Chairman of Committee as appropriate*).

If removal is delayed or is progressing at an unacceptable rate, the Airport Manager, on instruction from ATC, will remove the disabled aircraft at the owner/operator's expense and risk. Prior to doing so, the Airport Manager will request the owner to complete the ***indemnity release*** .

Aircraft Owner

When advised of a disabled aircraft, the owner should;

- Liaise with the Airport Manager.
- Consider contingency planning for aircraft removal as soon as practicable following its release by the *Air Safety investigator*.

Air Safety Requirements

Airport staffs are required to cooperate with and provide all reasonable assistance to *Air Safety Investigators* should an on-scene investigation be necessary.

4.15 Handling and Storage of Hazardous Materials

MCAR Part - 139.112 requires the Aerodrome Operator shall have the procedure for the protection of Handling and Storage of Hazardous Materials.

4.15.1 Purpose

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

- Flammable liquids and solids
- Corrosive liquids
- Compressed gases
- Magnetised or radioactive materials
- Explosives
- Biological substances

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

4.15.2 Responsibilities

The Airport Manager has overall responsibility for establishing procedures to ensure the safe handling of hazardous materials at the Airport.
The *Senior Operations Officer* is responsible for designating appropriate parking areas for aircraft transhipping explosives.
In the course of their normal day-to-day airside surveillance, *Operations Officers* are responsible for limited monitoring of the movement of hazardous materials on airside (when such movement is known to them).
Each organisation involved in air freighting hazardous materials is responsible for compliance with dangerous goods provisions, adopting correct procedures for packaging, storage and their transfer between aircraft and landside facilities.
For explosive freight, forwarders are responsible for advising the *Airport Operations Supervisor* on each occasion that hazardous materials are to be transhipped, together with a copy of the DCA instrument authorising the transhipment.
Airlines are responsible for warning and screening passengers in regard to the unlawful carriage of hazardous materials.

4.15.3 DCA Contact

The DCA Contact for advice on the air transportation of dangerous goods is:
[*Insert name and position*]

4.15.4 Hazardous Materials Storage

Aviation Fuel
Jet aviation fuel (Jet-A1 / Avtur) is stored in ---tanks, at the [Insert location]
Aviation gasoline (Avgas) is stored in a *{nn}* million litre below ground tank at the [Insert location]
Road-tanker fuel to service is provided to General Aviation aircraft.

Fuel Storage Systems - NonAircraft

Several outlets exist for non-aviation services:

- Petrol Service Station
- Maintenance Yard

Other Hazardous Materials

No other hazardous materials covered by these procedures are stored permanently on airport. Temporary storage pending consignment by air is the responsibility of the Freight Forwarder.

4.15.5 Handling Procedures

Aviation Fuel

AVTUR (JET A1) is dispensed to aircraft at the International and Domestic Terminals, by an in ground hydrant system and mobile tankers. Other areas requiring Avtur are serviced by tankers. AVGAS is dispensed to aircraft in the *General Aviation* area by mobile tankers.

Explosives

Refer to Section 4.15.6 Operational Safety Policy for Transfer of Explosive Cargo for details.

Other Hazardous Materials

For the shipment of non-routine hazardous materials the following criteria will be considered when allocating an area for the procedure:

- Drainage flow;
- Clearance distances from other aircraft, the public, buildings and equipment;
- Possible effects of spillages and drifting vapours if containers are punctured; and
- Possible effects to pavement surfaces and other adjacent facilities.

4.15.6 Operational Safety Policy for Transfer of Explosive Cargo

Introduction

Transfer of explosives between aircraft and transport vehicles may only take place at the Airport in accordance with the following procedures.

Approval

All airline operators and freight forwarders must seek approval prior to carrying explosive cargo through the DCA Approval must be sought at least *two working days/ one week* in advance of the proposed shipment. In seeking approval the airline company or shipper shall provide the following information to the Airport Operations Supervisor or Senior Operations Officer

- Date and time of expected arrival and departure
- Category of movement (International or Domestic)
- Type of aircraft (and flight number if appropriate)
- Airline Coordinator and contact telephone number
- Number and type of vehicles involved in the explosive transfer
- Type and quantity of explosive
- A copy of the DCA approval

DCA Approval

Approval to carry explosives by air must first be obtained from the DCA by the Airline Operator. A copy of the DCA approval must be given to the Airport Manager.

.

Safety Distances

At the Airport, DCA recommendations are used to determine safety distances from other airport facilities/aircraft and explosive laden aircraft.

Preferred Aircraft Parking Positions

The preferred aircraft parking positions for aircraft transhipping explosives are the [Insert location]. ATC operational requirements will usually dictate the selection of the parking position. The aircraft and any vehicles or equipment associated with the cargo transfer may require an escort. Any directions given by the officer carrying out the escort must be complied with.

Alternative Parking.

Should operational considerations dictate that the preferred parking positions are unsuitable the Senior Operations Officer will select another site in conjunction with ATC.

General Requirements

Standard safety and security measures will apply to all staff involved in the transfer operation. These requirements include:

- Only vehicles involved in the explosive transfer are to be brought airside.
- Personnel, vehicles and handling agent equipment will be subject to escort formalities and will hold short of the manoeuvring area until the transfer is ready to commence.
- Personnel involved in the explosive transfer are to display a valid ASIC or valid visitor pass. Visitor passes may be arranged by contacting the Duty Manager or the Senior Operations Officer.

If the safety clearances are compromised, no loading or unloading operations are to proceed during movements on the runways.

4.16 Low visibility operations

4.16.1 Purpose

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

4.16.2 Responsibilities

The Airport Manager has overall responsibility for ensuring that low visibility procedures are developed and sufficient resources are available.
The Senior Operations Officer is responsible for carrying out Visual Assessment Light (VAL) and Runway Visibility Range (RVR) measurements. This responsibility may be delegated on a day-to-day basis by the duty Senior Operations Officer to a suitably qualified Operations Officer. VAL and RVR measurements are only carried out at the request of ATC.

4.16.3 Low Visibility Operations

Take-Off
Airlines and other commercial aircraft operators are able to take-off when visibility is below [*800 metres or metres*] provided their procedures are approved by DCA.
Pilots require ATC and aerodrome operator assistance in determining the visibility at such times.
DCA permits low visibility operations with different minima, depending on the available runway facilities:

- Minima of [800 m or m] if runway edge lighting or centreline marking is clearly visible to the pilot in command;
- Minima of [400 m or m], restricted to approved company pilots, if runway edge lighting and centreline marking is clearly visible to the pilot in command.

All other IFR aircraft require a minimum take-off visibility of *2000 m* or -------m.
Landing
Precision Approach Runway Category ---- facilities are available to RWY ---- and -----.
Requirements for landing in reduced visibility include operational [*High Intensity Approach Lighting system and High Intensity runway edge lighting].*

4.16.4 Visual Assessment Lights - Visibility 800-2000 Metres
[If Applicable]

VAL are installed at the Airport to permit assessments of visibility in the range from 800 -2000 m, for take-off on runways --- and -----.
The lights are located external to the graded runway strip, and are observed from a position outside the runway strip. This permits the visibility assessments to be made without disruption to aircraft operations.
Note. An additional omni-directional light connected to the low intensity circuit is collocated with the high intensity light at 2000 m.

4.16.5 Runway Visual Range - Visibility Below 800 Metres

Runway Visual Range are installed at the [insert location] of the Airport.

If RVR are not provided

Observations are made from the runway centreline at designated positions for each runway, [insert location] as shown on Plan.
The Operations Officer will not move from [insert location]until directed by ATC. The interval between RVR observations will be as directed by ATC.
If visibility is inadequate to permit take-offs, ATC may choose to permit the Operations Officer to remain on the runway to continually update the RVR readings

4.16.6 Runway Inspection

Runway inspections are required prior to authorising an aircraft take-off in low visibility conditions:

- A full length runway inspection within 30 minutes immediately preceding; and
- A supplementary inspection over the first 1100-1500m every 5 minutes, as the runway visibility observations are made or as directed by ATC.

4.16.7 Manoeuvring Area Safety and Security

An inspection of the security fence should be made prior to the first instrument meteorology conditions departure utilizing low visibility procedures (if possible).
Vehicular movement on the maneuvering area will be restricted to Operations Officers, RFFS and vehicles or aircraft escorted by an Operations Officer. Nonessential vehicles are not permitted on the manoeuvring area in low visibility conditions.
No vehicle is permitted within 150 m of the runway centreline while a take-off or landing is in progress. Other safety considerations include:

- Two-way radio communications are to be maintained between the Operations Officer and ATC on the Aerodrome Control Frequency -----MHz during runway visibility assessments.
- A copy of Plan *{exhibit}, Runway Visibility Assessment Chart*, is to be retained in the Operations Officer's vehicle at all times.

4.17 Protection of sites for radar and navigational aids

MCAR Part - 139.121 requires aerodrome operator to ensure to control activities that may cause interference to radar and navigation aids located on the airport.

4.17.1 Purpose

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

4.17.2 Responsibilities

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.
[Insert personnel] are responsible for monitoring construction activity on the Aerodrome to prevent the interruption of visual and electronic signals of NAVAIDS.

The *Works Project Manager, or Safety Officer* controlling any work activity on the airport, is responsible for advising ATC of any works proposals that may affect the operation of radar or navaids on the airport, including any cables associated with the facilities.
ATC is responsible for the physical protection of its radar and navaids located on the Airport. This may include appropriate fencing and warning signs to restrict entry to each site.

4.17.3 Works Planning and Coordination

The Airport Manager's nominees with responsibility for airport works are required to give prior notification to ATC of:

- Work activities in the vicinity of radar and navaids on the Airport which might effect the signals to and from those facilities; and
- Proposed excavation work within 3m of cables associated with the facilities.

This advice may be either verbal or provided formally during the planning stage of a MOWP or PERCOW.
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.
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 advice.
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 organisation required to carry out work at the airport.

Where there is a possibility of interference to the radar or navaid signal due to transient obstacles, such as vehicles travelling on perimeter roads, signs displaying the appropriate warning or instruction will be erected.
Vehicles and plant will not enter the navaid restricted areas to RWY ------- without ATC approval.

4.17.4 Maintenance Works Affecting Radar and Navigation Aids

All ATC personnel or contractors are required to abide by the security arrangements for gaining airside access.
The Airport Manager will contact ATC where mowing works may affect navaid signals. The *Grounds Maintenance Supervisor* will contact ATCat least 24 hours prior to the works to ensure that navaids can be turned off when required e.g. not in IMC or no flight testing will be in progress.
ATC will be notified for works affecting the DME/VOR NAVAID at least 24 hours prior to works commencing. This will allow ATC time to issue a NOTAM and to arrange for qualified personnel to be in attendance to deactivate or activate the facilities if or as required.
As a guide in preparing for minor maintenance activity, work within the following areas can be expected to cause interference with the relevant navaid:

- Localiser - from 360 metres in front to 10 metres behind the localiser aerial, and 90m either side of the runway centreline;
- Glide path - from glide path building, an area extending 700 m directly in front of the building towards the landing aircraft, at a width of 175 m towards the associated runway centreline; and
- VOR - within a radius of 150 m of the VOR.

Any other major works or works involving a large amount of equipment, or tall equipment, should be referred to ATC for advice on the affect on navaids.

4.17.5 Signs warning of hazardous microwave radiation.

The installation of signs warning of hazardous microwave radiation shall be supplied near the Airport Radar and Navigation Aids.

4.17.6 Airport Radar and Navigation Aids: Clearance and Locations

Clearances for radar and navaids facilities associated with the Airport are shown on Plan *{exhibit}*.

4.17.7 Interruption of visual and electronic signals of NAVAIDs

(a) Interruption of visual and electronic signals of NAVAIDS is prevented when within the aerodromes authority. Maintenance personnel should maintain the grass height at ILS critical areas below level that will affect NAVAIDS.

(b) No facilities shall be constructed on the Aerodrome that have been determined by the DCA to derogate the operation of an electronic or visual NAVAID or air traffic control facilities.

(c) *The Operation Officers* are responsible for monitoring construction activity on the Aerodrome to prevent the interruption of visual and electronic signals of NAVAIDS.

(d) Protection Against Vandalism
Protect--or if the owner is other than the certificate holder, assist in protecting--all NAVAIDS on its Aerodrome against vandalism .

Part 5: Aerodrome Administration and Safety management System

5.1 Aerodrome Administration

The Aerodrome operator is required to describe the orgnization structure of his aerodrome which sets out the roles to accomplish the aerodrome agenda or functions.

5.1.1 The Airport is headed by the Airport Manger who is responsible to the CEO of (enter name of Airport) for the effective and efficient Management of the Airport.

5.1.2 Describe the various divisions, departments or section under the Airport Manager with the guidance of the airports organization chart outlining their principle accountabilities.

Example. THE AIRPORT SAFETY OFFICER

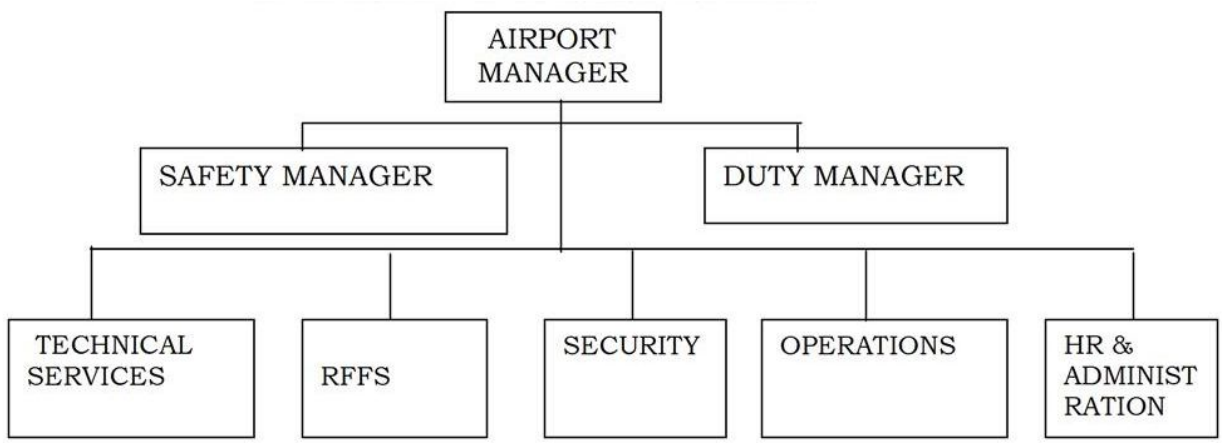
The (function) is responsible to the (function Manager), for the (insert principle accountability) e.g. monitoring and auditing of the safety management system at (name of the aerodrome) as detailed in the Aerodrome Manual or other directives issued from time to time.

The (Title Division/Manager/Officer) for (function) shall:

a) Insert function.
b) Insert function.
c) Insert function.
d) Insert function.

5.1.3 (Insert Aerodrome name) Organization Chart

SAMPLE AIRPORT ORGANIZATION CHART



5.2 Airport committees

The following committees have been assembled to conduct business about matters addressed in this Manual.
{provide appropriate details}

5.3 Safety Management System

5.3.1 Safety management is that part of the overall management function which determines and implements the (Aerodrome Name) safety policy.

5.3.2 (Insert Aerodrome name) followed by a commitment statement to the effect that the implementation of safety management system has been embraced by the highest level of management and forms a central part of its policy and programs.

5.3.3 (Insert Aerodrome name) **SAFETY POLICY.**

(Insert Aerodrome name) management will demonstrate their continued commitment to enhance safety at airports and will be responsible and accountable for inculcating and promoting safety culture among its employees.

The (Insert Aerodrome name) will promulgate safety awareness through sensitization and training on safety issues at all levels. The (Insert Aerodrome name) will establish safety performance targets, review performance and authorize necessary improvement measures. Also the Authority will recognize and reward outstanding safety performance to all employees.

The (Insert Aerodrome name) written safety goal and will ensure that everyone understands it. The (Insert Aerodrome name) will provide easy and accessible communication systems for effectiveness in safety reporting and documentation.

All Managers and Supervisors are responsible and accountable for the safety and occupational health practices and performance of employees within their areas of responsibility.

It is the duty of employees, contractors, concessionaires, business partners and any other airport users to comply with the safety measures required by the DCA and applicable legislation, and they are also responsible for their own safety and the safety of others. Employees and other stakeholders shall be given opportunities to participate in developing safety standards and procedures.

The (Insert Aerodrome name) is committed in maintaining a working environment that is safe and healthy for employees in accordance with the national and recognized international legislations and standards. The (Insert Aerodrome name) will ensure that airport facilities and equipment meet required safety standards and specifications for their optimum performance and safe operational status.

The (Insert Aerodrome name) will put in place an effective mechanism for carrying out safety audits and evaluations in respect of conditions of operational areas, working tools and occupational health matters for optimal adherence to safety standards. The effectiveness of the Safety Management System will be reviewed on a regular basis in order to achieve continuous improvement.

5.3.4 Safety Management Strategy

In implementing its strategy for safety management the (Insert Aerodrome name) Management has adopted the following principles which experience elsewhere has shown that they provide a frame work for the establishment of processes to identify safety shortcomings and provide assurances that safety levels be being met or improved.

5.3.5 Safety Achievement

This concept relates to specifying the means by which safety performance of each Division at the Airport meets its safety objectives and their derived requirements.

5.3.6 Safety Assurance:

This principle details the means for providing assurance that risks are being managed properly and effectively. This will be achieved through:

i) Safety Audits: that the management should carry out routinely on its services and those rendered by other agencies so as to provide itself with assurance that all airport operations meet the objectives of its safety management system.

ii) Safety Performance Monitoring: This entails putting in place suitable monitoring arrangements so that undesirable trends in safety performance can be recognized and addressed accordingly.

iii) Investigation of Safety Significant Incidents: which shall be carried out as part of process in place to investigate such incidents, identifying any failures of the airports management of safety and take corrective action if required. This shall be done in addition to any statutory requirement to report such incident to DCA.

5.3.7 Safety Promotion.

This concept specifies the means by which safety issues are communicated within the Airport to eliminate unnecessary risks and avoid the repeat or errors risk.

(Insert Aerodrome name) Management ensures that lessons learned from its investigation of safety occurrences; and the case history and experience from other airports are distributed widely and, where relevant, auctioned to minimize the risk of recurrence.

To raise staff awareness levels the results of such lessons shall be included in the airports training program.

5.4 Organization of Safety Management System

As stated in the AA policy quoted earlier in this section, each manager at (Insert Aerodrome name) shall be responsible for the introduction, implementation and supervision of safety within his division.

However, some over all coordination and programming is required for the whole (Insert Aerodrome name) Management Services. Therefore the Airport Manager has appointed an officer designated as Airport Safety Officer to supervise the coordination and programming of safety management within (Insert Aerodrome name). He will also carry out or arrange for auditing of individual Divisions and institutions. *His duties are enumerated in section 5.1 of this Manual.*

In addition to the Airport Safety Officer who shall report to the Airport Manager each Manager shall designate one officer within his Division as a liaison person on safety for that Division and who will work on day to day with the Airport Safety Officer. For the person so designated the safety management duties shall be performed along with his other assignments.

5.5 (Insert Aerodrome name) Safety Management Committee

5.5.1 There shall be established (Insert Aerodrome name) Safety Management Committee with the following membership: -

a) The Airport Manager – Chairman
b) Manager Maintenance/Technical Services
c) Manager Security
d) Manager Operations
e) Manager RFFS
f) he Manager ANS
g) Safety Manager, Ground Handling Agent
h) Fixed Base Operators
l) Airline Operators Representative
m) Fuel Companies
n) Catering company
o) Airport Safety Officer (Secretariat)

5.5.2 The committee shall have the following functions: -

a) Review the progress of implementation of SMS at (Insert Aerodrome name)
b) Assess the effects of the implementation of SMS and its management
c) Plan or consider the schedule of internal safety audits of institutions and divisions at (Insert Aerodrome name).
d) Identity area(s) of critical risk level at (Insert Aerodrome name) (Insert Aerodrome name) and recommend measures to be taken.
e) Exchange ideas, lessons and experiences on SMS that will build safety culture at (Insert Aerodrome name) and could form as material in safety promotion documents issued.

5.5.3 More information on safety management System are detailed in (Insert Aerodrome name) safety management manual document. It is separate document and incorporated to this Aerodrome Manual.

ABBREVIATIONS

The following list contains key abbreviations used in this Manual, as well as others likely to be in common use in the operation of the Airport.

ATC	-	Air traffic Control
ACN	-	aircraft classification number
AEC	-	airport emergency committee
AEP	-	airport emergency plan
AC	-	Advisory circular
AIP	-	aeronautical information publication
AIS	-	aeronautical information service/s
ARP	-	aerodrome reference point
ATS	-	air traffic services
CWY	-	clearway
DCA	-	Department of Civil Aviation
EOC	-	emergency operations centre
EST	-	estimated
ICAO	-	International Civil Aviation Organisation
ILS	-	instrument landing system
MTOW	-	maximum take-off weight
NDB	-	non-directional beacon
NOTAM	-	notice to airmen
OLS	-	obstacle limitation surface
PANS-OPS	-	procedures for air navigation services - aircraft operations
PAPI	-	precision approach path indicator
PCN	-	pavement classification number
RESA	-	runway end safety area
RFFS	-	Rescue and Fire Fighting Service
RVR	-	runway visual range
RWY	-	runway
SWY	-	stopway
TWY	-	taxiway
VASIS	-	visual approach slope indicator system
VOR	-	very high frequency omni-directional radio range

etc.,

Annex

1. Aerodrome Emergency Plan
2. Safety Management System
3. etc.,

Exhibit

1. Aerodrome Layout Plan
2. Aerodrome Facilities Plan
3. Organization Chart
4. etc.,